Summary of the Final Environmental Impact Statement
Northern Great Plains Plans Revision

June, 2001

Introduction

In 1995, The Forest Service decided to address the legally mandated requirement to revise forest and grassland management plans that were over 10 years old using a new approach. Rather than "revise in a vacuum," meaning that each administrative unit would gather its own information, conduct its own public involvement, and draft its own revised management plan, an ecosystem approach was proposed and agreed upon. Since the Northern Great Plains ecosystem is a large area with many similarities the national grasslands in North Dakota, South Dakota, Wyoming, joined with the national grassland and national forests in Nebraska to combine efforts. This approach presented many opportunities, as well as some daunting challenges, not the least of which was distance.

A single planning team was brought together and stationed in Chadron, Nebraska. They worked closely with Forest Service managers and staff specialists as well as the public associated with the 10 national grasslands and forests in the 2.9 million acre planning area. The goal was to share what made sense to share and to recognize that while there are similarities across the planning area, there are also significant differences. Therefore, the analysis is contained within one Final Environmental Impact Statement (FEIS), but each planning unit used that analysis and participated in developing a management plan specific to that planning unit.

The FEIS and Plans could not have been completed without help from a wide range of professionals in other government agencies and the private sector who offered their reviews and comments to make the final documents reflect the best science currently available. Also, hundreds of people attended meetings, open houses, and other events designed to stimulate thought and discussion about the plan revisions. Nearly 26,000 people took the time to respond, in writing, to the draft documents and offer their thoughts and comments. To all who contributed their time, expertise, and energy—THANK YOU!!

This document is a summary, at **the administrative unit level**, of the Revision Topics, Alternatives Considered, and a comparison of the effects of those alternatives and the Forest Service Preferred Alternative. The information in this summary is discussed in more detail in the Final Environmental Impact Statement, Appendices, and Maps. This summary describes briefly how the public was involved in the process and how the documents are available for public review. It also describes the next steps in the process and approximate timeline for arriving at a final decision. How you can obtain copies of the documents is discussed near the end of the summary.

To better understand the administrative and planning organization addressed in the FEIS and Plans please keep these terms in mind:

Planning Area - The area of the National Forest System, including national grasslands, covered by a Regional or Forest Plan.

Administrative Unit - All the National Forest System lands, including national grasslands, **for which one forest supervisor is responsible.**

Planning Unit – Each individual national grassland and forest in the planning area.

Geographic Area – All, or portions of national grasslands or forests where management is directed toward achieving a specified desired condition

Management Area – Parts of the national forests or grasslands that are managed for a particular emphasis.

The Planning Units

The planning units under study lie quite distant from each other (see map on inside cover), from eastern North Dakota to eastern Wyoming and from northwestern North Dakota to northwestern and central Nebraska. The table below lists the names of the units and the states and counties in which they are located.

Land and resource management plans (management plans) currently direct management of the national forest and national grassland units. Issuance of these plans occurred June 10, 1987, for the Custer National Forest (which includes the Dakota Prairie Grasslands); November 20, 1985, for the Medicine Bow National Forest; and December 14, 1984, for the Nebraska National Forest. Other National Forest System units under the administration of the Medicine Bow-Routt National Forests that are not listed above are addressed in other planning efforts.

Units Under Review, Affected Counties, and Approximate Federal Surface Acres of Each Unit.

Units	Affected Counties	Acres
Dakota Prairie Grasslands Administrative Unit		
Planning Units		
Cedar River National Grassland	Grant and Sioux Counties, North Dakota	6,800
Grand River National Grassland	Corson, Ziebach and Perkins Counties, South Dakota	154,200
Little Missouri National Grassland	Billings, Dunn, Golden Valley, McKenzie and Slope Counties, North Dakota	1,026,000
Sheyenne National Grassland	Ransom and Richland Counties, North Dakota	70,300
Medicine Bow-Routt National Forest Administrative Unit		
Planning Unit		
Thunder Basin National Grassland	Campbell, Converse, Crook, Niobrara, Weston Counties, Wyoming	553,300
Nebraska National Forest Administrative Unit		
Planning Units		
Bessey Ranger District	Blaine and Thomas Counties, Nebraska	90,200
Buffalo Gap National Grassland	Custer, Fall River, Jackson and Pennington Counties, South Dakota	589,200
Fort Pierre National Grassland	Jones, Lyman and Stanley Counties, South Dakota	116,100
Samuel R. McKelvie National Forest	Cherry County, Nebraska	116,100
Oglala National Grassland	Dawes and Sioux Counties, Nebraska	94,200
Pine Ridge Ranger District	Dawes and Sioux Counties, Nebraska	50,500

Dakota Prairie Grasslands:

Cedar and Grand River National Grasslands

Located in Grant and Sioux Counties of North Dakota, the Cedar River National Grassland is a 6,800-acre tract of mixed-grass prairie on rolling hills, intersected by streams and dry gullies. Most of this unit lies within the boundaries of the Standing Rock Indian Reservation. The Grassland is administered by the Grand River / Cedar River Ranger District, Lemmon, South Dakota. The Cedar River National Grassland is managed for multiple purposes, including livestock grazing. The last significant buffalo hunt occurred near the grassland in 1883, when a group of Sioux and whites harvested about 10,000 head.

Located in Perkins, Ziebach, and Corson Counties of South Dakota, the Grand River National Grassland contains more than 154,200 acres and is administered by the Grand River / Cedar River Ranger District, Lemmon, South Dakota. Mixed-grass vegetation rises from its rolling landscape. The unit is home to pronghorn and mule and white-tailed deer. Nearby Shadehill Reservoir provides fishing, camping and boating recreation.

Little Missouri National Grassland

The Little Missouri National Grassland, at more than a million acres, is the largest national grassland in the nation. This mixed-grass prairie found in badlands topography is located in McKenzie, Billings, Slope, and Golden Valley Counties in western North Dakota. The Grassland is administered by the McKenzie Ranger District, Watford City, North Dakota, and the Medora Ranger District, Dickinson, North Dakota.

The Little Missouri is home to a great variety of wildlife, including bighorn sheep, eagles and falcons, prairie dogs, and pronghorn antelope. Oil and gas production and livestock grazing are important on this unit, as are opportunities for remote roadless experiences.

Sheyenne National Grassland

The more than 70,300 acres of the Sheyenne National Grassland consists of tallgrass prairie, oak savanna, and river woodlands in southeastern North Dakota, including parts of Ransom and Richland Counties. This unit is administered by the Sheyenne Ranger District in Lisbon, North Dakota.

The Sheyenne National Grassland is home to, white-tailed deer, sharp-tailed grouse, prairie chickens, an occasional moose and a wide variety of other plants and animals, many of them rare. The western prairie fringed orchid is listed as a threatened plant. Several butterflies found on this unit also appear to have declining populations. There are many natural sandy blow-outs on this grassland, which is surrounded by intensive cultivation. This large contiguous tallgrass prairie unit is particularly significant since tallgrass prairie is so rare on the Great Plains.

Medicine Bow-Routt National Forest Unit:

Thunder Basin National Grassland

The Thunder Basin National Grassland is located in northeastern Wyoming and occupies about 553,300 acres of land among a mosaic of state, federal, and private lands. These lands generally lie

between Douglas on the south, Newcastle on the east, to the Montana border on the north, and Wright on the west. This unit is administered by the Douglas Ranger District, Douglas, Wyoming.

The Thunder Basin National Grassland is a blend of mixed-grass grassland, sagebrush grassland, cottonwood, greasewood, and ponderosa pine/juniper vegetation, within rolling plains, escarpment, dissected plains, and shale upland landscapes. The grassland is home to pronghorn, prairie elk, and prairie dogs. A great deal of coal is also mined on the grassland, including the largest coal strip-mine operation in the nation, located near Gillette.

Nebraska National Forest Units:

Nebraska National Forest (Bessey Ranger District) and Samuel R. McKelvie National Forest

About 90,200 acres of Sandhills country make up the Bessey Ranger District, located in central Nebraska in Thomas and Blaine Counties. This area is named after Dr. Charles E. Bessey. Bessey convinced the federal government to plant pine and other tree species in the treeless Sandhills to avert what he anticipated would be a national timber shortage. Beginning in 1902, work began in establishing a nursery and hand-planting a forest across the shifting dunes and grasslands of central Nebraska. The Bessey Tree Nursery is located within the unit and is administered separately from the Bessey Ranger District, Halsey, Nebraska.

Named for former Nebraska governor and cattleman Samuel R. McKelvie, the 116,100-acre Samuel R. McKelvie National Forest, administered by the Bessey Ranger District, lies in the Sandhills of north central Nebraska in Cherry County. Elevation rises to about 3,200 feet, and the topography consists of low rolling hills, ridges, and grass-covered dunes. The unit is administered by the Bessey Ranger District. Located in the Nebraska Sandhills, the unit is a mixed-grass prairie. Small scale tree planting after 1902 provided a blend of grasslands and plantation forests (about 2000 acres) of mainly ponderosa pine. The unit is home to a variety of prairie plant and animal species, including coyotes, sharp-tailed grouse, and both mule and white-tailed deer.

Buffalo Gap National Grassland

The Buffalo Gap National Grassland is located in southwestern South Dakota and includes more than 589,000 acres of land that borders and is intermingled with private, state, Indian reservation, and national park lands. The eastern half of this unit extends from near Kadoka, South Dakota on the east, to the Cheyenne River on the west, north to U.S. Highway 14, and south to the Pine Ridge Indian Reservation. The Wall Ranger District, Wall, South Dakota, administers the eastern half. The western half extends from the Cheyenne River on the east to the Wyoming and Nebraska borders on the west and south, respectively. The Fall River Ranger District, Hot Springs, South Dakota, administers the western half.

The Buffalo Gap National Grassland contains mixed-grass vegetation. The landscape includes rolling prairie and badlands topography. The unit is home to many wildlife species, such as pronghorn antelope, both mule and white-tailed deer, and prairie dogs. Currently, black-footed ferrets are being reintroduced into Conata Basin. Sizable beds of agates and vertebrate and invertebrate fossils can be found on the grassland.

In addition, the National Grassland Visitor Center is located in Wall, South Dakota. The center is administered by the Wall Ranger District. It focuses on interpretation of the Great Plains and offers information on the country's national grasslands. The Center features more than 20 exhibits.

Fort Pierre National Grassland

The Fort Pierre National Grassland includes more than 116,000 acres of federal land. It lies south of Pierre, South Dakota, north of Interstate 90, and west of the Lower Brule Indian Reservation. This unit is administered by the Fort Pierre National Grassland, Pierre, South Dakota.

The Fort Pierre National Grassland consists of mixed-grass vegetation on a rolling hill landscape just west of the Missouri River. The grassland is home to many species of wildlife including prairie chicken, sharp-tailed grouse, antelope, mule and white-tailed deer, and waterfowl.

Nebraska National Forest (Pine Ridge Ranger District)

These lands are in Dawes and Sioux Counties of northwestern Nebraska. Included are the Pine Ridge Ranger District at about 50,500 acres, with the Soldier Creek Wilderness at about 7,800 acres. The Pine Ridge Job Corps Center is also located in this district, although it is administered separately. Elevations rise to 5,000 feet along ridges of ponderosa pine. The unit is administered by the Pine Ridge Ranger District, Chadron, Nebraska.

The Pine Ridge Ranger District area is a popular outdoor destination. Its pine forests and rugged sandstone terrain, rising from the surrounding plains, provide a scenic backdrop for a number of recreational activities.

Oglala National Grassland

The 94,200-acre Oglala National Grassland lies in Dawes and Sioux Counties of northwestern Nebraska. Topography consists of rolling hills and badlands country. The grassland is administered by the Pine Ridge Ranger District, Chadron, Nebraska. The grassland contains mixed-grass vegetation and is home to prairie dogs, pronghorn, mule deer, raptors, and a variety of ground-nesting birds and reptiles.

Purpose of and Need for the Decision

The purpose of revising the Management Plans is to develop and implement a science-based, ecosystem-management strategy for these National Forest System lands. The strategy will enable these lands to move from current conditions to more ecologically sustainable and socially desirable future conditions, if needed, while leaving options available to future generations.

The decisions to be made will provide an ecological context to the Management Plans and will help clarify the relationship of management activities to the capability of ecosystems, develop realistic expectations for the production of goods and services, sustain ecosystems by ensuring their health, diversity, and productivity, and integrate ecological, economic, and social factors in order to maintain and enhance the quality of the environment to meet current and future needs.

Regulatory Basis for Planning

Long-range planning is a prudent management action and also required by law. Congress recognized that public desires and demands for products and services, and physical, biological and social environments change through time. The National Forest Management Act, passed by Congress in 1976, requires that the Management Plans be reviewed and, in most cases, revised every 10-15 years to respond to changed conditions.

Managerial Reasons for Revising Existing Plans

What We Have Learned in the Last Decade

Over a decade has lapsed since the current Management Plans were approved. Implementation of these Plans has shown us the need for changes in management direction for many resources and programs on these ten grassland and forest units. Several sources have led us to believe we have a need to change our current Management Plans through revision. The major sources used to identify the need for change were:

- Experiences in implementing the Management Plans and working with the public;
- Public involvement in implementing projects;
- Need for Management Plan amendments as a result of implementing projects;
- Monitoring the effects of implementation;
- Understanding cumulative effects from implementing projects;
- Issues raised in routine communication with the public and in appeals and litigation;
- Knowledge gained from research on prairie ecosystems;
- Discussions with employees;
- Coordination and input from other federal agencies, state agencies, and partners;
- Public feedback on values for these National Forest and Grassland units;
- Results of assessments.

Since the early to mid-1980s, the prairie ecosystem has developed some new constituencies who are requesting a different focus for management of these public lands within the Great Plains. They are asking that we address some different issues and uses in revising our Management Plans. Appeals and litigation of resource decisions implementing the Plans are also an important source of information. While the overall number of appeals in proportion to resource decisions is low, there has been a marked increase in appeal and litigation activity. This increase, in some part, reflects a change in constituencies that are interested in grassland and forest management and the resources of the National Grasslands and Forests.

General Purpose of Revision

We are undertaking Management Plan revision to provide direction that will:

- Provide goods and services to people,
- Involve people and communities, and
- Sustain ecosystem functions.

Congress understood that resource conditions and human values change over time—public issues, demand for products and services, and our understanding of physical, biological and social environments change through time. Congress believed that planning helps us define desired conditions and set a course to achieve those conditions.

We must adjust our long-term direction in response to new information, technology, and demands. We revise and update Management Plans to restore and sustain ecosystems, and to identify stable, long-term resource outputs to benefit people.

Decisions Made with a Management Plan

Management plans establish key decisions for the long-term management of affected National Forest System lands. These decisions include:

- Establishment of grassland-wide and forest-wide multiple use goals and objectives (36 CFR 219.11).
- Establishment of grassland-wide and forest-wide management requirements (standards and guidelines) to fulfill the requirements of 16 USC 1604 (The National Forest Management Act) applying to the future activities (resource integration requirements 36 CFR 219.13 to 219.27).
- Establishment of management areas and direction applying to future activities in that management area [resource integration and minimum, specific, management requirements [36 CFR 219.11 (c)].
- Determination of the capability and potential suitability of lands for producing forage for grazing animals and for providing habitat for management indicator species (36 CFR 219.20), designation of lands not suitable for timber production and, where applicable, establishment of allowable timber sale quantity (36 CFR 219.14, 219.15, and 219.21).
- Establishment of monitoring and evaluation requirements [36 CFR 219.11 (d)].
- Recommendation to Congress for Wilderness classification where 36 CFR 219.17 applies.
- Establishment of rivers eligible for Wild and Scenic River consideration and recommendation to Congress of suitable rivers for inclusion into the Wild and Scenic River System (16 USC 1271-1287, 36 CFR 297, and 47 FR 39454, Sept. 7, 1982), in cooperation with the National Park Service.

Three revised management plans (one for each participating administrative unit) and one Final Environmental Impact Statement (FEIS) describing environmental effects for all three management plans have been prepared and are available for public review.

Where We've Been -- Public Involvement

Beginning in 1995 the Forest Service began to engage people in discussions about the national forests and national grasslands in the Northern Great Plains and how they should be managed.

Management plans for national forests and grasslands are required by the National Forest Management Act (NFMA) to be updated every 10-15 years. The management plans for all of the national grasslands in North and South Dakota, Wyoming, and Nebraska, as well as the national forests in Nebraska were approaching mandatory revision. Due to the similarities of these ten,

primarily grassland units, it made sense to the agency to combine efforts to produce one Environmental Impact Statement analyzing their resources, uses, and issues.

Because there are significant differences also, managers decided to use the analysis to produce three separate plans, one for the Thunder Basin National Grassland, which is managed by the Medicine Bow—Routt National Forest with headquarters in Laramie, WY; one for the units managed by the Nebraska National Forest, headquartered in Chadron, NE; and one for the units now managed as the Dakota Prairie National Grasslands, with headquarters in Bismarck, ND.

In January, 1996 the first issue of the *Revision Reporter* plan revision update newsletter was mailed to people and organizations who's names were consolidated into a mailing list combined from mailing lists of all administrative units involved in the plan revision. It discussed the planning revision strategy, why revision was needed, and encouraged people to provide input to the planning team.

Between February and May, 1996 the Forest Service hosted a series of public events, including open houses, designed to explain the process and encourage participation.

On February 26, 1997, formal public involvement was initiated with an announcement in the Federal Register (Notice of Intent) of the Forest Service's intent to prepare an Environmental Impact Statement in conjunction with the revision of the management plans. Widely distributed press releases and another series of open houses invited the public to help define the scope of the analysis and to identify public issues associated with these public lands (approximately 2.9 million acres).

This formal process, known as "scoping" resulted in over 3100 comment documents, with about 65% being form letters.

Draft EIS and Land and Resource Management Plan (LRMP) Comments and Content Analysis

By July 6, 1999, the Draft Environmental Impact Statement (DEIS) was ready for a 90-day public review and comment period. Eventually extended three times at the public's request, to February 3, 2000, the comment period resulted in nearly 25,000 commentors providing over 110,000 comments on the DEIS. All comments received during the comment period were analyzed using an involved process to glean, summarize, record and categorize all comments pertinent to the plans revision. (Appendix A, FEIS)

Comments on the DEIS were the basis for changes incorporated into the Final Environmental Impact Statement (FEIS) and Revised Plans.

Major Revision Topics

Major revision topics are those for which changes in resource conditions, technical knowledge, data improvement, or public opinion of national forest and national grassland resource management have created a need for change in the management plans. Changes generally are important enough to affect large areas, change the mix of goods and services produced, and involve choices in management direction where there is no public consensus on the best course of action.

These seven major revision topics influenced the decision to revise the plans and represent the major issues addressed in this document.

- Community and Lifestyle Relationships
- Livestock Grazing
- Oil and Gas Leasing
- Plant and Animal Damage Control
- Rangeland and Forest Health
- Recreation and Travel Management
- Special Area Designations

All seven revision topics are described below and addressed in this FEIS. Key indicators are identified for each revision topic. These indicators help the reader compare the five alternatives by describing the effects of implementing each alternative.

Community and Lifestyle Relationships

People who live in the Northern Great Plains attach a great deal of value to lands administered by the Forest Service. Commodity and amenity benefits contribute to the social fabric and the economic base of many neighbors and communities near these public lands.

Management decisions determine the use and availability of these lands and resources to the public. In resource-based communities, especially small communities without a diversified economy, these decisions can perpetuate or disrupt the local economy and lifestyles. More diversified communities can often cope with change, although some sectors may be more or less affected. The capacity to handle change without major hardships to social groups or institutions is an important component of community and lifestyle relationships.

Economic effects can include changes in local employment and income, payments to state and local government, and consequences associated with local government services and community infrastructure. National forests and national grasslands have a role in sustaining or diversifying area economies and providing amenity values.

American Indians make up the largest minority group in the planning area and include such tribal affiliations as the Lakota, Hidatsa, Arikara, Cheyenne, Lower Brule, Crow, and Pawnee. American Indian culture, religion, and social conventions add complexity, diversity, and context to the fabric of life on the Northern Great Plains, both historically and contemporaneously. Several Indian reservations either lie within or near the administrative boundaries of several of the planning units. American Indians visit the National Forest System lands in the area to collect medicinal and sacred plants, practice religious ceremonies, recreate, or work. For instance, some American Indians in the planning area hold livestock grazing permits and others work for energy-extraction industries.

Key indicators for the community and lifestyle relationships topic are listed below:

Indicator	Units of measure
Jobs and income related to:	
Range-fed livestock grazing	Number and dollars
Oil and gas leasing	Number and dollars

Indicator	Units of measure
Recreation and tourism	Narrative summary
Social group effects	Narrative summary in Chapter 3

Livestock Grazing

Livestock grazing on National Forest System lands is a permitted and traditional use on public lands and plays a part in maintaining and improving ecosystem health, when managed appropriately. However, this use must be balanced with multiple-use objectives, such as flora and fauna diversity, soil and water protection, wildlife food and habitat, outdoor recreation, and other resource values dependent on rangeland vegetation. The public continues to have interest in what levels of permitted grazing and other uses are appropriate for these publicly owned grassland areas.

Management Plan direction can be developed to describe the desired condition of ecological units. In accordance with CFR 219.20, the capability and potential suitability of National Forests and Grasslands to produce forage for grazing animals and habitat for management indicator species will be determined. While management plans will determine desired vegetation conditions for these grasslands and forests, the plans will not determine the allowable number of livestock to be grazed. That decision will be made in subsequent site-specific allotment management plans.

The planning area has been inventoried to describe the current mix of vegetation to determine ecological units based on land types and geographic areas. Management direction relating to livestock grazing has been tied to desired vegetative conditions. Key descriptors of desired grassland and shrubland vegetation are composition, structure, and woody vegetation regeneration in draws and riparian areas. Grazing use may fluctuate annually, depending on moisture and the desired vegetative conditions.

Allocation of Animal Unit Months (AUMs) is currently based on 1,000 lb. cows. Genetic improvements in cattle have increased cattle size as large as 1,600 lbs. The larger cows require more forage to sustain them. Utilization appears to have increased, while the methodology used to determine AUMs has not changed. Appropriate methods for calculating grazing allocations are examined in this revision process.

Few of the planning units now have secondary range. This type of range, which occurs in larger pastures with few water developments and low utilization, is desirable for upland habitat and for diversity of native plant and animal species and for recreationists who desire large unfenced areas of grassland.

Forest Service managers have expressed concern on the reduced flexibility of sustaining grazing when disturbances such as drought, hail, and fire occur. Concepts such as swing pastures, rest areas, and use of yearlings give managers flexibility to sustain grazing when drought or fire reduces forage. Requiring that some areas be rested each year will give managers increased flexibility in meeting desired conditions.

Key indicators for livestock grazing topic are listed below:

Indicator	Units of measure
Suitable rangeland	acres
Estimated grazing levels	AUMs (animal unit months)
Estimated available forage production	thousand of pounds

Indicator	Units of measure
Average pasture size	acres
Water developments	number per section

Oil and Gas Leasing

Oil and gas are important resources for the people of the United States, and the Grasslands contain valuable oil and gas deposits. In 1987, Congress passed the Federal Onshore Oil and Gas Leasing Reform Act, which expanded the Secretary of Agriculture's role in managing oil and gas resources on National Forest System lands. Within the National Forest System, the Secretary of Agriculture has the responsibility to identify lands available for leasing and to authorize leasing for specific lands. In performing analyses for these decisions, the Forest Service has identified on maps the nature and extent of stipulations that will be applied to leases for the purpose of protecting surface resources.

Previously completed leasing analyses are currently in effect for about 2.4 million acres of federal minerals (1.7 million acres federal surface estate) in the planning area, including the Little Missouri, Cedar River, Thunder Basin and Oglala National Grasslands and the western half of the Buffalo Gap National Grassland. These decisions have been implemented continuously since their signing.

Since the current leasing decisions and associated analyses were completed, several changes have occurred. There have been improvements in the technology of oil and gas exploration and development, changes in the scientific understanding of how ecosystems function, and changes in management requirements necessary to meet the laws governing the national grasslands and forests. For example, the requirements to manage habitat for threatened or endangered plant and animal species are constantly changing. With this analysis, the existing leasing decisions are being reviewed in light of new information generated since the current decisions were made (e.g., newly listed threatened and endangered species, rare ecosystem elements or habitats). In addition, good management and the law require oil and gas leasing to be consistent with the approved Management Plans. The new information and resulting changes in the Management Plans may result in changes to past leasing decisions or in the conditions of surface occupancy (stipulations) attached to new leases that will be issued under new decisions made based on this analysis. New leasing decisions, however, cannot force changes of terms on leases in existence as of the date of those new decisions. Such leases will continue as issued for the full extent of their terms. Future operations on pre-existing leases will be administered under new plan direction as much as possible without violating pre-existing lease rights.

Key indicators for the oil and gas leasing topic are listed below:

Indicator	Units of measure
Available for leasing	acres
Available for leasing but currently not authorized	acres
Available with stipulations	acres
No Surface Occupancy (NSO)	acres
Controlled Surface Use (CSU)	acres
Timing	acres
Standard Lease Terms	acres

Plant and Animal Damage Control

Under certain conditions, some plant and animal species can cause unacceptable economic and / or environmental effects. Sometimes management activities on National Forest System lands include control of noxious or exotic plants, insects, predators, and rodents. Damage control is a cooperative effort involving the Forest Service, local and state government, and other federal regulatory agencies.

Prairie dog management on National Forests and Grasslands continues to generate public interest. Although prairie dog communities are major contributors to biological diversity on National Grasslands, adjoining landowners often view prairie dogs as potentially damaging to private land values and the land's agricultural production. Many livestock grazing permittees are also concerned about the loss of forage on National Grasslands to prairie dogs. Other people interested in prairie dogs include recreational shooters, watchable wildlife enthusiasts, and wildlife interests. This plan revision process addresses management direction for prairie dog poisoning and shooting.

Invasions of noxious and non-native plants are reducing or eliminating the integrity of native plant communities. Existing Management Plans direct managers to treat noxious and non-native species on a priority basis. Control is emphasized on newly infested areas, priority areas, and minor infestations. The agency has an integrated pest management menu of options to control undesirable vegetation.

The Animal and Plant Health Inspection Service (APHIS) has primary responsibility for providing technical assistance and coordinating programs directed at predator control, control of range insect pests (such as grasshoppers), biocontrol of noxious weeds, and animal damage control. State wildlife agencies and county weed and pest boards assist with damage control in some Northern Great Plains states. The Forest Pest Management division of State and Private Forestry provides technical assistance and coordinates suppression programs for forest insect and disease pests.

A recently issued policy on animal damage, primarily targeting predators, outlines a cooperative approach between the Forest Service and APHIS. The Forest Service has revised its manual direction (FSM 2650) to elaborate on the Master Memorandum of Understanding signed by both agencies.

Key indicators for the plant and animal damage control topic are listed below:

Indicator	**Units of measure**
Prairie dog poisoning	acres
Noxious plants	percent of existing acres

Rangeland and Forest Health

The health of the national grasslands and forests is important to many people. Northern Great Plains ecosystems evolved under several major environmental forces, including grazing, fire, floods, and drought. The plants and animals that adapted and persisted are those best suited to the disturbance regimes of this region.

Human use and manipulation of these lands and waters have changed the natural disturbance regimes that originally shaped this region, affecting native plants and animals. Native animals play important ecological roles as pollinators, decomposers, soil builders, nutrient cyclers, and vital links in the food chain. Non-native or invasive plant species have replaced many native plant communities. The diversity of native plants and animals on national grasslands and forests is largely

determined by the ability of the Forest Service and other cooperators to manage vegetation for a variety of successional and structural stages.

Biological diversity is defined as the full variety of life in an area, including the ecosystems, plant and animal communities, species and genes, and the processes through which individual organisms interact with one another and with their environments. We are directed by law and regulation to provide for the viability of all native and selected non-native plants and animal species. Maintaining biological diversity, or "keeping all the pieces," will help us to ensure we meet our legal mandates.

Public interest for maintaining the biological integrity and diversity of these public lands has grown substantially over the last decade. Biodiversity has surfaced as an issue in preliminary discussions and environmental analyses conducted in recent years. The scientific community, supported by published research, has emphasized the importance of biodiversity conservation.

New information on species and their habitats found on or near national grasslands and forests in the planning area has also been gathered. Eight species are federally listed or proposed for listing and three are candidates for federal listing as threatened or endangered under the new proposed rules of the US Fish and Wildlife Service. Species listed or proposed for listing include: black-footed ferret, whooping crane, American burying beetle, bald eagle, blowout penstemon, western prairie-fringed orchid, Topeka shiner, and mountain plover. Five of these species were listed or proposed for listing after existing plans were developed. South Dakota and Nebraska list another 20 species under state laws. The Nature Conservancy maintains a list of 50 to 60 species of concern in the Northern Great Plains. Many of these same species are among the 86 listed by the USDA Forest Service as sensitive species in Forest Service Regions 1 and 2.

Prairie dogs are a keystone grassland herbivore, and are a sensitive species in some areas of the Great Plains. They now exist in about 2 percent of their historic range. Many associate species (e.g., ferret, swift fox, ferruginous hawk, burrowing owls, mountain plover) are endangered, threatened, or experiencing significant declines.

In 1998, black-tailed prairie dogs were petitioned for listing as a threatened species. In 1999, the FWS completed their status review of this species and determined that its listing was warranted but precluded due to higher priority of listing needs for other species. Black-tailed prairie dogs have been classified as a candidate species for protection under the Endangered Species Act. The status of this species will now be reviewed annually.

The largest remaining prairie dog complexes exist on Indian reservations and national grasslands. The opportunity to conserve this declining species within the planning area lies heavily on the ability to increase prairie dog complexes on national grasslands. This will require changes in direction (affecting livestock grazing intensities, poisoning, shooting, etc.) from current management plans in order to conserve the species.

During 2000, states within the planning area have been working to develop state-wide prairie dog conservation strategies. The Forest Service has been involved in these state-wide planning efforts and realizes that states are relying heavily on national grassland prairie dog populations to play a role in conservation efforts. These state-wide plans are not completed as this FEIS goes to print. The management plans for these units will be updated as needed as cooperative agreements are developed or if the species is listed. A change in management direction for protection of this species from the direction described in existing management plans is warranted.

The status of breeding birds in the United States is gaining interest. Of the 435 bird species breeding in the U.S., 330 have been documented to breed on the Great Plains. Great declines in some species from 14-91 percent result from habitat loss, degradation, and fragmentation. Since the plan revision process began, the mountain plover has been proposed for listing as a threatened species. It is also expected that the northern sage grouse will be petitioned for listing. Existing management plans did not address specific management direction to maintain the viability of these species on national grasslands. Failure to address the management needs of these species could result in legal vulnerability that could affect future management activities on these public lands.

Biodiversity conservation encompasses management for threatened, endangered and sensitive species, and management indicator species, as well as many additional considerations, including habitat for game species.

Native diversity has undergone changes from land-use and agricultural practices. Also, invasions of noxious and invasive plants are reducing or eliminating native plant species.

Some authorized activities and land uses, such as livestock grazing have major influences on watershed health and soil stability. The quantity and type of vegetation maintained on uplands and along drainages, streams and rivers largely determine water and soil conditions.

The health of forest ecosystems is closely tied to the ability of riparian and other prairie woodlands to regenerate and sustain themselves. Fire, insects and disease in coniferous forests are significant influences on forest health.

Indicators	**Units of measure**
Prairie dog colonies	acres
Black-footed ferret reintroduction areas	number and acres
Habitat suitability for management indicator species (by species	
low	**percent**
moderate	**percent**
High	percent
Endangered Species Act species, candidate species, other species of concern	
Grass/shrub structure	
low	percent
moderate	percent
high	percent
Grass/shrub composition	
early	percent
early intermediate	percent
late intermediate	percent
late	percent
Forest structure	
Late successional	percent

Indicators	Units of measure
Riparian / woody draw regeneration	percent
Area being rested	percent
Suitable rangeland bison-only grazing	percent
Tree plantations (Nebraska NF-Bessey RD)	acres per decade
Restoration (prescribed burning, mechanical treatment, etc.	acres

Recreation and Travel Management

Recreation on public lands in the prairie ecosystem is increasing dramatically. Contributing factors are: 1) national grasslands have been recognized for hunting opportunities; 2) the public has increased appreciation for the beauty of the prairie; 3) more people are taking short vacations to the closest public lands; and 4) there has been a loss of solitude in mountain areas. Current recreation use exceeds the levels anticipated in the existing Management Plans. Some leisure activities, such as mountain biking and use of all-terrain vehicles, have greatly increased in popularity since the existing Management Plans were written. The public is demanding recreational uses and values on our Great Plains grassland areas be addressed more fully.

Monitoring indicates that recreation users are generally satisfied with their recreation experiences, but some people want more developed facilities, improved roads, more site and area information, and better signing.

Hunting opportunities, such as upland bird hunting, is a major dispersed recreational activity on many of these public lands. Big game hunting is also popular. The amount of hiding and holding cover for game species depends on sufficient vegetative cover following livestock grazing season.

While there are few designated "roads" in some areas, portions of the grasslands are well traveled. Topography and vegetation make it possible for all terrain vehicles to drive just about anywhere. Some people are asking us to address road or area restrictions to address resource impacts and recreational desires for solitude.

User preferences vary widely over available recreational opportunities. Some users desire primitive recreation experiences with restricted motorized travel, while others, such as all-terrain vehicle users, prefer motorized access. Because recreation use on these public lands has increased over the last decade, the conflicts have also increased.

Key indicators for the recreation and travel management topic are listed below:

Indicators	Units of measure
Scenic Integrity Levels	acres
Recreation Opportunity Spectrum allocations	acres
Use levels at developed sites / clusters of dispersed sites	PAOTs (people at one time)
Trails	miles
Dispersed Recreation	
Fishing emphasis	ponds added
Big game hunting emphasis	change in opportunity
Upland game hunting cover	change in opportunity
Prairie dog colonies closed to shooting	areas

Indicators	Units of measure
Prairie dog colonies for viewing / educational studies	acres
Travel restricted	acres
Expected designated routes	miles and miles per square mile

Special Area Designations

The Northern Great Plains National Forest and Grassland units include many unique and outstanding combinations of physical and biological resources, and areas of social interest. These are collectively referred to as "special areas."

Special area designations may include wildernesses, wild and scenic rivers, cultural and historic sites, research natural areas, geologic and paleontology sites, rare habitats, botanical areas, prairie dog colonies, black-footed ferret habitat, wetland conservation areas, unique ecological communities, and areas of biodiversity richness. Special areas already designated in the planning area include three research natural areas, one wilderness, one national recreation area, one experimental forest, one purchase unit, and one prairie dog management area.

Special area designation has received a great deal of interest from many. Maintaining grassland roadless areas and developing grassland wilderness areas has become important to many people. Roadless areas must be evaluated for potential wilderness designation during the Management Plan revision process (36 CFR 219.17). Likewise, interest in Research Natural Areas in the grassland ecosystem has increased. Forest planning must make provisions for the establishment of Research Natural Areas (36 CFR 219.25).

There is also interest in maintaining wild and scenic rivers. Consideration of potential wild and scenic rivers is an inherent part of the land and resource management planning process (FSH 1924). Other special areas may be desired for their contributions to furthering knowledge about natural systems, interpretive / educational opportunities, or other objectives.

Key indicators for the special area designations topic are listed below:

Indicators	Units of measure
Recommended for Wilderness	number and acres
Recommended Wild / Scenic rivers	
wild classification	miles
scenic classification	miles
recreation classification	miles
Special Interest Areas	number and acres
Research Natural Areas	number and acres

Other Topics

Other topics identified as important to the public, such as fossils, land adjustments, heritage resources, forest management, minerals (other than oil and gas), and water resource management, are addressed through this revision process but were not considered major revision topics.

Other Topics Raised But Not Addressed

The public and other agencies raised a number of additional topics and issues that are not addressed in detail in these revision documents. Such topics require departmental or legislative actions or come under the authority of other governmental agencies and are outside the scope of land management planning decisions. These topics include but are not limited to the following:

- Departmental and Legislative Topics:

  Grazing fee levels.

  Recreation user fees.

  Sale or transfer of administration of the national grasslands.

  Transfer of the Cedar River and Grand River National Grasslands to the Standing Rock Sioux Tribe.

  Transfer of the Buffalo Gap National Grassland to the Oglala Sioux Tribe.

  Transfer of the Fort Pierre National Grassland to the Lower Brule Sioux Tribe.

  Primacy of livestock grazing on national grasslands.

- Topics for Other Governmental Agencies:

  Predator control.

  Grasshopper control.

  Transfer of Shadehill Reservoir to another federal agency.

- Topics to be Addressed by the Forest Service at the Project Level:

  DM&E railroad expansion.

  Establishment of livestock stocking rates.

  Numbers of AUMs (to be established through the allotment management planning process).

Alternatives

Alternatives are described in the regulations as “the heart of the environmental impact statement.” And for good reason, this is where all reasonable choices are rigorously explored, evaluated, and compared, in order to allow the decision-maker and the public to see the clear distinctions between each.

Important Points Concerning All the Alternatives

All alternatives represent the philosophies of multiple use and ecosystem management. The alternatives provide basic protection for the grassland and forest resources and comply fully with environmental laws. The alternatives are implementable and fully achievable. As directed by federal law, Forest Service policy and regulations, and guidance described in the Regional Guides for Regions 1 and 2, all the alternatives will:

- Maintain basic soil, air, water and land resources.
- Provide a variety of life through management of biologically diverse ecosystems, though they may differ in how they emphasize native plant and animal management.
- Provide recreation opportunities and maintain scenic quality in response to the needs of national forest and national grassland users and local communities. Protect heritage resources in accordance with applicable laws and regulations, while also providing recreational and educational opportunities. Protect fossils and antiquity resources.
- Sustain multiple uses, products and services in an environmentally acceptable manner. This includes timber harvest, livestock grazing, locatable and leasable minerals extraction and recreation uses.
- Through cooperation with other landowners, place emphasis on improved landownership and access patterns that benefit both private landowners and the public.
- Improve financial efficiency for most programs and projects by minimizing expenses, recognizing, however, that not all programs and projects produce revenue.
- Emphasize cooperation with individuals, organizations, Indian Tribes and other agencies to coordinate the planning and implementation of projects.
- Promote rural development opportunities to enrich rural cultural life, to enhance the environment, to provide employment and to improve rural living conditions.

Direction that varies among alternatives includes:

- Management area allocations.
- Objectives for noxious weeds and undesirable plant reductions.
- Objectives for recreation developments and trail construction.
- Objectives for desired vegetation composition and structure, rest, prescribed fire, pasture size, water developments, and areas dedicated to bison-only grazing.
- Standards and guidelines for paleontological resources.
- Standards and guidelines for prairie dog management.

While all alternatives provide a wide range of multiple uses, goods, and services, some alternatives give slightly more emphasis to particular uses in order to respond to public comment and to explore management options, opportunities, and trade-offs.

Budgets prepared for each alternative at two funding levels project actual outcomes and practical results. Historically, the Forest Service has not received the funds necessary to fully implement its management plans. The budgets were allocated between programs based on the theme of each alternative, the expected goods and services provided, and the necessary actions and expenditures

required to deliver those goods and services.

The first budget level for each alternative is based on the funds necessary to most fully implement the three revised forest/grassland management plans. The second is a reduced budget based on the typical level of funding received to implement the three current forest/grassland plans.

Management Area Allocations

Management areas are defined as parts of the grassland or forest that are managed for a particular emphasis. Each management area has a prescription that consists of a theme, desired conditions, and standards and guidelines that apply to it. Management areas describe where different kinds of resource opportunities are available and where different kinds of management activities occur. The management area prescriptions are grouped into eight major categories, based on a continuum from least evidence of human disturbance to most:

Table 1. Management Area Prescription Categories.

Category	Description	Example
1	Natural processes dominate with little human influence.	Wilderness.
2	Conservation of representative ecological settings, components, unique features.	Research Natural Areas, Special Interest Areas.
3	Balance of ecological values and human occupancy.	Special wildlife habitats; ecosystem restoration.
4	Recreation areas.	Scenery, dispersed recreation.
5	Forested ecosystems providing timber and range products.	General forest and rangelands.
6	Rangeland management emphasized.	
7	Residential/forest intermix.	
8	Utility corridors and mineral developments.	

The following management areas are used in the alternatives. The alternative maps show the distribution of these management areas across the planning units.

Table 2. Management Area Prescriptions Used in the Alternatives.

Management Area	Title
1.1	Wilderness: Soldier Creek
1.2	Recommended for Wilderness
1.2a	Suitable for Wilderness
1.31	Backcountry Recreation Nonmotorized
1.5	National River System: Wild Rivers Recommended
2.1	Special Interest Areas
2.2	Research Natural Areas
2.4	American Indian Traditional Use Areas
3.4	National River System: Scenic Rivers Recommended
3.51	Bighorn Sheep
3.51a	Bighorn Sheep with Non-Federal Mineral Ownership
3.63	Black-footed Ferret Reintroduction Habitat
3.64	Special Plant and Wildlife Habitat

Management Area	Title
3.65	Rangelands with Diverse Natural-Appearing Landscapes
3.66	Ecosystem Restoration
3.68	Big Game Range
4.22	Scenic Areas, Vistas, Travel Corridors
4.32	Dispersed Recreation: High Use
4.4	National River System: Recreation Rivers Recommended
5.12	General Forest and Rangelands: Range Vegetation Emphasis
5.13	Forest Products
5.31	Experimental Forests
6.1	Rangeland with Broad Resource Emphasis
7.1	Residential/Forest Emphasis
8.3	Designated Utility Corridors: Existing and Proposed
8.4	Mineral Production and Development
8.5	Nursery
8.6	Administrative Sites

Each alternative would allocate the national grassland and forest units under review to management areas. FEIS Appendix D describes the emphasis of each management area and lists the applicable standards and guidelines. Although allocations may change from current direction, most commodity uses, such as grazing, and oil and gas development, would continue in balance with desired conditions.

Alternative 1 - (No Action)

The no action alternative is required by regulation. Current Land and Resource Management Plan (Management Plan) direction and emphases would continue with this alternative. Since current plans were developed, management area titles and the management area numbering system have changed. Therefore, Management Area titles and numbers have been changed to make this alternative more easily comparable to other alternatives; however, management direction remains the same as in current Management Plans.

For all planning units, this alternative had the most acres of MA 6.1 Rangeland with Broad Resource Emphasis and the least acres of special management area designations (MA 1.2, 1.31, 1.5, 2.1, 2.2, 3.4, 3.51, and Category 4).

For Nebraska National Forest tree plantations, this alternative would provide for partial reversion of pine and cedar plantations on the Bessey Ranger District to native prairie. Firewood cutting, post and pole cutting, and other forms of wood product removal would be encouraged. Prescribed fire would be used to reduce cedar encroachment on native grasslands.

There were no changes to this alternative from Draft EIS to the Final EIS.

Alternative 2

This alternative would emphasize production of commodities such as livestock, minerals, oil, gas, and timber. Plant and animal habitats would be managed to meet viable populations. Recreation opportunities, and special area designations would be provided where they would not foreclose commodity production.

For the **Dakota Prairie Grasslands**, this alternative had the most acres of MA 3.51 Bighorn Sheep Habitat (118,490 ac) and the least acres of MA 2.2 Research Natural Areas and other special management area designations. It had the second highest acreage (1,128,770 ac) of MA 6.1 Rangeland with Broad Resource Emphasis.

For the **Nebraska National Forest**, this alternative had the most acres of MA 5.13 Forest Products, and it had 891,380 acres of MA 6.1 Rangeland with Broad Resource Emphasis. It had no recommended wilderness, wild and scenic rivers, or bighorn sheep habitat management areas.

For the **Thunder Basin National Grassland**, Alternative 2 had the most acres of MA 5.12 General Forest and Rangelands, Range Vegetation Emphasis (253,550 ac) and MA 8.4 Mineral Production and Development (49,350 ac).

For **Nebraska National Forest tree plantations**, this alternative would provide for partial reversion of pine and cedar plantations on the Bessey Ranger District to native prairie. Firewood cutting, post and pole cutting, and other forms of wood product removal would be encouraged. Prescribed fire would be used to reduce cedar encroachment on native grasslands.

There were no changes to this alternative from Draft EIS to the Final EIS.

Alternative 3 FEIS (Preferred Alternative)

This alternative would modify current Management Plan direction by adopting additional special area designations, such as Research Natural Areas, Special Interest Areas, and Recommended Wilderness Areas. It would also place added emphasis on native plants and animals and recreation opportunities.

Changes in Alternative 3 from the Draft EIS include the following: changes in goals, objectives, standards and guidelines, and monitoring requirements, proposed Management Area allocations, Geographic Area direction, oil and gas stipulations (See Final Land and Resource Management Plans). "Bison-friendly" grazing policies were also included.

This alternative would facilitate bison grazing on the lands administered by the Dakota Prairie Grasslands, the Nebraska National Forest, and the Thunder Basin National Grassland. In this alternative, bison will be treated as a type of livestock, not as free-roaming wildlife herds, and permittee requests to graze bison would be fully considered. The following factors will be considered when evaluating the suitability of allotments for bison grazing:

- Public safety.
- Livestock health.
- Livestock structures; including but not limited to fences and handling facilities.
- Economic viability of the permittee.
- Desired recreational experiences of National Grassland visitors.
- Desired spiritual experiences for American Indian tribes.

For **Nebraska National Forest tree plantations**, this alternative would entail managing and maintaining about 20,000 acres of pine plantations on the Bessey Ranger District through a combination of thinning, prescribed burning, planting, and insect and disease control. Cedar plantations would be harvested for forest products and cedar stands would be converted to either pine plantings or native grasslands. Within the next ten to fifteen years, approximately 20% of the pine plantations with cedar understories or cedar encroachment would be treated to remove the cedar. Firewood cutting, post and pole cutting, and other forms of wood product removal would be encouraged where needed to meet stand objectives. Prescribed fire would be actively used to reduce cedar encroachment on native grasslands. Active reforestation of ponderosa pine through tree planting would occur on plantations burned in the 1960's.

The following three tables summarize, by unit, the major changes in management area allocations from Draft to Final EIS for this alternative.

Table 3. Dakota Prairie Grasslands

MA	MA Title	DEIS Acres	FEIS Acres
1.2	Recommended for Wilderness	22,190	0
1.2a	Suitable Wilderness	0	41,500
1.31	Backcountry Nonmotorized	121,950	69,400
2.1	Special Interest Area	6,390	6,400
2.2	Research Natural Area	20,030	19,700
2.4	American Indian Traditional Use	6,280	6,300
3.51	Bighorn Sheep	67,210	19,300
3.51a	Bighorn Sheep-Non Federal Minerals	0	35,800
3.63	Black Footed Ferret Reintroduction	0	29,200
3.64	Special Plant and Wildlife Habitat	1,010	2,300
3.65	Rangelands with Naturally-Appearing	329,300	383,100
3.66	Ecosystem Restoration: Tall Grass	53,050	63,800
4.22	Scenic Area, Vistas, Travel Corridors	22,450	23,600
4.32	Dispersed Recreation: High Use	9,550	8,000
5.12	General Forest and Rangelands	10,640	0
6.1	Rangeland with Broad Resource Emphasis	587,080	549,700

Table 4. Nebraska National Forest Units

MA	MA Title	DEIS Acres	FEIS Acres
1.1	Wilderness: Soldier Creek	7,810	7,800
1.2	Recommended for Wilderness	15,970	40,500
1.31	Backcountry Nonmotorized	14,000	13,900
1.31a	Pine Ridge National Recreation Area	6,500	6,500
2.1	Special Interest Area	54,490	26,900
2.2	Research Natural Area	6,740	6,800
3.51	Bighorn Sheep	6,590	5,600
3.63	Black Footed Ferret Reintroduction	109,140	105,000

3.64	Special Plant and Wildlife Habitat	107,290	105,000
4.32	Dispersed Recreation: High Use	6,350	6,500
5.12	General Forest and Rangelands	27,000	27,900
6.1	Rangeland with Broad Resource Emphasis	691,300	702,800

Table 5. Thunder Basin National Grassland

MA	MA Title	DEIS Acres	FEIS Acres
1.2	Recommended for Wilderness	14,850	0
1.31	Backcountry Nonmotorized	6,540	6,500
2.1	Special Interest Area	12,570	26,700
2.2	Research Natural Area	1,210	1,200
3.63	Black Footed Ferret Reintroduction	45,470	47,900
3.65	Rangelands with Naturally-Appearing	116,560	83,400
3.68	Big Game Range	33,890	33,900
4.32	Dispersed Recreation: High Use	25,780	25,800
5.12	General Forest and Rangelands	129,480	160,900
6.1	Rangeland with Broad Resource Emphasis	118,130	118,100
8.4	Mineral Production & Development	47,990	48,000

Alternative 3 DEIS

This alternative is carried forward in its entirety from the DEIS to the FEIS; there were no changes.

For the **Dakota Prairie Grasslands**, Alternative 3 had the most acres of MA 1.31 Backcountry Recreation Nonmotorized (121,950 ac), MA 2.1 Special Interest Area (6,390 ac), MA 2.2 Research Natural Area (21,030 ac), MA 3.65 Rangelands with Diverse, Natural-appearing Landscapes (329,300 ac), and MA 4.22 Scenic Area, Vistas or Travel Corridors (22,450 ac).

For the **Nebraska National Forest**, this alternative would provide the most acres of MA 2.1 Special Interest Areas (103,030 ac), MA 3.51 Bighorn Sheep Habitat (6,590 ac), and MA 3.64 Special Plant and Wildlife Habitat (107,290 ac).

For the **Thunder Basin National Grassland**, this alternative would have the most acres of MA 2.1 Special Interest Area (12,570 ac), MA 3.65 Rangeland with Diverse, Natural-appearing Landscapes (116,560 ac), MA3.68 Big Game Range (33,890 ac), and MA 4.32 Dispersed Recreation: High Use (25,780 ac).

For the Nebraska National Forest, this alternative would entail managing and maintaining about 20,000 acres of pine plantations on the Bessey Ranger District through a combination of thinning, prescribed burning, planting, and insect and disease control. Cedar plantations would be harvested for forest products and cedar stands would be converted to either pine plantings or native grasslands. Within the next ten to fifteen years, approximately 20% of the pine plantations with cedar understories or cedar encroachment would be treated to remove the cedar. Prescribed fire would be actively used to reduce cedar encroachment on native grasslands. Active reforestation of ponderosa pine through tree planting would occur on plantations burned in the 1960s.

Alternative 4

This multiple-use alternative would feature natural processes and restoration of impaired native ecosystems. It would demonstrate the role that national grasslands and forests have in sustaining rare animal and plant communities within the Northern Great Plains. This alternative would allow for "bison-only" grazing on a minimum of 5% of the lands administered by each of the Dakota Prairie Grasslands, the Nebraska National Forest, and the Thunder Basin National Grassland. In this alternative, bison will be treated as a type of livestock, not as free-roaming wildlife herds.

With this alternative, permittees requests to graze bison would be fully considered as well as the opportunities to convert to "bison-only" grazing on vacant and newly acquired allotments determined to be desirable and suitable for bison grazing.

For the **Dakota Prairie Grasslands**, this alternative has the largest acreages of MA 1.2 Recommended Wilderness (85,940 acres), MA 3.63 Black-footed Ferret Reintroduction Habitat (74,670 acres), and MA 3.66 Ecosystem Restoration: Tall Grass Prairie (55,150 acres).

For the **Nebraska National Forest**, it has the largest acreages of MA 1.2 Recommended Wilderness (174,970 acres), MA 3.4 Scenic Rivers Recommended (1,790 acres), Black-footed Ferret Reintroduction Habitat (109,930 acres), and MA 3.66 Ecosystem Restoration (22,410 acres).

For the **Thunder Basin National Grassland**, it has the largest acreages of MA 1.2 Recommended Wilderness (59,280 acres), MA 2.2 Research Natural Areas (3.520 acres), and MA 3.63 Black Footed Ferret Reintroduction Habitat (112,510 acres). See the Management Area Direction in Chapter 2 of the Management Plan.

For **Nebraska National Forest tree plantations**, this alternative would include actively converting non-native pine and cedar plantations on the Bessey Ranger District to native prairie through tree cutting and burning over the next 20 years. Firewood cutting, post and pole cutting, and other forms of wood product removal would be encouraged. Prescribed fire would be actively used to reduce cedar encroachment on native grasslands. No active reforestation through tree planting would occur.

There were no changes in this alternative from Draft to Final EIS.

Alternative 5

This alternative would accentuate recreation opportunities and non-commodity services and also provide commodity outputs that complement or fit within recreation objectives. See the Management Area Direction found in Chapter 2 of the Management Plan.

For the **Dakota Prairie Grasslands**, this alternative would result in the 72,670 acres of MA 1.2 Recommended Wilderness and the most acres in MA 3.4 National River System: Scenic Rivers Recommended (18,280 ac), MA 3.64 Special Plant and Wildlife Habitat (16,400 ac), and MA 4.32 Dispersed Recreation: High Use (13,880 ac).

For the **Nebraska National Forest**, this alternative would provide the most acres of MA 1.31 Backcountry Recreation Nonmotorized (126,660 ac), MA 2.1 Special Interest Area (55,190 ac), MA 4.32 Dispersed Recreation: High Use (11,550 ac), and MA 4.4 National River System: Recreation Rivers Recommended (1,790 ac).

For the **Thunder Basin National Grassland**, this alternative had the most acres of MA 1.31 Backcountry Recreation Nonmotorized (22,710 ac), MA 4.22 Scenic Area, Vistas or Travel Corridors (6,030 ac), and MA 8.4 Mineral Production and Development (49,350 ac).

For **Nebraska National Forest tree plantations**, this alternative would entail managing and maintaining about 15,000 acres of pine plantations on the Bessey Ranger District through a combination of thinning, prescribed burning, planting, and insect and disease control and allowing for gradual reversion of remaining pine and cedar plantations on the Bessey Ranger District to native prairie. Cedar plantations would be harvested for forest products and cedar stands would be converted to either pine plantings or native grasslands. Within the next ten to fifteen years, approximately 5% of the pine plantations with cedar understories or cedar encroachment would be treated to remove the cedar. Firewood cutting, post and pole cutting, and other forms of wood product removal would be encouraged where needed to accomplish thinning objectives and cedar removal. Prescribed fire would be actively used to reduce cedar encroachment on native grasslands. Active reforestation of ponderosa pine through tree planting would occur on plantations burned in the 1960s.

There were no changes in this alternative from Draft to Final EIS.

Comparison Tables of Differences in Alternatives

The following tables show the differences among the alternatives by management area acres and by major revision topic using the key indicators identified in Chapter 1. The tables are not replacements for the full effects disclosure provided in Chapter 3 of the Draft Environmental Impact Statement. Chapter 3 should also be reviewed for more detailed and technical discussions about this summarized information. Acreages in the tables have been rounded to the nearest 10.

Dakota Prairie Grasslands

In the following table, acres are rounded to the nearest 10. Acres in parentheses are concurrent management area acres, meaning they overlap other management areas.

Table 6. Management Area Acres by Alternative for Dakota Prairie Grasslands

Management Area	Alt 1	Alt 2	DEIS Alt 3	FEIS Alt 3	Alt 4	Alt 5
Category 1						
1.2 Recommended for Wilderness	0	0	22,190	0	85,940	72,670
1.2a Suitable for Wilderness	0	0	0	41,520		
1.31 Backcountry Recreation Nonmotorized	42,990	0	121,950	69,050	103,840	81,490
1.5 National River System: Wild Rivers Recommended	0	0	0	0	840	0
TOTALS	**42,990**	**0**	**144,140**	**110,570**	**193,620**	**154,160**
Category 2						
2.1 Special Interest Areas	0	1,770	6,390	6,420	5,930	4,640
2.2 Research Natural Areas	840	840	20,030 (380)	20,120 (380)	9,040 (14,150)	1,070 (830)
2.4 American Indian Traditional Use Areas	6,250	6,280	6,280	6,280	6,280	6,280
TOTALS	**7,170**	**8,890**	**32,710**	**32,820**	**21,250**	**11,990**
Category 3						
3.4 National River System: Scenic Rivers Recommended	0	0	0	0	17,260 (520)	18,280 (350)
3.51 Bighorn Sheep	27,940	118,490 (350)	67,210 (51,510)	19,320	74,670 (49,600)	68,710 (50,090)

Management Area	Alt 1	Alt 2	DEIS Alt 3	FEIS Alt 3	Alt 4	Alt 5
3.51a Bighorn Sheep – Non Federal Minerals	0	0	0	35,800		
3.63 Black-footed Ferret Reintroduction Habitat	0	0	0	29,180	16,220 (11,690)	0
3.64 Special Plant and Wildlife Habitat	2,730	1,010	1,010	2,270	1,010	16,400
3.65 Rangelands with Diverse, Natural- appearing Landscapes	0	0	329,300	383,120	295,350	0
3.66 Ecosystem Restoration: Tall Grass Prairie	0	0	53,050	63,760	55,150	0
TOTALS	**30,670**	**119,500**	**450,570**	**533,480**	**460,070**	**103,390**
Category 4						
4.22 Scenic Area, Vistas or Travel Corridors	0	0	22,450	23,570	0	2,960
4.32 Dispersed Recreation: High use	0	0	9,550	7,990	1,710	13,880
4.4 National River System: Recreation Rivers Recommended	0	0	0	0	2,470 (60)	3,070
TOTALS	**0**	**0**	**32,000**	**31,560**	**4,180**	**19,910**
Category 5						
5.12 General Forest and Rangelands: Range Vegetation Emphasis	0	0	10,640	0	12,680	0
5.31a Experimental Forests (Denbigh)	800	800	800	800	800	800
5.31b Experimental Forests (Souris)	160	160	160	160	160	160
TOTALS	**960**	**960**	**11,600**	**960**	**13,640**	**960**
Category 6						
6.1 Rangeland with Broad Resource Emphasis	1,176,600	1,128,770	587,080	549,720	568,760	967,710
TOTALS	**1,176,600**	**1,128,770**	**587,080**	**549,720**	**568,760**	**967,710**

Table 7. Comparison of Alternatives by Major Revision Topic for Dakota Prairie Grasslands

Revision Topic/Key Indicators	Existing Condition	Alt 1	Alt 2	DEIS Alt 3	FEIS Alt 3	Alt 4	Alt 5
Community/Lifestyle Relationships							
Range-fed livestock grazing on NFS & Intermingled lands (Change From Existing Condition)		5%	5%	-13%	-9%	-34%	-24%
direct and indirect jobs (number)	1132	1190	1191	983	1033	747	865
direct and indirect income (millions of 1997 $)	$14.2	$15.0	$15.0	$12.5	$13.0	$9.4	$10.9
Oil / gas activities on NFS lands (Change From Existing Condition)	0%	0%	0%	-3%	-3%	-7%	-3%
direct and indirect jobs (number)	1,686	1,686	1,686	1,629	1,629	1,572	1,629

Revision Topic/Key Indicators	Existing Condition	Alt 1	Alt 2	DEIS Alt 3	FEIS Alt 3	Alt 4	Alt 5
direct and indirect income (millions of 1997 $)	36.9	36.9	36.9	35.6	35.6	34.3	35.6
Effects on major use/interest segments	See Social Effects section in Chapter 3.						
Livestock Grazing							
Acres suitable rangeland	1,073,516	1,113,070	1,113,000	1,051,800	1,112,970	1,051,970	1,053,580
Estimated AUMs of livestock grazing	434,451	459,410	459,530	376,300	398,160	287,650	336,050
Thousands lbs. forage available to livestock	339,675	358,350	358,430	293,510	310,560	224,380	262,160
Acres average pasture size	425 – 1,150	NA	430 - 1,150	430 - 1,300	variable	430 - 1,500	540 - 1,300
Average # water developments/sq. mile	2.5 – 3.5	NA	NA	2.2 - 3.4	NA	1.8 - 3.5	2.0 - 3.2
Oil and Gas							
Acres with existing leasing decisions	992,870	992,870	992,870	992,870	992,870	992,870	992,870
Not currently authorized for leasing	16,230	16,230	0	0	26,200	0	0
Acres available for leasing	967,930	967,930	967,930	967,930	946,280	967,930	967,930
No Surface Occupancy (NSO)	209,520	209,520	185,600	281,860	204,380	298,610	237,960
Controlled Surface Use (CSU)	77,920	77,920	45,230	129,110	159,230	220,650	317,490
Timing Limitation (TL)	133,630	133,630	185,650	170,720	202,990	176,040	176,610
Standard Lease Terms Only	589,840	589,840	569,800	412,590	407,430	389,050	306,320
Plant and Animal Control							
Acres prairie dog poisoning	Variable	No change	Increase	Decrease	Minimal poisoning	No poisoning	Decrease
Reduction in noxious weeds and invasive plants	No change	No change	Reduce by 15%	Contain or reduce	Contain or reduce	Reduce by 15%	Contain or reduce
Rangeland and Forest Health							
Predicted habitat suitability for management indicator species							
western prairie fringed orchid	Not estimated	Not estimated	Not estimated	Not estimated	Not estimated	Not estimated	Not estimated
plains sharp-tailed grouse	1-10%	15-30%	10-30%	0-60%	20-40%	35-65%	25-55%
greater prairie chicken	1-10%	20-30%	20-30%	50-60%	30-40%	60-70%	45-55%
sage grouse	Unknown	15-25%	10-20%	Maintain or increase	20-30%	45-55%	25-35%
black-tailed prairie dog (predicted total colony acreage)	2,600	2,600	$\leq$ 2,600	4,400 to 11,000	7,900 to 13,400	7,900 to 13,400	4,400 to 6,900
Endangered Species Act species, candidate species, other species at risk	See Biological Assessment and Evaluation						
Black-footed ferret areas (number and acres)	0 0	0 0	0 0	0 0	1 29,180	1 27,920	0 0

Revision Topic/Key Indicators	Existing Condition	Alt 1	Alt 2	DEIS Alt 3	FEIS Alt 3	Alt 4	Alt 5
Desired grass/shrub structure (midpoint)							
percent area low	Unknown	15	15	15	15	15	15
percent area moderate	Unknown	65	67	49	60	39	52
percent area high	Unknown	20	17	36	26	46	33
Desired grass/shrub composition							
percent area early seral stage	48	10-15	20	10-15	12	10	10-15
percent area mid seral stage	42	NA	NA	NA	69	NA	NA
percent area late seral stage	10	NA	NA	NA	19	NA	NA
percent area mid/late seral stage	NA	85-90	80	85-90	NA	90	85-90
Percent of riparian/woody draw areas regenerating	55	55	80	80	80	80	80
Percent of the suitable rangeland rested	0	0	0	5	5	20	14
Percent suitable rangelands bison-only grazing	0	0	0	0	0	5	0
Acres prescribed burning	2,000	3,600	2,900	8,500	6,500	21,000	17,000
Recreation and Travel Management							
Scenic Integrity Levels							
low acres	1,190,620	1,190,620	1,203,800	827,140	908,220	836,490	656,640
moderate acres	16,400	16,390	44,480	260,400	237,930	208,820	434,400
high acres	50,170	50,170	8,890	170,570	111,980	211,870	166,150
Recreation Opportunity Spectrum Classes							
urban acres	760	760	760	440	450	760	440
rural acres	276450	269730	276440	264380	266830	264920	254490
roaded modified acres	116720	116620	116620	112900	112920	114080	114350
roaded natural acres	501790	496730	500770	468090	477730	450710	470000
roaded natural nonmotorized acres	134090	135010	135220	137100	137460	137140	135170
semi-primitive motorized acres	226610	194580	226610	112060	133410	91720	127800
semi-primitive nonmotorized acres	1710	44710	1710	163170	129320	198810	155870
Capacity of developed sites/clusters of dispersed sites (persons at one time)	185	185	185	330 to 350	330 to 350	185	480 to 650
Trails miles	170	170	170	210	210	170	170
Dispersed Recreation							
change in fishing opportunity	No change	No change	No change	Add 1 pond	Add 1 pond	No change	Add 2-3 ponds
change in quality deer habitat	No change	No change	+	+	+	+	+
change in quality upland bird habitat	No change	No change	No change or reduction	++	++	+++	+-
acres prairie dog colonies closed to shooting yearlong	0	0	0	0	All ferret habitat on Little Missouri	All NFS lands	0

Revision Topic/Key Indicators	Existing Condition	Alt 1	Alt 2	DEIS Alt 3	FEIS Alt 3	Alt 4	Alt 5
Acres allowing off-road motorized travel	1,257,470	1,257,360	1,257,360	0	0	0	2,800
Acres where no motorized use is allowed (except administrative use)	660	660	660	175,770	131,670	230,460	136,430
Acres with seasonal motorized travel restrictions (except administrative use)	0	0	0	118,010	61,290	74,340	59,770
Acres with designated routes for motorized travel	0	0	0	964,270	1,064,900	953,260	1,058,960
Miles expected designated routes (does not restrict snowmobile use)	NA	NA	NA	1,830 to 2,810	1,830 to 2,810	1,670 to 2,345	2,185 to 3,110
Expected designated routes per sq. mile)	NA	NA	NA	1.0 to 2.5	1.0 to 2.5	1.0 to 2.0	1.0 to 4.25
Special Area Designations							
Recommended for Wilderness (number of areas and acres)	0	0	0	3 22,140	0 0	9 85,940	9 72,630
Recommended Wild / Scenic rivers							
Little Missouri River (Forest Service)							
miles wild classification	0	0	0	0	0	3.3	0
miles scenic classification	0	0	0	0	0	88.9	92.2
miles recreation classification	0	0	0	0	0	13.7	13.7
Little Missouri River (National Park)							
miles wild classification	0	0	0	14.9	14.9	14.9	0
miles scenic classification	0	0	0	6.8	5.8	10.8	21.7
miles recreation classification	0	0	0	0	0	1.5	0
Sheyenne River							
miles wild classification	0	0	0	0	0	0	0
miles scenic classification	0	0	0	0	0	0	0
miles recreation classification	0	0	0	0	0	0	10.2
Special Interest Areas (number and acres)	0	0	9 1,770	16 6,390	17 6,420	14 5,930	13 4,640
Research Natural Areas (number and acres)	3 840	3 840	3 840	12 20,410	11 20.500	13 23,190	7 1,900

Nebraska National Forest Units

For the following table, acres are rounded to nearest 10. Acres for Alternative 3a are the same as Alternative DEIS 3 unless shown otherwise a shown in italic (these are not additive). Acres in parentheses are concurrent management area acres, meaning they overlap other management area acres.

Table 8. Management Area Acres by Alternative for Nebraska National Forest Units.

Management Area	Alt 1	Alt 2	DEIS Alt 3 *Alt 3a*	FEIS Alt 3	Alt 4	Alt 5
Category 1						
1.1 Wilderness: Soldier Creek	7,810	7,810	7,810	7,810	7,810	7,810
1.2 Recommended for Wilderness	0	0	15,970 *0*	40,450	174,970	9,700
1.31 Backcountry Recreation Nonmotorized	0	9,700	14,000	13,860	1,830	126,660
1.31a Backcountry Recreation Nonmotorized: Pine Ridge Recreation Area	6,540	6,540	6,540	6,540	6,540	6,540
TOTALS	**14,350**	**24,050**	**44,320**	**68,660**	**191,850**	**150,720**
Category 2						
2.1 Special Interest Areas	70	1,060	54,490 *103,030*	26,870	2,820	55,190
2.2 Research Natural Areas	500	3,090	6,740 *1,560*	6,800	5,270 (4,060)	4,120
TOTALS	**570**	**4,150**	**61,230** ***104,590***	**33,670**	**8,090**	**59,310**
Category 3						
3.4 National River System: Scenic Rivers Recommended	0	0	0	0	1,790 (40)	0
3.51 Bighorn Sheep	0	0	6,590	5,650	5,950	5,950
3.63 Black-footed Ferret Reintroduction Habitat	8,050	61,510	109,140 *83,870*	104,030	109,930 (11,450)	86,780
3.64 Special Plant and Wildlife Habitat	54,340	16,640	107,290 *6,850*	104,840	15,580	20,140
3.66 Ecosystem Restoration	0	0	0	0	22,410	0
TOTALS	**62,390**	**78,150**	**223,020** ***90,720***	**214,520**	**155,200**	**112,870**
Category 4						
4.32 Dispersed Recreation: High Use	1,110	1,110	6,350 *5,250*	6,520	1,110	11,550
4.4 National River System: Recreation Rivers Recommended	0	0	0	0	140	1,790
TOTALS	**1,110**	**1,110**	**6,350** ***5,250***	**6,520**	**1,250**	**13,340**
Category 5						
5.12 General Forest and Rangelands: Range Vegetation Emphasis	0	22,410	27,000	27,940	27,000	0

Management Area	Alt 1	Alt 2	DEIS Alt 3 *Alt 3a*	FEIS Alt 3	Alt 4	Alt 5
5.13 Forest Products	0	31,990	0	0	0	0
TOTALS	**0**	**54,400**	**27,000**	**27,940**	**27,000**	**0**
Category 6						
6.1 Rangeland with Broad Resource Emphasis	977,180	891,380	691,300 *673,790*	701,750	670,130	716,980
TOTALS	**977,180**	**891,380**	**691,300** ***673,790***	**701,750**	**670,130**	**716,980**
Category 7						
7.1 Residential/Forest Intermix	0	2,600	2,610	2,610	2,610	2,610
TOTALS	**0**	**2,600**	**2,610**	**2,610**	**2,610**	**2,610**
Category 8						
8.3 Designated Utility Corridors: Existing and Potential	240	0	0	0	0	0
8.4 Mineral Production and Development	0	0	0	0	0	0
8.5 Nursery	80	70	70	70	20	70
8.6 Administrative Sites	390	230	230	230	190	230
TOTALS	**710**	**300**	**300**	**300**	**210**	**300**

Table 9. Comparison of Alternatives by Major Revision Topic for Nebraska National Forest Units.

Revision Topic/Key Indicators	Existing Condition	Alt 1	Alt 2	DEIS Alt 3 *Alt3a*	FEIS Alt 3	Alt 4	Alt 5
Community/Lifestyle Relationships							
Range-fed livestock grazing on NFS & Intermingled lands (percent change from Existing Condition)		-18%	-9%	-8%/ -9%	-18%/ -18%	-31%	-27%
direct and indirect jobs (number)	487	402	442	448 / 445	401 / 401	336	356
direct and indirect income (millions of 1997 $)	$7.9	$6.5	$7.2	$7.2 / $7.2	$6.5 / $6.5	$5.4	$5.7
Oil/gas activities on NFS lands (percent change from Existing Condition)	0%	0%	2%	2%	2%	2%	2%
direct and indirect jobs (number)	85	85	87	87	87	87	87
direct and indirect income (millions of 1997 $)	$2.3	$2.3	$2.4	$2.4	$2.4	$2.4	$2.4
Effects on major use/interest segments	See social effects section in Chapter 3.						
Livestock Grazing							
Acres suitable rangeland	1,000,013	967,850	969,190	1,005,550 *1,005,550*	969,860 *967,300*	969,060	967,480
Estimated AUMs of livestock grazing	363,885	301,271	333,120	333,800 *332,200*	301,064 *300,845*	247,673	263,450

Revision Topic/Key Indicators	Existing Condition	Alt 1	Alt 2	DEIS Alt 3 *Alt3a*	FEIS Alt 3	Alt 4	Alt 5
Thousands lbs. forage available to livestock	283,835	234,990	259,870	260,360 *259,110*	234,830	193,488	205,488
Acres average pasture size	500 – 1,170	NA	500 - 1,170	620 - 1,170	variable	680 - 1,290	680 - 1,290
Average # water developments / sq. mile	1.5 – 3.6	1 - 3	1 - 2.4	0.5 - 3.7	1.6 – 3.7	0.3 - 3.3	1 - 3.7
Oil and Gas							
Acres with existing leasing decisions	246,850	246,850	246,850	246,850	246,850	246,850	246,850
Acres available for leasing	246,850	246,850	246,850	246,850	246,850	246,850	246,850
Available with stipulations (some acres have more than one type of stipulation)	43,020	43,020	246,850	246,850	246,850	246,850	246,850
Not currently authorized for leasing	14,360	14,360	0	0	0	0	0
No Surface Occupancy (NSO)	21,720	21,720	6,600	6,600	6,600	19,610	19,170
Controlled Surface Use (CSU)	9,440	9,440	7,620	47,450	48,360	8,130	73,040
Paleontology CSU	0	0	232,640	192,820	191,910	219,100	154,630
Timing Limitation (TL:)	11,540	11,540	42,420	26,070	42,430	26,060	41,030
Standard Lease Terms Only	189,470	189,470	0	0	0	0	0
Plant and Animal Control							
Acres prairie dog poisoning	Variable	No change	Increase	Decrease	Minimal poisoning	No poisoning	Decrease
Reduction in noxious weeds and invasive plants	Contain or reduce	No change	Reduce by 15%	Contain or reduce	Contain or reduce	Reduce by 15%	Contain or reduce
Rangeland and Forest Health							
Predicted habitat suitability for management indicator species							
plains sharp-tailed grouse	1-55%	15-55%	10-35%	10-50%	10-55%	30-80%	25-80%
greater prairie chicken	1-25%	30-55%	10-35%	40-50%	35-55%	45-80%	45-80%
sage grouse	Evaluation Incomplete	20-30%	10-20%	Maintain or increase	20-30%	45-55%	25-35%
black-tailed prairie dog (predicted total colony acreage)	6,400 to 7,850	6,400 to 7,850	$\leq$ 6,400	20,900 to 50,200	24,700 to 40,200	24,700 to 40,200	22,500 to 36,600
pygmy nuthatch	Not estimated	Not specified	10%	Not specified	10%	10%	10%
Endangered Species Act species, candidate species, other species at risk	See Biological Assessment and Evaluation						
Black-footed ferret areas (number and acres)	1 8,050	1 8,050	1 61,510	2 109,140	2 104,000	2 120,920	2 86,780
Desired grass / shrub structure (midpoint)							
percent low	Unknown	18	27	23	17	16	19
percent moderate	Unknown	64	56	42	50	37	39
percent high	Unknown	18	17	35	33	47	42

Revision Topic/Key Indicators	Existing Condition	Alt 1	Alt 2	DEIS Alt 3 *Alt3a*	FEIS Alt 3	Alt 4	Alt 5
Desired grass/shrub composition							
percent early seral stage	13	10-15	20	10-15	9	10	10-15
percent early intermediate seral stage	22	NA	NA	NA	16	NA	NA
percent late intermediate seral stage	57	NA	NA	NA	46	NA	NA
percent late seral stage	8	NA	NA	NA	29	NA	NA
percent mid/late seral stage	NA	85-90	80	85-90	NA	90	85-90
Forest structure							
percent late successional	0	0	10	20-30	20	90	30-40
Percent riparian/woody draw regeneration	40	40	80	80	80	80	80
Acres/decade tree plantations maintained on Bessey Ranger District	NA	NA	Based on need	20,000	20,000	0	12,000 to 15,000
Percent rest	2	2	>1	5	6	13	11
Percent suitable rangeland bison-only grazing	0	0	0	0	0	5	0
Acres prescribed burning	500	0	0	1,800	1,750	9,000	3,500
Recreation and Travel Management							
Scenic Integrity Levels							
very low	900	0	0	0	0	0	0
low acres	907,660	945,000	926750	784,290	785,520	773,210	326,540
moderate acres	27,100	55,320	60,330	112,250	111,750	58,860	472,720
high acres	65,720	1,060	14,100	104,820	104,080	169,290	201,340
Recreation Opportunity Spectrum Classes							
urban acres	240	320	310	310	310	260	310
rural acres	59280	92540	59210	59210	59210	58380	58150
roaded natural acres	625820	626350	633650	617860	603160	577580	597470
roaded natural nonmotorized acres	0	31130	3090	4300	4240	5310	4120
semi-primitive motorized acres	337180	291060	315820	309430	303400	235600	238220
semi-primitive nonmotorized acres	33380	14490	43820	64780	85570	178730	157610
Capacity of developed sites/clusters of dispersed sites (persons at one time)	2,280	2,280	2,280	2,360	2,360	2,280	2,360
Trails miles	120	120	120	150 - 160	150 - 160	120	170
Dispersed Recreation							
change in fishing opportunity	No change	No change	No Change	No change	No change	No change	Add 1
change in quality deer habitat	No change	No change	++	++	++	++	++
change in quality upland bird habitat	No change	No change	No change	++	++	+++	+++

Revision Topic/Key Indicators	Existing Condition	Alt 1	Alt 2	DEIS Alt 3 *Alt3a*	FEIS Alt 3	Alt 4	Alt 5
acres prairie dog colonies closed to shooting yearlong	All ferret habitat on Buffalo Gap NG	All ferret habitat on Buffalo Gap NG	All ferret habitat on Buffalo Gap NG	All ferret habitat on Buffalo Gap NG	All ferret habitat on Buffalo Gap NG	All NFS lands	All ferret habitat on Buffalo Gap NG
Acres allowing off-road motorized travel	855,330	868,560	895,460	5,200	5,410	0	10,400
Acres where no motorized use is allowed (except administrative use)	55,793	17,820	18,820	81,060	77,770	214,020	180,910
Acres with seasonal motorized travel restrictions (except administrative use)	144,880	139,980	139,980	0	35,280	0	0
Acres with designated routes for motorized travel	0	30,900	3,000	971,000	937,540	843,240	865,950
Miles expected designated routes (does not restrict snowmobile use)	NA	NA	NA	1,450 to 3,040 *980 to 2,100*	1,450 to 3,040 *980 to 2,100*	1,264 to 1,977	1,970 to 2,710
Expected designated routes per sq. mile)	NA	NA	NA	0.5 to 2.0 *NA*	0.5 to 2.0 *NA*	0.5 to 1.75	1.5 to 2.0
Special Area Designations							
Recommended for Wilderness (number of areas and acres)	0	0	0	1 15,970 *0*	1 40,450	1 174,970	1 9,700
Recommended Wild / Scenic rivers							
Cheyenne River							
miles wild classification	0	0	0	0	0	0	0
miles scenic classification	0	0	0	0	0	8.6	0
miles recreation classification	0	0	0	0	0	0	8.6
Rapid Creek							
miles wild classification	0	0	0	0	0	0	0
miles scenic classification	0	0	0	0	0	1.7	0
miles recreation classification	0	0	0	0	0	0	1.7
Middle Loup River							
miles wild classification	0	0	0	0	0	0	0
miles scenic classification	0	0	0	0	0	0	0
miles recreation classification	0	0	0	0	0	0.5	0
Special Interest Areas (number of areas and acres)	2 70	2 70	8 1,060	15 54,490 *17* *105,256*	14 26,870	12 2,820	18 55,190
Research Natural Areas (number of areas and acres)	1 500	1 500	3 3,090	6 8,300	6 6,800	9 9,330	4 4,120

Thunder Basin National Grassland

For the following table, acres are rounded to nearest 10. Acres in parentheses are concurrent management area acres, meaning they overlap other management area acres.

Table 10. Management Area Acres by Alternative for Thunder Basin National Grassland

Management Area	Alt 1	Alt 2	DEIS Alt 3	FEIS Alt 3	Alt 4	Alt 5
Category 1						
1.2 Recommended for Wilderness	0	0	14,850	0	59,280	15,260
1.31 Backcountry Recreation Nonmotorized	0	0	6,540	6,550	4,200	22,710
TOTALS	**0**	**0**	**21,390**	**6,550**	**63,480**	**37,970**
Category 2						
2.1 Special Interest Areas	0	6,590	12,570	26,780	6,590	6,590
2.2 Research Natural Areas	0	0	1,210	1,210	3,520	0
TOTALS	**0**	**6,590**	**13,780**	**27,990**	**10,110**	**6,590**
Category 3						
3.63 Black-footed Ferret Reintroduction Habitat	33,750	41,230	45,470 (5,920)	47,890	112,510 (16,550)	27,850 (13,380)
3.65 Rangelands with Diverse, Natural-appearing Landscapes	0	0	116,560	83,430	17,920	0
3.68 Big Game Range	4,270	0	33,890	33,890	0	0
TOTALS	**38,020**	**41,230**	**195,930**	**165,210**	**130,430**	**27,850**
Category 4						
4.22 Scenic Area, Vistas or Travel Corridors	0	0	0	0	0	6,030
4.32 Dispersed Recreation: High Use	0	1,930	25,780	25,780	1,930	0
TOTALS	**0**	**1,930**	**25,780**	**25,780**	**1,930**	**6,030**
Category 5						
5.12 General Forest and Rangelands: Range Vegetation Emphasis	0	253,550	129,480	160,870	89,630	0
TOTALS	**0**	**253,550**	**129,480**	**160,870**	**89,630**	**0**
Category 6						
6.1 Rangeland with Broad Resource Emphasis	514,470	199,850	118,130	118,090	212,840	424,690
TOTALS	**514,470**	**199,850**	**118,130**	**118,090**	**212,840**	**424,690**
Category 8						
8.4 Mineral Production and Development	0	49,350	47,990	47,990	44,060	49,350
TOTALS	**0**	**49,350**	**47,990**	**47,990**	**44,060**	**49,350**

Table 11. Comparison of Alternatives by Major Revision Topic for Thunder Basin National Grassland

Revision Topic/Key Indicators	Existing Condition	Alt 1	Alt 2	DEIS Alt 3	FEIS Alt 3	Alt 4	Alt 5
Community/Lifestyle Relationships							
Range-fed livestock grazing on NFS & Intermingled lands (Percent change from Existing Condition)		13%	13%	7%	2%	-10%	5%
direct and indirect jobs	291	329	327	311	298	261	304
direct and indirect income (millions of 1997 $)	$6.2	$7.0	$6.9	$6.6	$6.3	$5.5	$6.4
Oil and gas activities on NFS lands (Percent Change From Existing Condition)	0%	0%	0%	0%	0%	-1%	0%
direct and indirect jobs	664	664	664	664	664	660	664
direct and indirect income (millions of 1997 $)	$24.4	$24.4	$24.4	$24.4	$24.4	$24.2	$24.4
Effects on major use/interest segments	See social effects section in Chapter 3.						
Livestock Grazing							
Acres suitable rangeland	572,518	532,100	532,100	532,100	532,060	531,060	532,100
Estimated AUMs of livestock grazing	112,700	127,530	126,940	120,700	115,430	101,340	117,840
M pounds of forage available to livestock	87,900	99,470	99,010	94,150	88,140	79,040	91,910
Average pasture size in acres	1,640	NA	1,640	1,720	variable	1,720	1,720
Average # water developments/sq. mile	2.1	NA	NA	1.9	variable	1.9	2.1
Oil and Gas							
Acres with existing leasing decisions	1,158,760	1,158,760	1,158,760	1,158,760	1,158,760	1,158,760	1,158,760
Not currently authorized for leasing	0	0	0	0	246,850	0	0
acres available for leasing	1,158,760	1,158,760	1,158,760	1,158,760	911,910	1,158,760	1,158,760
Available with stipulations (some acres have more than one type of stipulation)	205,740	205,740	1,158,760	1,158,760	911,910	1,158,760	1,158,760
No Surface Occupancy (NSO)	7,580	7,580	130,940	152,570	120,340	190,360	162,180
Controlled Surface Use (CSU)	106,470	106,470	92,580	144,540	143,810	112,240	182,970
Paleontology CSU	0	0	928,600	855,220	641,260	839,532	807,020
Timing Limitation (TL)	110,270	110,270	278,490	308,750	245,760	308,130	266,180
Standard Lease Terms Only	953,020	953,020	0	0	0	0	0

Revision Topic/Key Indicators	Existing Condition	Alt 1	Alt 2	DEIS Alt 3	FEIS Alt 3	Alt 4	Alt 5
Plant and Animal Control							
Acres of prairie dog poisoning	Variable	No change	Increase	Decrease	Minimal poisoning	None	Decrease
Reduction in noxious weeds and invasive plants	Contain or reduce	No change	Reduce by 15%	Contain or reduce	Contain or reduce	Reduce by 15%	Contain or reduce
Rangeland and Forest Health							
Predicted habitat suitability (where applicable) for management indicator species							
plains sharp-tailed grouse	Unknown	10-20%	10-20%	5-15%	30-40%	25-35%	15-25%
sage grouse	Evaluation Incomplete	10-20%	10-20%	Maintain or increase	30-40%	25-35%	15-25%
black-tailed prairie dog (predicted total colony acreage)	≥ 5,400	≥5,400	≤5,400	23,300 to 59,700	29,900 to 47,500	29,900 to 47,500	25,100 to 39,900
Endangered Species Act species, candidate species, other species at risk	See Biological Assessment and Evaluation						
Black-footed ferret reintroduction areas (numbers and acres)	1 33,750	1 33,750	1 41,230	1 51,400	1 53,830	1 129,060	1 41,230
Desired grass/shrub structure (midpoint)							
percent low	Unknown	25	29	22	23	25	21
percent moderate	Unknown	57	55	49	43	37	57
percent high	Unknown	18	16	29	34	38	22
Desired grass/shrub composition							
percent early seral stage	37	10-15	20	10-15	18	10	10-15
percent early intermediate seral stage	17	NA	NA	NA	32	NA	NA
percent late intermediate seral stage	45	NA	NA	NA	33	NA	NA
percent late seral stage	1	NA	NA	NA	17	NA	NA
percent mid/late seral stage	NA	85-90	80	85-90	NA	90	85-90
Forest structure							
percent late successional	0	0	10	20-30	10	90	30-40
Percent riparian/woody draw regeneration	27	27	80	80	80	80	80
Percent rest	0	0	0	5	10	10	5
Percent suitable rangeland bison-only grazing	0	0	0	0	0	5	0
Acres prescribed burning	400	400	1,000	500	variable	4,500	2,000
Recreation and Travel Management							
Scenic Integrity Levels							
very low	3,880	0	0	0	0	0	0
low acres	53,120	550,960	490,670	432,150	432,110	451,040	413,090
moderate acres	495,490	1,530	55,230	85,840	85,840	28,530	95,520
high acres	0	0	6,590	34,490	34,530	72,910	43,890

Revision Topic/Key Indicators	Existing Condition	Alt 1	Alt 2	DEIS Alt 3	FEIS Alt 3	Alt 4	Alt 5
Recreation Opportunity Spectrum							
urban acres	13,250	13,250	49,780	48,130	48,130	44,680	49,790
rural acres	69,530	69,530	51,190	41,200	41,200	51,260	51,850
roaded natural acres	442,620	442,620	424,430	418,940	418,940	388,100	391,680
roaded natural nonmotorized acres	0	0	0	1,210	15,380	3,520	0
semi-primitive motorized acres	27,090	27,090	27,090	22,290	22,290	2,140	21,870
semi-primitive nonmotorized acres	0	0	0	20,720	6,550	62,800	37,300
Capacity of developed sites / clusters of dispersed sites (persons at one time)	5	5	5	80	80	5	200
Trail miles	0	0	0	Add some trails	Add some trails	0	100
Dispersed Recreation							
change in fishing opportunity	No change	No change	No change	No change	No change	No change	No change
change in quality deer habitat	No change	No change	++++	++++	++++	++++	++++
change in quality upland bird habitat	No change	No change	No change	+	+	++	+
acres prairie dog colonies closed to shooting yearlong	0	0	All ferret habitat	All ferret habitat	All ferret habitat	All NFS lands	All ferret habitat
Acres allowing off-road motorized travel	552,510	552,510	552,510	0	0	0	0
Acres where no motorized use is allowed (except administrative use)	0	0	0	22,600	28,560	65,500	38,000
Acres with seasonal restrictions (except administrative use)	0	0	0	39,800	39,880	0	0
Acres with designated routes for motorized travel	0	0	0	495,100	484,070	492,000	519,500
Expected designated routes per sq. mile	NA	NA	NA	1.0 - 2.0	1.0 - 2.0	1.0 - 1.5	1.5 - 2.0
Expected miles of designated routes	NA	NA	NA	970 to 1,550	970 to 1,550	960 to 1,150	1,220 to 1,620
Special Area Designations							
Recommended for Wilderness (number and acres)	0 0	0 0	0 0	1 14,850	0 0	6 59,280	1 15,260
Special Interest Areas (number and acres)	0 0	0 0	3 6,590	4 12,570	6 26,780	3 6,590	3 6,590
Research Natural Areas (number and acres)	0 0	0 0	0 0	2 1,230	2 1,220	4 2,880	0 0

Where We Go From Here

The congressional delegations of North Dakota and Wyoming requested a six –month public review and comment period following the release of the FEIS and Revised Plans. The Forest Service has honored that request. A Notice of Availability (NOA) of this comment period will be published in the Federal Register, accompanied by press releases in local and regional newspapers, near the middle of June. The comment period will end 180 days from the date the NOA is published.

Document Availability

The FEIS, Appendices, all maps, and the three Management Plans are available for no charge on the internet at www.fs.fed.us/ngp.

They are also available on compact disc at no charge. Call or write: Nebraska National Forest, 125 North Main St., Chadron, NE 69337-2118. Ph. (308) 432-0300.

Hardcopies of the documents are available for purchase from:

Mail Orders: Superintendent of Documents, PO Box 371954, Pittsburgh, PA, 15250-7954

Phone Orders: (202) 512-1800

Fax Orders: (202) 512-2250

You may purchase any of the three management plans individually. Each will include a map. You may also purchase the FEIS, all appendices, and the 15 alternative maps as one item.

Prices:	Management Plans (each)	$33.00
	FEIS Package (each)	$83.00

Prices include shipping.