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CHAPTER 1 GRASSLAND-WIDE AND FOREST-WIDE DIRECTION

INTRODUCTION

This chapter contains direction that applies across all Nebraska National Forest units (NNF). Its direction includes Regional goals, and NNF goals, objectives, standards and guidelines. Additional direction can be found in other chapters and appendices, which reference national goals, policies, statutes, regulations, and agreements.

GOALS AND OBJECTIVES

Land and resource management direction consists of goals, objectives and management requirements (standards and guidelines) for the national grasslands and national forests. Goals and objectives provide broad, overall direction regarding the type and amount of goods and services the national grasslands and national forests provide and focus on achieving ecosystem health and ecological integrity. Management requirements set minimum standards that must be met or exceeded while achieving the goals and objectives. Administrative requirements also establish broad multiple-use management direction and generally apply to all areas of the national grasslands and national forests.

Goals are concise statements that describe desired conditions, and are expected to be achieved sometime in the future. They are generally timeless and difficult to measure. Goals describe the ends to be achieved, rather than the means of doing so.

Objectives are concise, time-specific statements of measurable planned steps taken to accomplish a goal. They are generally achieved by implementing a project or activity. However, objectives are not targets. Targets are dependent upon budgets, which may or may not reflect management plan emphasis areas.

The reader will note that some resources, management programs or responsibilities are only briefly mentioned or not mentioned at all in this chapter. Chapter 2 contains additional direction for the grassland and forest units. Forest Service personnel will strive to plan and implement projects that contribute to achieving the goals and objectives in a manner consistent with standards and guidelines and applicable legal requirements.

Many variables affect the achievement of goals and objectives. There are numerous legal mandates, congressional intent as directed by annual budgets, and political issues over which the national grasslands and national forests have little or no control. Given this situation, the USDA Forest Service leadership will determine what mix of activities is most appropriate in any given year and use every opportunity to move toward the overall management intent prescribed by the goals and objectives.

The goals and objectives presented here are tiered to the USDA Forest Service Government Performance and Results Act Strategic Plan: 2000 Revision. This strategic plan presents the goals, objectives and activities that reflect the Forest Service's commitment to a sustainable natural resource base for the American people. All goals and objectives fall under the overall mission of the Forest Service, which is to sustain the health, productivity and diversity of the

land to meet the needs of present and future generations. "Caring for the Land and Serving People" expresses the spirit of this mission. Implicit in this statement is the agency's collaboration with people as partners in caring for the nation's forests and rangelands.

The Forest Service's mission, and strategic goals and objectives are derived from the laws defining and regulating the agency's activities. Goals and objectives describe tangible progress toward achieving the agency's mission through implementing land and resource management plans. These plans guide on-the-ground natural resource management to ensure sustainable ecosystems and to provide multiple benefits. The Forest Service is committed to achieving the following goals and objectives:

Goal 1: Ensure Sustainable Ecosystems

Promote ecosystem health and conservation using a collaborative approach to sustain the Nation's forests, grasslands and watersheds.

Goal 1.a: Improve and protect watershed conditions to provide the water quality and quantity and soil productivity necessary to support ecological functions and intended beneficial water uses.

Objectives:

1. Within 10 years, meet the following objectives:

- Improve 20 percent of 6th Hydrologic Unit Code (sub-watershed) level watersheds from Class II to Class I, or from Class III to Class II. Maintenance of unimpaired watersheds and restoration of impaired watershed are high priorities. Utilize criteria of geomorphic integrity, water quality integrity, biotic information, watershed vulnerability and potential partnerships to prioritize watershed improvement projects.
- Achieve a 20 percent reduction in acres of eroded or disturbed soils by Forest Service permitted or management actions.
- Achieve a 20 percent reduction in the amount of degraded water bodies, such as dam impoundments by Forest Service permitted or management actions.

2. Implement management practices that will move at least 80 percent of riparian areas and woody draws toward self-perpetuating tree and shrub regeneration within site capability.

3. At least 80% of the perennial streams will meet or move toward Proper Functioning Condition (PFC).

4. Within 15 years, identify, maintain, and/or improve stream flows for at least 10 percent of stream segments having high resource values within watersheds.

5. Throughout the life of the Plan, ensure proper plugging of abandoned wells (i.e., seismograph holes, water wells, etc.) to prevent cross contamination of aquifers.

Goal 1.b: Provide ecological conditions to sustain viable populations of native and desired non-native species and to achieve objectives for Management Indicator Species (MIS).

Objectives:

1. As scientific information becomes available, jointly develop with the US Fish and Wildlife Service and other agencies conservation and recovery strategies for plant and animal species, listed as threatened or endangered under the Endangered Species Act, and implement established conservation or recovery strategies over the life of the Plan.

2. Within 15 years, demonstrate positive trends in population viability, habitat availability, habitat quality, population distribution throughout the species range within the planning area, and other factors affecting threatened, endangered, sensitive species and MIS.

3. Develop and implement conservation strategies for Forest Service sensitive species, as technical information becomes available.

4. Within 15 years, conserve populations of species at risk and rare communities by demonstrating positive trends in habitat availability and quality, or any other applicable factors affecting species at risk.

5. Identify rare plant and animal communities, inventory them and develop associated management strategies to conserve them. Support the development and implementation of State and Regional Conservation Plans as they apply to the grassland or forest units.

6. Within 10 years, provide sufficient habitat for Management Indicator Species to reduce adverse impacts on populations during droughts.

7. Establish scientifically credible monitoring programs, develop survey methods and initiate baseline and trend surveys for populations, habitats and/or ecological conditions to contribute to viability of threatened and endangered species, species at risk, and MIS.

8. Complete and initiate implementation of conservations strategies for globally rare plant species (G2-3 rankings) including Dakota buckwheat and Barr's milkvetch and other high priority species in cooperation with other conservation agencies and organizations.

9. Conduct target surveys for globally rare plant species (Barr’s milkvetch, Dakota buckwheat, smooth goosefoot, Ute ladies’ tresses) and other rare plant species with viability concerns.

Goal 1.c: Increase the amount of forests and grasslands restored to or maintained in a healthy condition with reduced risk and damage from fires, insects and diseases, and invasive species.

Objectives:

1. Within 10 years, implement management practices, including prescribed fire that will move all affected landscapes toward desired vegetation composition and structure as described in Geographic Area direction.

2. Over the next 15 years, retain only those range structures (fences and water developments) that achieve resource management (i.e., wildlife habitat, botanical, range management, visual quality, and recreation) goals and objectives.

3. Within 5 years, develop and implement cooperative noxious weeds and undesirable non-native or invasive species management plans in consultation with appropriate partners and agencies.

4. Within 3 years, develop and implement a certified noxious weed-free forage program in consultation with appropriate state agencies.

5. Within 10 years, limit further expansion of areas affected by noxious weeds.

6. Within 10 years, implement an integrated prevention and pest control management program for noxious weeds and undesirable non-native or invasive plant species.

7. Immediately initiate hazardous material cleanup on identified sites.

8. In a timely manner, review Prevention of Significant Deterioration (PSD) permit applications and make recommendations where needed to reduce impacts to those congressionally designated lass I areas specified in the federal Clean Air Act as subject to air quality related values.

Goal 2: Multiple Benefits to People

Provide a variety of uses, values, products, and services for present and future generations by managing within the capability of sustainable ecosystems.

Goal 2.a: Improve the capability of the Nation's forests and grasslands to provide diverse, high-quality outdoor recreation opportunities.

Objectives:

1. Annually maintain or reconstruct 20% of National Grassland and Forest trails to regional standards

2. Over the next 15 years, provide readily available information concerning recreation opportunities for developed, historic, and appropriate cultural sites.

3. Within 5 years, provide appropriate directional signing to key recreation sites and inform people about the public access routes to national grasslands and national forests.

4. Within 10 years, complete site and recreation plans, including rehabilitation and re-vegetation strategies. As demand warrants, increase recreational opportunities where compatible with resource objectives. These opportunities may include trails, campgrounds, and interpretation.

5. Within 5 years, develop and implement a science- and marketing-based interpretive program strategy that uses a variety of communication media. The purpose of the strategy will be to effectively use communication principles and methods based in the field of interpretation to:

- Communicate with target audiences regarding management concerns or issues, changes in management direction, and specific projects
- Enhance visitor's recreation experiences by identifying and implementing interpretive projects that highlight national grassland and forest resources and management.

6. Provide nonmotorized and motorized trails for a wide variety of uses and experiences.

7. Manage trail systems to minimize conflicts among users.

8. When appropriate, authorize special use permits for outfitter-guide services on NFS lands.

9. Through partnerships, encourage, establish, and sustain a diverse range of recreational facilities and services on NFS lands. Encourage outfitters and guides who support interpretive and educational awareness of grassland ecosystems or who provide services to people with disabilities.

10. When appropriate, designate and manage outfitted camp locations.

Goal 2.b: Improve the capability of wilderness and protected areas to sustain a desired range of benefits and values.

Wilderness

Objective

Within 5 years of Congressional designation, develop wilderness plans to emphasize recreational, aesthetic, and educational experiences consistent with values of those areas.

Heritage Sites

Objectives:

1. Within 5 years, develop and implement a heritage inventory strategy and implementation schedule to survey and evaluate sites, in support of management actions and activities as agreed upon with the State Historic Preservation Offices (SHPO), Tribal Historic Preservation Offices (THPO) and to include compliance with laws Sec. 106 and Sec. 110 of the National Historic Preservation Act.

2. Within 5 years, assess identified sites eligible for the National Register of Historic Places (NRHP) in conjunction with SHPO and THPO and provide interpretation for National Register of Historic Places sites where appropriate and consistent with developed preservation plans.

3. Within 3 years, identify and protect traditional cultural properties in consultation with federally recognized American Indian tribes.

4. Within 10 years, update prehistoric, ethnographic, and historic overviews.

5. In partnership with American Indian tribes and/or others, educate and interpret to increase public awareness, protect heritage resources, and further the goals of research.

Special Areas

Objective:

Within 5 years, develop and implement a management and monitoring plan for each Research Natural Area.

2.c: Improve the capability of the Nation's forests and grasslands to provide a desired sustainable level of uses, values, products, and services.

Livestock Grazing

Objectives:

1. Annually, provide forage for livestock on suitable rangelands. Annual grazing levels will be adjusted, as needed, during periods of drought or for other conditions.

2. As needed, revise allotment management plans (AMP) to meet desired vegetative conditions described in Geographic Area and to implement all appropriate management plan direction.

Geologic and Paleontologic Resources

Objectives:

1. Within 15 years, inventory and evaluate 20 percent of high potential paleontological formations.

2. Within 15 years, develop and implement conservation plans for significant geological and paleontological sites.

3. Within 15 years, provide interpretation for at least 20 percent of important geological and paleontological sites, consistent with the conservation plans.

Mineral and Energy Resources

Objectives:

1. Ensure reclamation provisions of operating plans are completed to standard.

2. Honor all valid existing legal mineral rights.

Miscellaneous Products

Objective:

Provide appropriate opportunities to satisfy demand for miscellaneous products (special forest and grassland products, such as mushrooms, floral products and medicinal plants) through environmentally responsible harvest and collection methods on National Forest System Lands.

Scenery

Objective:

Implement practices that will meet, or move the landscape character toward scenic integrity objectives, as described in Geographic Area direction.

Special Uses

Objective:

Ensure all special use permittees are meeting requirements for customer service and are in compliance with the terms of their permits or contracts.

Wildlife, Fish, and Plant Use

Objectives:

1. Within 10 years, identify, manage, develop, and interpret appropriate watchable wildlife and plant viewing sites.

2. Within 10 years, support native and desirable non-native plant, fish, and wildlife populations by meeting or making measurable progress towards desired vegetative composition and structure, as described in Geographic Area direction.

Goal 3: Scientific and Technical Assistance

Develop and use the best scientific information available to deliver technical and community assistance and to support ecological, economic, and social sustainability.

3.a: Improve the knowledge base provided through research, inventory, and monitoring to enhance scientific understanding of ecosystems, including humans, to support decision-making and sustainable management of the Nation's forests and grasslands.

Objectives:

1. Implement inventory and monitoring systems to provide scientific information and decision support across all land ownerships.

2. Provide research results and tools through technology transfer to support effective management, and restoration of ecosystems and sustainability of natural resources.

3. Assess potential habitat capability at the local level for management indicator species by identifying existing or establishing new reference areas and implementing long-term monitoring. Some reference areas will need to be managed for multiple-year accumulation of vegetation and litter for those management indicator species of high structure grasslands and sagebrush habitats.

4. Assess the potential impacts of the construction of impoundments in upper watersheds on hydrologic flows and patterns on downstream habitat on the sturgeon chub and other sensitive native fish species.

5. Assess the condition of watersheds containing aquatic habitats of sensitive fish species that are found primarily in clear-water streams and rivers.

Goal 4: Effective Public Service

Ensure the acquisition and use of an appropriate corporate infrastructure to enable the efficient delivery of a variety of uses.

4.a: Improve the safety and economy of the USDA Forest Service roads, trails, facilities, and operations and provide greater security for the public and employees

Objectives:

1. Within 5 years, identify travel opportunities and restrictions, including designating motorized travelways and areas, to meet land management objectives. Provide reasonable access for use of the national grasslands and national forests.

2. Within 5 years, provide site-specific maps and information showing closures, restrictions, and opportunities for motorized and nonmotorized use using a science-based Roads Analysis process.

3. Within 5 years, identify the minimum Forest Service road system for administration, utilization, and protection of National Forest system lands and resources, while providing safe and efficient travel and minimizing adverse environmental effects.

4. Annually maintain at least 8 percent of the forest development transportation system roads.

5. Within 15 years, complete at least 10% of high priority facility reconstruction projects

6. Annually maintain at least 10% of buildings and other facilities to standards and code. Annually maintain all buildings to safety & health standards.

7. Where appropriate, encourage and authorize recreation opportunities for people with disabilities.

4.b: Provide appropriate access to NFS lands and USDA Forest Service programs

Land Ownership and Access

Objectives:

1. Within 3 years, develop and implement approved land ownership adjustment plan in response to resource management and public needs. The plan shall be coordinated, reviewed, and updated annually.

2. Within 3 years, develop and implement a 5-year Rights-of-Way Acquisition Program in response to resource management programs and access needs. This 5-year plan will be coordinated, reviewed, and updated annually.

3. Identify opportunities for partnerships to provide new recreational fisheries and/or waterfowl and wetlands habitat.

Unauthorized Uses

Objective:

Take appropriate law enforcement or administrative actions on all unauthorized uses.

Public and Organizational Relations

Objectives:

1. Provide opportunities for federally recognized American Indian tribes to participate in planning and management of the national grasslands and national forests, especially where tribes have claimed special geographic, historical, or cultural interest.

2. Work in cooperation with federal, state, and county agencies, individuals, Indian tribes, and non-government organizations for control of noxious weeds and invasive species and animal damage.

3. Create and foster partnerships with other agencies, accredited educational and research institutions, tribal colleges, and other appropriate public and private sector organizations to further the goals of research, education, protection, and interpretation.

4. Cooperate with the appropriate state and federal agencies in balancing desired wildlife and fish population objectives with desired habitat conditions.

STANDARDS AND GUIDELINES

This direction applies across the Nebraska National Forest units. Additional direction is found in other chapters and appendices, which include more detailed information, or national and regional policies.

Standards are actions that must be followed or are required limits to activities in order to achieve grassland/forest objectives. Site-specific deviations from standards must be analyzed and documented in management plan amendments.

Guidelines are actions that should be followed to achieve Grassland or forest goals and objectives. Deviations from guidelines must be analyzed during project-level analysis and documented in a project decision document, but do not require management plan amendments.

PHYSICAL RESOURCES

A. Air

1. Meet state and federal air quality standards, and comply with local, state, and federal air quality regulations and requirements, either through original project design or through mitigation, for such activities as prescribed fire, mining, and oil and gas exploration and production (see Appendix A). **Standard**

2. Meet requirements of the Prevention of Significant Deterioration (PSD), State Implementation Plans (SIP) and applicable Smoke Management Plans. **Standard**

3. Reduce the impacts to air quality and loss of energy resources by only allowing flaring of gas from oil wells during production testing of wells. Connection to a pipeline or re-injections will be required once production is established. Exceptions will be considered on a case-by-case basis. **Guideline**

4. Partner with local and state government, energy producers, and other appropriate stakeholders to devise dust control plans for unpaved roads. Expedite permitting processes, where necessary, to implement the plans that are developed through this partnership. **Guideline**

(See Geology and Minerals; Lease-able Minerals section to find air standards and guidelines related to mineral operations)

B. Water

1. Manage land treatments to conserve site moisture and to protect long-term stream health from damage by increased runoff. **Standard**

2. Manage land treatments to maintain enough organic ground cover in each land unit to prevent harmful increased runoff (exceptions shall occur in special habitat situations (e.g. prairie dog habitat). **Standard**

3. In the water influence zone next to perennial and intermittent streams, lakes, and wetlands, allow only those actions that maintain or improve long-term health and riparian ecosystem condition. **Standard**

4. Design and construct all stream crossings and other instream structures to provide for passage of flow and sediment, withstand expected flood flows, and allow free movement of resident aquatic life. **Standard**

5. Conduct actions so that stream pattern, geometry, and habitats are maintained or improved toward robust stream health. **Standard**

6. Maintain long-term ground cover, soil structure, water budgets, and flow patterns of wetlands to sustain their ecological function, per 404 regulations. (The 404 regulations are guidelines established by the Environmental Protection Agency. They constitute the substantive environmental criteria used in evaluating activities regulated under Section 404(b)(1) of the Clean Water Act. The full text of these regulations can be found at 40 CFR 230). **Standard**

7. Return and/or maintain sufficient stream flows under appropriate authorities to minimize damage to scenic and aesthetic values, fish, and wildlife habitat, and to otherwise protect the environment. **Standard**

8. Manage water-use facilities to prevent gully erosion of slopes to prevent sediment and bank damage to streams. **Standard**

9. Construct roads and other disturbed sites to minimize sediment discharge into streams, lakes, and wetlands. **Standard**

10. Place chemicals and pathogenic pollutants where such pollutants will not reach surface or ground water. **Standard**

11. Apply runoff controls to disconnect pollutant sources from surface and ground water. **Standard**

12. Apply chemicals using methods described in label instructions that minimize risk of entry to surface and ground water. **Standard**

13. Design activities to protect and manage the riparian ecosystem. Maintain the integrity of the ecosystem including quantity and quality of water. **Standard**

14. Locate facilities away from the water's edge or outside the riparian areas, woody draws, wetlands and floodplains unless alternatives have been assessed and determined to be more environmentally damaging. If necessary to locate facilities in these areas, then:

- Deposit no waste material (silt, sand, gravel, soil, slash, debris, chemical or other material) below high water lines, in riparian areas, in the areas immediately adjacent to riparian areas or in natural drainageways (draws, land surface depressions or other areas where overland flow concentrates and flows directly into streams or lakes).
- Prohibit deposition of soil material in natural drainageways.
- Locate the lower edge of disturbed or deposited soil banks outside the active floodplain.
- Prohibit stockpiling of topsoil or any other disturbed soil in the active floodplain.
- Locate drilling mud pits outside riparian areas, wetlands and floodplains. If location is unavoidable in these areas, seal and dike all pits to prevent leakage.
- Rehabilitate gravel pits if located in riparian zones to simulate a natural riparian/aquatic situation. **Guideline**

15. Do not allow new roads to parallel streams. When road location must occur in riparian areas, unless alternatives have been assessed and determined to be more environmentally damaging, cross streams at right angles. Locate crossings at points of low bank slope and firm surfaces. **Standard**

(See the Geology and Minerals Appendix F for information on siting oil and gas facilities. Also see Water Conservation Practices Handbook, FSH 2509.25, for further information.)

C. Soils

1. Limit roads and other disturbed sites to the minimum feasible number, width, and total length consistent with the purpose of specific operations, local topography and climate. **Standard**

2. Stabilize and maintain roads and other disturbed sites during and after construction to control erosion. **Standard**

3. Reclaim roads and other disturbed sites when use ends, as needed, to prevent resource damage. **Standard**

4. Prohibit soil-disturbing activities (e.g., road construction, well pad construction) on slopes greater than 40 percent and on soils susceptible to mass failure. **Guideline**

(See the Geology and Minerals Appendix F for information on siting oil and gas facilities. Also see Water Conservation Practices Handbook, Forest Service Handbook 2509.25, for further information.)

D. Minerals and Energy Resources

General

1. Require operators to obtain water for mineral operations from private sources, except in the following instances: a) private sources are not available; b) water is available from National Forest System land ponds or wells; and c) such use would conflict with established uses. **Standard**

2. Prohibit rig stacking and storage of equipment not being used. **Standard**

3. Obliterate and rehabilitate special use and single use roads associated with oil and gas lease development within one year from the end of their use period, unless a documented decision is made to keep the road for other management needs. **Guideline**

(See the Invasive Plant Species section for direction regarding revegetation, and the Infrastructure section for direction on facilities. Also see Geology and Minerals Appendix F for further information)

Geophysical Operations

4. Where no suitable mitigation measures are possible, prohibit geophysical (seismic) operations that cause surface disturbance in Research Natural Areas, Special Interest Areas, Administrative Sites and known National Register eligible sites. **Standard**

5. Minimize surface and other resource disturbance from geophysical operations. **Guideline**

6. Do not allow new road construction, unless alternatives have been assessed and determined to be more environmentally damaging. **Guideline**

7. Allow geophysical operations within developed recreation sites; however, restrictions (type, timing, seasonal, or location restrictions) will be applied to avoid conflicts with recreationists, and to maintain the recreational setting of the developed site. **Guideline**

Oil and Gas Operations

8. Honor valid existing legal rights pertaining to the development, production and transport of mineral resources. See Fish, Wildlife, and Rare Plants; Recreation; and Scenery Management sections for additional direction. **Standard**.

9. Promote the use of closed circulation systems. Discourage the use of open reserve pits for oil and gas drilling operations. In cases where the use of pits for drilling operations is justified, analyze and monitor construction and use for minimal potential for leakage and structural failure (including pit solidification). **Guideline**

10. Prohibit the use of production pits. **Standard**

11. Do not allow field offices unless operators demonstrate they are essential to production operations. When need is justified, facilities will be limited in size and design to serve only those purposes necessary. **Guideline**

12. Provide on and off site information warning of the dangers of hydrogen sulfide fumes around developed oil production sites. **Standard**

13. Limit noise levels from oil and gas production facilities within ¼-mile of developed recreation sites to be no more than 70 decibels, as measured by the A-weighted Sound level (dBA) system of measurements, at the edge of the developed site. This standard applies only to constant, routine, day-to-day production noises. It doesn't apply to noise from drilling and testing of production nor temporary noises such as work-over rigs and maintenance or repair tasks. **Standard**

(See the Developed Recreation Sites section for other standards and guidelines that apply to mineral operations)

Energy and Mineral-Related Special Uses

14. Minimize disturbance by co-locating roads, pipelines, gathering lines, and power lines for energy resource development. **Guideline**

15. Authorize commercially produced water disposal wells with a special use permit with appropriate fees for special use. **Guideline**

(See the Special Uses section for other standards and guidelines that shall apply to mineral operations)

E. Paleontological Resources

1. Protect key paleontological resources (Classes 3, 4, and 5 of the Fossil Potential Classification) from disturbance, or mitigate the effects of disturbance, to conserve scientific, interpretive, and legacy values. (See Paleontological Appendix J for details). **Standard**

2. Survey and post federal land boundaries where paleontological sites have Fossil Potential Classification sensitivity rankings of 3, 4 or 5. (See Paleontological Appendix J for details). **Guideline**

3. Prior to ground-disturbing activities, conduct paleontologic surveys in any area where there is a high potential to encounter these resources according to the process outlined in Appendix J. **Standard**

BIOLOGICAL RESOURCES

F. Fish, Wildlife and Rare Plants

General

1. Consult state and regional Partners in Flight Bird Conservation Plans for additional guidance on habitat management for land birds. **Guideline**

2. Modify livestock grazing practices as needed to reduce adverse impacts of drought on food and cover for prairie grouse and other wildlife. **Standard**

3. When installing new livestock water tanks, install durable and effective escape ramps for birds and small mammals. During maintenance of existing tanks, replace ramps that are ineffective or missing. **Standard**

4. Design and build new structures, including fences, to reduce hazards to big game and to allow big game movement throughout the year. (Appendix B) This doesn't include fences designed to specifically exclude wildlife. **Guideline**

5. Do not authorize construction of new woven wire fences and barbed-wire fences with 5 or more strands. This doesn't include fences designed to specifically exclude wildlife. **Guideline**

6. Delay any mowing outside developed sites until July 15 or later to protect ground-nesting birds, including their nests and broods. Project-level analyses will determine the earliest mowing date. **Guideline**

7. Manage vegetation so native forbs periodically complete their full reproductive cycle. **Guideline**

8. Use the following criteria at the project level to help determine where to manage for tall and dense nesting habitat in as large of blocks as possible in upland areas for waterfowl, prairie grouse and other ground-nesting birds:

- Presence of moderate to highly productive soils,
- Dominance of mid to tall grass species,
- Proximity to waterfowl pairing ponds and/or prairie grouse display grounds,
- Proximity to wetlands with well-developed emergent vegetation,
- Proximity to cooperative waterfowl/wetland development projects and other major wetland complexes. **Guideline**

9. Design new water impoundments to provide new recreational fisheries and/or waterfowl and wetlands habitat. **Guideline**

10. During the AMP process or as other opportunities arise, design and implement livestock grazing strategies to provide well-developed emergent vegetation through the growing season on 30 to 50% of the wetlands (natural and constructed) distributed across watersheds and landscapes, contingent on local site potential. **Guideline**

11. During the AMP process or as other opportunities arise, design and implement livestock grazing strategies to provide for thick and brushy understories and multi-layer and multi-age structure in riparian habitats, wooded draws and woody thickets, contingent on local site potential. **Guideline**

12. Provide access for bats and other cave-dependent species when closing mine shafts or caves. **Guideline**

13. Protect all known day roost areas and wintering sites used by bats. **Guideline**

14. A sharp-tailed ground display ground is no longer considered active if it has been unoccupied during the last 2 breeding seasons. **Standard**

15. To help reduce disturbances to breeding and nesting sharp-tailed grouse, do not authorize the following activities within 1.0 mile of active display grounds from March 1 to June 15:

- Construction (e.g., roads, water impoundments, pipelines, utilities, oil and gas facilities, fencing),
- Reclamation,
- Gravel mining operations,
- Seismic exploration,
- Oil and gas drilling,
- Drilling of water wells,
- Permitted recreation events,
- Training of bird hunting dogs. **Guideline**

16. Manage viewing activities on sharp-tailed grouse display grounds to reduce disturbances and adverse impacts to the birds. **Guideline**

17. During the AMP process or as other opportunities arise, design and implement livestock grazing strategies that provide quality nesting and brooding habitat on at least 25% of the grasslands (consistent with vegetation objectives for the geographic area) within 1.0 mile of active sharp-tailed grouse display grounds. Consult Appendix H for a description of quality habitat for sharp-tailed grouse. **Guideline**

Threatened, Endangered and Proposed Species

Black-footed Ferret

18. In prairie dog colonies known or thought to be occupied by black-footed ferrets, limit oil and gas development to one location per 80 acres to help maintain suitable ferret habitat. **Standard**

19. To help provide suitable habitat for black-footed ferrets and their young during the breeding and whelping seasons, prohibit the following activities within 1/8 mile of prairie dog colonies, or those portions of larger colonies, occupied or thought to be occupied by ferrets from March 1 through August 31:

- Construction (e.g., roads, water impoundments, oil and gas facilities),
- Reclamation,
- Gravel mining operations,
- Drilling of water wells,
- Oil and gas drilling. **Standard**

20. To help provide suitable habitat for black-footed ferrets and their young during the breeding and whelping seasons, do not authorize the following activities within 1/8 mile of prairie dog colonies, or those portions of larger colonies, occupied or thought to be occupied by ferrets from March 1 through August 31:

- Construction (e.g., pipelines, utilities, fencing),
- Seismic exploration,
- Permitted recreation events involving large groups of people. **Guideline**

~~21. Any net loss of suitable black-footed ferret habitat as a result of prairie dog poisoning or development of new facilities within colonies shall be replaced within the year. This is based on the amount of suitable habitat available prior to prairie dog dispersal in the year of the poisoning or development.~~ ~~**Standard**~~ (Amendment 2)

22. For routine maintenance, access to oil and gas facilities in prairie dog colonies occupied or thought to be occupied by black-footed ferrets shall be limited to daylight hours. This does not apply to emergency repairs. **Guideline**

Sensitive Plant and Animal Species

23. Do not authorize new facilities, roads, trails, fences, salting and mineral areas, or water developments in habitat occupied by sensitive plant species. **Guideline**

24. During the AMP process or as other opportunities arise, design and implement livestock grazing strategies that allow sensitive plant species to complete their reproductive cycles at a frequency that maintains and enhances their populations. **Standard**

25. Identify sensitive plant habitats and rare plant communities as priorities for invasive plant monitoring and control. **Guideline**.

26. Do not authorize the use of invasive plant control methods that may negatively impact sensitive plant species. **Guideline**

27. As opportunities arise, design timing, intensity and frequency of mowing, burning and livestock grazing to maintain and/or increase populations of sensitive plant species and the health of rare plant communities. **Standard**

28. Do not authorize vegetation management and construction projects that would prevent recolonization of sensitive plant populations from adjacent populations. **Standard**

29. Do not develop any additional springs and seeps where associated habitat for sensitive plant species would be degraded or lost. **Standard**

30. Design vegetation and pest management activities (e.g., prescribed burning, mowing, livestock grazing, or grasshopper spraying) and pesticide application projects in known habitats of sensitive butterfly species to reduce mortality of butterflies and to maintain or enhance nectar and larvae host plant species. **Guideline**

31. Design and construct new facilities to minimize the risk of accidental spills and discharge of petroleum and other toxic materials into waters occupied by sensitive fish species, and implement appropriate precautionary measures. **Guideline**

32. Do not authorize uses that would deplete instream flows below levels needed to protect the aquatic habitats of sturgeon chub and other sensitive native fish species. **Standard**

33. Design and implement vegetation management and construction projects so they do not degrade habitat for plains topminnow and other clear-water stream species by increasing sediment load and turbidity. **Guideline**

Greater Prairie Chicken

34. To help reduce adverse impacts to breeding prairie chicken and their display grounds, prohibit construction of new facilities within 0.25 miles of active display grounds. A display ground is no longer considered active if it's known to have been unoccupied during the last two breeding seasons. This does not apply to pipelines, fences, windmills and underground utilities. **Standard**

35. To help reduce disturbances to breeding and nesting prairie chicken, prohibit the following activities within 1.0 mile of active display grounds from March 1 to June 15:

- Construction (e.g., roads, trails, water impoundments),
- Gravel mining operations,
- Drilling of water wells,
- Training of bird hunting dogs. **Standard**

36. To reduce disturbances to breeding and nesting prairie chicken, do not authorize the following activities within 1.0 mile of active display grounds from March 1 to June 15:

- Construction (e.g., pipelines, utilities, fencing),
- Permitted recreation events. **Guideline**

37. Manage viewing activities on display grounds to reduce disturbances and adverse impacts to the birds. **Guideline**

38. During the AMP process or as other opportunities arise, design and implement livestock grazing strategies that provide quality nesting and brooding habitat on at least 30% of the area within 1.0 mile of active display grounds (consistent with vegetation objectives for the geographic area). Consult Appendix H for a description of quality habitat for greater prairie chicken. **Guideline**

39. Do not plant trees (does not apply to shrubs such as American plum and western chokecherry) in prairie chicken habitat. **Guideline**

Burrowing Owls

40. Do not spray grasshoppers within 0.25 mile of known burrowing owl nests. **Standard**

41. To optimize habitat for burrowing owls, manage for active prairie dog colonies that are larger than 80 acres. **Guideline**

Black-tailed Prairie Dog

~~42. Restrict prairie dog shooting where significant risks have been identified for other wildlife species or where shooting is preventing or slowing a desired prairie dog population expansion. Restrictions shall be year-long or seasonal, and dates of seasonal restrictions shall vary depending on the species at risk. Coordinate and consult with the appropriate wildlife agencies prior to implementation of restrictions. **Guideline**~~ (Amendment 2)

43. Prohibit activities that would alter water flow regimes and flood prairie dog burrows. **Standard**

44. To reduce risks and habitat loss for prairie dogs and other wildlife species closely associated with prairie dog colonies, align new roads outside prairie dog colonies. If it's necessary to place a new road in a prairie dog colony, minimize the amount of road within the colony to the extent that soil, drainage, topographical and other physical factors will allow. **Guideline**

Swift Fox

45. To reduce disturbances to swift fox during the breeding and whelping seasons, prohibit the following activities within 0.25 miles of their dens from March 1 to August 31:

- Construction (e.g., roads, water impoundments, oil and gas facilities),
- Reclamation,
- Gravel mining operations,
- Drilling of water wells,
- Oil and gas drilling. **Standard**

For lands identified in the DM&E final environmental impact statement and only for project decisions on those lands, this standard is waived entirely to allow for construction, installation, and operation of the DM&E Railroad under a construction permit and an authorization. Site-specific direction from the project mitigation plan, where it applies, will be used instead. See Amendment 2003-01 for specific mitigation. (Amendment 1)

46. To reduce disturbances to swift fox during the breeding and whelping seasons, do not authorize the following activities within 0.25 miles of their dens from March 1 to August 31:

- Construction (e.g., pipelines, utilities, fencing),
- Seismic exploration,
- Workover operations for maintenance of oil and gas wells,
- Permitted recreation events involving large groups of people. **Guideline**

47. Prohibit the use of M-44s (sodium cyanide) for predator control in occupied swift fox habitat on National Forest System lands. **Standard**

48. During the AMP process or as other opportunities arise, design and implement livestock grazing strategies that provide a mosaic of low, moderate and high grassland structure in occupied swift fox habitat, consistent with vegetation objectives for the geographic area. **Guideline**

49. Pursuant to the Swift Fox Conservation Strategy, identify population monitoring and habitat inventory methods; identify key habitats on national grasslands and forests; and develop appropriate population and habitat management strategies. **Guideline**

50. Pursuant to the Swift Fox Conservation Strategy, implement management activities for expanding the distribution of swift fox. **Guideline**

Raptors

51. To help prevent abandonment, reproductive failure or nest destruction, prohibit development of new facilities within the minimum distances (line of sight) of active raptor nests and winter roost sites as specified in the following table. For the bald eagle, golden eagle, merlin, ferruginous hawk and Swainson's hawk, a nest is no longer considered active if it's known to have been unoccupied for the last 7 years. For the burrowing owl and other raptor species, a nest is no longer considered active if it's known to have been unoccupied during the current or most recent nesting season. This does not apply to pipelines, fences, and underground utilities. **Standard**

Species and Habitat	Minimum Distance (miles)
Bald Eagle Nest	1.0
Bald Eagle Winter Roost Area	1.0
Golden Eagle Nest	0.25
Merlin Nest	0.25
Ferruginous Hawk Nest	0.25
Swainson's Hawk Nest	0.25
Burrowing Owl Nest	0.25
Nests of Other Raptors	0.125

For lands identified in the DM&E final environmental impact statement and only for project decisions on those lands, this standard is waived entirely to allow for construction, installation, and operation of the DM&E Railroad under a construction permit and an authorization. Site-specific direction from the project mitigation plan, where it applies, will be used instead. See Amendment 2003-01 for specific mitigation. (Amendment 1)

52. To help reduce disturbances to nesting and wintering raptors, prohibit the following activities within the minimum distances (line of sight) of active raptor nests and winter roost areas during the dates specified in the following table:

- Construction (e.g., roads, water impoundments, oil and gas facilities),
- Reclamation,
- Gravel mining operations,
- Oil and gas drilling,
- Drilling of water wells,
- Timber harvest and fuel treatments,
- Precommercial thinning. **Standard**

Species and Habitat	Minimum Distance (miles) and Dates
Bald Eagle Nest	1.0 from 2/1 to 7/31
Bald Eagle Winter Roost Area	1.0 from 11/1 to 3/31
Golden Eagle Nest	0.50 from 2/1 to 7/31
Merlin Nest	0.50 from 4/1 to 8/15
Ferruginous Hawk Nest	0.50 from 3/1 to 7/31
Swainson's Hawk Nest	0.50 from 3/1 to 7/31
Burrowing Owl Nest	0.25 from 4/15 to 8/31
Nests of Other Raptors	0.125 from 2/1 to 7/31[a]

[a] Dates may vary depending on the species

53. To help reduce disturbances to nesting and wintering raptors, do not authorize the following activities within the minimum distances (line of sight) of active raptor nests and winter roost areas during the dates specified in the previous table:

- Construction (e.g., pipelines, utilities, fencing),
- Seismic exploration,
- Workover operations for maintenance of oil and gas wells,
- Fuelwood cutting,
- Permitted recreation events. **Guideline**

G. Fire Suppression, Fuels Treatments, Prescribed Fire

Fire Suppression

1. Suppress all wildfires, natural and human-caused, using fire management strategies based on aggressive initial attack. Encourage the use of natural barriers and burning out when appropriate. **Guideline**

2. Develop an Appropriate Management Response (AMR) for each management area outlined in the Fire Management Plan for Nebraska National Forest units. **Guideline**

3. Minimize impacts to paleontological and heritage resources, streams, stream banks, shorelines, lakes and associated vegetation, and habitat for threatened, endangered, proposed, and sensitive species from wildfire suppression efforts in the following ways:

- Prohibit the use of earth-moving equipment on known paleontological or heritage sites.
- Discourage the application of fire-retardant chemicals over riparian areas, wetlands and open water.
- Prior to using earth-moving equipment, consult appropriate specialists for guidance.
- Notify USFWS when TES habitat is threatened or impacted by fire. **Guideline**

4. Encourage the use of wildland fire management strategies in wilderness areas, backcountry recreation non-motorized areas, special interest areas, and research natural areas that minimize land and resource disturbance. **Guideline**

Fuel Treatment

5. Reduce the threat of wildfire to public and private developments by following guidelines in the National Fire Protection Association Publication 299, *Protection of Life and Property from Wildfire*, and reduce the fuel load to acceptable levels. **Guideline**

6. Participate in the "Firewise" community program. **Guideline**

Prescribed Fire

7. During project-level planning for prescribed burning, schedule prescribed fire activities at intervals designed to improve or maintain habitats of desired plant and animal species. **Guideline**

H. Animal Damage Management

1. Limit the use of rodenticides (grain baits) for reducing prairie dog populations to the following situations:

- Public health and safety risks occur in the immediate area,
- Damage to private and public facilities, such as cemeteries and residences.
- To respond to unwanted prairie dog colonization on adjoining agricultural lands. (Amendment 2) **Standard**

- To respond to situations where prairie dog colony acres are exceeding the maximum range of acres for the GA and where desired vegetation condition is not being achieved. (Oglala, Buffalo Gap, and Fort Pierre National Grasslands only). (Amendment 3 – proposed revision)

    1. Maximum acreage limit exceeded:

        1) When prairie dog colony acres in a GA exceed the maximum, rodenticide use may occur on up to 1/3 of the maximum range of acres (i.e., if the aggregate acres exceed 3%, reduce to about 2%). Guideline

        2) Poisoning will usually occur for 1 to 3 years, until the district ranger determines the acres of prairie dogs are at or below the maximum acreage. Colony reduction, due to exceeding acreage limits, may occur every year based on available funding. However, the district ranger should avoid rodenticide use for more than three to five consecutive years. The intent is not to apply rodenticide annually. Guideline

        3) Acres that have been poisoned will not be used to calculate prairie dog acreage requirements until monitoring shows recolonization. Standard

        4) Before, during and following poisoning to reduce acres, livestock will be removed for a period of 1 to 3 years or until the district ranger determines that desired prairie dog acreage requirements have been achieved. Guideline

    2. To achieve desired vegetation condition:

        a. The district ranger will use non lethal methods before employing lethal methods to maintain the range of prairie dog acres and achieve desired vegetation conditions (see Forest Plan Amendment 3, Supplement 1 – Implementation Plan). Guideline

        b. Manage livestock grazing to maintain prairie dog habitat to meet desired vegetation conditions and minimize the potential for soil loss. This management may include annual modifications to livestock grazing and other tools (see Forest Plan Amendment 3, Supplement 1 – Implementation Plan, Table 5). Long-term modifications to livestock grazing will be addressed in the range allotment management planning (RAMP) process. Guideline

        c. Adaptive management as described in Forest Plan Amendment 3, Supplement 1 – Implementation Plan will be used. This includes the suite of management tools listed in Table 5 in that supplement. The district ranger will be the decision-maker for the site-specific, on-the-ground actions. Standard

        d. Before rodenticide use can occur, the minimum range of prairie dog acres for the GA must be achieved. Non lethal methods can be used at any time (see Forest Plan Amendment 3, Supplement 1 – Implementation Plan). Standard

        e. Rodenticide will be used to reduce prairie dog densities within a colony. In a colony in which prairie dog densities have been reduced but not eliminated, the treated acres will be used to calculate the minimum and maximum acreage requirements for the GA. Standard

f. If monitoring indicates that the existing condition of the plant community is below the desired condition and the SI is at or below 25%, poisoning could occur as determined by the district ranger (see Forest Plan Amendment 3, Supplement 1 – Implementation Plan). Guideline

g. Before, during and following poisoning to reduce acres, livestock will be removed for a period of 1 to 3 years or until the district ranger determines that desired vegetation conditions are met. Guideline

2. Determine the appropriate response to complaints of unwanted colonization on adjoining agricultural lands. A suite of management tools will be considered based on site-specific evaluations (Amendment 2). **Guideline**

3. Reduce conflicts with adjacent landowners over prairie dog management through an active landownership adjustment program. **Guideline**

4. Prohibit use of rodenticides (above-ground grain baits) for reducing prairie dog populations outside the period October 1 to January 31(Amendment 2) to reduce risks to migratory birds. To reduce risk to other wildlife, do not use burrow fumigants in prairie dog colonies. **Standard**

I. Livestock Grazing

1. Allow bison grazing on the Grasslands by permit, and require amendments to grazing agreements and rules of management to allow a change of class of livestock to include bison. Evaluate bison grazing to include the following criteria: associated health issues; fence requirements; wildlife habitat needs; handling facilities; and human safety. **Standard**

2. Cooperate with states to ensure healthy livestock (including bison), such as requiring testing by the permittee for diseases (e.g., Brucellosis) and vaccinating for other diseases prior to placement on public lands. **Standard**

3. Adjust livestock management activities annually as needed to take into account the effect of natural processes, such as droughts, fires, floods, and grasshoppers on forage availability. **Guideline**

4. Manage livestock grazing to maintain or improve riparian/woody draw areas. Implement the following practices:

- Avoid season-long grazing and activities, such as feeding, salting, herding, or water developments, which concentrate livestock in riparian/woody draw areas.
- Control the timing, duration, and intensity of grazing in riparian areas to promote establishment and development of woody species. **Guideline**

5. Meet rest objectives based on, but not limited to, the following desired conditions:

- Where high structure is required for plant and animal communities (See Geographic Area) and/or reproductive success of Management Indicator Species and threatened, endangered, and sensitive species;
- Where increased fuel loads are desired for prescribed burning;
- Where rest is required for vegetative recovery after wildfire or prescribed burns.

- Where ungrazed areas are desired for monitoring vegetation structure or for research needs;
- Where ungrazed areas are desired for biological diversity. **Guideline**

6. When allotment management plans are revised, adjust stocking levels to account for the variations in liveweight of livestock if needed to meet desired vegetative conditions. (See Appendix C). **Guideline**

7. Prohibit feed storage and regular and routine feeding of domestic livestock on National Forest System lands. **Standard**

8. Prohibit livestock grazing in developed recreation sites unless it can be accommodated before or after the recreation-use season, or unless it enhances the management of the site. **Guideline**

9. Prioritize and remove any fences or water developments that are not contributing to achieving desired conditions. **Guideline**

(See Infrastructure for standards and guidelines relating to capital investments on lands with moderate to high mineral development potential)

J. Non-native and Invasive Species, Noxious Weeds and Insect Management

1. Manage invasive plant species using integrated management techniques, including mechanical, chemical, prescribed fire, and biological control methods. **Standard**

2. Attempt to prevent the spread of undesirable non-native, invasive, or noxious plant species to the NNF, by including necessary provisions in contracts and permits designed to limit its lands and resources to exposure to these plants. **Standard**

3. Allow haying only where noxious weeds are not present or are pre-treated to prevent seed set unless haying is needed as a method of noxious weed control. If used as a control, ensure proper disposal of hay. **Guideline**

4. Contain and control established undesirable non-native and invasive plant species and non-native insect infestations based on the following:

- Rate of species spread;
- Invasions within special management areas, such as RNAs and Wildernesses, activity corridors, and high use areas;
- Probability of successful treatment(s) in meeting desired conditions. **Guideline**

5. Once appropriate consultation with state agencies has taken place, allow only certified noxious weed seed-free products for recreational animal feed or revegetation projects. This includes use of certified hay or straw, and heat-treated, or other appropriately processed products. **Standard**

6. Utilize all methods feasible, including livestock grazing strategies, in the integrated pest management program. **Guideline**

7. Where technically and economically feasible, use genetically local (at the ecological sub-section level) native plant species in revegetation efforts. To prevent soil erosion, non-native annuals or sterile perennial species may be used while native perennials are becoming established. **Guideline**

8. Where appropriate, control insect damage and diseases using integrated pest management techniques. Treatment activities will be based on potential risks to human health, wildlife and the value of and risks to adjacent lands, public lands and other resources. Priority should be given to areas where values to be protected exceed the cost of protection. **Guideline**

9. Where chronic grasshopper problems reoccur and cannot be corrected through livestock grazing strategies, allow baiting with approved pesticides as a grasshopper control method. **Guideline**.

10. Restrict pesticide use where it would have adverse effects on species at risk. **Standard**

11. Set priorities for controlling insects, disease, and invasive plant species based on the following:

- Prevent the introduction of new invasive species
- Treat new infestations. **Standard**

MANAGED RECREATION

K. Recreation

General

1. Protect instream flows at special recreation features. Use the following categories to rank streams and stream reaches based on the recreation features and values described:

- High priority features: scenic areas and overlooks, visitor centers, canoeing areas, scenic byways, native threatened, endangered, and sensitive species, Wilderness water resources under threat of degradation, and similar features where flowing water is critical to a quality recreational experience.
- Moderate priority features: recreation areas, including roads, trails, campgrounds and picnic grounds next to streams and reservoirs where flowing water contributes to a quality recreational experience and to aesthetic values. **Standard**

2. Refrain from building new recreation facilities in riparian areas unless a clear public need can be demonstrated, and no other reasonable alternative exists. **Guideline**

3. Implement a "pack-it-in/pack-it-out" solid waste/garbage removal policy where disposal facilities are not available. **Standard**

4. On sites where dispersed recreation activities have contributed to bare mineral soil and accelerated erosion, mitigate impacts by redirecting use, rehabilitating or hardening the site to minimize erosion and off-site movement of soil. **Guideline**

Developed Recreation Sites

5. Harden sites to protect resources or accommodate user needs. **Guideline**

6. Close facilities if public safety or sanitation cannot be provided. **Standard**

7. Design recreational facilities to blend with the elements found in the natural landscape. **Guideline**

8. Make facilities at trailheads or along trails consistent with the Recreation Opportunity Setting Spectrum and provide for parking, trail information and appropriate sanitation facilities, as needed. **Guideline**

9. Allow oil and gas leasing within developed recreation sites, but do not permit ground-disturbing oil and gas activities. **Standard**

Outfitters and Guides

10. Consider the following criteria before making a decision to issue an outfitter and guide service permit:

- There will not be significant conflict with other permitted outfitters and guides, other permittees, or other users as a result of the activities associated with the permit.
- Other resource considerations, including the biological needs of wildlife, are considered and found compatible with the proposed activity.
- The permit furthers national grassland and forest goals. **Guideline**

11. Require all outfitter and guide permittees conducting activities with a relatively high risk or frequency of serious injury to have at least one guide on each trip who possesses current advanced first aid certification. Examples of high risk activities include, but are not limited to: horse, mule, or pack animal use, snow machine or all-terrain vehicle use, rock climbing, hang gliding, etc. **Standard**

12. Administer permits and pursue and prosecute illegal outfitters and guides. **Standard**

13. Prohibit permanent outfitter/guide facilities or caches on NFS lands. **Standard**

L. Scenery Management

1. Manage activities to be consistent with the scenic integrity objective(s), as referenced by the Adopted Scenic Integrity Objective map in Chapter 2. **Guideline**

2. Scenic Integrity Objectives for management areas apply only to the area within the management area boundary. **Standard**

3. Rehabilitate areas that do not meet the scenic integrity objectives specified for the management area. Consider the following when setting priorities for rehabilitation:

- Relative importance of the area and the amount of deviation from the scenic integrity objectives.
- Length of time it will take natural processes to reduce the visual impacts so that they meet the scenic integrity objective;
- Length of time it will take rehabilitation measures to meet scenic integrity objectives;
- Benefits to other resource management objectives to accomplish rehabilitation. **Guideline**

(Also see the sections on Special Uses and Recreation)

ADMINISTRATION

M. Land Ownership

General

1. Base land acquisitions on the premise of a willing buyer and seller. **Guideline**

2. Honor existing rights, such as treaty rights, mineral rights, water rights, and private property access. **Standard**

3. Consider the following when opportunities to acquire lands occur (Reference 36 CFR 254):

- Land with important or unique resources, such as water frontage, wetlands, floodplains and associated riparian ecosystems, cave resources, crucial big-game winter range, threatened or endangered species habitat and habitats needed for recovery, Forest Service sensitive species habitat, important paleontological or geologic sites, important historical heritage resource or traditional cultural properties, outstanding scenic values, or critical ecosystems when these resources are threatened by change of use, or when management may be enhanced by public ownership.
- Lands that include prairie dog colonies or that present opportunities to allow expansion of colonies are a high priority.
- Important botanical, wildlife and fishery management areas. This includes lands supporting rare plant communities.
- Lands with important value for outdoor recreational purposes.
- Land needed to protect resource values by eliminating or reducing fire risks or soil erosion.
- Non-federal lands in mineralized areas that have low potential for future mineralized patents, and where the minerals will be donated to the United States.
- Lands that would reduce conflicts between Forest Service, tribal lands and private landownership objectives, especially when conflicts are adversely impacting National Forest System management. This includes reducing conflicts involving the management of prairie dog colonies along National Forest System lands.
- Lands in Congressionally designated Wilderness and other classified areas.
- Lands that would correct maladjustments of land use as described in the Bankhead-Jones Farm Tenant Act.
- Lands within or around existing blocks of public ownership of at least 2,000 acres. **Guideline**

4. Consider the following to identify lands for possible disposal:

- Lands suitable for development by the private sector, if developments, such as residential, agricultural, industrial, or recreational, are in the public interest.
- Isolated parcels of any size, such as parcels having no legal public or administrative access and the effort to acquire such access is not cost-efficient or otherwise reasonable.

- Lands less than 2,000 acres which are not contiguous to larger blocks of public lands.
- Existing, reserved, or acquired rights-of-way parcels that are no longer needed for rights-of-way purposes. **Guideline**

5. Consider the following before making land adjustments:

- Lands with important or unique resources may be disposed of, however, consider mitigation and compensation values gained in acquired lands. Discourage use of reservation or partial interests as mitigation measures.
- Avoid land adjustments that could result in a trend toward federal listing or loss of population viability for species of concern. Sensitive species habitat can be conveyed if conveyance would not result in a trend toward federal listing or adversely impact the population viability of the species, or if mitigation and compensation values gained in acquired lands are to be considered, or if effects could be mitigated. **Guideline**

6. Obtain reasonable public and administrative access to all National Forest System lands in the following ways:

- Require reciprocal grants, where needed, when granting rights-of-way easements across the forests or grasslands.
- Reserve in land disposal actions, existing and designated inventoried rights-of-way that are needed for implementation of the management plan and to protect them for future construction and occupancy. **Guideline**

7. Acquire through purchase or donation rights-of-way to provide public access where needed. **Guideline**

8. As part of the land acquisition process, determine management prescription allocation. **Guideline**

N. Heritage Resources

1. Consult with designated representatives of federally recognized American Indian tribes during design of projects with potential to affect cultural rights and practices to help ensure protection, preservation and use of areas that are culturally important to them. **Standard**

2. Consider American Indian traditional cultural plant use, when designing vegetative management activities. **Guideline**

3. Leave human remains undisturbed. **Guideline**

4. In case of disturbance, take steps outlined in Appendix M. Follow state law regarding the discovery of human remains. **Standard**

5. Protect heritage resources from damage by activities or vandalism through project design, specified protection measures, monitoring, and coordination. **Standard**

6. Enhance and interpret significant heritage sites for the education and enjoyment of the public, while protecting the integrity of the sites. **Guideline**

7. Limit non-research oriented ground-disturbing activities on heritage districts and sites eligible for the National Register Historic Preservation (NRHP) that creates adverse impacts to the district or site. **Guideline**

O. Special Forest or Grassland Products

1. Ensure plant collecting does not jeopardize the continued vigor or existence of a plant population or associated plant communities. **Standard**

2. Require permits to collect Forest Service designated sensitive plants or parts of sensitive plants. **Standard**

3. Require permits to commercially collect special forest or grassland products. **Standard**

4. Protect the distribution and species viability of plants associated with medicinal and traditional cultural values. **Guideline**

5. Protect American Indian traditional collecting areas. **Guideline**

6. Allow non-commercial collection of paleontological resources with authorization (permit or area designation). The maximum amount of collected petrified wood person per day does not exceed 25 pounds, and that the total maximum weight in one calendar year per person does not exceed 250 pounds. Permits shall only be issued to museums, educational institutions, and similar groups for larger amounts. **Standard**

7. Allow rock hounding (hunting and collecting of non-fossil rocks and minerals) on National Forest System lands without a permit, providing the activity does not damage the resource and specimens are for personal, non-commercial uses (See 36 CFR 228.62[e]). Collected material should not exceed 25 pounds per person, per day, and 250 pounds per year. Permits may be issued for larger amounts. **Guideline**

8. Research oriented, noncommercial, and commercial collection of miscellaneous products may be allowed if available information indicates that collection would not diminish sustainability of the products. **Guideline**

9. Allow non-commercial collections of desired miscellaneous products by federally recognized American Indian tribes, in accordance with treaty rights. **Standard**

P. Special Uses

1. Permit utility companies to construct new utility corridors, unless prohibited by management direction provided in Chapters 1, 2, and 3. **Guideline**

2. Consolidate utility lines within existing corridors or in areas adjacent to roads wherever possible. **Guideline**

3. Bury electrical utility lines of 33 KV or less and telephone lines (Refer to MA direction for more specific corridor direction). **Guideline**

4. Ensure utility corridors are consistent between adjoining National Forest System regions and other federal, tribal, and state land management agencies. **Guideline**

5. Place all new pipelines underground. **Guideline**

6. Route new roads, pipelines, gathering lines, and technically required overhead power lines in a manner to minimize visual impacts. When these facilities leave existing corridors, they should be subordinate to the landscape (see Scenic Integrity in Glossary). **Guideline**

7. Design and construct new power lines to minimize the risk of raptor electrocution by ensuring that an 80 inch distance between conductors and ground wire. Upon renewal of permits, retrofit to provide for 80 inch distance between conductors and ground wire or install perch-inhibitors. **Standard**

8. Design night lighting to minimize light pollution. Limit continuous or dusk-to-dawn lighting at facilities. Exceptions may be made for the lighting of towers or lines to facilitate flight safety, and staffed, around-the-clock operations. **Guideline**

9. Disapprove land-use authorizations on NFS lands identified for disposal if such occupancy shall affect disposal action. **Standard**

10. Act on special-use applications according to the following priorities:

- Land and land-use activity requests relating to public safety, health and welfare, e.g., highways, power lines and public service improvements.
- Land and land-use activities contributing to increased economic activity associated with National Forest System resources, e.g., oil and gas, energy, minerals, livestock grazing, outfitting and guiding, etc.
- Land and land-use activities that benefit only private users, e.g., events, road permits, rights-of-way for private power lines, telephones, waterlines, etc. **Guideline**

11. Require a special-use road permit or easement for motorized access to private land where access for the general public is not available. **Guideline**

12. Disapprove any special-use applications that can reasonably be met on private or other federal lands unless it is clearly in the public interest. **Guideline**

13. Do not renew existing term agricultural permits that authorize hay harvesting or farming operations on National Forest System lands. **Standard**

(See Geology and Minerals, Energy and Minerals Related to Special Uses for standards and guidelines regarding mineral operations.)

Q. Infrastructure Use and Management

1. Do not restrict motorized vehicle use on existing roads and trails until a decision is made designating non-motorized areas and travelways, unless specifically prohibited in management area direction or existing orders. **Guideline**

2. Allow appropriate emergency services (i.e., law enforcement, fire suppression, medical, search and rescue) and administrative use on roads or areas where motorized use is restricted. **Guideline**

3. Allow motorized wheelchair use in a nonmotorized area so long as that wheelchair meets the legal definition of Title V, Section 507(c) (2) of the Americans with Disabilities Act. **Standard**

4. Perform site-specific Roads Analysis, including public involvement, prior to making any decisions on road construction, reconstruction, and decommissioning. Allow road maintenance without Roads Analysis for up to 5 years after approval of this plan. **Guideline**

5. Do not invest in new facilities on lands meeting the criteria for disposal. **Guideline**

6. Build new and reconstructed fences to provide for big game movement (Appendix B) and access for recreation, fire protection, and mineral development. **Guideline**

7. As opportunities allow, install gates along all existing fences at intervals to provide reasonable access. **Guideline**

8. Install all gates so they are easily opened and closed by all users. **Guideline**

9. Install cattle guards or hinged metal gates on popular and designated travel routes. **Guideline**

10. Prioritize and reconstruct those fences that do not meet big game specifications. **Guideline**

12. Restrict capital investments on lands with non-federal mineral estate ownership in areas of moderate to high mineral development potential if purpose of capital investment would conflict with mineral development. **Guideline**

13. Perform site-specific mineral evaluations prior to making substantial investments, such as recreation developments, on federal mineral estate in areas of moderate to high potential for valuable mineral deposits. Depending on conclusions from mineral evaluation and potential for mineral development, consider alternate location for capital investment, withdrawal of locatable minerals, or restrictions on surface occupancy for leasable minerals. **Guideline**

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CHAPTER 2 GEOGRAPHIC AREA DIRECTION

INTRODUCTION

Geographic areas include management direction that is too specific to apply across all Nebraska National Forest units (NNF). For example, desired vegetation conditions need to be tailored to the vegetation types, climate, and productivity of a specific area. The Geographic Area direction found in this chapter complements the general Grassland and Forest-wide direction in Chapter 1 and the more specific Management Area direction in Chapter 3.

This chapter contains a brief section on each geographic area and includes the following:

- Description of the physical setting and important features.
- Direction to achieve the desired conditions and management emphases.

The size, location, climate, major drainages, and topographic and vegetation features are described in the "Setting" section. This section also includes the area's unique or unusual features. The management direction for each area is listed in the following sections: Geographic Area Direction – *Objectives*, and Geographic Area Direction – *Standards and Guidelines*. Maps at the back of this chapter also display direction for the geographic areas. They include the following information:

- Recreation Opportunity Spectrum (ROS) settings
- Scenic Integrity Objectives (SIOs)
- Travel management direction

GEOGRAPHIC AREAS

Geographic areas are delineated on the enclosed Alternative 3 map. The Nebraska National Forest and associated units contain 11 geographic areas, as follows:

Bessey Ranger District

The Bessey Ranger District, which includes two units--the Bessey Unit of central Nebraska, and the Samuel R. McKelvie National Forest of north central Nebraska, is located in the sandhills of Nebraska, the largest grass-stabilized dune region in the Western Hemisphere. The Bessey Ranger District encompasses about 207,000 acres. The district office is located near Halsey, Nebraska along with the Charles E. Bessey Tree Nursery. Portions of the Bessey Ranger District include plantation stands of ponderosa pine and eastern redcedar. The 25,000 acres of hand-planted forests are distinguished as the largest plantation forest in United States. Two geographic areas are included for the Bessey Ranger District:

- Bessey Unit
- Samuel R. McKelvie National Forest.

Buffalo Gap National Grassland: Fall River Ranger District

The Fall River Ranger District encompasses about 322,000 acres of the 595,000-acre Buffalo Gap National Grassland of southwestern South Dakota. The district constitutes the western and southern reaches of the national grassland. It extends from the Cheyenne River on the east to the Wyoming and Nebraska borders on the west and south, respectively. The district office is located in Hot Springs, South Dakota.

The Fall River Ranger District is divided into three distinct geographic areas:

- Fall River Northeast,
- Fall River Southeast,
- Fall River West.

Buffalo Gap National Grassland: Wall Ranger District

The Wall Ranger District encompasses about 273,000 acres of the 595,000-acre Buffalo Gap National Grassland of southwestern South Dakota. The district constitutes the northern and eastern reaches of the national grassland. It extends east from the Cheyenne River through the White River Badlands, wrapping around Badlands National Park, to just south of Kadoka, South Dakota. The Wall Ranger District also shares common boundary with the Pine Ridge Indian Reservation and the Fall River Ranger District of the Buffalo Gap National Grassland. The district office is located in Wall, South Dakota, and is adjacent to the National Grassland Visitors Center, the only Forest Service visitor center in the country devoted entirely to interpreting the country's 20 national grasslands.

The Wall Ranger District is divided into three distinct geographic areas:

- Wall North,
- Wall Southeast,
- Wall Southwest.

Fort Pierre National Grassland

The Fort Pierre National Grassland encompasses 116,000 acres of National Forest System lands in central South Dakota beginning five miles south of Fort Pierre, SD and extending southward to within five miles of I-90. This grassland is contained in one geographic area: the Fort Pierre Geographic Area. The Fort Pierre National Grassland shares a common boundary with the Lower Brule Indian Reservation on six miles of its northeastern boundary, and lies within two miles of the Missouri River on its northeastern corner. All of the drainages on the Fort Pierre National Grassland eventually flow to the Missouri River. The Grassland adjoins no other National Forest System lands and is some 75 miles from the nearest National Forest System land on the Buffalo Gap National Grassland to the southwest. The Fort Pierre Ranger District's administrative office is located in Pierre, South Dakota.

Pine Ridge Ranger District, Nebraska National Forest

The Pine Ridge Ranger District office is located three miles south of Chadron, Nebraska. The district manages both the Pine Ridge portion of the Nebraska National Forest, as well as the Oglala National Grassland. The Pine Ridge area includes about 50,500 acres of National Forest System lands in northwestern Nebraska. The Oglala National Grassland encompasses about 94,000 acres of National Forest System lands in Nebraska's northwest corner. The district is divided into two geographic areas:

- Oglala National Grassland
- Pine Ridge Unit.

BESSEY GEOGRAPHIC AREA

Bessey Ranger District

Setting

The Bessey Geographic Area encompasses about 90,170 acres of National Forest System lands in central Nebraska's 12 million acre sandhills region. The Bessey Ranger District, Halsey, Nebraska, administers this geographic area.

The climate of the Bessey Geographic Area can be classified as semi-arid Continental. In general, the weather of the sandhills is highly variable. Precipitation arrives mostly from the Gulf of Mexico, with 75 percent of it falling between April and September. Precipitation varies widely, from around 17 inches to 23 inches per year. Summer temperatures average from the 60s to the mid-70 degrees Fahrenheit, while average winter temperatures are near freezing at 32-degrees Fahrenheit. Still, summer temperatures can rise well above 100 degrees, while winter temperatures can fall below zero degrees. Spring blizzards are common. The wind tends to blow frequently.

The topography of the area is characterized by large vegetated sand masses created by blowing sand as recently as 1500 years ago. A number of dune types are found in the sandhills. In the Bessey Geographic Area, dune types include crescentic-ridge and linear dune types. Dunes in the Nebraska sandhills can rise to more than 400 feet, can be as long as 20 miles, and can display slopes as steep as 25 percent. Elevation in the Bessey Geographic Area ranges from around 2,225 to 2,700 feet above sea level.

The rivers and streams of the Nebraska sandhills are unusual in several respects. Sandhills rivers have few tributaries. They seldom flood, despite low banks, and because the flow is derived from steady groundwater seepage, they flow at a nearly constant rate. Nearly all sandhills rivers rise within the sandhills. The Niobrara River, which begins in eastern Wyoming, being the one exception. Sandhills rivers are relatively low in dissolved solids, but do contain silica. Two important rivers are associated with the Bessey Geographic Area. The Middle Loup River lies just touches the northern boundary, while the Dismal River intermittently breaches the southern boundary.

Also of note is the High Plains Aquifer, which lies beneath the sandhills. Within the Bessey Geographic Area, this aquifer has a saturated thickness of more than 500 feet.

The dominant vegetation consists of several sandhills communities. They include 1) bunchgrass communities of little bluestem, junegrass, needleandthread, prairie sandreed and switchgrass, 2) sand muhly communities of sand muhly, sand bluestem, needleandthread, prairie sandreed and hairy grama, 3) blowout communities of blowout grass, prairie sandreed, sand muhly, ricegrass, sand lovegrass and the endangered species blowout penstemon. The Bessey Geographic Area also has a limited floodplain prairie and hardwood forest community. In addition, hand-planted plantation stands of jack pine, Austrian pine, Scotch pine, ponderosa pine and Eastern redcedar are found in this geographic area.

Desired Conditions

The desired condition is to perpetuate diverse and healthy sandhills prairie communities, representing both cool season and warm season species such as needleandthread, porcupinegrass, little bluestem,, sand bluestem, prairie sandreed, blue grama, hairy grama and Indiangrass. Shrub thickets will be managed to perpetuate multiple layers and age classes of herbaceous plants and shrubs. Shrub species found in the thickets include chokecherry, snowberry, and American plum. Streams and riparian areas will maintain soil moisture to perpetuate riparian plant communities with strong root masses. Some of the plant species common in the riparian zones include prairie cordgrass, bulrushes, spikerushes, cottonwoods, and willows.

The streams and riparian areas are in, or are trending towards, Properly Functioning Condition (PFC-see glossary), which allows them to recover quickly from floods and support diverse native plants and animals. Long-term soil productivity and properly functioning water cycles are maintained. Properly functioning water cycles are characterized by high infiltration rates, low soil compaction, and minimal overland flows.

To provide habitat for viable populations of all wildlife species, a mixture of vegetation composition and structure will be provided. Herbaceous structure (grasses and forbs), especially, plays a very important role in determining habitat suitability for many grassland wildlife species.

A few small areas, where suitable soils provide habitat, will be maintained in low vegetation structure to support viable black-tailed prairie dog populations. Prairie dog colonies serve as important habitat for other species of wildlife, some of which have low region-wide populations.

Grasses and forbs of moderate height and density will provide adequate habitat for many birds, mammals and other classes of wildlife. Over a significant area high, dense, cover will be left after the grazing season for birds that require more cover and nest on the ground early in the spring, such as sharp-tailed grouse, prairie chickens, and some species of ducks.

Tall and dense grass cover also improves the hunting experience by acting as “holding cover” for sharp-tailed grouse and prairie chickens. Upland game birds find security in such cover and will be less apt to flush beyond shooting range. Upland bird hunting is an important and growing activity in this geographic area. A significant percent of the area should display these conditions, in which bird hunters will perceive that their efforts can be successful.

The tree plantations will be maintained for their recreational, aesthetic, wildlife and historic values. They will be managed to exhibit open park-like characteristics with multi-aged stands of regenerating ponderosa and jack pine where possible. Historic redcedar stands will be maintained with some areas being thinned to open up the canopy. Redcedar numbers will be reduced in open pine stands and where they are spreading into native grassland areas.

The Signal Hill RNA will be managed to maintain the vegetation in a relatively undisturbed state for research values. Manipulation through grazing or prescribed fire may be used to meet management objectives.

Wildlife exclosures will be managed to maintain their wildlife and research values. Desired vegetation conditions are variable depending on the individual exclosure.

The prairie landscape desired condition is to maintain the open and scenic plains and vast prairie landscapes. Recreationists should perceive that they are visiting an expansive native prairie. In

the forest plantations, recreationists should perceive a natural forest setting. Small areas of cattle grazing impacts will exist but will be minimized. Visitors should have little trouble traveling designated roads and trails, except in extreme weather conditions, and should have no difficulty opening and closing gates.

Developed recreation areas including the Bessey Recreation Complex, Whitetail Campground and Natick Campground are to be maintained to provide a variety of services and experiences to visitors.

Timber stands around the administrative site, nursery, 4-H Camp and Bessey Recreation Complex will be managed to reduce fire hazard.

Important Attributes

- Part of the largest grass-stabilized dune region in the Western Hemisphere
- Part of the largest hand-planted forest in the United States
- Habitat for blowout penstemon, an endangered plant species
- The Bessey Recreation Complex, with camping, horseback and picnic facilities and a swimming pool
- Scott Fire Tower, the only active fire tower on the Nebraska National Forest
- Charles E. Bessey Nursery, the nation's oldest federal tree nursery
- Hunting and wildlife viewing opportunities.

Management Area Prescription Allocation

Number	Prescription	Acres
2.1	Special Interest Areas	19,540
2.2	Research Natural Areas	500
3.64	Special Plant and Animal Habitat	400
6.1	Rangeland with Broad Resource Emphasis	69,480
8.5	Nursery (Charles E. Bessey Nursery)	70
8.6	Administrative Sites	150

Geographic Area Direction – Objectives

Vegetation

This section deals with vegetation and its relationship to MIS and TES habitat needs.

The resulting vegetation will have a mix of seral stages designed to approximate evolutionary development of the northern Great Plains. The grassland ecosystem will feature a “shifting mosaic” of disturbance processes over space and time.

Composition objectives are based on a mix of grass and grass-like species across a majority of the Geographic Area. This mix provides opportunity for meeting vegetation structure objectives and providing for floristic diversity.

The following section describes the specific vegetative composition and structure objectives for the Bessey Geographic Area:

Composition

1. The desired plant species composition objective across the geographic area is as follows:

Late Seral	Late Intermediate Seral	Early Intermediate Seral	Early Seral
30-50%	30-50%	1-20%	1-20%

In the late seral stage the sands and choppy sands ecological type will be dominated by sand bluestem and little bluestem will be the codominant species. Prairie sandreed, hairy grama, switchgrass, sedges and sand lovegrass are also important grasses in the late seral stage on this ecological type. On the more productive dry valley ecological type blue grama will be the dominant species while sedges will be the codominant species. Prairie sandreed, sand bluestem, switchgrass, sand lovegrass, and little bluestem are also important grasses on dry valley sites in the late seral stage.

In the late intermediate seral stage the sands and choppy sands ecological type will be dominated by little bluestem, and sand lovegrass will be the codominant species. Sand bluestem, sedges, prairie sandreed, hairy grama, and switchgrass, are also important grasses in the late intermediate seral stage of the sands and choppy sands ecological type. On the more productive dry valley ecological type, little bluestem will be the dominant species while sedges will be the codominant species. Switchgrass, blue grama, sand bluestem, hairy grama, and needleandthread are also important grasses on dry valley sites in the late intermediate seral stage.

In the early intermediate seral stage the sands and choppy sands ecological type will be dominated by hairy grama while little bluestem will be the codominant species. Sand bluestem, sedges, prairie sandreed, switchgrass, and sand lovegrass, are also important species in the early intermediate seral stage of the sands and choppy sands ecological type. On the more productive dry valley ecological type, sedges will be the dominant species while blue grama will be the codominant species. Little bluestem, switchgrass, prairie sandreed, sand bluestem, and hairy grama are also important grasses on dry valley sites in the early intermediate seral stage.

In the early seral stage the sands and choppy sands ecological type will be dominated by sand bluestem while switchgrass will be the codominant species. Sand lovegrass, sedges, little bluestem, prairie sandreed, and blue grama are also important species in the early seral stage of this ecological type. On the more productive dry valley ecological type switchgrass will be the dominant species while sand bluestem will be the codominant species. Little bluestem, prairie sandreed, needleandthread, blue grama, and sedges are also important species on dry valley sites in the early seral stage.

Smooth Goosefoot

- Prioritize and initiate target surveys for smooth goosefoot. **Objective**

Structure

2. Manage the geographic area to meet the vegetation structure objectives identified below:

High	Moderate	Low
40 to 60%	40 to 60%	0 to 5%

High vegetation structure can be achieved on moderate and highly productive soils dominated by mid and/or tall grasses (late or late intermediate seral stage composition). Grasslands on moderate to highly productive soils but dominated by short grass species generally do not have the capability to provide high vegetation structure unless management is changed to increase the composition of mid to tall grass species over a period of years or decades.

Moderate structure can be achieved on moderate to highly productive soils dominated by mid and/or tall grasses depending on grazing use levels. Grasslands dominated by short grass species will not achieve moderate structure regardless of grazing levels.

Minimally productive soils, prairie dog colonies, and grassland areas grazed by livestock at high intensities provide low structure. Low vegetation structure can result from a dominance of low stature plant species or from heavy utilization of mid and tall grasses.

Plantations

Within the next 15 years, reduce redcedar to create open pine stands in 20 percent of the plantations. **Objective**

Fire

Prescribe burn a minimum of 500-2,500 acres per decade. **Objective**

Rest

Rest 1-10 percent of the suitable rangeland each year. **Objective**

Infrastructure

1. Increase average pasture size over the decade by 15 percent. **Objective**

2. Allow no net increase in water developments. **Objective**

Wildlife, Fish and Rare Plants

1. Management Indicator Species:

Greater Prairie Chicken

- Provide diverse and quality grassland habitat across the larger valleys and adjoining hills in this geographic area at levels that will help support stable to increasing populations of greater prairie chicken and other wildlife over the next 10 to 15 years. **Objective**
- Establish and maintain quality nesting, brooding and roosting habitat for greater prairie chicken (see Appendix H) and associated wildlife by meeting vegetation objectives for high structure over the next 10 to 15 years. **Objective**

Plains Sharp-tailed Grouse

- Provide diverse and quality grassland habitat at levels that will support stable to increasing populations of sharp-tailed grouse and other wildlife with similar habitat needs over the next 10 to 15 years. **Objective**
- Establish and maintain quality nesting, brooding and roosting habitat for sharp-tailed grouse (see Appendix H) and associated wildlife by meeting vegetation objectives for 40-60% of the area in high structure grasslands over the next 10 to 15 years. **Objective**

2. Threatened, Endangered and Sensitive Species:

Blowout Penstemon (Endangered Species)

- Coordinate with appropriate state and federal agencies to provide a continued propagation source for blowout penstemon (re-establishment of a greenhouse facility may be critical to achieving recovery goals for this species). **Objective**
- Reintroduce populations in suitable habitat and in area of historic occurrence in the species range within the planning area. **Objective**
- Design and implement strategies to create or maintain suitable blowout penstemon habitat on National Forest System lands within the range of the species in the planning area. **Objective**

Recreation

1. Develop site management plans including vegetation plans for the Bessey Recreation Complex, Whitetail, and Natick Campgrounds within 10 years. **Objective**

2. Develop one additional group campground facility (Well site 25) within 10 years. **Objective**

Geographic Area Direction – Standards and Guidelines

Vegetation

1. Use existing monitoring information and stocking rate guidelines for livestock grazing (see Appendix I) to help develop and implement range management strategies for meeting desired vegetation objectives. **Standard**

Smooth Goosefoot

- Conduct target surveys in priority areas to determine if smooth goosefoot or suitable habitat occurs in the geographic area. Protect populations that are found in the geographic area and maintain suitable habitat for these populations. **Standard**
- Prioritize control of noxious weeds in habitat occupied by smooth goosefoot. Restrict activities that contribute to invasive and non-native plant species into occupied habitat. **Standard**
- Monitor ORV use in occupied habitat and implement travel management restrictions if smooth goosefoot populations are at risk. **Standard**

Wildlife, Fish and Rare Plants

1. Management Indicator Species:

Greater Prairie Chicken

- Forty to sixty percent of this geographic area is to be managed for high structure grasslands. A substantial amount of this should be located in the larger valleys and adjoining hills where it will optimize habitat for greater prairie chicken and associated species. **Guideline**
- Establish and maintain quality foraging habitat for greater prairie chicken and associated species by enhancing and/or maintaining a diversity of forb species. **Guideline**

Plains Sharp-tailed Grouse

- Establish and maintain quality foraging habitat for sharp-tailed grouse and associated species by enhancing and/or maintaining a diversity of forb species and regeneration of sandhill shrub thickets. **Guideline**

2. Threatened, Endangered and Sensitive Species:

Blowout Penstemon (Endangered Species)

- To help meet national recovery plan objectives for blowout penstemon, cooperate with other agencies or organizations in transplanting blowout penstemon into suitable habitat with the objective of establishing at least two self-sustaining populations in this geographic area. **Standard**
- Identify suitable blowouts for future blowout penstemon transplants and manage disturbance processes in these areas to maintain suitable habitat. **Standard**
- Protect naturally occurring, introduced, and re-introduced populations and their habitats within the geographic area. **Standard**
- Conduct target surveys for additional naturally occurring populations within the range of distribution of the species in the geographic area. **Standard**
- Monitor transplanted blowout penstemon populations to assess success of reintroduction methods and efforts. **Standard**
- Monitor ORV use in sand dunes and implement travel management restriction if blowout penstemon populations are at risk. **Standard**
- As needed to help meet the recovery objectives identified in the national recovery plan for this species, create new blowouts as reintroduction habitat by applying appropriate disturbance processes. **Standard**
- Prioritize noxious weed control in blowouts occupied by blowout penstemon populations or in blowouts identified for future transplants. Restrict activities that contribute to invasive and non-native plant species into blowout penstemon habitat. **Standard**

Western Prairie Fringed Orchid (Threatened Species)

- In consultation and coordination with the U.S. Fish and Wildlife Service, evaluate opportunities for establishing Western Prairie Fringed Orchid populations on Nebraska National Forest units and implement if suitable habitat exists. **Standard**

Plantations

1. In the tree plantations, the desired condition is to maintain them for their recreational, aesthetic, wildlife and historic values by maintaining present stands for multi-age classes and promote regeneration of ponderosa pine and jack pine wherever possible. Stands should be managed to exhibit open park-like characteristics. **Guideline**

2. Historic redcedar stands will be maintained with some areas being thinned to open up the closed canopy. **Guideline**

MCKELVIE GEOGRAPHIC AREA

Samuel R. McKelvie National Forest - Bessey Ranger District

Setting

The McKelvie Geographic Area encompasses about 116,060 acres of National Forest System lands in the north central portion of Nebraska's 12 million acre sandhills region. The Bessey Ranger District headquartered near Halsey, Nebraska administers this geographic area.

The climate of the McKelvie Geographic Area can be classified as semi-arid Continental. In general, the weather of the sandhills is highly variable. Precipitation arrives mostly from the Gulf of Mexico, with 75 percent of it falling between April and September. Precipitation varies widely, from around 17 inches to 23 inches per year. Summer temperatures average from the 60s to the mid-70 degrees Fahrenheit, while average winter temperatures are near freezing at 32-degrees Fahrenheit. Still, summer temperatures can rise well above 100 degrees, while winter temperatures can fall below zero degrees. Spring blizzards are common. The wind tends to blow frequently.

The topography of the area is characterized by large vegetated sand masses created by blowing sand as recently as 1500 years ago. A number of dune types are found in the sandhills. In the McKelvie Geographic Area, dune types include the crescentic-ridge, the moderate-relief sand sheet, the wide-spaced crescentric and the linear dune types. Dunes in the Nebraska sandhills can rise to more than 400 feet, can be as long as 20 miles and can display slopes as steep as 25 percent. Elevation in the McKelvie Geographic Area ranges from around 2,625 to 3,175 feet above sea level.

The rivers and streams of the Nebraska sandhills are unusual in several respects. Sandhills rivers have few tributaries. They seldom flood, despite low banks, and primarily because the flow is derived almost exclusively from steady groundwater seepage, they flow at a nearly constant rate. Nearly all sandhills rivers rise within the sandhills. The Niobrara River, which begins in eastern Wyoming, is the only exception. Sandhills rivers are relatively low in dissolved solids, but do contain silica. Two rivers of importance are associated with the McKelvie Geographic Area. The Niobrara River touches or crosses the northern boundary, while the Snake River touches the southern boundary. In addition, Merritt Reservoir, on the Snake River, lies adjacent to the McKelvie Geographic Area on the southeastern corner. A portion of the reservoir lies within the boundary of the forest and is managed through agreements with the Bureau of Reclamation and Nebraska Game and Parks Commission.

Also of note is the High Plains Aquifer, which lies beneath the sandhills. Within the McKelvie Geographic Area, this aquifer has a saturated thickness of more than 500 feet. The High Plains Aquifer feeds numerous wetlands and marshes.

The dominant vegetation consists of several sandhills plant communities. They include 1) bunchgrass communities of little bluestem, junegrass, needleandthread, prairie sandreed and switchgrass, 2) sand muhly communities of sand muhly, sand bluestem, needleandthread, prairie sandreed and hairy grama, 3) blowout communities of blowout grass, prairie sandreed, sand muhly, ricegrass, sand lovegrass and the blowout penstemon, a state and federally listed

endangered species. In addition, approximately 2200 acres of the geographic area consists of hand-planted ponderosa pine stands.

Desired Conditions

The desired condition is to perpetuate diverse and healthy sandhills prairie communities, representing both cool season and warm season species such as needleandthread, porcupinegrass, little bluestem, sand bluestem, prairie sandreed, blue grama, hairy grama and Indiangrass. Shrub patches will be managed to perpetuate multiple layers and age classes of herbaceous plants and shrubs. Species included in the patches are chokecherry, snowberry, and American plum. Streams and riparian areas will maintain soil moisture to perpetuate riparian plant communities with strong root masses. Plant species include prairie cordgrass, bulrushes, spikerushes, cottonwoods, and willows.

The streams and riparian areas are in, or are trending towards, Properly Functioning Condition (PFC-see glossary), which allows them to recover quickly from floods and support diverse native plants and animals. Long-term soil productivity and properly functioning water cycles are maintained. Properly functioning water cycles are characterized by high infiltration rates, low soil compaction, and minimal overland flows.

To provide habitat for viable populations of all wildlife species, a mixture of vegetation composition and structure will be provided. Herbaceous structure (grasses and forbs), especially, plays a very important role in determining habitat suitability for various species.

If populations of prairie dogs become established in suitable habitats, these areas will be maintained in low structure to support viable black-tailed prairie dog populations. Prairie dog colonies serve as important habitat for other species of wildlife, some of which have low region-wide populations.

Grass of moderate height and density will provide adequate habitat for many birds, mammals and other classes of wildlife. Over a significant area, high, dense cover will be left after the grazing season for birds that require higher structure and nest on the ground early in the spring, such as sharp-tailed grouse, prairie chickens, and some species of ducks.

Tall, dense grass cover will also improve the hunting experience by acting as “hiding cover” for sharp-tailed grouse and prairie chickens. Game birds find security in such cover and will be less apt to flush beyond shooting range. Upland bird hunting is an important and growing activity in this geographic area. A significant percent of the area should display these conditions, in which bird hunters will perceive that their efforts can be successful.

The tree plantations will be maintained for their recreational, aesthetic, wildlife and historic values. They will be managed to exhibit open park-like characteristics with multi-aged stands of regenerating ponderosa and jack pine where possible. Historic redcedar stands will be maintained with some areas being thinned to open up the canopy. Redcedar numbers will be reduced in open pine stands and where they are spreading into native grasslands.

The Steer Creek Research Natural Area will be managed to maintain the vegetation in a natural state. Grazing will continue in the area. Emphasis will be placed on management of the riparian corridor. Vegetation composition will be managed with an emphasis on late seral conditions and high structure.

The Steer Creek special plant and animal area will be managed to maintain the upland and riparian vegetation for native plant communities including sandhills prairie and riparian habitats. Vegetation composition will be managed with an emphasis on late seral conditions and high structure.

Wildlife exclosures will be managed to maintain their wildlife and research values. Desired vegetation conditions are variable depending on the individual exclosure.

The area around Merritt Reservoir will be managed to maintain healthy plant communities while managing for high recreational use near Merritt Reservoir. The reservoir is currently managed through an MOU with the Bureau of Reclamation and Nebraska Game and Parks Commission.

The landscape desired condition is to maintain open and scenic plains and vast prairie landscapes. Recreationists should perceive that they are visiting an expansive native prairie. In the forest plantations, recreationists should perceive a natural forest setting. Small areas of cattle grazing impacts will exist but will be minimized. Visitors should have little trouble traveling designated roads and trails, except in extreme weather conditions, and should have no difficulty opening and closing gates.

No new road construction will be authorized in the area north of County Road 5 and east of State Spur 16F.

Steer Creek campground will be maintained to provide a variety of recreation experiences and services to visitors.

Areas around the administrative site and Steer Creek Campground will be managed to reduce fire hazard.

Important Attributes

- Part of the largest grass-stabilized dune region in the Western Hemisphere
- Hand-planted timber stands
- Habitat for blowout penstemon, a federally listed endangered plant species
- Hunting and viewing opportunities for sharp-tailed grouse and waterfowl, numerous neotropical grassland birds
- Merritt Reservoir, adjoining the Forest, provides a significant sports fishery and recreational complex

Management Area Prescription Allocation

Number	Prescription	Acres
2.1	Special Interest Areas	2,850
2.2	Research Natural Areas	2,620
3.64	Special Plant and Animal Habitat	4,470
4.32	Dispersed Recreation High Use	1,110
6.1	Rangeland with Broad Resource Emphasis	104,870
8.6	Administrative Sites	20

Geographic Area Direction - Objectives

Vegetation

This section deals with vegetation and its relationship to MIS and TES habitat needs.

The resulting vegetation will have a mix of seral stages designed to approximate evolutionary development of the northern Great Plains. The grassland ecosystem will feature a "shifting mosaic" of disturbance processes over space and time.

Composition objectives are based on a mix of grass and grass-like species across a majority of the Geographic Area. This mix provides opportunity for meeting vegetation structure objectives and providing for floristic diversity.

The following section describes the specific vegetative compositional and structural objectives for the McKelvie Geographic Area:

Composition

1. The desired plant species composition objective across the geographic area is as follows:

Late Seral	Late Intermediate Seral	Early Intermediate Seral	Early Seral
30 to 50%	30 to 50%	1 to 20%	1 to 20%

In the late seral stage, on the more productive dry valley ecological type, blue grama will be the dominant species while sedges will be the codominant species. Prairie sandreed, sand bluestem, switchgrass, sand lovegrass, and little bluestem are also important grasses on dry valley sites in the late seral stage. The sands and choppy sands ecological type will be dominated by sand bluestem while little bluestem will be the codominant species. Prairie sandreed, hairy grama, switchgrass, sedges and sand lovegrass are also important grasses in the late seral stage on this ecological type.

In the late intermediate seral stage, on the more productive dry valley ecological type, little bluestem will be the dominant species while sedges will be the codominant species. Switchgrass, blue grama, sand bluestem, hairy grama, and needleandthread are also important grasses on dry valley sites in the late intermediate seral stage. The sands and choppy sands ecological type will be dominated by little bluestem while sand lovegrass will be the codominant species. Sand bluestem, sedges, prairie sandreed, hairy grama, and switchgrass, are also important grasses in the late intermediate seral stage of the sands and choppy sands ecological type.

In the early intermediate seral stage, on the more productive dry valley ecological type, sedges will be the dominant species while blue grama will be the codominant species. Little bluestem, switchgrass, prairie sandreed, sand bluestem, and hairy grama are also important grasses on dry valley sites in the early intermediate seral stage. The sands and choppy sands ecological type will be dominated by hairy grama while little bluestem will be the codominant species. Sand bluestem, sedges, prairie sandreed, switchgrass, and sand lovegrass, are also important species in the early intermediate seral stage of the sands and choppy sands ecological type.

In the early seral stage, on the more productive dry valley ecological type, switchgrass will be the dominant species while sand bluestem will be the codominant species. Little bluestem, prairie sandreed, needleandthread, blue grama, and sedges are also important species on dry

valley sites in the early seral stage. The sands and choppy sands ecological type will be dominated by sand bluestem while switchgrass will be the codominant species. Sand lovegrass, sedges, little bluestem, prairie sandreed, and blue grama are also important species in the early seral stage of this ecological type.

Structure

2. Manage the geographic area to meet the vegetation structure objectives identified below:

High	Moderate	Low
40 to 60%	40 to 60%	0 to 5%

High vegetation structure can be achieved on moderate and highly productive soils dominated by mid and/or tall grasses (late or late intermediate seral stage composition). Grasslands on moderate to highly productive soils but dominated by short grass species generally do not have the capability to provide high vegetation structure unless management is changed to increase the composition of mid to tall grass species over a period of years or decades.

Moderate structure can be achieved on moderate to highly productive soils dominated by mid and/or tall grasses depending on grazing use levels. Grasslands dominated by short grass species in the late intermediate or late seral stage will not achieve moderate structure regardless of grazing levels.

Low productivity soils, prairie dog colonies, and grassland areas grazed by livestock at high intensities provide low structure. Low vegetation structure can result from a dominance of low stature plant species or from heavy utilization of mid and tall grasses.

Smooth Goosefoot

1. Prioritize and initiate target surveys for smooth goosefoot. **Objective**

Plantations

1. Within the life of the plan, remove encroaching redcedar in 20 percent of the pine plantations to maintain open pine stands. **Objective**

Fire

1. Prescribe burn a minimum of 500 to 2,500 acres per decade. **Objective**

Rest

1. Rest 1-10 percent of the suitable rangeland each year. **Objective**

Infrastructure

1. Maintain average pasture size over the life of the plan. **Objective**

2. Allow no net increase in water developments. **Objective**

Wildlife, Fish, and Rare Plants

1. Management Indicator Species:

Greater Prairie Chicken

- Provide diverse and quality grassland habitat across the larger valleys and adjoining hills in this geographic area at levels that will help establish a viable population of at least 100 adult male prairie chicken over the next 10 to 15 years. **Objective**
- Establish and maintain quality nesting, brooding and roosting habitat for greater prairie chicken (see Appendix H) and associated wildlife by meeting vegetation objectives for high structure over the next 10 to 15 years. **Objective**

Plains Sharp-tailed Grouse

- Provide diverse and quality grassland habitat at levels that will support stable to increasing populations of sharp-tailed grouse and other wildlife with similar habitat needs over the next 10 to 15 years. **Objective**
- Establish and maintain quality nesting, brooding and roosting habitat for sharp-tailed grouse (see Appendix H) and associated wildlife by meeting vegetation objectives for 40-60% of the area in high structure grasslands over the next 10 to 15 years. **Objective**

2. Threatened, Endangered and Sensitive Species:

Blowout Penstemon (Endangered Species)

- Coordinate with appropriate state and federal agencies to provide a continued propagation source for blowout penstemon (re-establishment of a greenhouse facility may be critical to achieving recovery goals for this species). **Objective**
- Reintroduce populations in suitable habitat and in areas of historic occurrence in the species range within the planning area. **Objective**
- Design and implement strategies to create or maintain suitable blowout penstemon habitat on National Forest System lands within the range of the species in the planning area. **Objective**

Geographic Area Direction – Standards and Guidelines

Vegetation

1. Use existing monitoring information and stocking rate guidelines for livestock grazing (see Appendix I) to help develop and implement range management strategies for meeting desired vegetation objectives. **Standard**

Smooth Goosefoot

- Conduct target surveys in priority areas to determine if smooth goosefoot or suitable habitat occurs in the geographic area. Protect populations that are found in the geographic area and maintain suitable habitat for these populations. **Standard**
- Prioritize control of noxious weeds in habitat occupied by smooth goosefoot. Restrict activities that contribute to invasive and non-native plant species into occupied habitat. **Standard**

- Monitor ORV use in occupied habitat and implement travel management restrictions if smooth goosefoot populations are at risk. **Standard**

Wildlife, Fish, and Rare Plants

1. Management Indicator Species:

Greater Prairie Chicken

- Forty to sixty percent of this geographic area is to be managed for high structure. A substantial amount of this should be located in the larger valleys and adjoining hills where it would optimize habitat for greater prairie chicken and associated species. **Guideline**
- Establish and maintain quality foraging habitat for greater prairie chicken and associated species by enhancing and/or maintaining a diversity of forb species. **Guideline**

Plains Sharp-tailed Grouse

- Establish and maintain quality foraging habitat for sharp-tailed grouse and associated species by enhancing and/or maintaining a diversity of forb species and regeneration of sandhill shrub thickets. **Guideline**

2. Threatened, Endangered, and Sensitive Species:

Blowout Penstemon (Endangered Species)

- To help meet national recovery plan objectives for blowout penstemon, cooperate with other agencies or organizations in transplanting blowout penstemon into suitable habitat with the objective of establishing at least 2 populations in this geographic area. **Standard**
- Identify suitable blowouts for future blowout penstemon transplants and manage disturbance processes in these areas to maintain suitable habitat. **Standard**
- Protect naturally occurring, introduced, and re-introduced populations and their habitats within the geographic area. **Standard**
- Conduct target surveys for additional naturally occurring populations within the range of distribution of the species in the geographic area. **Standard**
- Monitor transplanted blowout penstemon populations to assess success of reintroduction methods and efforts. **Standard**
- Monitor ORV use in sand dunes and implement travel management restriction if blowout penstemon populations are at risk. **Standard**
- As needed to help meet the recovery objectives identified in the national recovery plan for this species, create new blowouts as reintroduction habitat by applying appropriate disturbance processes. **Standard**
- Prioritize noxious weed control in blowouts occupied by blowout penstemon populations or in blowouts identified for future transplants. Restrict activities that contribute to invasive and non-native plant species into blowout penstemon habitat. **Standard**

Western Prairie Fringed Orchid (Threatened Species)

- In consultation and coordination with the U.S. Fish and Wildlife Service, evaluate opportunities for establishing Western Prairie Fringed Orchid populations on the Nebraska National Forest and implement if suitable habitat exists. **Standard**

Plantations

1. In the tree plantations, the desired condition is to maintain them for their recreational, aesthetic, wildlife and historic values by maintaining present stands for multi-age classes and promoting regeneration of ponderosa pine and jack pine wherever possible. Stands should be managed to exhibit open park-like characteristics. **Guideline**

2. Historic redcedar stands will be maintained with some areas being thinned to open up the closed canopy. **Guideline**

FALL RIVER NORTHEAST GEOGRAPHIC AREA

Buffalo Gap National Grassland - Fall River Ranger District

Setting

The Fall River Northeast Geographic Area includes about 91,908 acres of National Forest System lands on the northeastern portion of the Fall River Ranger District. The Wall Ranger District of the Buffalo Gap National Grassland borders this area on the east.

The climate of the Fall River Northeast Geographic Area can be classified as semi-arid Continental. Local weather can be highly variable and unpredictable. Temperatures can range from -40 degrees below zero Fahrenheit in the winter to more than 110-degrees Fahrenheit in the summer. Precipitation levels average a little above 16 inches per year with the majority falling as rain from about May through July.

The topography of this area is a blend of rolling hills and plains, rugged badlands formations, and Cheyenne River breaks. The major distinguishing landmarks and features include, from north to south, Rapid Creek, Railroad Buttes, Red Shirt Canyon and the Chalk Hills. Drainages flow primarily to the east into the Cheyenne River, which forms the eastern boundary of the Fall River Ranger District and is a significant feature in this geographic area. Elevations range from about 2,450 feet above sea level in the northwestern corner of the district along the Cheyenne River to 3,100 feet above sea level in the Red Shirt Canyon area.

The primary tributaries of the Cheyenne River in this geographic area include, from north to south, Rapid Creek, Spring Creek, Battle Creek and French Creek. All of these streams originate in the interior of the Black Hills more than 50 miles from their confluence with the Cheyenne River.

The dominant vegetation types include: western wheatgrass in the uplands with green ash, American elm, snowberry, and chokecherry, in the draws. Cottonwood trees are common along the Cheyenne River, but also appear, to a lesser extent, along the major tributary streams. Rocky Mountain juniper also provides a significant woody component on many of the north-facing slopes.

Currently, there are two developed recreation facilities in this geographic area. They are the Railroad Buttes OHV Area and French Creek Campground. The primary dispersed recreational opportunities within this geographic area include big game hunting, upland game hunting, waterfowl hunting, wildlife viewing, rockhounding, mountain biking, hiking, fishing, and camping.

Desired Condition

The desired condition is perpetuate diverse and healthy mixed grass communities, representing both cool season and warm season species such as western wheatgrass, green needlegrass, needleandthread grass, little bluestem, threadleaf sedge, prairie sandreed, sideoats grama, buffalo grass, and blue grama. Hardwood draws will be managed to perpetuate multiple layers and age classes of herbaceous plants, shrubs and trees. Species included in the draws are green ash, American elm, chokecherry and snowberry. Streams and riparian areas will maintain soil

moisture to perpetuate riparian plant communities with strong root masses. Plant species include prairie cordgrass, bulrushes, spikerushes, inland saltgrass, cottonwoods, and willows.

The landscape desired condition is to maintain open, scenic plains and vast prairie landscapes. The streams and riparian areas are in, or are trending towards, Properly Functioning Condition (PFC-see glossary), which allows them to recover quickly from floods and support diverse native plants and animals. Long-term soil productivity and properly functioning water cycles are maintained. Properly functioning water cycles are characterized by high infiltration rates, low soil compaction, and minimal overland flows.

The desired condition for the upland grassland is to perpetuate diverse and healthy mixed grass communities that provide primarily moderate to high structure levels. Upland grassland habitat associated with sharp-tailed grouse will be managed to provide sufficient residual cover to meet nesting, brooding, and hiding cover requirements. Woody draws/riparian woodlands/cedar breaks will be managed to perpetuate multiple layers and age classes of vegetation including herbaceous plants, shrubs, and trees. Wetlands/aquatic areas will emphasize healthy submergent and emergent vegetative cover along the shorelines, while reducing sediment levels to maintain high quality aquatic habitat. Although small and isolated, prairie dog colonies will maintain some low structure grassland habitat scattered throughout this geographic area.

The desired recreation condition includes the development of a picnic area and trailhead at the Railroad Buttes OHV Area, and the development of trailheads and trails for the Red Shirt Area. The Red Shirt area, which is being recommended for Wilderness designation, will be managed to protect its rugged, unroaded character, and motorized travel will be restricted. Dispersed recreation activities will continue to be emphasized across this geographic area.

Important Attributes

- Significant fossil resources from the Tertiary Period.
- Significant gemstone and agate beds.
- Railroad Buttes Off-Highway Vehicle (OHV) Motorized Recreation Area.
- Scenic Red Shirt Canyon.
- Picturesque Rapid Creek and Cheyenne River Valleys.
- French Creek Campground & Trailhead
- Populations of Barr's milkvetch.

Management Area Prescription Allocation

Number	Prescription	Acres
1.2	Recommended for Wilderness	14,800
2.2	Research Natural Areas	1,600
3.64	Special Plant and Animal Habitat: Sharp-tailed Grouse	15,710
	Special Plant and Animal Habitat: Creston Pit	150
4.32	Dispersed Recreation High Use	5,410
6.1	Rangeland with Broad Resource Emphasis	54,280

Geographic Area Direction - Objectives

Vegetation

This section deals with vegetation and its relationship to MIS and TES habitat needs. The focus in the Fall River Northeast Geographic Area is on grass and grass-like plants.

The resulting vegetation will have a mix of seral stages designed to approximate evolutionary development of the northern Great Plains. The grassland ecosystem will have a "shifting mosaic" of disturbance processes over space and time.

Composition objectives are based on a mix of grass and grass-like species across a majority of the Geographic Area. This mix provides suitable opportunity for meeting vegetation structure objectives and providing for floristic diversity.

The following section describes the specific vegetative compositional and structural objectives for the Fall River Northeast Geographic Area:

Composition

1. The desired plant species composition objective across the geographic area is as follows:

Late Seral	Late Intermediate Seral	Early Intermediate Seral	Early Seral
20 to 40%	40 to 60%	5 to 15%	5 to 15%

In the late seral stage, more productive soils (clayey, silty, and thin upland soils) should be comprised mainly of mid grasses and to a lesser extent tall grasses. On clayey, silty, and thin upland range sites western wheatgrass, green needlegrass, porcupine grass, sideoats grama, and little bluestem are the primary mid grasses and big bluestem should make up the majority of the tall grasses. Tall grasses such as big bluestem, switchgrass, and prairie sandreed should be expressed in the overflow or run-in sites.

In the late intermediate seral stage, more productive soils (clayey, silty, and thin upland soils) should be comprised mainly of mid grasses and to a lesser extent short grasses. The dominant grass species in the late intermediate seral stage should be western wheatgrass with the codominance made up of needleandthread, porcupine grass, blue grama, and sedges. The mix of grasses making up the codominance in late intermediate seral stages will fluctuate according to precipitation and/or grazing intensities. Overflow sites will be made up of mid grasses, mainly western wheatgrass and green needlegrass.

In the early intermediate seral stage, more productive soils (clayey, silty, and thin upland soils) should be comprised mainly of short grasses and to a lesser extent mid grasses. Dominant grass species in the early intermediate seral stage should be blue grama, buffalo grass, western wheatgrass, needleandthread, and sedges. The mix of grasses making up the codominance in early intermediate seral stages will fluctuate according to precipitation and/or grazing intensities. Overflow sites will be made up of mid grasses and short grasses; mainly western wheatgrass, needleandthread, and blue grama.

In the early seral stage, more productive soils (clayey, silty, and thin upland soils) should be comprised mainly of short grasses with little if any presence of mid grasses. The early seral stage will be dominated by sedges, and short grasses such as blue grama and buffalograss on all range sites. Overflow sites will be dominated by short grasses and to a lesser extent mid grasses. The early seral stage should be emphasized on the less productive claypan soil types, in and around prairie dog towns, and in isolated areas of high livestock use.

Structure

2. Manage the geographic area to meet the vegetation structure objectives identified below:

High	Moderate	Low
25 to 45%	45 to 65%	1 to 20%

High vegetation structure can be achieved on moderate and highly productive soils dominated by mid and/or tall grasses (late or late intermediate seral stage composition). Grasslands on moderate to highly productive soils but dominated by short-statured species generally do not have the capability to provide high vegetation structure unless management is changed to increase the composition of mid to tall grass species over a period of years or decades.

Moderate structure can be achieved on moderate to highly productive soils dominated by mid and/or tall grasses depending on grazing use levels. Grasslands within this geographic area receiving light to moderate levels of livestock use should be in the late or late intermediate seral stage to achieve moderate structure. Grasslands dominated by short grass species in early intermediate or early seral stages will not achieve moderate structure under even light grazing levels.

Low productivity soils, prairie dog colonies, and grassland areas grazed by livestock at high intensities provide low structure. Low vegetation structure can result from a dominance of low stature plant species or from heavy utilization of mid and tall grasses.

Smooth Goosefoot

1. Prioritize and initiate target surveys for smooth goosefoot. **Objective**

Fire

1. Prescribe burn a minimum of 1,500 acres per decade to achieve one or more of the following desired condition objectives:

- Promote vegetative diversity,
- Improve wildlife habitat,
- Stimulate riparian/woody draw regeneration,
- Control or reduce invasive plants/noxious weeds,
- Improve plant vigor and health, and/or
- Reduce fuel loading. **Objective**

Rest

1. Rest 1-10 percent of the suitable rangeland each year. **Objective**

Wildlife, Fish, and Rare Plants

1. Management Indicator Species:

Plains Sharp-tailed Grouse

- Provide diverse and quality grassland habitat across this geographic area at levels that, in combination with habitat on adjoining lands, helps support stable to increasing sharp-tailed grouse populations (long-term trends) and viable populations of other wildlife species with similar habitat needs. **Objective**
- Establish and maintain quality nesting and brooding habitat for sharp-tailed grouse (Appendix H) and associated wildlife by meeting vegetation objectives for high structure within 10 years. **Objective**
- Establish and maintain quality winter foraging habitat for sharp-tailed grouse and associated wildlife by enhancing and/or maintaining a diversity of forb species in grassland communities and regeneration of shrub patches and the shrub component of wooded draws and riparian habitats. **Objective**

Black-tailed Prairie Dog (Amendment 3 – proposed revision)

- Apply adaptive management strategies to provide objectives for 1,000 minimum and 2,700 maximum acres of active prairie dog colonies within the interior-colony management zones. If maximum acreage objective is exceeded, refer to Chapter 1, H. Animal Damage Control for management direction. **Objective**
- Increase black-tailed prairie dog populations over the next 10-to 15 years. **Objective**
- Maintain or expand the current distribution of black-tailed prairie dogs across the geographic area over the next 10 to 15 years. **Objective**

2. Threatened, Endangered and Sensitive Species:

Sturgeon Chub (Candidate Species)

- In cooperation with other conservation agencies and organizations, continue inventories as needed in the Cheyenne River and selected tributaries to establish baseline population and distribution information so that appropriate population trend and habitat objectives can be established for these drainages. **Objective**
- In cooperation with other conservation agencies and organizations, assess the potential impacts of the construction of additional small impoundments in upper watersheds on hydrologic flow and patterns on downstream sturgeon chub habitat. **Objective**

3. Special Plant and Wildlife (3.64) Area: Special Wetland/Aquatic Habitat (Creston Pit). The Creston Pit Area is a special wetland/aquatic habitat area in this geographic area. The area will be managed to enhance and maintain the habitat for waterfowl and shorebirds as follows:

- Provide diverse and quality wetland/aquatic habitat in this special management area at levels that help support stable to increasing populations of waterfowl and other wildlife with similar habitat needs. **Objective**

4. Enhance warm-water fisheries in suitable water impoundments. **Objective**

Recreation

Railroad Buttes Off-Highway Vehicles (OHV) Recreation Area (4.32)

1. Develop a trailhead, parking, and picnic area for this area. **Objective**

Red Shirt Recommended for Wilderness Area (1.2)

2. Within the life of the plan develop trailheads near the French Creek Campground/Agate Beds and near the Red Shirt Bridge off of Highway #40. **Objective**

3. Within the life of the plan develop hiking/horseback trails in the area to accommodate public use and need. **Objective**

Geographic Area Direction – Standards and Guidelines

Vegetation

1. Use existing monitoring information and stocking rate guidelines for livestock grazing (see Appendix I) to help develop and implement range management strategies for meeting desired vegetation objectives. **Standard**

Smooth Goosefoot

- Conduct target surveys in priority areas to determine if smooth goosefoot or suitable habitat occurs in the geographic area. Protect populations that are found in the geographic area and maintain suitable habitat for these populations. **Standard**
- Prioritize control of noxious weeds in habitat occupied by smooth goosefoot. Restrict activities that contribute to invasive and non-native plant species into occupied habitat. **Standard**
- Monitor ORV use in occupied habitat and implement travel management restrictions if smooth goosefoot populations are at risk. **Standard**

Infrastructure

1. New structural improvements (fences and water developments) may be constructed as needed to achieve desired condition objectives. **Guideline**

Wildlife, Fish, and Rare Plants

1. Management Indicator Species:

Plains Sharp-tailed Grouse

- The following criteria will be considered during site-specific project level planning to help determine the best locations to manage for high structure grasslands:
  - Presence of moderate to highly productive soils and range sites,
  - Proximity to sharp-tailed grouse display grounds,
  - Proximity to shrub habitats, private croplands and other sharp-tailed grouse foraging habitats. **Guideline**

Black-tailed Prairie Dog (Amendment 3 – proposed revision)

- Refer to Chapter 1 (Sections F and/or H) for standards and guidelines.

2. Threatened, Endangered and Sensitive Species:

Sturgeon Chub

- To assist in maintaining the current quantity and quality of aquatic habitat for this species, do not authorize land uses or developments that would measurably and cumulatively further degrade sturgeon chub habitat, including reducing downstream flows**. Guideline**
- Conduct project-level biological evaluations assessing potential downstream risks to this species from proposed projects that may have the potential to significantly alter sturgeon chub habitat or reduce downstream flows. This includes sand and gravel dredging and small impoundment construction in upper watersheds. **Guideline**

3. Special Plant and Wildlife (3.64) Areas: Sharp-tailed Grouse. These areas will be managed to emphasize high structure for sharp-tailed grouse habitat. **Guideline**

- The following criteria will be considered during site-specific project level planning to help determine the best locations to manage for high structure grasslands:
  - Presence of moderate to highly productive soils and range sites,
  - Proximity to wetland/aquatic habitat. **Guideline**
- This area may be grazed or burned periodically to meet management objectives. **Guideline**

Recreation

Railroad Buttes Off-Highway Vehicles (OHV) Recreation Area (4.32)

1. Prohibit target shooting within this area. **Standard**

2. This area will be open to motorized travel. However, some areas shall have travel restrictions (Seasonal Closures, Area Closures, and/or designated routes) to mitigate impacts to sensitive areas. These areas could include archeological sites, paleontological sites, wetlands, critical wildlife and plant areas, and areas with high visual sensitivity (along County Road). **Standard**

FALL RIVER SOUTHEAST GEOGRAPHIC AREA

Buffalo Gap National Grassland - Fall River Ranger District

Setting

The Fall River Southeast Geographic Area encompasses about 111,621 acres of National Forest System lands on the central portion of Fall River Ranger District. The Pine Ridge Sioux Indian Reservation borders this area on the east.

The climate of the Fall River Southeast Geographic Area can be classified as semi-arid Continental. Local weather can be highly variable and unpredictable. Temperatures can range from –40 degrees below zero Fahrenheit in the winter to more than 110-degrees Fahrenheit in the summer. Precipitation levels average around 16 inches per year with the majority falling as rain from about May through July.

The topography of this area is a blend of gently rolling hills and semi-flat plains. Distinguishing features include, from north to south, the Jim Wilson and First Black Canyons, Limestone Butte and Lone Butte. Drainages generally flow to the west into the Cheyenne River or southeast into the White River. Elevations range from about 2,900 feet above sea level along the Cheyenne River in the northern portion of this geographic area to about 3,530 feet above sea level atop Limestone Butte in the central portion of this geographic area.

The primary tributaries flowing into the Cheyenne River are Horsehead Creek and Hay Canyon Creek and the primary tributary flowing into White River is Blacktail Creek.

Dominant vegetation includes western wheatgrass in the uplands and some chokecherry, snowberry, green ash, willow, and cottonwood in the draws.

Currently, the only developed recreational facility within this geographic area is the Pioneer Picnic Area. The primary dispersed recreational opportunities within this geographic area include big game hunting, upland game hunting, waterfowl hunting, wildlife viewing, rockhounding, mountain biking, hiking, fishing, and camping.

Desired Conditions

The desired condition is to perpetuate diverse and healthy mixed grass and short grass communities, representing both cool season and warm season species such as western wheatgrass, green needlegrass, needleandthread grass, little bluestem, threadleaf sedge, prairie sandreed, sideoats grama, buffalo grass, and blue grama. Hardwood draws will be managed to perpetuate multiple layers and age classes of herbaceous plants, shrubs and trees. Species in the draws are green ash, American elm, chokecherry and snowberry. Streams and riparian areas will maintain soil moisture to perpetuate riparian plant communities with strong root masses. Plant species include prairie cordgrass, bulrushes, spikerushes, inland saltgrass, cottonwood, and willows.

The landscape desired condition is to maintain open, scenic plains and vast prairie landscapes. Streams and riparian areas are in, or are trending towards, Properly Functioning Condition (PFC-see glossary), which allows them to recover quickly from floods and support diverse native plants and animals. Long-term soil productivity and properly functioning water cycles are maintained. Properly functioning water cycles are characterized by high infiltration rates, low soil compaction, and minimal overland flows.

The desired condition for the upland grassland is to perpetuate diverse and healthy mixed grass communities that provide a mixture of grassland structure levels. Upland grassland habitat associated with sharp-tailed grouse will be managed to provide sufficient residual cover to meet nesting, brooding, and hiding cover requirements. Woody draws/riparian woodlands/cedar breaks will be managed to perpetuate multiple layers and age classes of vegetation including herbaceous plants, shrubs, and trees. Wetlands/aquatic areas will be managed to emphasize healthy submergent and emergent vegetative cover along the shorelines, while reducing sediment levels to maintain high quality aquatic habitat. Grassland structure will be managed to promote prairie dog expansion within the proposed ferret reintroduction area (MA 3.63). Prairie dog colonies outside the ferret reintroduction area and scattered throughout the geographic area will maintain some low structure grassland habitat.

The desired recreation condition includes an interpretive trail around the wetlands at the Pioneer Picnic Area. Dispersed recreation activities will continue to be emphasized in this geographic area.

Important Attributes

- Semi-precious rock and agate beds
- Pioneer Picnic Area
- Vast, rolling plains and open landscape
- Limestone Butte wetland area
- Limited populations of Barr's milkvetch

Management Area Prescription Allocation

Number	Prescription	Acres
3.63	Black-footed Ferret Reintroduction Habitat	25,300
3.64	Special Plant and Wildlife Habitat: Sharp-tailed Grouse	26,190
	Special Plant and Wildlife Habitat: Limestone Butte Reservoir Area	260
6.1	Rangeland with Broad Resource Emphasis	59,860

Geographic Area Direction - Objectives

Vegetation

This section deals with vegetation and its relationship to MIS and TES habitat needs. The focus in the Fall River Southeast Geographic Area is on grass and grass-like life plants.

The resulting vegetation will have a mix of seral stages designed to approximate evolutionary development of the northern Great Plains. The grassland ecosystem will feature a shifting mosaic of disturbance processes over space and time.

Composition objectives are based on a mix of grass and grass-like species across a majority of the Geographic Area. This mix provides suitable opportunity for meeting structure objectives and providing for floristic diversity.

The following section describes the specific vegetative composition and structure objectives for the Fall River Southeast Geographic Area:

Composition

1. The desired plant species composition objective across the geographic area is as follows:

Late Seral	Late Intermediate Seral	Early Intermediate Seral	Early Seral
20 to 30%	40 to 60%	15 to 25%	1 to 10%

In the late seral stage, more productive soils (clayey, silty, and thin upland soils) should be comprised mainly of mid grasses and to a lesser extent tall grasses. On clayey, silty, and thin upland range sites western wheatgrass, green needlegrass, porcupinegrass, sideoats grama, and little bluestem are the primary mid grasses and big bluestem should make up the majority of the tall grass. Tall grasses such as big bluestem, switchgrass, and prairie sandreed should be expressed in the overflow or run-in sites.

In the late intermediate seral stage, more productive soils (clayey, silty, and thin upland soils) should be comprised mainly of mid grasses and to a lesser extent short grasses. The dominant grass species in the late intermediate seral stage should be western wheatgrass with the codominance made up of needleandthread, porcupine grass, blue grama, and sedges. The mix of grasses making up the codominance in the late intermediate seral stages will fluctuate according to precipitation and/or grazing intensities. Overflow sites will be made up of mid grasses, mainly western wheatgrass and green needlegrass.

In the early intermediate seral stage, more productive soils (clayey, silty, and thin upland soils) should be comprised mainly of short grasses and to a lesser extent mid grasses. Dominant grass species in the early intermediate seral stage should be blue grama, buffalo grass, western wheatgrass, needleandthread, and sedges. The mix of grasses making up the codominance in early intermediate seral stage will fluctuate according to precipitation and/or grazing intensities. Overflow sites will be made up of mid grasses and short grasses; mainly western wheatgrass, needleandthread, and blue grama.

In the early seral stage, more productive soils (clayey, silty, and thin upland soils) should be comprised mainly of short grasses with little if any presence of mid grasses. The early seral stage will be dominated by sedges, and short grasses such as blue grama and buffalograss on all range sites. Overflow sites will be dominated by short grasses and to a lesser extent mid grasses. Early seral stage should be emphasized on less productive claypan soil types, in and around prairie dog towns, and in isolated areas of high livestock use.

Structure

2. Manage the geographic area to meet the vegetation structure objectives identified below:

High	Moderate	Low
15 to 35%	40 to 60%	15 to 35%

High vegetation structure can be achieved on moderate and highly productive soils dominated by mid and/or tall grasses (late or late intermediate seral stage composition). Grasslands on moderate to highly productive soils but dominated by short statured species generally do not have the capability to provide high vegetation structure unless management is changed to increase the composition of mid to tall grass species over a period of years or decades.

Moderate structure can be achieved on moderate to highly productive soils dominated by mid and/or tall grasses depending on grazing use levels. Grasslands within this geographic area receiving light to moderate levels of livestock use should be in late or late intermediate seral stage to achieve moderate structure. Grasslands dominated by short grass species in early intermediate or early seral stages will not achieve moderate structure under even light grazing levels.

Minimally productive soils, prairie dog colonies, and grassland areas grazed by livestock at high intensities provide low structure. Low vegetation structure can result from a dominance of low stature plant species or from heavy utilization of mid and tall grasses.

Fire

1. Prescribe burn a minimum of 1,500 acres per decade to achieve one or more of the following desired condition objectives:

- Promote vegetative diversity,
- Improve wildlife habitat,
- Stimulate riparian/woody draw regeneration,
- Control or reduce invasive plants/noxious weeds,
- Improve plant vigor and health, and/or
- Reduce fuel loading. **Objective**

Rest

1. Rest 1-10 percent of the suitable rangeland each year. **Objective**

Wildlife, Fish and Rare Plants

1. Management Indicator Species:

Plains Sharp-tailed Grouse

- Provide diverse and quality grassland habitat across this geographic area at levels that, in combination with habitat on adjoining lands, helps support stable to increasing sharp-tailed grouse populations (long-term trends) and viable populations of other wildlife species with similar habitat needs. **Objective**

- Establish and maintain quality nesting and brooding habitat for sharp-tailed grouse (Appendix H) and associated wildlife by meeting vegetation objectives for high structure within 10 years. **Objective**
- Establish and maintain quality winter foraging habitat for sharp-tailed grouse and associated wildlife by enhancing and/or maintaining diverse forb species in grassland communities and regenerating shrub patches and the shrub component of wooded draws and riparian habitats. **Objective**

Black-tailed Prairie Dog

- Increase black-tailed prairie dog populations over the next 10 to 15 years. **Objective**
- Maintain or expand the current distribution of black-tailed prairie dogs across the geographic area over the next 10 to15 years. **Objective**
- Develop a prairie dog colony complex in the northeastern part of this geographic area over the next 10 to 15 years. This area has been designated as MA 3.63 (see Chapter 3). **Objective**

2. Special Plant and Wildlife (3.64) Area: Special Wetland/Aquatic Habitat (Limestone Butte). The Limestone Butte Reservoir area is a special wetland/aquatic habitat area in this geographic area. The area will be managed to enhance and maintain the habitat for waterfowl and shorebirds as follows:

- Provide diverse and quality wetland/aquatic habitat in this special management area at levels that help support stable to increasing populations of waterfowl and other wildlife with similar habitat needs. **Objective**

Recreation

1. Within the life of the plan develop an interpretive trail at the Pioneer Picnic Area. **Objective**

2. Within the life of the plan develop an interpretive sign and/or display for the Limestone Butte Special Wetland/Aquatic Area. **Objective**

Geographic Area Direction – Standards and Guidelines

Vegetation

1. Use existing monitoring information and stocking rate guidelines for livestock grazing (see Appendix I) to help design and implement range management strategies for meeting desired vegetation objectives. **Standard**

Infrastructure

1. New structural improvements (fences and water developments) may be constructed as needed to achieve desired condition objectives. **Guideline**

Wildlife, Fish, and Rare Plants

1. Management Indicator Species:

Plains Sharp-tailed Grouse

- The following criteria will be considered during site-specific project level planning to help determine the best locations to manage for high structure grasslands:
  - Presence of moderate to highly productive soils and range sites,
  - Proximity to sharp-tailed grouse display grounds,
  - Proximity to shrub habitats, private croplands and other sharp-tailed grouse foraging habitats. **Guideline**

Black-tailed Prairie Dog

- Refer to Chapter 1 (Sections F and H) and Chapter 3 (Management Area 3.63) for standards and guidelines.

2. Threatened, Endangered, and Sensitive Species:

Mountain Plover (Sensitive Species, Proposed Species)

- Prescribe burn selected large flats (a section or more in size) to evaluate the effectiveness of burns in attracting and inventorying mountain plover. Prescribed burns should be timed to provide large blackened areas in the spring. **Standard**
- In cooperation with the U.S. Fish and Wildlife Service and the state wildlife agency, evaluate the desirability and feasibility of trying to establish a nesting population with reintroduced birds. **Standard**

(The following mountain plover direction will apply if plover are eventually found or established in this geographic area.)

- To help maintain suitable nesting habitat for mountain plover, prohibit development of new facilities within 0.25 miles of known mountain plover nests or nesting areas. This does not apply to pipelines, fences, and underground utilities. **Standard**

  For lands identified in the DM&E final environmental impact statement and only for project decisions on those lands, this standard is waived entirely to allow for construction, installation, and operation of the DM&E Railroad under a construction permit and an authorization. Site-specific direction from the project mitigation plan, where it applies, will be used instead. See Amendment 2003-01 for specific mitigation. (Amendment 1)

- Any net loss of suitable and occupied mountain plover habitat as a result of prairie dog poisoning or development of new facilities within prairie dog colonies will be replaced within the year by concurrent expansion of suitable plover habitat or in some cases, by enhanced management and protection of occupied plover habitat elsewhere on or near the national grassland. The amount of habitat loss is based on the amount of suitable and occupied habitat available prior to prairie dog dispersal in the year of the poisoning or development. **Guideline**

- To help reduce disturbances and risks to nesting mountain plover, prohibit the following activities in plover nesting areas or within 0.25 miles of plover nests from March 15 through July 31:
  - Construction (e.g., roads, water impoundments),
  - Reclamation,
  - Drilling of water wells,
  - Prescribed burning. **Standard**
- To help reduce disturbances and risks to nesting mountain plover, do not authorize the following activities in plover nesting areas or within 0.25 miles of plover nests from March 15 through July 31:
  - Construction (e.g., pipelines, utilities, fencing),
  - Permitted recreation events involving large groups of people,
  - Grasshopper spraying,
  - Prairie dog shooting (in consultation with state wildlife agencies and U.S. Fish and Wildlife Service). **Guideline**

  For lands identified in the DM&E final environmental impact statement and only for project decisions on those lands, this standard is waived entirely to allow for construction, installation, and operation of the DM&E Railroad under a construction permit and an authorization. Site-specific direction from the project mitigation plan, where it applies, will be used instead. See Amendment 2003-01 for specific mitigation. (Amendment 1)
- To help reduce risks to mountain plovers from traffic, limit vehicle speeds in occupied mountain plover habitat to 25 mph on resource roads and 35 mph on local roads. **Standard**
- Vegetation management projects in suitable mountain plover habitat will be designed to maintain or improve mountain plover habitat. **Standard**
- To avoid attracting avian predators, new structures and facilities in occupied mountain plover habitat will be designed with low profiles and/or perch-inhibitors. This does not apply to structures and facilities less than 4 feet in height or those expected to be used as hunting perches by raptors. **Guideline**
- Use the following criteria at the project level to help determine where to use prescribed burning and high livestock grazing intensities (Appendix I) to provide low grassland structure and enhanced mountain plover nesting and brooding habitat:
  - Proximity to existing mountain plover nesting areas,
  - Proximity to prairie dog colonies,
  - Presence of expansive and flat grassland areas. **Guideline**

Swift Fox (Sensitive Species)

- This geographic area is near an area on the Buffalo Gap National Grassland that supports swift fox, and there's a high probability that this area is occasionally used by swift fox. USDA predator (primarily coyote) control activities to reduce livestock losses will be limited in this area to methods that do not pose a significant and direct mortality risk to swift fox. **Standard**

3. Special Plant and Wildlife (3.64) Areas: Sharp-tailed Grouse. Vegetation in these areas will be managed to emphasize high structure for sharp-tailed grouse habitat. This area may be grazed or burned periodically to meet management objectives. **Guideline**

4. The following criteria will be considered during site-specific project level planning to help determine the best locations to manage for high structure grasslands:

- Presence of moderate to highly productive soils and range sites,
- Proximity to wetland/aquatic habitat. **Guideline**

5. Enhance warm-water fisheries in suitable water impoundments. **Guideline**

FALL RIVER WEST GEOGRAPHIC AREA

Buffalo Gap National Grassland - Fall River Ranger District

Setting

The Fall River West Geographic Area encompasses about 119,749 acres of National Forest System lands on the southwestern portion of the Fall River Ranger District. The Oglala National Grassland borders this area on the south.

The climate of the Fall River West Geographic Area can be classified as semi-arid Continental. Local weather can be highly variable and unpredictable. Temperatures can range from in excess of 40-degrees below zero Fahrenheit in the winter to more than 110-degrees above zero Fahrenheit in the summer. Precipitation levels average around 14 to 15 inches per year with the majority falling as rain from about May through July.

The topography of this geographic area is a blend of rolling hills, plateaus, and flat bottomlands that drain into the Cheyenne River and its' tributaries. Soils are generally thin. The southern portion of this area includes exposed clays and hardpan. Distinguishing features include, from north to south, the Cheyenne River and the former Black Hills Army Ordnance Depot. Drainages generally flow north into the Cheyenne River. Elevations range from about 3,600 feet above sea level along the northern stretches of the Cheyenne River in this geographic area to about 4,200 feet above sea level south of the former Black Hills Army Ordnance Depot - the highest point on the Fall River Ranger District.

Primary tributaries flowing into the Cheyenne River in this geographic area include, from north to south: Moss Agate Creek, Dry Creek, Fiddle Creek, Cottonwood Creek, Coal Creek, Alkali Creek, Indian Creek and Hat Creek.

The dominant vegetation includes western wheatgrass in the uplands, with scattered cottonwood and chokecherry communities. A few ponderosa pine can be found along the escarpment of Fiddle Creek.

A significant sagebrush community lies north of the Black Hills Army Ordnance Depot. Scattered greasewood communities can be found along creek bottoms throughout the geographic area.

Currently, there are no developed recreational facilities within this geographic area. The primary dispersed recreational opportunities within this geographic area include big game hunting, upland game hunting, waterfowl hunting, wildlife viewing, mountain biking, hiking, fishing, and camping.

Desired Conditions

The desired condition is to perpetuate diverse and healthy mixed grass and short grass communities, representing both cool season and warm season species such as western wheatgrass, green needlegrass, needleandthread, little bluestem, threadleaf sedge, prairie sandreed, sideoats grama, buffalo grass, and blue grama. Hardwood draws will be managed to perpetuate multiple layers and age classes of herbaceous plants, shrubs, and trees. Species in the draws are green ash, American elm, chokecherry and snowberry. Streams and riparian areas will

maintain soil moisture to perpetuate riparian plant communities with strong root masses. Plant species include prairie cordgrass, bulrushes, spikerushes, inland saltgrass, cottonwood, and willows.

The desired landscape condition is to maintain open, scenic plains and vast prairie landscapes. The streams and riparian areas are in, or are trending towards, Properly Functioning Condition (PFC-see glossary), which allows them to recover quickly from floods and support diverse native plants and animals. Long-term soil productivity and properly functioning water cycles are maintained. Properly functioning water cycles are characterized by high infiltration rates, low soil compaction, and minimal overland flows..

Desired condition for the upland grassland is to perpetuate diverse and healthy mixed grass communities that provide a mixture of grassland structure levels. Sagebrush habitat associated with sage grouse will be managed to provide an abundance of residual herbaceous cover for nesting. Grassland structure associated with swift fox will be managed to provide moderate to low grassland structure levels. Woody draws/riparian woodlands/cedar breaks will be managed to perpetuate multiple layers and age classes of vegetation including herbaceous plants, shrubs, and trees. Wetlands/aquatic areas will be managed to emphasize healthy submergent and emergent vegetative cover along the shorelines, while reducing sediment levels to maintain high quality aquatic habitat. Prairie dog colonies scattered throughout the geographic area will be managed to maintain low structure to encourage prairie dog expansion.

The desired recreation condition includes the development of interpretive signs and/or displays for the Special Interest Areas and the Crowe Dam Special Wetland/Aquatic Area. Dispersed recreation activities will continue to be emphasized in this geographic area.

Important Attributes

- Swift fox population (Forest Service listed sensitive species)
- Significant marine fossil resources from the Late Cretaceous Period
- Site of the former Black Hills Army Ordnance Depot
- Sagebrush/greasewood communities, providing habitat for sage grouse and big game
- Huntable populations of pronghorn

Management Area Prescription Allocation

Number	Prescription	Acres
2.1	Special Interest Area	2,260
3.64	Special Plant and Wildlife Habitat: Sage Grouse	45,760
	Special Plant and Wildlife Habitat: Swift Fox	9,540
	Special Plant and Wildlife Habitat: Crowe Dam	250
6.1	Rangeland with Broad Resource Emphasis	61,940

Geographic Area Direction - Objectives

Vegetation

This section deals with vegetation and its relationship to MIS and TES habitat needs. The focus in the Fall River West Geographic Area is on grass and grass like plants.

The resulting vegetation will have a mix of seral stages designed to approximate evolutionary development of the northern Great Plains. The grassland ecosystem will feature a "shifting mosaic" of disturbance processes over space and time.

Composition objectives are based on a mix of grass and grass-like species across a majority of the Geographic Area. This mix provides suitable opportunity for meeting vegetation structure objectives and providing for floristic diversity.

The following section describes the specific vegetative composition and structure objectives for the Fall River West Geographic Area:

Composition

1. The desired plant species composition objective across the geographic area is as follows:

Late Seral	Late Intermediate Seral	Early Intermediate Seral	Early Seral
10 to 30%	50 to 70%	10 to 20%	1 to 10%

Grasslands: In the late seral stage, more productive soils (clayey, silty, and thin upland soils) should be comprised mainly of mid grasses and to a lesser extent tall grasses. On clayey, silty, and thin upland range sites western wheatgrass, green needlegrass, porcupine grass, sideoats grama, and little bluestem are the primary mid grasses and big bluestem should make up the majority of the tall grass. Tall grasses such as big bluestem, switchgrass, and prairie sandreed should be expressed in the overflow or run-in sites.

In the late intermediate seral stage, more productive soils (clayey, silty, and thin upland soils) should be comprised mainly of mid grasses and to a lesser extent short grasses. The dominant grass species in the late intermediate seral stage should be western wheatgrass with the codominance made up of needleandthread, porcupine grass, blue grama, and sedges. The mix of grasses making up the codominance in the late intermediate seral stage will fluctuate according to precipitation and/or grazing intensities. Overflow sites will be made up of mid grasses, mainly western wheatgrass and green needlegrass.

In the early intermediate seral, more productive soils (clayey, silty, and thin upland soils) should be comprised mainly of short grasses and to a lesser extent mid grasses. The dominant grass species in the early intermediate seral stage should be blue grama, buffalo grass, western wheatgrass, needleandthread, and sedges. The mix of grasses making up the codominance in the early intermediate seral stage will fluctuate according to precipitation and/or grazing intensities. Overflow sites will be made up of mid grasses and short grasses; mainly western wheatgrass, needleandthread, and blue grama.

In the early seral stage, more productive soils (clayey, silty, and thin upland soils) should be comprised mainly of short grasses with little if any presence of mid grasses. The early seral stage will be dominated by sedges, and short grasses such as blue grama and buffalograss on all range sites. Overflow sites will be dominated by short grasses and to a lesser extent mid grasses. The early seral stage should be emphasized on the less productive claypan soil types, in and around prairie dog towns, and in isolated areas of high livestock use.

Sagebrush Stands: The understory of big sagebrush stands in late seral stage is dominated by mid grasses such as western wheatgrass, green needlegrass, and needleandthread with short grasses, especially blue grama and buffalograss, being a minor part of the understory component.

The understory of big sagebrush stands in the late intermediate seral stage is dominated by western wheatgrass, with blue grama and buffalograss being the two codominant species.

The dominant native plant species in the understory of big sagebrush stands in early intermediate seral stage are blue grama and buffalo grass while western wheatgrass is a lesser component of the understory.

The dominant native plant species in the understory of big sagebrush stands in early seral stage are buffalograss and blue grama. There are also several annual forbs as well as broom snakeweed, and plains cactus making up the understory of the sagebrush communities in early seral stage.

Structure

2. Manage the geographic area to meet the vegetation structure objectives identified below:

High	Moderate	Low
10 to 30%	50 to 70%	10 to 30%

High vegetation structure can be achieved on moderate and highly productive soils dominated by mid and/or tall grasses (late or late intermediate seral stage composition). Grasslands on moderate to highly productive soils but dominated by short statured species generally do not have the capability to provide high vegetation structure unless management is changed to increase the composition of mid to tall grass species over a period of years or decades.

Moderate structure can be achieved on moderate to highly productive soils dominated by mid and/or tall grasses depending on grazing use levels. Grasslands within this geographic area receiving light to moderate levels of livestock use should be in the late or late intermediate seral stage to achieve moderate structure. Grasslands dominated by short grass species in the early intermediate or early seral stage will not achieve moderate structure under even light grazing levels.

Minimally productive soils, prairie dog colonies, and grassland areas grazed by livestock at high intensities provide low structure. Low vegetation structure can result from a dominance of low stature plant species or from heavy utilization of mid and tall grasses.

Fire

1. Prescribe burn a minimum of 1,500 acres per decade to achieve one or more of the following desired condition objectives:

- Promote vegetative diversity,
- Improve wildlife habitat,
- Stimulate riparian/woody draw regeneration,
- Control or reduce invasive plants/noxious weeds,
- Improve plant vigor and health, and/or
- Reduce fuel loading. **Objective**

Rest

1. Rest 1-10 percent of the suitable rangeland each year. **Objective**

Wildlife, Fish and Rare Plants

1. Management Indicator Species:

Sage Grouse

- Provide habitat conditions that, in combination with sagebrush habitat on adjoining lands, helps support stable to increasing sage grouse populations (long-term trends) in the western part of this geographic area. **Objective**
- Establish and maintain quality nesting and brooding habitat for sage grouse (Appendix H) and associated wildlife across most of the sagebrush habitat in this geographic area within 10 to 15 years. **Objective**

Black-tailed Prairie Dog

- Increase black-tailed prairie dog populations across the geographic area over the next 10 to 15 years. **Objective**
- Maintain or expand the current distribution of black-tailed prairie dogs across the geographic area over the next 10 to15 years. **Objective**
- Apply adaptive management strategies to provide objectives for 1,000 minimum and 3,600 maximum acres of active prairie dog colonies within the interior-colony management zones. If maximum acreage objective is exceeded, refer to Chapter 1, H. Animal Damage Control for management direction. **Objective** (Amendment 3 – proposed revision)

2. Special Plant and Wildlife (3.64) Area: Special Wetland/Aquatic Habitat (Crowe Dam). Crowe Dam area is a special wetland/aquatic habitat area in this geographic area. The area will be managed to maintain and enhance habitat for waterfowl and shorebirds as follows:

- Provide diverse and quality wetland/aquatic habitat at levels that help support stable to increasing populations of waterfowl and other wildlife with similar habitat needs. **Objective**

Recreation

1. Within the life of the plan develop interpretive media for Special Interest Areas in this Geographic Area and the Crowe Dam Special Wetland/Aquatic Area. **Objective**

Geographic Area Direction – Standards and Guidelines

Vegetation

1. Use existing monitoring information and stocking rate guidelines for livestock grazing (see Appendix I) to help design and implement range management strategies to meet desired vegetation objectives. **Standard**

Infrastructure

1. New structural improvements (fences and water developments) may be constructed as needed to achieve desired condition objectives. **Guideline**

Wildlife, Fish and Rare Plants

1. Management Indicator Species:

Sage Grouse

- To help reduce adverse impacts to breeding sage grouse and their display grounds, prohibit construction of new oil and gas facilities within 0.25 miles of active display grounds. A display ground is no longer considered active if it's known to have been unoccupied during the past 5 breeding seasons. This does not apply to pipelines and underground utilities. **Standard**
- To reduce disturbances to nesting sage grouse, prohibit the following activities within 2.0 miles of active display grounds from March 1 to June 15:
  - Construction (e.g., roads, water impoundments, oil and gas facilities),
  - Reclamation,
  - Gravel mining operations,
  - Drilling of water wells,
  - Oil and gas drilling,
  - Training of hunting dogs. **Standard**
- To reduce disturbances to nesting sage grouse, do not authorize the following activities within 2.0 miles of active display grounds from March 1 to June 15:
  - Construction (e.g., pipelines, utilities, fencing),
  - Seismic exploration,
  - Workover operations for maintenance of oil and gas wells,
  - Permitted recreation events. **Guideline**
- To help prevent reproductive failure, limit noise on sage grouse display grounds from nearby facilities and activities to 49 decibels (10 dBA above background noise) from March 1 to June 15. **Guideline**

- Pastures will be managed for sage grouse/big sagebrush only if they contain 5% or more canopy cover of big sagebrush. **Guideline**
- When constructing facilities or structures within 2 miles of a sage grouse active display ground, design them to discourage raptor perching by maintaining a low profile or using perch inhibitors. **Guideline**
- Prohibit development or operations of facilities within 2 miles of a sage grouse display ground if these activities would exceed a noise level of more than 10 decibels above the background noise level (39 db), at 800 feet from the noise source, from March 1 to June 15. **Guideline**.
- Manage display ground viewing activities to reduce disturbances and adverse impacts to birds on display grounds. **Guideline**
- During the AMP process or as other opportunities arise, design and implement livestock grazing strategies to provide quality nesting cover in all sagebrush stands (>15% canopy cover of sagebrush) within at least 3.0 miles of active display grounds (consistent with GA vegetation objectives) where sagebrush is irregularly distributed around the display ground. This minimum distance can be reduced to 2.0 miles where sagebrush is uniformly distributed around display grounds. Consult Appendix H for a description of quality nesting habitat for sage grouse. **Standard**
- In big sagebrush and sage grouse wintering habitat, do not prescribe burn or treat with herbicides unless it can be demonstrated to be beneficial for local sage grouse populations. Treatments should not be conducted where the canopy cover of sagebrush averages less than 15%. Limit treatments to less than 80-acre patches and no more than 20% of the sagebrush stands in the wintering habitat. Big sagebrush within 100 yards of meadows, riparian areas, and other foraging habitats should not be burned or sprayed. **Guideline**
- Maintain or enhance wet and sub-irrigated meadows, seeps, riparian habitats, and other wetland areas that occur in or adjacent to sage grouse habitat as quality sage grouse foraging areas during the spring, summer, and fall. Consult Appendix H for a description of quality foraging habitat for sage grouse broods. **Standard**
- Maintain or increase the size of big sagebrush patches in sage grouse habitat. **Guideline**
- When conducting vegetation management projects, maintain small openings within sagebrush and greasewood stands at a ratio of no more than 25% openings and at lease 75% shrub canopy (e.g., 1 acre of opening for every 3 acres of shrub within the discrete stand). **Standard**
- At the onset of drought, evaluate the need to adjust land uses to reduce impacts on sage grouse nesting and brooding habitat. **Standard**
- Manage for high vegetative structure in areas where it would enhance sage grouse nesting habitat. Emphasize areas characterized by:
  - Presence of moderate to highly productive soils and range sites,
  - Plant composition dominated by mid and/or tall grasses, with sagebrush canopy cover of 15-25%,
  - Proximity to sage grouse display grounds. **Guideline**

Black-tailed Prairie Dog

- Refer to Chapter 1 (Sections F and H) for standards and guidelines.

2. Threatened, Endangered and Sensitive Species:

Mountain Plover (Candidate Species)

- Prescribe burn selected large flats (a section or more in size) to evaluate the effectiveness of burns in attracting and inventorying mountain plover. Prescribed burns should be timed to provide large blackened areas in the spring. **Standard**
- In cooperation with the U.S. Fish and Wildlife Service and South Dakota Department of Game, Fish and Parks evaluate the desirability and feasibility of trying to establish a nesting population with reintroduced birds. **Standard**

(The following mountain plover direction will apply if plover are eventually found or established in this geographic area.)

- To help maintain suitable nesting habitat for mountain plover, prohibit development of new facilities within 0.25 miles of known mountain plover nests or nesting areas. This does not apply to pipelines, fences and underground utilities. **Standard**
- To help maintain occupied nesting and brooding habitat on black-tailed prairie dog colonies, new oil and gas development will be limited to one well per 80 acres within occupied habitat. Cumulatively, structure and facility development will not occur on more than 2 percent of the occupied mountain plover nesting habitat in each prairie dog colony. **Standard**
- Any net loss of suitable and occupied mountain plover habitat as a result of prairie dog poisoning or development of new facilities within prairie dog colonies will be replaced within the year by concurrent expansion of suitable plover habitat or in some cases, by enhanced management and protection of occupied plover habitat elsewhere on or near the national grassland. The amount of habitat loss is based on the amount of suitable and occupied habitat available prior to prairie dog dispersal in the year of the poisoning or development. **Guideline**
- To help reduce disturbances and risks to nesting mountain plover, prohibit the following activities in plover nesting areas or within 0.25 miles of plover nests from March 15 through July 31:
  - Construction (e.g., roads, water impoundments, oil and gas facilities),
  - Reclamation,
  - Seismic exploration,
  - Gravel mining operations,
  - Oil and gas drilling,
  - Drilling of water wells,
  - Prescribed burning. **Standard**

- To help reduce disturbances and risks to nesting mountain plover, do not authorize the following activities in plover nesting areas or within 0.25 miles of plover nests from March 15 through July 31:
  - Construction (e.g., pipelines, utilities, fencing),
  - Workover operations for maintenance of oil and gas wells,
  - Permitted recreation events involving large groups of people,
  - Grasshopper spraying,
  - Prairie dog shooting (in consultation with state wildlife agencies and U.S. Fish and Wildlife Service). **Guideline**
- To help reduce risks to mountain plover, access to oil and gas facilities in occupied mountain plover habitat for routine maintenance should be limited to once per 24 hour period and occur between 9 am and 5 pm. Duration of maintenance activities should not extend beyond 1 hour when possible. This does not apply to travel for emergency repairs. **Guideline**
- To help reduce risks to mountain plovers from traffic, limit vehicle speeds in occupied mountain plover habitat to 25 mph on resource roads and 35 mph on local roads. **Standard**
- Vegetation management projects in suitable mountain plover habitat will be designed to maintain or improve mountain plover habitat. **Standard**
- To avoid attracting avian predators, new structures and facilities in occupied mountain plover habitat will be designed with low profiles and/or perch-inhibitors. This does not apply to structures and facilities less than 4 feet in height or those expected to be used as hunting perches by raptors. **Guideline**
- Use the following criteria at the project level to help determine where to use prescribed burning and high livestock grazing intensities (Appendix I) to provide low grassland structure and enhanced mountain plover nesting and brooding habitat:
  - Proximity to existing mountain plover nesting areas.
  - Proximity to prairie dog colonies.
  - Presence of expansive and flat grassland areas. **Guideline**

Swift Fox (Sensitive Species)

- This geographic area supports swift fox. USDA predator (primarily coyote) control activities to reduce livestock losses will be limited in this area to methods that do not pose a significant and direct mortality risk to swift fox. **Standard**
- Special Plant and Wildlife (3.64) Areas: Swift Fox. This area will be managed to emphasize moderate to low structure for swift fox habitat. **Guideline**

3. Special Plant and Wildlife (3.64) Area: Special Wetland/Aquatic Habitat (Crowe Dam). The Crowe Dam area is a special wetland/aquatic habitat area in this geographic area. Vegetation in this area will be managed to enhance and maintain the habitat for waterfowl and shorebirds as follows:

- Establish and maintain quality nesting and brooding habitat on adjacent upland grasslands for waterfowl and associated wildlife within 10 years. A substantial amount of this acreage should be located where it would optimize habitat for waterfowl and associated species. The following criteria will be considered during site-specific, project level planning to help determine the best locations to manage for high structure grasslands:
  - Presence of moderate to highly productive soils and range sites.
  - Proximity to wetland/aquatic habitat.
  - Area may be grazed or burned periodically to meet management objectives.
    Guideline

WALL NORTH GEOGRAPHIC AREA

Buffalo Gap National Grassland - Wall Ranger District

Setting

The Wall North Geographic Area includes approximately 69,600 acres of National Forest System lands in the northern portions of the Wall Ranger District.

The climate of the Wall North Geographic Area can be classified as semi-arid Continental. Local weather can be highly variable and unpredictable. Temperatures can range from minus 20 degrees below zero Fahrenheit in the winter to more than 100 degrees Fahrenheit in the summer. Precipitation levels average 16.5 inches per year with the majority falling as rain from about April to July.

The topography of the area consists of typical rolling grasslands, above the "Wall" badlands landscape feature. The "Wall" is more than 40 miles in length, beginning near Wall, South Dakota, and tapering out south of Kadoka. This landscape features drops vertically an average of about 600 feet. The major distinguishing landmarks and features include the Upper Bad River Drainage to the northeast, and the Wall, which typically provides the southern boundary. Drainages flow primarily to the north and east into the Cheyenne River and Bad River. Elevations range from approximately 2,400 feet above sea level at the east end of the geographic area to 3,300 feet near the Pinnacles Ranger Station at Badlands National Park.

Upland grassland is the primary vegetation/habitat type covering about 92% of the geographic area. The soils are the most productive in the geographic area, providing a range of forage production annually from 1,200 to 2,200 pounds per acre. Over 55 percent of this upland grassland habitat consists of highly productive range sites and nearly 20 percent are minimally productive range sites. The native vegetation is dominated by mid grasses and a variety of forbs. This mixed grass prairie is made up of cool-season and warm-season plants that provide diverse habitat for a variety of wildlife species and forage for livestock. The principle grass species are western wheatgrass, green needlegrass, needleandthread, sideoats grama, blue grama, buffalograss, little bluestem, and big bluestem.

The balance of the geographic area is comprised of a variety of vegetation/habitat types: Badlands (1%) are barren, highly eroded lands with little or no vegetation. Badlands provide unique habitat for some plants and animals that are suited to open, barren soils. Juniper breaks (2%) are a unique habitat type that occurs primarily along the Cheyenne River. These areas have moderate to dense cover of juniper with an understory of sideoats grama and little bluestem. This habitat type provides critical hiding cover and thermal cover for a number of wildlife species. Prairie dog colonies (2%) are a unique component of upland grasslands and provide habitat for a number of TES species. Prairie dog colonies are fairly small and scattered across this geographic area. Although the woody draw/riparian woodland habitat (1%) comprises a very small portion of the geographic area, this habitat type is critical for many wildlife species. The woody draw/riparian woodlands provide the highest diversity of both plant and animal life in the geographic area. Principle woody species include green ash, chokecherry, buffaloberry, snowberry, cottonwood, and willow. Primary creeks and drainages include Little Buffalo Creek, the South Fork of the Bad River, Whitewater Creek, Crooked Creek, Sage Creek, Big Buffalo

Creek and Cottonwood Creek. Wetland/aquatic habitats are unusual in this geographic area (1%) and the majority are constructed water impoundments that have improved waterfowl production. A number of these impoundments have been developed into warm-water fisheries and provide additional recreational experiences. The sagebrush habitat type (<1%) is very limited and found along several of the major floodplain areas scattered throughout this geographic area.

Currently, the only developed recreational facility within this geographic area is the National Grasslands Visitor Center. The primary dispersed recreational opportunities within this geographic area include big game hunting, upland game hunting, waterfowl hunting, wildlife viewing, mountain biking, hiking, fishing, and camping

Desired Conditions

The desired landscape condition is to maintain the vast and scenic nature of open rolling prairie landscapes.

The streams and riparian areas are in, or are trending towards, Properly Functioning Condition (PFC-see glossary), which allows them to recover quickly from floods and support diverse native plants and animals. Long-term soil productivity and properly functioning water cycles are maintained. Properly functioning water cycles are characterized by high infiltration rates, low soil compaction, and minimal overland flows.

Grazing management and prescribed fire will be used as tools to enhance grass and forb diversity, stimulate woody plant regeneration and reduce invasive or noxious weeds. R

Recreational opportunities will continue to emphasize dispersed recreation activities on the majority of the geographic area. However, public interest has indicated a need to develop a primitive campground south of Wall, SD.

The desired condition for the upland grassland is to perpetuate diverse and healthy mixed grass communities that provide primarily high to moderate structure levels. Upland grassland habitat will be managed to provide sufficient residual cover for those wildlife species requiring higher grassland structure levels. Woody draws/riparian woodlands/cedar breaks will be managed to perpetuate multiple layers and age classes of vegetation including herbaceous plants, shrubs, and trees. Wetlands/aquatic areas will be managed to emphasize healthy shoreline and emergent vegetative cover along the shorelines, while reducing sediment levels to maintain high quality aquatic habitat. Although small and isolated, prairie dog colonies will be managed to maintain low structure grassland habitat scattered throughout this geographic area.

Important Attributes

- National Grasslands Visitor Center
- Best sharp-tailed grouse habitat on the Wall Ranger District
- Abundant bird watching opportunities
- Numerous scenic viewpoints highlighting vast rolling grasslands and badlands
- High-quality woody draw/riparian wildlife habitat

Management Area Prescription Allocation

Number	Prescription	Acres
2.2	Research Natural Areas	1,030
6.1	Rangeland with Broad Resource Emphasis	68,500

Geographic Area Direction -- Objectives

Vegetation

This section deals with vegetation and its relationship to MIS and TES habitat needs. The focus in the Wall North Geographic Area is on grass and grass-like plants.

The resulting vegetation will have a mix of seral stages designed to approximate evolutionary development of the northern Great Plains. The grassland ecosystem will feature a "shifting mosaic" of disturbance processes over space and time.

Composition objectives are based on a mix of grass and grass like species across a majority of the Geographic Area. This mix provides suitable opportunity for meeting vegetation structure objectives and providing for floristic diversity.

The following section describes the specific vegetative compositional and structural objectives for the Wall North Geographic Area:

Composition

1. The desired plant species composition objective across the geographic area is as follows:

Late Seral	Late Intermediate Seral	Early Intermediate Seral	Early Seral
20 to 40%	30 to 50%	10 to 30%	1 to 20%

In late seral stage, the more productive soils (clayey and silty range sites) should be comprised mainly of mid grasses and to a lesser extent tall grasses, the moderately productive soils (dense clay and shallow clay range sites) should be comprised of mid grasses, while the less productive thin claypan and claypan range sites should be comprised of mid grasses and short grasses. On clayey and silty range sites western wheatgrass, green needlegrass, needleandthread, sideoats grama, and little bluestem are the primary mid grasses and big bluestem should make up the majority of the tall grass. The dense clay range sites are comprised of mainly western wheatgrass and green needlegrass to a lesser extent. On shallow clay range sites, found primarily on the slopes, western wheatgrass, and green needlegrass occur in amounts approximately equal to big bluestem, little bluestem, and sideoats grama. Western wheatgrass, blue grama, and buffalograss should dominate the less productive thin claypan and claypan range sites. The mix of grasses making up the codominance on all range sites in late seral stage will fluctuate according to precipitation and/or grazing intensities. Tall grasses such as big bluestem, switchgrass, and prairie sandreed should be expressed in the overflow or run-in sites.

In late intermediate seral stage, more productive soils (clayey and silty range sites) should be comprised mainly of mid grasses and to a lesser extent short grasses and tall grasses, the moderately productive soils (dense clay and shallow clay range sites) should be comprised of mid grasses and short grasses, while the less productive thin claypan and claypan range sites should be comprised of short grasses and to a lesser extent mid grasses. The dominant grass species on clayey and silty range sites in the late intermediate seral stage should be western

wheatgrass with the codominance made up of needleandthread, blue grama, and sedges. The dense clay range sites are comprised of mainly western wheatgrass. On shallow clay range sites little bluestem, western wheatgrass, and sideoats grama are the dominant species while blue grama and sedges become more abundant. Blue grama, buffalograss and to a lesser extent western wheatgrass will dominate the less productive thin claypan and claypan range sites. The mix of grasses making up the codominance on all range sites in late intermediate seral stage will fluctuate according to precipitation and/or grazing intensities. Overflow sites will be made up of mid grasses, mainly western wheatgrass and green needlegrass.

In early intermediate seral stage, more productive soils (clayey and silty range sites) should be comprised mainly of short grasses and to a lesser extent mid grasses, the moderately productive soils (dense clay and shallow clay range sites) should be comprised of mid grasses and short grasses, while the less productive thin claypan and claypan range sites should be comprised of short grasses. The dominant grass species on clayey and silty range sites in early intermediate seral stage should be blue grama, buffalograss, western wheatgrass, needleandthread, and sedges. The dense clay range sites are comprised of mainly western wheatgrass and an increasing number of forbs. On shallow clay range sites blue grama and threadleaf sedge dominate the site while little bluestem is the remaining mid grass component. Less productive thin claypan and claypan range sites will be dominated by annual grasses and cactus. The mix of grasses making up the codominance in early intermediate seral stage will fluctuate according to precipitation and/or grazing intensities. Overflow sites will be made up of mid grasses and short grasses; mainly western wheatgrass, needleandthread, and blue grama.

In early seral stage, more productive soils (clayey and silty range sites) should be comprised mainly of short grasses with little if any presence of mid grasses, the moderately productive soils (dense clay and shallow clay range sites) should be comprised of short grasses with little presence of mid grasses, while the less productive thin claypan and claypan range sites should be comprised of short grasses. The early seral stage will be dominated by sedges, and short grasses such as blue grama, buffalograss and annual grasses on all range sites. The mix of grasses making up the codominance in early seral stage will fluctuate according to precipitation and/or grazing intensities. Overflow sites will be dominated by short grasses and to a lesser extent mid grasses.

Structure

2. Manage the geographic area to meet the vegetation structure objectives identified below:

High	Moderate	Low
35 to 45%	35 to 45%	15 to 25%

High vegetation structure can be achieved on moderately and highly productive soils dominated by mid and/or tall grasses (late or late intermediate seral stage composition). Grasslands on moderately to highly productive soils but dominated by short statured species generally do not have the capability to provide high vegetation structure unless management is changed to increase the composition of mid to tall grass species over a period of years or decades.

Moderate structure can be achieved on moderately to highly productive soils dominated by mid and/or tall grasses depending on grazing use levels. Grasslands within this geographic area receiving light to moderate levels of livestock use should be in the late or late intermediate seral stage to achieve moderate structure. Grasslands dominated by short grass species in the early

intermediate or early seral stages will probably not achieve moderate structure under even light grazing levels.

Low productivity soils, prairie dog colonies, and grassland areas grazed by livestock at high intensities provide low structure. Low vegetation structure can result from a dominance of low stature plant species or from heavy utilization of mid and tall grasses.

Smooth Goosefoot

1. Prioritize and initiate target surveys for smooth goosefoot. **Objective**

Fire

1. Prescribe burn a minimum of 500 acres per decade to achieve the following desired condition objectives:

- Promote vegetative diversity.
- Improve wildlife habitat.
- Stimulate riparian/woody draw regeneration.
- Control or reduce invasive plants/noxious weeds. **Objective**

Rest

1. Rest 1-10 percent of the suitable rangeland each year. **Objective**

Wildlife, Fish and Rare Plants

1. Management Indicator Species:

Plains Sharp-tailed Grouse

- Provide diverse and quality grassland habitat across the geographic area at levels that, in combination with habitat on adjoining lands, helps support stable to increasing populations of sharp-tailed grouse and other wildlife with similar habitat needs. **Objective**
- Establish and maintain quality nesting and brooding habitat for sharp-tailed grouse (see Appendix H) and associated wildlife by meeting vegetation objectives for high structure within 10 years. **Objective**

Black-tailed Prairie Dog (Amendment 3 – proposed revision)

- Apply adaptive management strategies to provide objectives for 1,000 minimum and 2,100 maximum acres of active prairie dog colonies within the interior-colony management zones. If maximum acreage objective is exceeded, refer to Chapter 1, H. Animal Damage Control for management direction. **Objective**
- Increase black-tailed prairie dog populations over the next 10-to 15 years. **Objective**
- Maintain or expand the current distribution of black-tailed prairie dogs across the geographic area over the next 10 to 15 years. **Objective**

2. Threatened, Endangered and Sensitive Species:

Sturgeon Chub

- In cooperation with other conservation agencies and organizations, conduct inventories as needed in the Cheyenne and White Rivers and tributaries to establish baseline population and distribution information so that appropriate population trend objectives can be established. **Objective**
- In cooperation with other conservation agencies and organizations, assess the potential impacts of the construction of additional small impoundments in upper watersheds on hydrologic flow and patterns on downstream sturgeon chub habitat. **Objective**

Recreation

1. Develop primitive campground southwest of Wall near Badlands National Park. **Objective**

Geographic Area Direction – Standards and Guidelines

Vegetation

1. Use current monitoring information and stocking rate guidelines for livestock grazing (see Appendix I) to help design and implement vegetation management strategies for meeting desired vegetation objectives. **Standard**

Smooth Goosefoot

1. Conduct target surveys in priority areas to determine if smooth goosefoot or suitable habitat occurs in the geographic area. Protect populations that are found in the geographic area and maintain suitable habitat for these populations. **Standard**

2. Prioritize control of noxious weeds in habitat occupied by smooth goosefoot. Restrict activities that contribute to invasive and non-native plant species into occupied habitat. **Standard**

3. Monitor ORV use in occupied habitat and implement travel management restrictions if smooth goosefoot populations are at risk. **Standard**

Livestock Grazing

1. Continue to emphasize combining pastures and allotments to achieve desired condition objectives (wildlife habitat, botanical, range management, visual quality, and recreation). **Guideline**

2. In areas where sharp-tailed grouse and waterfowl production are emphasized, utilize light to moderate stocking levels on allotments with large pastures to achieve a mosaic of vegetation structure that provides high structure intermittently across the allotment. Utilize skim or rest on allotments with small pastures that fail to provide sufficient high cover levels. **Guideline**

Infrastructure

1. New structural improvements (fences and water developments) may be constructed as needed to achieve desired condition objectives (wildlife habitat, botanical, range management, visual quality, and recreation. **Guideline**

Wildlife, Fish and Rare Plants

1. Management Indicator Species:

   Plains Sharp-tailed Grouse

   - A range of 35 to 45% of the acres is prescribed for high structure grasslands in this geographic area. A substantial amount of this acreage should be located where it would optimize habitat for sharp-tailed grouse and associated species. The following criteria will be considered during site-specific project level planning to help determine the best locations to manage for high structure grasslands:
     - Presence of moderate to highly productive soils and range sites,
     - Proximity to sharp-tailed grouse display grounds,
     - Proximity to shrub habitats and private croplands. **Guideline**
   - Establish and maintain quality foraging habitat for sharp-tailed grouse and associated species by enhancing and/or maintaining diverse forb species and promoting regeneration of shrub patches and the shrub component of wooded draws and riparian habitats. **Guideline**

   Black-tailed Prairie Dog (Amendment 3 – proposed revision)

   - Refer to Chapter 1 (Sections F and/or H) for standards and guidelines.

2. Threatened, Endangered and Sensitive Species:

   Sturgeon Chub

   - To assist in maintaining the current quantity and quality of aquatic habitat for this species, do not authorize land uses or developments that would measurably and cumulatively further degrade sturgeon chub habitat, including reducing downstream flows. **Guideline**
   - Conduct project-level biological evaluations assessing potential downstream risks to this species from proposed projects that may have the potential to significantly alter sturgeon chub habitat or reduce downstream flows. This includes sand and gravel dredging and small impoundment construction in upper watersheds. **Guideline**

WALL SOUTHEAST GEOGRAPHIC AREA

Buffalo Gap National Grassland - Wall Ranger District

Setting

The Wall Southeast Geographic Area includes approximately 94,300 acres of National Forest System lands in the southeastern and parts of the north central portions of the Wall Ranger District.

The climate of the Wall Southeast Geographic Area can be classified as semi-arid Continental. Local weather can be highly variable and unpredictable. Temperatures can range from minus 20 degrees below zero Fahrenheit in the winter to more than 100 degrees Fahrenheit in the summer. Precipitation levels average 16.5 inches per year with the majority falling as rain from about April to July.

The topography of the area consists of badlands features and flat clay hardpan with sparse vegetation, generally located below the "Wall" badlands landscape feature. The "Wall" is more than 40 miles in length, beginning near Wall, South Dakota, and tapering out south of Kadoka, South Dakota. This landscape feature drops vertically an average of about 600 feet. The major distinguishing landmarks and features include the "Wall," and the badlands overflow drainages, which are typically narrow and deep. Drainages flow primarily to the south and east into the White River, or the north and east into the Cheyenne River. Elevations range from approximately 2,200 feet above sea level along the White River to 2,600 feet above sea level at the top of the "Wall."

Upland grassland is the primary vegetation/habitat type covering about 81% of the geographic area. The soils are moderately productive in this geographic area, providing a range of forage production annually from 800 to 1,600 pounds per acre. Over 60 percent of the upland grassland habitat consists of highly productive range sites and nearly 25 percent consists of minimally productive range sites. Native vegetation is dominated by mid grasses and short grasses with a variety of forbs. This mixed grass prairie is made up of cool-season and warm-season plants that provide diverse habitat for a variety of wildlife species and forage for livestock. The principle grass species are western wheatgrass, green needlegrass, needleandthread, sideoats grama, blue grama, buffalograss, little bluestem, and big bluestem. The next largest vegetation/habitat type is badlands, which comprises about 13% of the geographic area. Badlands are barren, highly eroded lands with little or no vegetation. Badlands provide unique habitat for some plants and animals that are suited to open, barren soils.

Prairie dog colonies (2%) are a unique component of the upland grasslands and provide habitat for a number of TES species. Prairie dog colonies are fairly small and scattered across this geographic area. The sagebrush habitat type (2%) is limited and found along several of the major floodplain areas scattered throughout this geographic area. This habitat type is dominated by silver sagebrush with a variety of interspersed grass species. Although the woody draw/riparian woodland habitat (1%) comprises a very small portion of the geographic area, it is critical for many wildlife species. The woody draw/riparian woodlands provide the highest diversity of both plant and animal life in the geographic area. Principle woody species include green ash, chokecherry, buffaloberry, snowberry, cottonwood, and willow. The primary creeks and

drainages flowing toward White River include Fifteen Creek, Cut Creek, Rake Creek, and Sixteen Mile Creek. White River flows along the south boundary of this geographic area. Wetland/aquatic habitat is unusual in this geographic area (1%) Most are constructed water impoundments that provide significant benefits for waterfowl production. Ducks Unlimited, in partnership with the Forest Service, has constructed three wetland impoundments within this geographic area to improve habitat for waterfowl. Kadoka Lake is the second largest wetland specifically managed for waterfowl production in western South Dakota. A number of these impoundments have been developed into warm-water fisheries and provide additional recreational experiences.

Currently, the only developed recreational facility within this geographic area is the fourteen mile long Prairie Bike Trail. The primary dispersed recreational opportunities within this geographic area include big game hunting, upland game hunting, waterfowl hunting, rockhounding, wildlife viewing, mountain biking, hiking, fishing, and camping

Desired Conditions

The desired landscape condition is to maintain the open and scenic nature of the rolling prairie landscapes and intermingled badlands.

Streams and riparian areas are in, or are trending towards, Properly Functioning Condition (PFC-see glossary), which allows them to recover quickly from floods and support diverse native plants and animals. Long-term soil productivity and properly functioning water cycles are maintained. Properly functioning water cycles are characterized by high infiltration rates, low soil compaction, and minimal overland flows.

Grazing management and prescribed fire will be used as tools to enhance grass and forb diversity, stimulate woody plant regeneration, and reduce invasive or noxious weeds.

Recreational opportunities will continue to emphasize dispersed recreation activities on the majority of the geographic area. Rake Creek area will be managed to protect its rugged, unroaded character and motorized travel is restricted. Based on public interest, the development of a trailhead and trails in the Rake Creek backcountry nonmotorized area is desired, as is a Watchable Wildlife interpretive trail around Kadoka Lake.

The desired condition for upland grassland is to perpetuate diverse and healthy mixed grass communities that provide a mosaic grassland structure levels. Woody draws/riparian woodlands will be managed to perpetuate multiple layers and age classes of vegetation including herbaceous plants, shrubs, and trees. Principle woody species include green ash, chokecherry, buffaloberry, snowberry, cottonwood, and willow. Wetlands/aquatic areas will emphasize healthy submergent and emergent vegetative cover along the shorelines, while reducing sediment levels to maintain high quality aquatic habitat. Special plant and wildlife habitat areas around Kadoka Lake and Weta Dam will provide high grassland structure levels for waterfowl nesting. Prairie dog colonies will be managed to maintain low structure grassland habitat in management area 3.63 within this geographic area.

Important Attributes

- Kadoka Lake wetland and waterfowl production area
- Abundant agate/rock beds
- Scenic badlands terrain
- Fourteen mile long Prairie Bike Trail
- Rake Creek backcountry nonmotorized recreation area

Management Area Prescription Allocation

Number	Prescription	Acres		
1.31	Backcountry Recreation Nonmotorized	12,030		
3.63	Black-footed Ferret Reintroduction Habitat	~~5,130~~	~~0~~	3,283
3.64	Special Plant and Wildlife Habitat	1,160		
6.1	Rangeland with Broad Resource Emphasis	~~76,170~~	~~81,300~~	78,012

See Appendix A FEIS – Maps, Proposed change to management area prescription 3.63 Black-footed ferret Reintroduction Habitat. (Amendment 2)

Geographic Area Direction -- Objectives

Vegetation

This section deals with vegetation and its relationship to MIS and TES habitat needs. The focus in the Wall Southeast Geographic Area is on grass and grass-like plants.

The resulting vegetation will have a mix of seral stages designed to approximate evolutionary development of the northern Great Plains. The grassland ecosystem will feature a "shifting mosaic" of disturbance processes over space and time.

Composition objectives are based on a mix of grass and grass-like species across a majority of the Geographic Area. This mix provides suitable opportunity to meet vegetation structure objectives and provide for floristic diversity.

The following section describes the specific vegetative composition and structure objectives for the Wall Southeast Geographic Area:

Composition

1. The desired plant species composition objective across the geographic area is as follows:

Late Seral	Late Intermediate Seral	Early Intermediate Seral	Early Seral
20 to 40%	30 to 50%	10 to 30%	1 to 20%

In late seral stage, more productive soils (clayey and silty range sites) should be comprised mainly of mid grasses and to a lesser extent tall grasses, the moderately productive soils (dense clay and shallow clay range sites) should be comprised of mid grasses, while the less productive thin claypan and claypan range sites should be comprised of mid grasses and short grasses. On clayey and silty range sites western wheatgrass, green needlegrass, needleandthread, sideoats grama, and little bluestem are the primary mid grasses and big bluestem should make up the majority of the tall grass. The dense clay range sites are comprised of mainly western wheatgrass and green needlegrass to a lesser extent. On shallow clay range sites, found primarily on the slopes, western wheatgrass, and green needlegrass occur in amounts

approximately equal to big bluestem, little bluestem, and sideoats grama. Western wheatgrass, blue grama, and buffalograss should dominate the less productive thin claypan and claypan range sites. The mix of grasses making up the codominance on all range sites in late seral stage will fluctuate according to precipitation and/or grazing intensities. Tall grasses such as big bluestem, switchgrass, and prairie sandreed should be expressed in the overflow or run-in sites.

In late intermediate seral stage, more productive soils (clayey and silty range sites) should be comprised mainly of mid grasses and to a lesser extent short grasses and tall grasses. The moderately productive soils (dense clay and shallow clay range sites) should be comprised of mid grasses and short grasses, while the less productive thin claypan and claypan range sites should be comprised of short grasses and to a lesser extent mid grasses. The dominant grass species on clayey and silty range sites in ate intermediate seral stage should be western wheatgrass with the codominance made up of needleandthread, blue grama, and sedges. Dense clay range sites are comprised mainly of western wheatgrass. On shallow clay range sites little bluestem, western wheatgrass, and sideoats grama are the dominant species while blue grama and sedges become more abundant. Blue grama, buffalograss and to a lesser extent western wheatgrass will dominate the less productive thin claypan and claypan range sites. The mix of grasses making up the codominance on all range sites in late intermediate seral stage will fluctuate according to precipitation and/or grazing intensities. Overflow sites will be made up of mid grasses, mainly western wheatgrass and green needlegrass.

In early intermediate seral stage, more productive soils (clayey and silty range sites) should be comprised mainly of short grasses and to a lesser extent mid grasses, the moderately productive soils (dense clay and shallow clay range sites) should be comprised of mid grasses and short grasses, while the less productive thin claypan and claypan range sites should be comprised of short grasses. The dominant grass species on clayey and silty range sites in the early intermediate seral stage should be blue grama, buffalograss, western wheatgrass, needleandthread, and sedges. Dense clay range sites are comprised mainly of western wheatgrass and an increasing number of forbs. On shallow clay range sites blue grama and threadleaf sedge dominate the sites, while little bluestem is the remaining mid grass component. Less productive thin claypan and claypan range sites will be dominated by annual grasses and cactus. The mix of grasses making up the codominance in early intermediate seral stage will fluctuate according to precipitation and/or grazing intensities. Overflow sites will be made up of mid grasses and short grasses; mainly western wheatgrass, needleandthread, and blue grama.

In early seral stage, more productive soils (clayey and silty range sites) should be comprised mainly of short grasses with few, if any, mid grasses. The moderately productive soils (dense clay and shallow clay range sites) should be comprised of short grasses with few mid grasses, while the less productive thin claypan and claypan range sites should be comprised of short grasses. The early seral stage will be dominated by sedges, and short grasses such as blue grama, buffalograss and annual grasses on all range sites. The mix of grasses making up the codominance in early seral stage will fluctuate according to precipitation and/or grazing intensities. Overflow sites will be dominated by short grasses and to a lesser extent mid grasses.

Structure

2. Manage the geographic area to meet the vegetation structure objectives identified below:

High	Moderate	Low
30 to 40%	35 to 45%	20 to 30%

High vegetation structure can be achieved on moderately and highly productive soils dominated by mid and/or tall grasses (late or late intermediate seral stage composition). Grasslands on moderately to highly productive soils but dominated by short statured species generally do not have the capability to provide high vegetation structure unless management is changed to increase the composition of mid to tall grass species over a period of years or decades.

Moderate structure can be achieved on moderately to highly productive soils dominated by mid and/or tall grasses depending on grazing use levels. Grasslands within this geographic area receiving light to moderate levels of livestock use should be in the late or late intermediate seral stage to achieve moderate structure. Grasslands dominated by short grass species in the early intermediate or early seral stages will not achieve moderate structure under even light grazing levels.

Minimally productive soils, prairie dog colonies, and grassland areas grazed by livestock at high intensities provide low structure. Low vegetation structure can result from a dominance of low stature plant species or from heavy utilization of mid and tall grasses.

Smooth Goosefoot

1. Prioritize and initiate target surveys for smooth goosefoot. **Objective**

Fire

1. Prescribe burn a minimum of 500 acres per decade to achieve the following desired condition objectives:

- Promote vegetative diversity
- Improve wildlife habitat
- Stimulate riparian/woody draw regeneration
- Control or reduce invasive plants/noxious weeds. **Objective**

Rest

1. Rest 1-10 percent of the suitable rangeland each year. **Objective**

Wildlife, Fish, and Rare Plants

1. Management Indicator Species:

Plains Sharp-tailed Grouse

- Provide diverse and quality grassland habitat across the geographic area at levels that, in combination with habitat on adjoining lands, helps support stable to increasing populations of sharp-tailed grouse and other wildlife with similar habitat needs. **Objective**
- Establish and maintain quality nesting and brooding habitat for sharp-tailed grouse (see Appendix H) and associated wildlife by meeting vegetation objectives for high structure within 10 years. **Objective**

Black-tailed Prairie Dog (Amendment 3 – proposed revision)

- Apply adaptive management strategies to provide objectives for 1,000 minimum and 2,700 maximum acres of active prairie dog colonies within the interior-colony management zones. If maximum acreage objective is exceeded, refer to Chapter 1, H. Animal Damage Control for management direction. **Objective**
- Increase black-tailed prairie dog populations over the next 10-to 15 years. **Objective**
- Maintain or expand the current distribution of black-tailed prairie dogs across the geographic area over the next 10 to 15 years. **Objective**

2. Threatened, Endangered and Sensitive Species:

Sturgeon Chub

- In cooperation with other conservation agencies and organizations, conduct inventories as needed in the Cheyenne and White Rivers and tributaries to establish baseline population and distribution information so that appropriate population trend objectives can be established. **Objective**
- In cooperation with other conservation agencies and organizations, assess the potential impacts of the construction of additional small impoundments in upper watersheds on hydrologic flow and patterns on downstream sturgeon chub habitat. **Objective**

3. Kadoka Lake and Weta Dam are special wetland/aquatic habitat areas in this geographic area (3.64 Special Plant and Wildlife Habitat Management Area). These areas will be managed to enhance and maintain their special plant and wildlife habitat for waterfowl and shorebirds as follows:

- Provide diverse and quality wetland/aquatic habitat in these special management areas at levels that help support stable to increasing populations of waterfowl and other associated wildlife with similar habitat needs. **Objective**
- Establish and maintain quality nesting and brooding habitat on adjacent upland grasslands for waterfowl and associated wildlife within 10 years. **Objective**

Recreation

1. Develop trailhead and hiking/horseback trails for the Rake Creek backcountry nonmotorized area. **Objective**

2. Develop Watchable Wildlife interpretive trail around Kadoka Lake. **Objective**

Geographic Area Direction – Standards and Guidelines

Vegetation

1. Use current monitoring information and stocking rate guidelines for livestock grazing (see Appendix I) to help design and implement range management strategies for meeting desired vegetation objectives. **Standard**

Smooth Goosefoot

1. Conduct target surveys in priority areas to determine if smooth goosefoot or suitable habitat occurs in the geographic area. Protect populations that are found in the geographic area and maintain suitable habitat for these populations. **Standard**

2. Prioritize control of noxious weeds in habitat occupied by smooth goosefoot. Restrict activities that contribute to invasive and non-native plant species into occupied habitat. **Standard**

3. Monitor ORV use in occupied habitat and implement travel management restrictions if smooth goosefoot populations are at risk. **Standard**

Livestock Grazing

1. Continue to emphasize combining pastures and allotments to achieve desired condition objectives (wildlife habitat, botanical, range management, visual quality, and recreation). **Guideline**

2. In areas where sharp-tailed grouse and waterfowl production to are emphasized, utilize light to moderate stocking levels on allotments with large pastures to achieve a mosaic of vegetation structure that provides high structure intermittently across the allotment. Utilize skim or rest on allotments with small pastures that fail to provide sufficient high cover levels. **Guideline**

Infrastructure

1. New structural improvements (fences and water developments) may be constructed as needed to achieve desired condition objectives (wildlife habitat, botanical, range management, visual quality, and recreation. **Guideline**

Wildlife, Fish, and Rare Plants

1. Management Indicator Species:

Plains Sharp-tailed Grouse

- A range of 30 to 40% of the acres is prescribed for high structure grasslands in this geographic area. A substantial amount of this acreage should be located where it would optimize habitat for sharp-tailed grouse and associated species. The following criteria will be considered during site-specific project level planning to help determine the best locations to manage for high structure grasslands:
  - Presence of moderately to highly productive soils and range sites,
  - Proximity to sharp-tailed grouse display grounds,
  - Proximity to shrub habitats, private croplands and other sharp-tailed grouse foraging habitats. **Guideline**
- Establish and maintain quality foraging habitat for sharp-tailed grouse and associated species by enhancing and/or maintaining diverse forb species and regenerating shrub patches and the shrub component of wooded draws and riparian habitats. **Guideline**

Black-tailed Prairie Dog (Amendment 3 – proposed revision)

- Refer to Chapter 1 (Sections F and/or H) for standards and guidelines.

2. Threatened, Endangered and Sensitive Species:

Sturgeon Chub

- To assist in maintaining the current quantity and quality of aquatic habitat for this species, do not authorize land uses or developments that would measurably and cumulatively further degrade sturgeon chub habitat, including reducing downstream flows. **Guideline**
- Conduct project-level biological evaluations assessing potential downstream risks to this species from proposed projects that may have the potential to significantly alter sturgeon chub habitat or reduce downstream flows. This includes sand and gravel dredging and small impoundment construction in upper watersheds. **Guideline**

3. Kadoka Lake and Weta Dam are special wetland/aquatic habitat areas in this geographic area. Collectively, these areas will be managed to maintain 500-600 acres of high structure grassland vegetation to enhance their special habitat for waterfowl and shorebirds. **Guideline**

WALL SOUTHWEST GEOGRAPHIC AREA

Buffalo Gap National Grassland - Wall Ranger District

Setting

The Wall Southwest Geographic Area includes approximately 102,500 acres of National Forest System lands in the southwestern and south central portions of the Wall Ranger District.

The climate of the Wall Southeast Geographic Area can be classified as semi-arid Continental. Local weather can be highly variable and unpredictable. Temperatures can range from 20 degrees below zero Fahrenheit in the winter to more than 100 degrees Fahrenheit in the summer. Precipitation levels average 16.5 inches per year with the majority falling as rain from about April to July.

The topography of the area can be divided into two distinct areas. The flat-bottomed Conata Basin includes small inclusions of badlands features, and the "Wall," a steep badlands escarpment that rises 800 feet to the north. The Indian Creek area consists of very steep juniper breaks with large intermingled badland formations, located toward the western portion of this geographic area. Major distinguishing features include the extensive prairie dog complex of Conata Basin and the rugged, fossil-rich badlands and juniper breaks of the Indian Creek country. Drainages flow primarily to the northwest into the Cheyenne River, or southeast toward White River. Elevations range from approximately 2,200 feet above sea level along White River to about 2,600 feet above sea level at the top of the "Wall."

Upland grassland is the primary vegetation/habitat type covering nearly 63% of the geographic area. The soils are moderately productive on this geographic area, providing a range of forage production annually from 1,000 to 1,800 pounds per acre. Nearly 60 percent of the upland grassland habitat consists of highly productive range sites and only 6 percent consists of minimally productive range sites. Native vegetation is dominated by mid grasses and short grasses with a variety of forbs. This mixed grass prairie is made up of cool-season and warm-season plants that provide diverse habitat for a variety of wildlife species and forage for livestock. Principle grass species are western wheatgrass, green needlegrass, needleandthread, sideoats grama, blue grama, buffalograss, little bluestem, and big bluestem. The next largest habitat type in the geographic area is badlands (22%). Badlands are barren, highly eroded lands with little or no vegetation. Badlands provide unique habitat for some plants and animals that are suited to open, barren soils.

This geographic area contains one of the largest complexes of prairie dog colonies on public lands and comprises nearly 9% of the geographic area. There are over 75 individual colonies varying in size from a few acres to over one thousand acres. The vegetation is dominated by a mixture of short grasses and forbs. Prairie dog colonies are a unique component of the upland grasslands and provide habitat for a number of TES species. Currently (2000), this geographic area hosts the world’s most successful black-footed ferret reintroduction program. Over 140 adult ferrets, many of which were born in the wild, are repopulating the area’s prairie dog colonies.

The balance of the geographic area is comprised of a variety of vegetation/habitat types, including the sagebrush habitat type (3%), which is found along several of the major floodplain

areas scattered throughout this geographic area. This habitat type is dominated by silver sagebrush with a variety of interspersed grass species. Juniper breaks (1%) are a unique habitat type that occurs primarily along the Cheyenne River west of Scenic. This habitat type provides critical hiding cover and thermal cover for a number of wildlife species. The woody draw/riparian woodlands habitat type (1%) provides the highest diversity of both plant and animal life in the geographic area.

The primary creeks and drainages flowing northward toward the Cheyenne River include Spring Draw, Indian Creek, Little Corral Draw, Big Corral Draw, Nevis Draw and Bear Creek. The Cheyenne River also flows through this geographic area. Primary creeks and drainages flowing southward toward White River include Cain Creek and Big Hollow Creek. Wetland/aquatic habitat is unusual in this geographic area (1%). Most are constructed water impoundments that significantly benefit waterfowl production.

Currently, there are no developed recreational facilities within this geographic area. Motorized travel has been restricted in the Indian Creek area since 1984. The primary dispersed recreational opportunities within this geographic area include big game hunting, upland game hunting, waterfowl hunting, rockhounding, wildlife viewing, mountain biking, hiking, fishing, and camping

Desired Conditions

The desired landscape condition is to maintain the undeveloped character and scenic integrity of the grasslands, intermingled prairie dog colonies, and rugged badlands.

The streams and riparian areas are in, or are trending towards, Properly Functioning Condition (PFC-see glossary), which allows them to recover quickly from floods and support diverse native plants and animals. Long-term soil productivity and properly functioning water cycles are maintained. Properly functioning water cycles are characterized by high infiltration rates, low soil compaction, and minimal overland flows.

Grazing management and prescribed fire will be used as tools to enhance the grass and forb vegetative diversity, stimulate woody plant regeneration and reduce invasive or noxious weeds. Recreational opportunities will continue to emphasize dispersed recreation activities on the majority of the geographic area. Indian Creek area will be managed to protect its rugged, unroaded character and is recommended for Wilderness designation. Based upon public interest, a primitive campground/trailhead and trails in the Indian Creek proposed wilderness area are desired.

The desired condition for the upland grassland is to perpetuate diverse and healthy mixed grass communities that provide a mixture of grassland structure levels. Grassland structure will be managed to promote prairie dog expansion, primarily adjacent to Badlands National Park and the core ferret reintroduction areas. Higher structure levels will be maintained adjacent to private lands to discourage prairie dog encroachment.

The woody draws/riparian woodlands/cedar breaks will be managed to perpetuate multiple layers and age classes of vegetation including herbaceous plants, shrubs, and trees. Wetlands/aquatic areas will emphasize healthy submergent and emergent vegetative cover along the shorelines, while reducing sediment levels to maintain high quality aquatic habitat.

Important Attributes

- Significant Cretaceous Period and Oligocene Epoch fossil resources
- Agate/rock beds
- The world's most successful black-footed ferret recovery program
- Vast black-tailed prairie dog complex
- Wilderness quality badlands backcountry

Management Area Prescription Allocation

Number	Prescription	Acres
1.2/2.1	Recommended for Wilderness/Special Interest Areas	27,600
3.63	Black-footed Ferret Reintroduction Habitat	73,590
6.1	Rangeland with Broad Resource Emphasis	2,690

Geographic Area Direction -- Objective

Vegetation

This section deals with vegetation and its relationship to MIS and TES habitat needs. The focus in the Wall Southwest Geographic Area is on grass and grass-like plants.

The resulting vegetation will have a mix of seral stages designed to approximate evolutionary development of the northern Great Plains. The grassland ecosystem will feature a "shifting mosaic" of disturbance processes over space and time.

Composition objectives are based on a mix of grass and grass like species across a majority of the Geographic Area. This mix provides suitable opportunity for meeting vegetation structure objectives and providing for floristic diversity.

The following section describes the specific vegetative composition and structure objectives for the Wall Southwest Geographic Area:

Composition

1. The desired plant species composition objective across the geographic area is as follows:

Late Seral	Late Intermediate Seral	Early Intermediate Seral	Early Seral
20 to 40%	20 to 40%	10 to 30%	10 to 30%

In late seral stage, more productive soils (clayey and silty range sites) should be comprised mainly of mid grasses and to a lesser extent tall grasses. Moderately productive soils (dense clay and shallow clay range sites) should be comprised of mid grasses, while the less productive thin claypan and claypan range sites should be comprised of mid grasses and short grasses. On clayey and silty range sites western wheatgrass, green needlegrass, needleandthread, sideoats grama, and little bluestem are the primary mid grasses and big bluestem should make up the majority of the tall grass. Dense clay range sites are comprised mainly of western wheatgrass and green needlegrass to a lesser extent. On shallow clay range sites, found primarily on the slopes, western wheatgrass, and green needlegrass occur in amounts approximately equal to big bluestem, little bluestem, and sideoats grama. Western wheatgrass, blue grama, and buffalograss

should dominate the less productive thin claypan and claypan range site. The mix of grasses making up the codominance on all range sites in late seral stage will fluctuate according to precipitation and/or grazing intensities. Tall grasses such as big bluestem, switchgrass, and prairie sandreed should be expressed in the overflow or run-in sites.

In late intermediate seral stage, more productive soils (clayey and silty range sites) should be comprised mainly of mid grasses and to a lesser extent short grasses and tall grasses. Moderately productive soils (dense clay and shallow clay range sites) should be comprised of mid grasses and short grasses, while the less productive thin claypan and claypan range sites should be comprised of short grasses and to a lesser extent mid grasses. The dominant grass species on clayey and silty range sites in late intermediate seral stage should be western wheatgrass with the codominance made up of needleandthread, blue grama, and sedges. Dense clay range sites are comprised mainly of western wheatgrass. On shallow clay range sites little bluestem, western wheatgrass, and sideoats grama are the dominant species while blue grama and sedges become more abundant. Blue grama, buffalograss and to a lesser extent western wheatgrass will dominate the less productive thin claypan and claypan range sites. The mix of grasses making up the codominance on all range sites in late intermediate seral stage will fluctuate according to precipitation and/or grazing intensities. Overflow sites will be made up of mid grasses, mainly western wheatgrass and green needlegrass.

In early intermediate seral stage, more productive soils (clayey and silty range sites) should be comprised mainly of short grasses and to a lesser extent mid grasses. Moderately productive soils (dense clay and shallow clay range sites) should be comprised of mid grasses and short grasses, while the less productive thin claypan and claypan range sites should be comprised of short grasses. The dominant grass species on clayey and silty range sites in early intermediate seral stage should be blue grama, buffalograss, western wheatgrass, needleandthread, and sedges. The dense clay range sites are comprised of mainly western wheatgrass and an increasing number of forbs. On shallow clay range sites, blue grama and threadleaf sedge dominate while little bluestem is the remaining mid grass component. Less productive thin claypan and claypan range sites will be dominated by annual grasses and cactus. The mix of grasses making up the codominance in early intermediate seral stage will fluctuate according to precipitation and/or grazing intensities. Overflow sites will be made up of mid grasses and short grasses; mainly western wheatgrass, needleandthread, and blue grama.

In early seral stage, more productive soils (clayey and silty range sites) should be comprised mainly of short grasses with little if any presence of mid grasses. Moderately productive soils (dense clay and shallow clay range sites) should be comprised of short grasses with little presence of mid grasses, while the less productive thin claypan and claypan range sites should be comprised of short grasses. Early seral stage will be dominated by sedges, short grasses such as blue grama, buffalograss, and annual grasses on all range sites. The mix of grasses making up the codominance in early seral stage will fluctuate according to precipitation and/or grazing intensities. Overflow sites will be dominated by short grasses and to a lesser extent mid grasses**.**

Structure

2. Manage the geographic area to meet the vegetation structure objectives identified below:

High	Moderate	Low
25 to 35%	35 to 45%	25 to 35%

High vegetation structure can be achieved on moderately and highly productive soils dominated by mid and/or tall grasses (late or late intermediate seral stage composition). Grasslands on moderately to highly productive soils but dominated by short statured species generally do not have the capability to provide high vegetation structure unless management is changed to increase the composition of mid to tall grass species over a period of years or decades.

Moderate structure can be achieved on moderately to highly productive soils dominated by mid and/or tall grasses depending on grazing use levels. Grasslands within this geographic area receiving light to moderate levels of livestock use should be in the late or late intermediate seral stage to achieve moderate structure. Grasslands dominated by short grass species in the early intermediate or early seral stage will not achieve moderate structure under even light grazing levels.

Minimally productive soils, prairie dog colonies, and grassland areas grazed by livestock at high intensities provide low structure. Low vegetation structure can result from a dominance of low stature plant species or from heavy utilization of mid and tall grasses.

Smooth Goosefoot

1. Prioritize and initiate target surveys for smooth goosefoot. **Objective**

Fire

1. Prescribe burn a minimum of 500 acres per decade to achieve the following desired condition objectives:

- Promote vegetative diversity
- Improve wildlife habitat
- Stimulate riparian/woody draw regeneration
- Control or reduce invasive plants/noxious weeds. **Objective**

Rest

1. Rest 1-10 percent of the suitable rangeland each year. **Objective**

Wildlife, Fish and Rare Plants

1. Management Indicator Species:

Black-tailed Prairie Dog

- To help increase prairie dog populations and habitat for associated species, enhance and maintain three or more prairie dog colony complexes in this geographic area. Colonies protected by conservation agreements or easements on adjoining land jurisdictions, including private, shall be considered part of a complex. **Objective**

2. Threatened, Endangered and Sensitive Species:

Sturgeon Chub

- In cooperation with other conservation agencies and organizations, conduct inventories as needed in the Cheyenne and White Rivers and tributaries to establish baseline population and distribution information so that appropriate population trend objectives can be established. **Objective**
- In cooperation with other conservation agencies and organizations, assess the potential impacts of the construction of additional small impoundments in upper watersheds on hydrologic flow and patterns on downstream sturgeon chub habitat. **Objective**

Recreation

1. Develop primitive campground/trailhead and hiking/horseback trails in Indian Creek area. **Objective**

Geographic Area Direction – Standards and Guidelines

Vegetation

1. Use current monitoring information and stocking rate guidelines for livestock grazing (see Appendix I) to help design and implement range management strategies for meeting desired vegetation objectives. **Standard**

Smooth Goosefoot

1. Conduct target surveys in priority areas to determine if smooth goosefoot or suitable habitat occurs in the geographic area. Protect populations that are found in the geographic area and maintain suitable habitat for these populations. **Standard**

2. Prioritize control of noxious weeds in habitat occupied by smooth goosefoot. Restrict activities that contribute to invasive and non-native plant species into occupied habitat. **Standard**

3. Monitor ORV use in occupied habitat and implement travel management restrictions if smooth goosefoot populations are at risk. **Standard**

Livestock Grazing

1. Continue to emphasize combining pastures and allotments to achieve desired condition objectives (wildlife habitat, botanical, range management, visual quality, and recreation). **Guideline**

2. In areas where sharp-tailed grouse and waterfowl production are emphasized, utilize light to moderate stocking levels on allotments with large pastures to achieve a mosaic of vegetation structure that provides high structure intermittently across the allotment. Utilize skim or rest on allotments with small pastures that fail to provide sufficient high cover levels. **Guideline**

Infrastructure

1. New structural improvements (fences and water developments) may be constructed as needed to achieve desired condition objectives (wildlife habitat, botanical, range management, visual quality, and recreation. **Guideline**

Wildlife, Fish, and Rare Plants

1. Management Indicator Species:

Black-tailed Prairie Dog

- Continue to emphasize an active landownership adjustment program in this geographic area in an attempt to reduce private land conflicts over prairie dog management and to enhance long-term management opportunities for expanding prairie dog populations in this area. **Guideline**
- In cooperation and coordination with the state wildlife agency, relocate prairie dogs as needed to establish new colonies or re-establish past colonies in this geographic area. **Guideline**
- Refer to Chapter 1 (Sections F and H) and Chapter 3 (Management Area 3.63) for additional standards and guidelines.

2. Threatened, Endangered, and Sensitive Species:

Sturgeon Chub

- To assist in maintaining the current quantity and quality of aquatic habitat for this species, do not authorize land uses or developments that would measurably and cumulatively further degrade sturgeon chub habitat, including reducing downstream flows**. Guideline**
- Conduct project-level biological evaluations assessing potential downstream risks to this species from proposed projects that may have the potential to significantly alter sturgeon chub habitat or reduce downstream flows. This includes sand and gravel dredging and small impoundment construction in upper watersheds. **Guideline**

FORT PIERRE GEOGRAPHIC AREA

Fort Pierre National Grassland

Setting

The Fort Pierre Geographic Area includes about 116,080 acres of National Forest System lands that are administered as Fort Pierre National Grassland. The office is in Pierre, South Dakota.

The area's climate is semi-arid Continental. Warm summers have frequent hot spells. Winters can be very cold, when arctic winds penetrate from the north. Average temperatures are 72 degrees Fahrenheit in summer and 19 degrees in winter. Average annual precipitation is about 18 inches, with most occurring between April and September. Blizzards and thunderstorms with hail occur seasonally.

The area is a gently rolling plain with few trees. Elevation ranges from about 1,550 to 2,238 feet above sea level. Drainages include Sand Creek, Timber Creek, Cedar Creek, Antelope Creek, Gray Blanket Creek, Stony Butte Creek, Porcupine Creek, and East Branch of War Creek. These intermittent streams flow mainly east and north to the Missouri River.

Upland mixed-grass prairie is the vegetation/habitat type over most of the national grassland. Western wheatgrass is the most prevalent grass species, growing on diverse sites. Green needlegrass and buffalograss also grow on the deep clays of ridge tops and flats. Side-oats grama, big bluestem, little bluestem, and blue grama grow on more shallow, sloping clays. Woody vegetation growing along drainages includes cottonwood, wild plum, willow, and western snowberry. Much flat or gently sloping private land in the area has been plowed to produce wheat, sunflowers, sorghum, corn, or alfalfa hay.

Prairie dog colonies occupy about 600 acres on the national grassland.

Over 150 ponds, ranging in size from less than an acre to over 20 acres, have been constructed in intermittent drainages. All provide waterfowl habitat. Some offer fishing for large-mouthed bass and panfish, such as bluegill, crappie or yellow perch.

There are no developed recreation sites in this geographic area.

Desired Conditions

The desired condition is to perpetuate diverse and healthy mixed-grass communities. This includes both cool-season and warm-season species, such as western wheatgrass, green needlegrass, buffalograss, side-oats grama, big bluestem, little bluestem, and blue grama. Hardwood draws will be managed to perpetuate multiple layers and age classes of herbaceous plants, shrubs, and trees. Cottonwood, wild plum, chokecherry, willow, and western snowberry will grow in suitable draws. Streams and riparian areas will maintain soil moisture to perpetuate riparian plant communities with strong root masses. Prairie cordgrass, bulrush, spikerush, and cattail will line suitable drainages. Streams and riparian areas should function properly or be in an upward trend.

Long-term soil productivity and properly functioning water cycles are maintained. Properly functioning water cycles are characterized by high infiltration rates, low soil compaction, and minimal overland flows.

To provide habitat for viable populations of all wildlife species, a mixture of vegetation composition and structure will be provided. Vegetation structure plays a very important role in determining habitat suitability for various species.

A relatively small percent of the area will be maintained in low composition and structure to support viable black-tailed prairie dog populations. Prairie dog colonies serve as important habitat for other species of wildlife, some of whose low region-wide populations are of concern.

Grass of moderate height and density will provide adequate habitat for many birds, mammals and other classes of wildlife. Over a significant area, high, dense cover will be left after the grazing season for birds that require more cover and nest on the ground early in the spring, such as sharp-tailed grouse, prairie chickens, and some species of ducks. Controlled livestock grazing will provide a variety of different grass structures for various wildlife species that depend on both tall and short grass structure.

Tall and dense grass cover also improves the hunting experience by acting as "holding cover" for sharp-tailed grouse and prairie chickens. Upland game birds find security in such cover and will be less apt to flush beyond shooting range. Upland bird hunting is an important and growing activity in this geographic area. A significant percent of the area should display these conditions, in which bird hunters will perceive that their efforts can be successful.

The desired landscape condition is to maintain open, scenic plains. Recreationists should perceive that they are visiting an expansive native mixed-grass prairie. Small areas of excessive cattle grazing impacts will exist, such as around water sources, but will be minimized. During fair weather, visitors should have little trouble traveling designated roads and trails, and no difficulty opening and closing gates. A significant percent of the area should display the desired landscape conditions to provide recreationists an opportunity to view or hunt wildlife.

Important Attributes

- Nationally known sharp-tailed grouse and greater prairie chicken habitat and populations
- Abundant birdwatching opportunities in a natural setting
- Plentiful warm-water fishing opportunities in a grassland setting
- Abundant opportunities to view open, scenic mixed-tall grass prairie landscapes

Management Area Prescription Allocation

Number	Prescription	Acres
2.2	Research Natural Areas (Mallard South)	1,030
3.64	Special Plant and Animal Habitats include:	895 combined
	Richland Wildlife Area	540
	Sheriff Dam area	120
	Mallard D.U. Dam	80
	Bower D. U. Dam	42
	Reservation Rd. Triangle	65
	Highway 83 Triangle	32

Number	Prescription	Acres
	Alkali West Exclosure	5
	Smith Dam Exclosure	4
	Reed Ranch Shelterbelt	5
	Cookstove Shelterbelt	2
6.1	Rangeland with Broad Resource Emphasis	114,160

Geographic Area Direction – Objectives

Vegetation

This section deals with vegetation and its relationship to MIS and TES habitat needs. The focus in the Fort Pierre Geographic Area is on grass and grass-like plants.

The resulting vegetation will have a mix of seral stages designed to approximate evolutionary development of the northern Great Plains. The grassland ecosystem will feature a shifting mosaic of disturbance processes over space and time.

Composition objectives are based on a mix of grass and grass like species across a majority of the Geographic Area. This mix provides suitable opportunity for meeting vegetation structure objectives and providing for floristic diversity.

The following section describes the specific vegetative composition and structure objectives for the Fort Pierre Geographic Area:

Composition

1. The desired plant species composition objective across the geographic area is as follows:

Late Seral	Late Intermediate Seral	Early Intermediate Seral	Early Seral
20 to 40%	30 to 50%	10 to 30%	1 to 20%

In late seral stage, more productive soils (clayey, silty, and thin upland soils) should be comprised mainly of mid grasses and to a lesser extent tall grasses. On clayey, silty, and thin upland soils western wheatgrass, green needlegrass, porcupinegrass, sideoats grama, and little bluestem are the primary mid grasses and big bluestem should make up the majority of the tall grass. Western wheatgrass, blue grama, and buffalograss should dominate the less productive claypan soil types. Tall grasses such as big bluestem, switchgrass, and prairie sandreed should be expressed in the overflow or run-in sites.

In late intermediate seral stage, more productive soils (clayey, silty, and thin upland soils) should be comprised mainly of mid grasses and to a lesser extent short grasses. Less productive claypan soils should be comprised of short grasses and to a lesser extent mid grasses. The dominant grass species in late intermediate seral should be western wheatgrass with the codominance made up of needleandthread, porcupinegrass, blue grama, and sedges. The mix of grasses making up the codominance in late intermediate seral stage will fluctuate according to precipitation and/or grazing intensities. Overflow sites will be made up of mid grasses, mainly western wheatgrass and green needlegrass.

In early intermediate seral stage, more productive soils (clayey, silty, and thin upland soils) should be comprised mainly of short grasses and to a lesser extent mid grasses. Less productive claypan soils should be comprised of short grasses. The dominant grass species in early

intermediate seral stage should be blue grama, buffalo grass, western wheatgrass, needleandthread, and sedges The mix of grasses making up the codominance in early intermediate seral stage will fluctuate according to precipitation and/or grazing intensities. Overflow sites will be made up of mid grasses and short grasses; mainly western wheatgrass, needleandthread, and blue grama.

In early seral stage, more productive soils (clayey, silty, and thin upland soils) should be comprised mainly of short grasses with few, if any, mid grasses. Less productive claypan soils should be comprised of short grasses. The early seral stage will be dominated by sedges, clubmoss, and short grasses such as blue grama and buffalograss on all soil types. Overflow sites will be dominated by short grasses and to a lesser extent mid grasses. The early seral stage should be emphasized on less productive claypan soil types, in and around prairie dog towns, and in isolated areas of high livestock use.

Structure

2. Manage the geographic area to meet the vegetation structure objectives identified below:

High	Moderate	Low
30 to 50%	30 to 50%	10 to 30%

High vegetation structure can be achieved on moderately and highly productive soils dominated by mid and/or tall grasses (late or late intermediate seral stage composition). Grasslands on moderately to highly productive soils but dominated by short statured species generally do not have the capability to provide high vegetation structure unless management is changed to increase the composition of mid to tall grass species over a period of years or decades.

Moderate structure can be achieved on moderately to highly productive soils dominated by mid and/or tall grasses depending on grazing use levels. Grasslands within this geographic area receiving light to moderate levels of livestock use should be in the late or late intermediate seral stage to achieve moderate structure. Grasslands dominated by short grass species in early intermediate or early seral stages will not achieve moderate structure under even light grazing levels.

Minimally productive soils, prairie dog colonies, and grassland areas grazed by livestock at high intensities provide low structure. Low vegetation structure can result from a dominance of low stature plant species or from heavy utilization of mid and tall grasses.

Fire

1. Prescribe burn a minimum of 1,000-5,000 acres per decade. **Objective**

Infrastructure

1. Increase the average pasture size by 25 percent over the decade. **Objective**

Rest

1. Maintain at least 10 percent of the suitable rangeland in rest each year. **Objective**

Wildlife, Fish, and Rare Plants

1. Management Indicator Species:

Plains Sharp-tailed Grouse

- Provide diverse and quality grassland habitat across this geographic area at levels that, in combination with habitat on adjoining lands, help support stable to increasing sharp-tailed grouse populations (long-term trends) and viable populations of other wildlife species with similar habitat needs. **Objective**
  - Establish and maintain quality nesting and brooding habitat for sharp-tailed grouse (Appendix H) and associated wildlife by meeting vegetation objectives for high structure within 10 years. **Objective**

Greater Prairie Chicken

- Provide diverse and quality grassland habitat across the geographic area at levels that, in combination with habitat on adjoining lands, helps support stable to increasing prairie chicken populations (long-term trends) across this national grassland. **Objective**
- Establish and maintain quality nesting and brooding habitat for prairie chickens (Appendix H) and associated wildlife by meeting vegetation objectives for high structure within 10 years. **Objective**

Black-tailed Prairie Dog

- To increase prairie dog populations and habitat for associated species, establish one or more prairie dog colony complexes in the northeast portion (Sand and Timber Creek drainages) of this geographic area over the next 10 to 15 years. Colonies protected by conservation agreements or easements on adjoining land jurisdictions, including private and tribal, may be considered part of a complex. **Objective**
- Apply adaptive management strategies to provide objectives for 1,000 minimum and 3,500 maximum acres of active prairie dog colonies within the interior-colony management zones. If maximum acreage objective is exceeded, refer to Chapter 1, H. Animal Damage Control for management direction. **Objective** (Amendment 3 – proposed revision)

Recreation

1. Within the life of the plan develop a trailhead facility and horse/hiking trail (Burnt Thigh) on the east half of the Fort Pierre National Grassland. **Objective**

2. Continue with the current travel restrictions for recreation travel between the dates or September 1 and November 30 that requires motorized vehicles to stay within 30 feet of the designated roads on the Fort Pierre National Grassland. **Standard**

3. Provide for an interpretive site along highway 83 in conjunction with the new construction scheduled within the next five years. **Objective**

Geographic Area Direction – Standards and Guidelines

Vegetation

1. Use current monitoring information and stocking rate guidelines for livestock grazing (see Appendix I) to help design and implement range management strategies for meeting desired vegetation objectives. **Standard**

Infrastructure

1. Allow no net decrease in the average pasture size. **Guideline**

2. Allow no net gain in the number of water developments, while maintaining or increasing the surface area covered by ponds providing brood habitat for waterfowl and fisheries. **Guideline**

Wildlife, Fish, and Rare Plants

1. Management Indicator Species:

Plains Sharp-tailed Grouse

- A range of 30-50% of this geographic area is prescribed for high structure grasslands. A substantial amount of this acreage should be located where it would optimize habitat for sharp-tailed grouse and associated species. The following criteria will be considered during site-specific project level planning to help determine the best locations to provide high-structure grasslands:
  - Presence of moderate to highly productive soils and range sites
  - Proximity to sharp-tailed grouse display grounds
  - Proximity to shrub habitats and private croplands. **Guideline**
- Establish and maintain quality winter foraging habitat for sharp-tailed grouse and associated wildlife by enhancing and/or maintaining diverse forb species in grassland communities and regenerating shrub patches and the shrub component of wooded draws and riparian habitats. **Guideline**

Greater Prairie Chicken

- A range of 30-50% of this geographic area is prescribed for high structure grasslands. A substantial amount of this acreage should be located where it would optimize habitat for sharp-tailed grouse and associated species. The following criteria will be considered during site-specific project level planning to help determine the best locations to manage for high structure grasslands:
  - Presence of moderate to highly productive soils and range sites,
  - Proximity to prairie chicken display grounds,
  - Proximity to shrub habitats, private croplands and other prairie chicken habitats. **Guideline**
- Establish and maintain quality foraging habitat for greater prairie chicken and associated species by enhancing and/or maintaining a diversity of forb species in grassland communities and regeneration of shrubs in thickets and wooded draws. **Guideline**

Black-tailed Prairie Dog

- Encourage land exchanges in the northeast portion of this geographic area to reduce conflicts over prairie dog management and to enhance long-term management opportunities for expanding prairie dog populations in this area. Land exchanges may need to be completed in some locations before some of the following guidelines may be fully implemented. **Guideline**
- Manage livestock grazing in the northeast portion of this geographic area to encourage prairie dog colony expansion in interior areas and to slow expansion along property boundaries. The appropriate livestock grazing strategies for individual areas will be identified as site-specific management plans are revised. **Guideline**
- In cooperation and coordination with the state wildlife agency, restrict prairie dog shooting in the northeast part of this geographic area as needed to encourage prairie dog population expansion. **Guideline**
- In cooperation and coordination with the state wildlife agency, relocate prairie dogs as needed to establish new colonies or to re-establish past colonies in the northeast part of this geographic area. **Guideline**
- Refer to Chapter 1 (Sections F and H) for additional standards and guidelines.

OGLALA GEOGRAPHIC AREA

Oglala National Grassland - Pine Ridge Ranger District

Setting

The Oglala Geographic Area encompasses 94,174 acres of National Forest System lands in northwestern Nebraska. The Pine Ridge Ranger District of the Nebraska National Forest administers the Oglala Geographic Area. The district office is located south of Chadron, Nebraska. Wyoming borders this area on the west and South Dakota on the north.

The climate of the Oglala Geographic Area can be classified as semi-arid Continental. Warm summers, cold winters, light precipitation, and frequent changes in the weather characterize the climate. Temperature extremes, as recorded at Fort Robinson (near Crawford, Nebraska), range from minus 37 degrees Fahrenheit to 110 degrees Fahrenheit. About 80 percent of precipitation falls between April and September. The average annual precipitation ranges from about 15 inches at Ardmore, South Dakota, located just north of this geographic area, to about 18 inches near Crawford just south of the geographic area. Blizzards generally occur several times each winter, while hail can accompany thunderstorms in the summer.

The topography of the area is a blend of rolling plains and badlands, including highly eroded benches, clay hardpan and bluffs. The major distinguishing landmarks include Toadstool Geologic Park, Roundtop, Wolf Butte and agate beds in the Sugarloaf Butte area.

Drainages flow primarily to the south and east on the southern portions of the geographic area and to the north and east on the northern portions of the geographic area. Elevations range from about 3,600 feet above sea level near Rock Bass Reservoir to about 4,700 feet above sea level at Eagle Eye Rock, about two miles south of Hudson-Meng Bison Bonebed. The White River System drains the southern portions of this geographic area, while the Cheyenne River System drains the northern portions. Primary tributaries in the southern portions of the geographic area include Little Cottonwood, Big Cottonwood and Sand Creeks. Primary tributaries in the northern portions include Whitehead, Antelope, Indian, Hat and Squaw Creeks.

The upland grassland is the primary vegetation/habitat type of the geographic area. Mid grasses dominate the native vegetation, but include short grasses and a variety of forbs. This mixed grass prairie is made up of cool-season and warm-season plants that provide diverse habitat for a variety of wildlife species and forage for livestock. The principle vegetative species are western wheatgrass, green needlegrass, buffalograss, blue grama, sideoats grama, and western snowberry. Other important habitat vegetation includes cottonwood, green ash, boxelder, silver buffaloberry, willow, and silver sage.

Badlands provide a unique habitat for some plants and animals that are suited to open, barren soils. Prairie dog colonies are a unique component of the upland grasslands and provide habitat for a number of TES species. Prairie dog colonies are fairly small and scattered across this geographic area. Although the woody draw/riparian woodland habitat comprises a small portion of the geographic area, this habitat type is critical for many wildlife species. The woody draw/riparian woodlands provide the highest diversity of both plant and animal life in the geographic area. Principle woody species include cottonwood, green ash, boxelder, silver buffaloberry, snowberry, willow and wildrose. The Roundtop area of the Oglala Geographic

Area consists of a ponderosa pine/grassland mix typical of the Pine Ridge Geographic area. The primary creeks and drainages include Sand Creek, Longbranch, Whitehead, Hat Creek, Antelope Creek, Indian and Brush Creeks. Wetland/aquatic habitat is unusual in this geographic area and much of it is located near constructed water impoundments that provide waterfowl habitat and support warm-water fisheries. The sagebrush habitat type is very limited and found along several of the major floodplain areas scattered across this geographic area.

Two developed recreational facilities existing in the Oglala Geographic Area are Hudson-Meng Bison Bonebed and Toadstool Geological Park. The primary dispersed recreational opportunities within this geographic area include big game hunting, limited upland game and waterfowl hunting, wildlife viewing, mountain biking, hiking, fishing, camping, and rock hounding.

Desired Condition

General: The desired landscape condition is to maintain open, scenic plains and vast prairie landscapes.

The streams and riparian areas are in, or are trending towards, Properly Functioning Condition (PFC-see glossary), which allows them to recover quickly from floods and support diverse native plants and animals. Long-term soil productivity and properly functioning water cycles are maintained. Properly functioning water cycles are characterized by high infiltration rates, low soil compaction, and minimal overland flows.

Prescribed fire will be used as a management tool to enhance grass and forb vegetative diversity, stimulate woody plant regeneration, and reduce invasive or noxious weeds. Range structures (fences and water developments) will be used to manage livestock to meet vegetative goals and objectives. Recreational opportunities will continue to emphasize dispersed recreation activities on the majority of the geographic area.

Upland Grasslands: These upland areas will be managed perpetuate diverse and healthy mixed grass and forb communities, representing both cool and warm season species such as western wheatgrass, green needlegrass, buffalograss, blue grama, big and little bluestem, threadleaf sedge and forbs. Upland grassland habitat will be managed to provide sufficient residual cover for those wildlife species requiring higher grassland structure levels.

Woody Draws: These draws will be managed to perpetuate multiple layers and age classes of vegetation including herbaceous plants, shrubs, and trees.

Streams and Riparian Areas: These areas will be managed to maintain soil moisture to perpetuate riparian plant communities with strong root masses, emphasize healthy submergent and emergent vegetative cover along streams and shorelines while reducing sediment levels to maintain high quality aquatic habitat. Plant species include sedges, rushes, and willows.

Prairie Dog Colonies: These areas will be managed to maintain and enhance low structure grassland habitat as part of the 10 to 30 percent vegetative structure objective of this geographic area. (Amendment 2)

Important Attributes

- Toadstool Geologic Park Campground, sod house, and badlands scenery
- Hudson-Meng Bison Bonebed archaeology site
- Sugarloaf Agate Beds
- Warbonnet Memorial
- Significant fossil resources, including a prehistoric trackway from the Oligocene Epoch
- Huntable and viewable populations of wildlife, including pronghorn, mule deer, wild turkey, and sharp-tailed grouse
- Sport fisheries in small reservoirs

Management Area Prescription Allocation

Number	Prescription	Acres
2.1	Special Interest Areas	2,040
5.12	General Forest and Rangeland: Range Vegetation Emphasis	2,000
6.1	Rangeland with Broad Resource Emphasis	90,100

Geographic Area Direction - Objectives

Vegetation

This section deals with vegetation and its relationship to MIS and TES habitat needs. The focus in the Oglala Geographic Area is on grass and grass-like plants.

The resulting vegetation will have a mix of seral stages designed to approximate evolutionary development of the northern Great Plains. The grassland ecosystem will feature a "shifting mosaic" of disturbance processes over space and time.

Composition objectives are based on a mix of grass and grass like species across a majority of the Geographic Area. This mix provides suitable opportunity for meeting vegetative structure objectives and providing for floristic diversity.

The following section describes the specific vegetative composition and structure objectives for the Oglala Geographic Area:

Composition

1. The desired plant species composition objectives across the geographic area is as follows:

Late Seral	Late Intermediate Seral	Early Intermediate Seral	Early Seral
10 to 30%	50 to 70%	10 to 20%	1 to 10%

In the late seral stage, more productive soils (clayey, shallow clay, limy upland, and silty range sites) should be comprised mainly of mid grasses and to a lesser extent tall grasses, while the less productive claypan soils should be comprised of mid grasses and short grasses. On clayey and silty range sites western wheatgrass, green needlegrass, sideoats grama, and little bluestem are the primary mid grasses, and big bluestem should make up the majority of the tall grass. On shallow clay range sites, found primarily on the slopes of the river breaks, western wheatgrass,

ricegrass, and green needlegrass occur in amounts approximately equal to big bluestem, little bluestem, and sideoats grama. Leadplant should also be a common part of the grassland community on the above mentioned range sites in the late seral stage. Western wheatgrass, blue grama, and buffalograss should dominate the less productive claypan range site. Tall grasses such as big bluestem, switchgrass, and prairie sandreed should be expressed in the overflow or run-in sites.

In late intermediate seral stage, more productive soils (clayey, shallow clay, limy upland, and silty range sites) should be comprised mainly of mid grasses and to a lesser extent short grasses, while the less productive claypan soils should be comprised of short grasses and to a lesser extent mid grasses. The dominant grass species on clayey and silty range sites in late intermediate seral stage should be western wheatgrass with the codominance made up of needleandthread, blue grama, and sedges. On shallow clay range sites little bluestem, western wheatgrass, and sideoats grama are the dominant species while blue grama and sedges become more abundant. The mix of grasses making up the codominance on all range sites in late intermediate seral stage will fluctuate according to precipitation and/or grazing intensities. Overflow sites will be made up of mid grasses, mainly western wheatgrass and green needlegrass.

In early intermediate seral stage, more productive soils (clayey, shallow clay, limy upland, and silty range sites) should be comprised mainly of short grasses and to a lesser extent mid grasses, while the less productive claypan soils should be comprised of short grasses. The dominant grass species on clayey and silty range sites in early intermediate seral stage should be blue grama, buffalograss, western wheatgrass, needleandthread, and sedges. On shallow clay range sites blue grama and threadleaf sedge dominate the site while little bluestem is the remaining mid grass component. The mix of grasses making up the codominance in early intermediate seral stage will fluctuate according to precipitation and/or grazing intensities. Overflow sites will be made up of mid grasses and short grasses; mainly western wheatgrass, needleandthread, and blue grama.

In early seral stage, more productive soils (clayey, shallow clay, limy upland and silty range sites) should be comprised mainly of short grasses with little if any presence of mid grasses, while the less productive claypan soils should be comprised of short grasses. The early seral stage will be dominated by sedges, and short grasses such as blue grama and buffalograss on all range sites. Overflow sites will be dominated by short grasses and to a lesser extent mid grasses. The early seral stage should be emphasized on less productive claypan range sites, in and around prairie dog towns, and in isolated areas of high livestock use or other persistent disturbances.

Structure

2. Manage the geographic area to meet the vegetation structure objectives identified below:

High	Moderate	Low
10 to 30%	50 to 70%	10 to 30%

High vegetation structure can be achieved on moderately and highly productive soils dominated by mid and/or tall grasses (late or late intermediate seral stage composition). Grasslands on moderately to highly productive soils but dominated by short stature species generally do not have the capability to provide high vegetation structure unless management is changed to increase the composition of mid to tall grass species over a period of years or decades.

Moderate structure can be achieved on moderately to highly productive soils dominated by mid and/or tall grasses depending on grazing use levels. Grasslands within this geographic area receiving light to moderate levels of livestock use should be in late or late intermediate seral stage to achieve moderate structure. Grasslands dominated by short grass species in early intermediate or early seral stage will not achieve moderate structure under even light grazing levels.

Minimally productive soils, prairie dog colonies, and grassland areas grazed by livestock at high intensities for an extended season of use provide low structure. Low vegetation structure can result from a dominance of low stature plant species or from heavy utilization of mid and tall grasses.

Fire

1. Prescribe burn a minimum of 1,500 acres per decade to meet objectives based on the following:

- Promote vegetative diversity;
- Improve wildlife habitat;
- Convert exotic vegetation to native vegetation;
- Stimulate riparian/woody draw woody plant regeneration;
- Control or reduce invasive or noxious weeds;
- Stimulate grass and forb growth;
- Reduce fuel loading
- Reduce damaging insect populations. **Objective**

Rest

1. Rest 1-10 percent of the suitable rangeland each year. **Objective**

Wildlife, Fish, and Rare Plants

1. Management Indicator Species:

Black-tailed Prairie Dog

- To help increase prairie dog populations and habitat for associated species, establish a prairie dog colony complex in the geographic area over the next 10 to 15 years. Colonies protected by conservation agreements or easements on adjoining land jurisdictions, including private, may be considered part of a complex. **Objective**
- Apply adaptive management strategies to provide objectives for 1,000 minimum and 2,800 maximum acres of active prairie dog colonies within the interior-colony management zones. If maximum acreage objective is exceeded, refer to Chapter 1, H. Animal Damage Control for management direction. **Objective** (Amendment 3 – proposed revision)

Plains Sharp-tailed Grouse

- Over the life of the plan provide diverse and quality grassland habitat across the geographic area at levels that, in combination with habitat on adjoining lands, helps support stable to increasing populations of sharp-tailed grouse and other wildlife with similar habitat needs. **Objective**
- Establish and maintain quality nesting and brooding habitat for sharp-tailed grouse (see Appendix H) and associated wildlife by meeting vegetation objectives for high structure within 10 years. **Objective**
- Establish and maintain quality foraging habitat for sharp-tailed grouse and associated wildlife species by enhancing and/or maintaining a diversity of forb species in grassland communities and regeneration of shrub patches and the shrub component of wooded draws and riparian habitats. **Objective**

Recreation

1. Construct the Prehistoric Prairies Discovery Center and associated trails. **Objective**

Geographic Area Direction – Standards and Guidelines

Vegetation

1. Use current monitoring information and stocking rate guidelines for livestock grazing (see Appendix I) to help design and implement range management strategies for meeting desired vegetation objectives. **Standard**

General Direction

1. For Management Area Direction 5.12 on the ONG, apply the Pine Ridge Geographic Area wildlife management direction. **Guideline**

Riparian

1. Manage riparian areas to maximize riparian vegetation such as sedges, rushes, willows, cottonwoods and green ash. **Guideline**

Infrastructure

1. New structural range improvements (fences and water developments) may be constructed as needed to achieve desired condition objectives (wildlife habitat, botanical, range management, visual quality and recreation). **Guideline**

Wildlife, Fish, and Rare Plants

1. Management Indicator Species:

Black-tailed Prairie Dog

- Encourage land exchanges in this geographic area to reduce conflicts over prairie dog management and to enhance long-term management opportunities for expanding prairie dog populations. Land exchanges may need to be completed in some locations before some of the following guidelines may be fully implemented. **Guideline**

- Manage livestock grazing to encourage prairie dog colony expansion in interior areas and to slow expansion along property boundaries. The appropriate livestock grazing strategies for individual areas will be identified as site-specific management plans are revised. **Guideline**
- In cooperation and coordination with the state wildlife agency, restrict prairie dog shooting as needed to encourage prairie dog population expansion. **Guideline**
- In cooperation and coordination with the state wildlife agency, relocate prairie dogs as needed to establish new colonies or to re-establish past colonies in this area. **Guideline**
- Refer to Chapter 1 (Sections F and H) and Chapter 3 (Management Area 3.63) for additional standards and guidelines.

Plains Sharp-tailed Grouse

- A range of 10 to 30% of the acres is prescribed for high structure grasslands in this geographic area. A substantial amount of this acreage should be located where it would optimize habitat for sharp-tailed grouse and associated species. The following criteria will be considered during site-specific project level planning to help determine the best locations to manage for high structure grasslands:
  - Presence of moderate to highly productive soils and range sites,
  - Proximity to sharp-tailed grouse display grounds,
  - Proximity to shrub habitats, private croplands and other sharp-tailed grouse foraging habitats. **Guideline**

2. Threatened, Endangered, and Sensitive Species

Mountain Plover (Sensitive Species, Candidate Species)

- Evaluate the effectiveness of large prescribed burns (a section or more in size) in attracting and inventorying mountain plover. Prescribed burns should be timed to provide large blackened areas in the spring. Large flats near prairie dog colonies in the northeast portion of this geographic area should be prioritized for burning. **Standard**
- In cooperation with the U.S. Fish and Wildlife Service and Nebraska Game and Parks Commission, evaluate the desirability and feasibility of trying to establish a nesting population with reintroduced birds. **Standard**
- To help maintain suitable nesting habitat for mountain plover, prohibit development of new facilities within 0.25 miles of known mountain plover nests or nesting areas. This does not apply to pipelines, fences, and underground utilities. **Standard**
- Any net loss of suitable and occupied mountain plover habitat as a result of prairie dog poisoning or development of new facilities within prairie dog colonies will be replaced within the year by concurrent expansion of suitable plover habitat or, in some cases, by enhanced management and protection of occupied plover habitat elsewhere on or near the national grassland. The amount of habitat loss is based on the amount of suitable and occupied habitat available prior to prairie dog dispersal in the year or the poisoning or development. **Guideline**

- To help reduce disturbances and risks to nesting mountain plover, prohibit the following activities in plover nesting areas or within 0.25 miles of plover nests from March 15 through July 31:
    - Construction (e.g., roads water impoundments).
    - Reclamation.
    - Drilling of water wells.
    - Prescribed burning. **Standard**
- To help reduce disturbances and risks to nesting mountain plover, do not authorize the following activities in plover nesting areas or within 0.25 miles of plover nests from March 15 through July 31:
    - Construction (e.g., pipelines, utilities, fencing).
    - Permitted recreation events involving large groups of people.
    - Grasshopper spraying.
    - Prairie dog shooting (in consultation with state wildlife agencies and U.S. Fish and Wildlife Service). **Guideline**
- To help reduce risks to mountain plovers from traffic limit vehicle speeds in occupied mountain plover habitat to 25 mph on resource roads and 35 mph on local roads. **Standard**
- Vegetation management projects in suitable mountain plover habitat will be designed to maintain or improve mountain plover habitat. **Standard**
- To avoid attracting avian predators, new structures and facilities in occupied mountain plover habitat will be designed with low profiles and/or perch-inhibitors. This does not apply to structures and facilities less than 4 feet in height or those not expected to be used as hunting perches by raptors. **Guideline**
- Use the following criteria at the project level to help determine where to use prescribed burning and high livestock grazing intensities (Appendix I) to provide low grassland structure and enhanced mountain plover nesting and brooding habitat:
    - Proximity to existing mountain plover nesting areas.
    - Proximity to prairie dog colonies.
    - Presence of expansive and flat grassland areas. **Guideline**

Swift Fox (Sensitive Species, Candidate Species)

- The northeast portion of this geographic area is near an area on the Buffalo Gap National Grassland that supports swift fox, and there's a high probability that swift fox also uses this part of the Oglala National Grassland. USDA predator (primarily coyote) control activities to reduce livestock losses will be limited in this area to methods that do not pose a significant and direct mortality risk to swift fox. This standard would also apply to any other areas in this geographic area where swift fox are found in the future. **Standard**

PINE RIDGE GEOGRAPHIC AREA

Pine Ridge Ranger District

Setting

The Pine Ridge Geographic Area encompasses about 50,529 acres of National Forest System lands in northwestern Nebraska. The Pine Ridge Ranger District of the Nebraska National Forest manages this geographic area. The district office is located south of Chadron, Nebraska.

The climate of the Pine Ridge Geographic Area can be classified as semi-arid Continental. Warm summers, cold winters, light precipitation, and frequent changes in the weather characterize the climate. Temperature extremes, as recorded near Crawford, Nebraska, range from minus 37-degrees Fahrenheit to 110-degrees Fahrenheit. About 80 percent of precipitation falls between April and September, with annual averages in the 18-inch range.

The topography of the area is dominated by the Pine Ridge, an escarpment of sandstone bluffs that extends just beyond the border in Wyoming, through northwestern Nebraska, then into southwestern South Dakota. The Pine Ridge is characterized by extensive growth of ponderosa pine, with some small inclusions of quaking aspen. Major landmarks and significant areas along the Pine Ridge, west to east, include the Soldier Creek Wilderness, the Pine Ridge National Recreation Area, Coffee Grinder Butte, and Aristocrat Butte. Elevations range between about 3,440 feet above sea level at Bordeaux Creek to 4,600 feet above sea level in the Deadman Creek area.

Drainages flow mainly toward the north (except for South, Middle, and North Forks of Soldier Creek, which flow to the southeast) into the White River and include, west to east, Deadman Creek, Cherry Creek, White Clay Creek, Saw Log Creek, West Ash Creek, East Ash Creek, Indian Creek, Cunningham Creek, Dead Horse Creek, Chadron Creek and Bordeaux Creek.

Vegetation consists of a grass/forest mix dominated by ponderosa pine, cool-season and warm-season grasses, and a variety of forbs. This vegetative mix provides a diverse habitat for a variety of wildlife species and forage for livestock. Principle deciduous tree species are cottonwood, hackberry, boxelder and green ash. Other woody species that can be found locally abundant are snowberry, chokecherry and wild plum. Grass species include western wheatgrass, little bluestem, big bluestem, prairie sandreed, buffalograss and green needlegrass. Sedges include threadleaf and needleleaf sedges.

The geographic area is comprised of a variety of vegetation/habitat types; coniferous forests are dominated by ponderosa pine. Areas of open coniferous forest/grassland (savannah) also make-up this geographic area. Open grassland (parkland) areas are frequently found throughout the forested area. These vegetative mixes provide important loafing, hiding, escape and thermal cover for many wildlife species. The woody draw and riparian woodland habitats comprises a small portion of the geographic area but are considered critical for many wildlife species. The primary creeks and drainages include Bordeaux, Chadron, Dead Horse, Indian, Cunningham, East Ash and West Ash. Soldier Creek Wilderness includes the North, Middle, and South Forks of Soldier Creek. The wetland/aquatic habitat provides a cold-water brown and brook trout recreational fishery. The geographic area has several developed recreational facilities including Spotted Tail, Outrider, Roberts and Soldier Creek Trailheads. Numerous hiking, horseback

riding and mountain bike trails exist across the geographic area. The primary dispersed recreational opportunities within this area include big game hunting, wildlife viewing, horseback riding, mountain biking, hiking, fishing and camping.

Desired Conditions

General: The desired landscape condition is to maintain a mosaic of ponderosa pine and open mixed grass parklands.

The streams and riparian areas are in, or are trending towards, Properly Functioning Condition (PFC-see glossary), which allows them to recover quickly from floods and support diverse native plants and animals. Long-term soil productivity and properly functioning water cycles are maintained. Properly functioning water cycles are characterized by high infiltration rates, low soil compaction, and minimal overland flows.

Livestock management techniques such as proper stocking, season of use, grazing rotation systems as well as fencing and water developments will be used to manage livestock to meet vegetative goals and objectives. Recreational opportunities will continue to emphasize dispersed recreational activities.

Ponderosa Pine Forest/Parklands: These forested/savannah areas will be managed to maintain or perpetuate a diversity of healthy and vigorous ponderosa pine forest, old growth stands of large old trees with open branches, intermingled standing dead and down trees, and mixed grass and forb communities providing a mosaic of varying grassland structure levels. Principle grass species include western wheatgrass, green needlegrass, little bluestem, needleandthread, blue grama, and big bluestem. Threadleaf sedge and a variety of forbs also exist. Ponderosa pine forests will be managed for healthy, sustainable yields, old growth communities, and standing and down snags across the forested areas.

Wooded Draw Areas: These areas will be managed to perpetuate multiple layers and age classes of vegetation including forbs, shrubs, and trees. Principle woody species include cottonwood, green ash, hackberry, wild plum, chokecherry, and snowberry.

Streams and Riparian Areas: These areas will maintain soil moisture to perpetuate riparian plant communities with strong root masses, emphasize healthy submergent and emergent vegetative cover along streams while reducing sediment levels to maintain high quality aquatic habitat. Plant species include sedges, rushes, willows, green ash, cottonwood, boxelder, and hackberry.

Important Attributes

- The 7,800-acre Soldier Creek Wilderness
- The 6,600-acre Pine Ridge National Recreation Area
- Extensive and scenic native ponderosa pine forest stands with open prairie vistas
- Trout fisheries in forest-lined streams
- Over 80 miles of recreational trails for mountain bikers, hikers and horseback riders
- Significant populations of huntable and viewable wildlife, including wild turkey, mule and white-tailed deer, and elk

Management Area Prescription Allocation

Number	Prescription	Acres
1.1	Wilderness: Soldier Creek	7,800
1.31	Backcountry Recreation Nonmotorized	1,830
1.31a	Backcountry Recreation Nonmotorized: Pine Ridge National Recreation Area	6,540
2.1	Special Interest Areas	100
3.51	Bighorn Sheep	5,650
5.12	General Forest and Rangeland: Range Vegetation Emphasis	25,930
7.1	Residential/Forest Intermix	2,610
8.6	Administrative Site	60

Geographic Area Direction - Objectives

Grassland Vegetation

This section deals with vegetation and its relationship to MIS and TES habitat needs. The focus in the Pine Ridge Geographic Area is on grass and grass-like plants.

The resulting vegetation will have a mix of seral stages designed to approximate evolutionary development of the northern Great Plains. The grassland ecosystem will feature a "shifting mosaic" of disturbance processes over space and time.

Composition objectives are based on a mix of grass and grass like species across a majority of the Geographic Area. This mix provides suitable opportunity for meeting vegetation structure objectives and providing for floristic diversity.

The following section describes the specific vegetative composition and structure objectives for the Pine Ridge Geographic Area:

1. Over the life of the plan, manage for 40-60% non-forested cover across the geographic area. **Objective**.

Composition

2. The desired plant species composition objectives across the geographic area is as follows:

Late Seral	Late Intermediate Seral	Early Intermediate Seral	Early Seral
15 to 25%	40 to 70%	5 to 15%	1 to 20%

In late seral stage, more productive soils (silty and savannah range sites) should be comprised mainly of mid grasses and to a lesser extent tall grasses. On silty range sites western wheatgrass, green needlegrass, sideoats grama, and little bluestem are the primary mid grasses and big bluestem and prairie sandreed should make up the majority of the tall grasses. Savannah range sites should be made up of little bluestem, sideoats grama, green needlegrass, and slender wheatgrass for mid grass species and big bluestem, prairie sandreed, and sand bluestem will make up the tall grass species.

In late intermediate seral stage, more productive soils (silty and savannah range sites) should be comprised mainly of mid grasses and to a lesser extent short grasses and tall grasses. The dominant grass species in late intermediate seral stage on silty range sites should be western

wheatgrass with the codominance made up of needleandthread, blue grama, and sedges. The dominant grass species in late intermediate seral stage on savannah range sites should be little bluestem, prairie sandreed, slender wheatgrass, sideoats grama, and blue grama. The mix of grasses making up the codominance in late intermediate seral stages will fluctuate according to precipitation and/or grazing intensities.

In early intermediate seral stage, more productive soils (silty and savannah range sites) should be comprised mainly of short grasses and to a lesser extent mid grasses. The dominant grass species in early intermediate seral stage on silty range sites should be blue grama, buffalo grass, western wheatgrass, needleandthread, and sedges. The dominant grass species in early intermediate seral stage on savannah range sites should be little bluestem, prairie junegrass, prairie sandreed, blue grama, hairy grama, and plains muhly. The mix of grasses making up the codominance in the early intermediate seral stage will fluctuate according to precipitation and/or grazing intensities.

In early seral stage, savannah range sites will be dominated by broadleaf weeds such as annual ragweed, green sagewort, and lupine, sedges, and annual grasses like downy brome. Other species common to the early seral stage on savannah range sites are short stature grass species such as red threeawn, hairy grama, and blue grama. Silty range sites should be comprised mainly of short grasses with little, if any, presence of mid grasses. Sedges will dominate the early seral stage on silty range sites along with short grasses such as blue grama and buffalograss. The early seral stage should be emphasized on less productive saline upland range sites and in isolated areas of high livestock use or other persistent disturbances.

Structure

3. Manage the geographic area to meet the vegetation structure objectives identified below:

High	Moderate	Low
10 to 20%	65 to 85%	5 to 15%

High vegetation structure can be achieved on moderately and highly productive soils dominated by mid and/or tall grasses (late or late intermediate seral stage composition). Grasslands on moderately to highly productive soils but dominated by short stature species generally do not have the capability to provide high vegetation structure unless management is changed to increase the composition of mid to tall grass species over a period of years or decades.

Moderate structure can be achieved on moderately to highly productive soils dominated by mid and/or tall grasses depending on grazing use levels. Grasslands within this geographic area receiving light to moderate levels of livestock use should be in the late or late intermediate seral stage to achieve moderate structure. Grasslands dominated by short grass species in early intermediate or early seral stage will not achieve moderate structure under even light grazing levels.

Minimally productive soils, and grassland areas grazed by livestock at high intensities for an extended season of use provide low structure. Low vegetation structure can result from a dominance of low stature plant species or from heavy utilization of mid and tall grasses.

Forest Vegetation

1. Manage for a 40-60% forest cover (silvicultural structural stages 2-5; see glossary) across the geographic area. **Objective**

2. Over the life of the plan, manage timber stands to do the following:

- Improve forest health
- Prevent potentially damaging forest pest populations
- Reduce fuel loading and risk of catastrophic wildfire
- Enhance wildlife and TES habitats
- Provide national forest timber to support local economies
- Limit ponderosa pine encroachment into rangelands
- Improve riparian habitat
- Enhance recreation experiences and visual quality **Objective**

3. Within 10 to 15 years, manage forest cover to achieve a 20-40 sq. ft. basal area on 10% of the forest cover. Manage to achieve silvicultural structural stages 4 and 5, with emphasis on structural stages 4a (mature open) and 5 (old growth/late successional). **Objective**

4. Over the long term (100 years), manage forest cover to create stands with four structural stages in the forest cover as follows:

- 15-25% in structural stage 2
- 15-25% in structural stage 3
- 40% in structural stage 4
- 20% in structural stage 5 **Objective**

5. Within 10-15 years, achieve forest structural diversity by maintaining or enhancing hardwood trees, shrub inclusions, and other beneficial plant communities and openings. **Objective**

Disturbance Processes

Prescribed Fire

1. Prescribe burn a minimum of 1,000 acres per decade to achieve management objectives based on the following:

- Promote vegetative diversity
- Improve wildlife and TES habitats
- Convert exotic vegetation to native vegetation
- Stimulate riparian and woody draw woody plant regeneration
- Control or reduce invasive or noxious weeds
- Reduce fuel loadings and risk of catastrophic fire
- Restore the ponderosa pine savannah ecosystem
- Stimulate grass and forb growth
- Reduce damaging insect populations. **Objective**

Rest

1. Rest 1-10 percent of the suitable rangeland each year. **Objective**

Wildlife, Fish, and Rare Plants

1. Management Indicator Species:

Plains Sharp-tailed Grouse

- Provide diverse and quality grassland habitat across the geographic area at levels that, in combination with habitat on adjoining lands, helps support stable to increasing populations of sharp-tailed grouse and other wildlife with similar habitat needs. **Objective**
- Establish and maintain quality nesting and brooding habitat for sharp-tailed grouse (see Appendix H) and associated wildlife by meeting vegetation objectives for high structure within 10 years. **Objective**

Pygmy Nuthatch

- Conduct inventories to establish baseline population and distribution information. **Objective**

Riparian

1. Over the life of the plan, manage riparian areas to maximize riparian vegetation such as sedges, rushes, willows, cottonwoods, hackberry, boxelder, and green ash. **Objective**

Perennial Stream Fisheries

1. Maintain or enhance adequate stream-side vegetative cover to promote shading, cooler water temperatures and streambank undercutting for trout fisheries. **Objective**

Recreation

1. Acquire easements and develop partnerships with Nebraska Game and Parks Commission and others, to connect the Pine Ridge Trail from Chadron to Crawford. **Objective**

2. As demand dictates, construct or improve trails and trailheads. **Objective**

Special Designations

1. Within 5 years, revise management plans for the Pine Ridge National Recreation Area to emphasize recreation, aesthetics, and educational experiences consistent with the area and other plan direction. **Objective**

Geographic Area Direction – Standards and Guidelines

Grassland Vegetation

1. Use current monitoring information and stocking rate guidelines for livestock grazing (see Appendix I) to help design and implement range management strategies for meeting desired vegetation objectives. **Standard**

2. New structural range improvements (fences and water developments) may be constructed as needed to achieve desired condition objectives (wildlife habitat, botanical, range management, visual quality and recreation). **Guideline**

3. Emphasize livestock management principles such as, light and heavy grazing intensity techniques (see Appendix I) season of use, number of animals, kind of livestock, and incorporate these principles into the grazing management system to achieve high and low vegetation structure objectives. **Guideline**

Forest Vegetation

1. Management activities should replicate biological processes found in the areas and strive to replicate natural vegetative patterns and patch size. **Guideline**

2. Opening (parkland) Management. The maximum size of openings created by even-aged management will be 40 acres, regardless of forest type, with the following exceptions:

- Where proposals for larger openings are approved by the Regional Forester after a 60-day public review.
- Where larger openings are the result of natural catastrophic conditions of fire, insect or disease attack, or windstorm.
- Where the area is cut does not meet the definition of created openings. **Standard**

3. The size of the uncut forest areas between openings must be based on the management objectives for the unit being analyzed. If these objectives include creating a mix of vegetation types to benefit the kinds wildlife associated with early successional stages and edges, the uncut units can be small. If the objectives include provisions for late successional associated species, the uncut units should be large enough to function as an ecological system not overly influenced by the edge. **Guideline**

4. When developing openings in vegetative communities, simulate naturally shaped edges. **Guideline**

5. Pine encroachment in grass or meadow vegetation may be removed mechanically or using prescribed fire to maintain forage base and landscape diversity. Consider soils that formed under grass or meadow plant communities in determining extent of pine encroachment removal. **Guideline**

Snags and Dead Woody Material Management

1. Design vegetative treatments to maintain an average of four hard snags per conifer forested acre. **Standard**

2. If there are fewer than four hard snags per forested acre, projects to increase snag numbers may be implemented. **Guideline**

3. Snags can be clumped or individual, but should be well distributed throughout the planning unit. **Guideline**

4. In areas not meeting the snag standard, consider snag cutting restrictions and treating live replacement trees to create snags. **Guideline**

5. All soft snags should be retained unless they are a safety hazard. **Guideline**

6. When necessary to meet the minimum snag standard, create snags from live tree replacements. **Guideline**

7. Leave large woody debris on harvested or thinned sites to help retain moisture, prevent soil movement, provide microsites for establishment of forbs, grasses, shrubs, and trees and to provide habitat for wildlife. Locate woody debris concentrations where fuels loading is not a concern. **Guideline.**

8. Prescriptions shall be developed prior to timber harvest to identify the amount, size(s), and distribution of down logs to be left on-site. On conifer-forested sites (ponderosa pine) retain an average of at least 50 linear feet per acre of coarse woody debris with a minimum diameter of 10 inches (where materials are available) or largest woody material found on-site. **Guideline**.

	Hard Snags			**Downed Logs**	
Forest Type	Minimum Diameter	Average per Acre *	Minimum Height	Minimum Diameter	Linear Feet per Acre *
Ponderosa pine	10 inches	4.0	25 feet	10 inches	50 feet

*This does not mean that every acre will have a snag or downed log; these are averages across the geographic area

Silviculture and Timber Harvest Utilization

1. In designing timber sales use the following guidelines:

Type of Product	**Minimum DBH**	**Minimum Top Diameter**	**Length (Feet)**	**Merchantability Factor**
Live Coniferous Trees				
Sawtimber	8”-9”	6”-7”	8’-10’	10.67 (33.3%)
Products Other Than Sawtimber	5”-6”	4”	6.5’-8.3’	Variable
Dead Coniferous Trees				
Sawtimber	7”-12”	6”-10”	8’-16’	10.67 (33.3%)
Products Other Than Sawtimber	5”	4”	Variable	Variable

2. Silvicultural standards and guidelines should be applied at the watershed and landscape level, as well as to individual stands of trees. The standards and guidelines must be applied in such a way as to perpetuate a range of environmental conditions while supplying goods and services to people. **Guideline**.

3. The scientifically defined silvicultural systems, shown by forest cover type, which meet the management objectives for the landscape or individual stands of trees within a landscape setting are acceptable.

- Acceptable Silvicultural Systems

Forest Cover Type	Even-Aged Systems	Uneven-Aged Systems
Ponderosa pine	Shelterwood, Clear-cut and Seed Tree	Group Selection and Single-Tree Selection

  - Both even-aged and uneven-aged management systems can be used and applied at scales ranging from a few acres to many hundreds of acres.
  - These silvicultural systems are to be applied in a manner that will promote natural regeneration.
  - Tree stand vegetation management treatments are to be approved by a certified silviculturalist.
  - The silvicultural systems identified can be used to convert uneven-aged stands to even-aged management and even-aged stands to uneven-aged management.
- For precommercial and commercial thinning:
  - Use thinning practices that consider genetic diversity and competition among trees for water, nutrients and light. The frequency of thinning should depend upon several factors including: tree species, financial efficiency, site growing conditions, fuels management, Management Indicator Species (MIS), and Scenic Integrity Objectives (SIOs) for the area.
  - In general, use stocking charts (FSH 2409.17) to implement intermediate cuttings in even-aged, suitable timberland stands to effectively meet land management direction and as a guideline for individual stand management. **Guideline**

Infrastructure

1. Allow no net decrease in the average pasture size. **Guideline**

2. Allow no net increase in the number of water developments. **Guideline**

Disturbance Processes

Prescribed Fire:

1. Visual effects of prescribed fire will comply with the approved SIO of the area. **Guideline**

2. When feasible and appropriate use burning to dispose of slash in order to return the inorganic and organic chemicals in the foliage and small woody material to the soil, to reduce fire hazard, and to provide seed beds for natural regeneration. Following burning promote revegetation of prescribed burned areas. Apply seed to initiate revegetation if ground cover is 60 percent or less and slopes are 30 percent or more. **Guideline**.

3. If piled and burned fuel creates ash piles deeper than three inches, scatter the ash, scarify and mix it with mineral soil, or bury it. **Guideline**

4. Defer prescribed burned areas from livestock grazing for a portion or all of the following growing season to ensure regrowth of forage species. **Guideline**

Prescribed Fire, cont.

5. Prescribed burn plans will identify acceptable levels of tree mortality for seedling, saplings, poles, and sawtimber. Burning prescriptions will be established to meet these levels. In planning prescribed burns, consider how the potential loss of trees is offset by the beneficial effects of fire, for example, overall stand health, wildlife benefits and fuel reduction. **Guideline**

Wildlife, Fish, and Rare Plants

Management Indicator Species:

Pygmy Nuthatch

- Provide quality nesting and foraging habitat for this management indicator species and other species with similar habitat preferences by meeting the short-term (10 to 15 years) objective of 10% of the ponderosa pine woodlands in structural stages 4 and 5, with emphasis on structural stages 4a (mature open) and 5 (old growth/late successional). **Guideline**
- Within the associated watershed, for each vegetation management project, retain or create at least 4 hard snags at least 25 feet in height and greater than 10 inch DBH per acre. This is an average minimum snag density across the project area. Collectively, 25% of the snags should be greater than 19 inch DBH. If the 25 foot or 19 inch DBH minimum criteria cannot be met, provide the largest and tallest snags available. **Standard**
- Snags can be clustered or individual, but must be well distributed within the watershed. **Guideline**
- During vegetation management activities in ponderosa pine, retain a sufficient number of green trees greater than 19 inch DBH or from the largest diameter class available, to move towards or maintain an average minimum density of one large green tree per acre with the associated watershed, for the purpose of snag recruitment. Retention trees can be clustered or individual. If this guideline cannot be met, leave the largest retention trees available. **Guideline**

Plains Sharp-tailed Grouse

A range of 10 to 20% of the acres is prescribed for high structure grasslands in this geographic area. A substantial amount of this acreage should be located where it would optimize habitat for sharp-tailed grouse and associated species.

- The following criteria will be considered during site-specific project level planning to help determine the best locations to manage for high structure grasslands:
  - Presence of moderate to highly productive soils and range sites,
  - Proximity to sharp-tailed grouse display grounds,
  - Proximity to shrub habitats, private croplands and other sharp-tailed grouse foraging habitats. **Guideline**
- Establish and maintain quality foraging habitat for sharp-tailed grouse and associated wildlife species by enhancing and/or maintaining a diversity of forb species in grassland communities and regeneration of shrub patches and the shrub component of wooded draws and riparian habitats. **Guideline**

2. Where deer and/or elk management is emphasized, livestock grazing, timber harvests, and road use activities shall be scheduled or limited to avoid disturbing elk and deer during the critical calving/fawning season and winter months. **Guideline**

3. When desired, provide security (hiding and thermal) cover capable of hiding 90% of a standing adult elk or deer from human view at a distance of 200 ft. Hiding cover stand size should range from 6.5 to 26 acres. Thermal cover for deer should include saplings or shrubs (evergreen/deciduous for summer and evergreen only for winter) at 5 feet tall and 75% crown closure. Optimum stand size is 2 to 5 acres with a minimum width of 300 feet. Summer thermal cover for elk should contain coniferous and/or deciduous trees 20 – 40 feet in height and >70% canopy closure, and a distance to lowest limb of 5 feet or greater. Optimum stand size is between 30 and 60 acres. **Guideline**

4. Elk calving areas contain forage and security areas. Newborn hiding cover should contain shrubs, downed logs and other large ground concealments at least 28" in height within 0.5 mile of water. Slash should be windrowed or piled. Lop and scatter should be discouraged. Slash depths of 18 inches impede elk movements so a variety of concealments should be available. Deer fawning habitat should include low shrubs and trees between 2 to 6 feet in height and tree canopy closure at about 50%. Optimum stand size is between 1 and 5 acres. **Guideline**

5. Water is most critical during spring and summer for lactating elk and deer. Water shall be located within 0.25 to 0.5 miles from spring and summer use areas. **Guideline**

6. Defer livestock grazing and/or timber harvest operations until after July 1 - 15 or rest pastures annually from grazing in identified calving/fawning and wintering areas. **Guideline**

7. Implement habitat improvement projects, such as prescribed burning, and timber harvest operations, to attract elk and deer during times of the year when depredation activities occur on private land. **Guideline**

8. Limit travel activities between May 15 – July 15 when elk calving habitat management is emphasized. Do not exceed an overall road density of .5 mile/sq. mile on areas emphasized for elk calving habitat. **Guideline**

9. Where wild turkey management is emphasized in ponderosa pine areas, timber harvests and livestock grazing activities shall follow these guidelines:

- Provide mature timber (>9" dbh with a basal area >100 sq ft/acre) on at least 15 percent of the forested area and 15% of forested area with a basal area >120 sq ft/acre. **Guideline**
- To enhance wild turkey nesting habitat, leave and scatter logging slash. Do not pile slash; leave large culls (>9") in place with branches intact. **Guideline**
- Where wild turkey brood cover is desired, maintain a vegetative height of at least 8 inches and 70% ground cover of herbaceous vegetation or a comparable VOR along forest edge openings and along riparian areas. Brood cover should be maintained through at least July 15. **Guideline**
- To enhance wild turkey roosting habitat, retain at least 2-6 roost sites per square mile. All trees within roost sites should be protected regardless of their size. Roost sites with basal areas >80 sq ft/acre that include at least 5 mature trees (>9" dbh) are preferred and these sites shall encompass ¼ acre or more. **Guideline**

Wildlife, Fish, and Rare Plants, #9., cont.

- Avoid timber harvest operations and prescribed burning activities during nesting season between April 15 and mid-June. **Guideline**
- Riparian areas shall be deferred from grazing until July 1 to prevent excessive removal of herbaceous vegetation used as brood habitat. **Guideline**
- Leave dense stands (>100 sq. feet/acre basal area) of woody escape cover within 100 yards of brood habitat openings. **Guideline**

10. Enhance perennial stream fisheries (trout) in suitable streams on National Forest System Lands on the Pine Ridge. Establish gravel-based spawning beds at desired stream locations. Gravel beds should be a minimum of 20' long and 6"deep and use ½"-1 ½" coarse gravel. **Guideline**

11. Construct instream structures (log deflectors, wedge dams, log covers, etc.) at desired stream locations to improve fisheries habitat. **Guideline**

12. Conduct sampling to establish an aquatic macro-invertebrate population baseline for perennial and/or selected streams. **Guideline**

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CHAPTER 3 : MANAGEMENT AREA DIRECTION

INTRODUCTION

Management areas are defined as parts of the grassland that are managed for a particular emphasis or theme. Each management area has a prescription that outlines the Theme, the Desired Conditions, and the Standards and Guidelines that apply to it (in addition to the Grassland-wide Standards and Guidelines).

Prescriptions have been broken into eight major categories based on the amount of human-made facilities and land use restrictions. For example, Proposed Wilderness (MA 1.2) would have the least amount of facilities and Rangeland with Broad Resource Emphasis (MA 6.1) would show the greatest evidence of facilities, including things like roads, oil wells, pipelines, and water developments.

Category 1	Category 2	Category 3	Category 4	Category 5	Category 6	Category 7	Category 8
Least facilities<----------> Most facilities **More land use restrictions<----------->Fewer land use restrictions**							

For this revision, linear, point, and small management areas were combined into other management areas, or are handled through discrete standards and guidelines. This includes campgrounds and picnic grounds (developed recreation sites), utility corridors, woody draws and riparian areas. Management areas devoted to a particular wildlife species were consolidated into "special wildlife areas."

The eight categories of management prescriptions are described below:

Prescription Category 1

Category 1 includes Wilderness Areas and the various prescriptions used within them, and the backcountry recreation settings. Ecological processes, such as fire, insects, and disease, are essentially allowed to operate relatively free from the influence of humans. Diversity resulting from natural succession and disturbances predominates, and non-native vegetation is rare. Users must be self-reliant and should expect little contact with other people. Few, if any, human-made facilities are present. With rare exceptions, travel is nonmotorized.

Prescription Category 2

Category 2 areas are intended to conserve representative (or particularly rare and narrowly distributed) ecological settings or components. They help protect ecosystems or ecosystem components that may have important functions, ensuring the overall sustainability of larger landscapes.

Human influences on ecological processes are limited as much as possible, but are sometimes evident. Types of human use vary, but generally are not intensive. Travel is generally nonmotorized. They help play an important role under an adaptive-management philosophy by serving as a "natural" reference for areas that are intensively managed for a particular objective. These areas are formally designated Research Natural Areas (RNAs).

Prescription Category 3

Ecological values in Category 3 areas are in balance with human occupancy, and consideration is given to both. Resource management activities may occur, but natural ecological processes and resulting patterns normally predominate. Although these areas are characterized by predominately natural-appearing landscapes, an array of management tools may be used to restore or maintain relatively natural patterns of ecological process. This results in some evidence of human activities. Users expect to experience some isolation from the sights and sounds of people, in a setting that offers some challenge and risk.

Prescription Category 4

The ecological values in Category 4 areas are managed to be compatible with recreation use, but are maintained well within the levels necessary to maintain overall ecological systems. Resource use for other values is not emphasized and has little impact on ecological structure, function, or composition. Sights and sounds of people are expected, and may even be desired. Motorized transportation is common.

Prescription Category 5

Category 5 areas are forested areas managed for a mix of forest products, forage, and wildlife habitat, while protecting scenery and offering recreation opportunities. Ecological sustainability is protected, while selected biological structures and compositions that consider the range of natural variability are emphasized. These lands often display high levels of investment, use, and activity; density of facilities; and evidence of vegetative treatment. Users expect to see other people and evidence of human activities. Facilities supporting the various resource uses are common. Motorized transportation is common.

Prescription Category 6

Category 6 areas are primarily non-forested ecosystems that are managed to meet a variety of ecological and human needs. Ecological conditions will be maintained while emphasizing selected biological (grasses and other vegetation) structures and compositions that consider the range of natural variability. These lands often display high levels of investment, use, and activity; density of facilities; and evidence of vegetative manipulation. Users expect to see other people and evidence of human activities. Facilities supporting the various resource uses are common. Motorized transportation is common.

Prescription Category 7

Category 7 areas are public lands intermingled with private land to such an extent that ecosystem management objectives for National Forest System lands must be tempered by other landowners' uses and objectives. Human activities have altered the natural appearance of these landscapes in most area on both the public and private lands. Sights and sounds of people predominate. Private land uses is often residential. Resource use is not planned on a sustainable basis, but many occur in concert with surrounding private land values. Motorized transportation is common.

Prescription Category 8

Ecological conditions, including processes, within Category 8 areas are likely to be permanently altered by human activities, beyond the level needed to maintain natural-appearing landscapes and ecological processes. These areas are generally small. Ecological values are protected where they affect the health and welfare of humans. Human activities are generally commercial in nature, directly or indirectly providing jobs and income. Motorized transportation is common.

1.1 WILDERNESS: SOLDIER CREEK

Theme

Wildernesses are managed to protect and perpetuate their natural conditions, while providing opportunities for solitude and self-reliance.

Desired Conditions

The area is managed to perpetuate natural conditions, including native plant and animal species and communities. Desired vegetation composition and structure are controlled primarily by natural processes, such as fire, insects and disease. Livestock grazing strategies and intensities are managed to achieve or maintain native plant and animal species and communities. Prescribed fire is used to reduce fire risk within the Wilderness and to adjoining lands and to meet desired vegetation composition and structure.

The area provides moderate opportunities for solitude in an environment that offers a low to moderate level of challenge and risk. Evidence of present human activity is limited to that necessary to protect Wilderness resources, to continue grazing, or is a result of a prior existing rights. Evidence of past human activity is considered integral to maintenance of the wilderness resource. Travel is primarily along a well-defined trail system, although some cross-country opportunities exist.

Both directional and resource protection signs may be present. Bridges or other structures may be present if needed for resource protection or where no safe opportunity exists to cross a stream during periods of normal water flow.

Standards and Guidelines

General

1. Limit motorized use to administrative purposes (e.g., grazing administration, noxious weed control, and fire suppression). **Standard**

Fire

1. Until a comprehensive program for managing the Wilderness is established, suppress all wildfires using the appropriate suppression action. **Standard**

2. Prohibit use of heavy ground-disturbing equipment for fire suppression unless authorized by the regional forester. The Forest Supervisor may authorize use of other mechanical equipment, such as chain saws or motorized vehicles. **Standard**

Livestock Grazing

1. See Forest Service Manual 2323.22 for direction on livestock grazing activities. **Standard**

Invasive Plant Species

1. Control noxious and invasive plant species with mechanical, chemical or biological control means. Recreational or permitted livestock must use certified noxious weed seed free forage. **Standard**

Recreation

1. Limit maximum party size in Wilderness to 25 heartbeats (any combination of people and recreational stock), except as permitted. Smaller party-size limits for people and stock will be established where biological and physical resource capability cannot support that level of use. **Standard**.

2. Prohibit recreational livestock within 100 feet of streambanks except for watering and through travel. **Standard**.

3. Initiate a permit system and limit use when the established capacity level is exceeded. **Guideline**

4. Reduce the incidence of contact with other groups or individuals by applying the following guidelines:

- Not more than 2 other parties encountered during cross-country travel or 4 other parties encountered on a Forest development trail per day on 80% of the days during the summer and fall use seasons.
- No more than one other party within sight or sound of campsites on 80% of the days during the summer and fall use seasons. **Guideline**

5. Manage according to the Recreation Opportunity Spectrum class of semi-primitive nonmotorized. **Guideline**

Scenery Management

1. Manage according to the Scenic Integrity Objective of Very High. **Guideline**

Special Uses

1. Restrict outfitter/guide permits to day-use only. **Standard**

Infrastructure

1. Allow permanent electric fences. **Standard**

2. New fences shall be placed to promote visual integrity and overall cost efficiency in construction and long-term maintenance. **Guideline**

3. As fences are reconstructed, allow only wood fence posts in the Wilderness. **Guideline**

1.2 RECOMMENDED FOR WILDERNESS

Theme

These are areas that the Forest Service will recommend to Congress for inclusion in the Wilderness System. These areas are managed to protect Wilderness characteristics until Congressional action is taken. Non-conforming activities may be limited or restricted.

Desired Conditions

These areas are managed to protect wilderness characteristics. Natural processes, such as fire, insects, disease, rest, and grazing control vegetation composition and structure. Large pasture size and unobtrusive structural developments promote an open, natural-appearing landscape. Generally, opportunities for primitive recreation are provided, with a moderate degree of solitude available.

There is some evidence of past and present human use, such as fences, trails, water developments and primitive roads. Existing two-track roads and old roads may be evident but through nonuse should diminish. Some of these may become designated trails. Bridges or other structures may exist to protect resources or provide safe stream crossings during normal water flow.

Use of mechanized equipment for administrative purposes will continue. Opportunities to remove or relocate structural range improvements (fences and water developments), to achieve resource management goals and objectives, will be pursued. Both directional and resource protection signs may be present.

Standards and Guidelines

General

1. Allow uses and activities only if they do not degrade wilderness characteristics. **Standard**

2. Reclaim disturbed lands to meet wilderness characteristics.. **Standard**

3. Limit all motorized use, including snowmobiles, to authorized administrative purposes, law enforcement, emergency and search and rescue. **Standard**

4. Control natural insect and disease outbreaks only when they threaten resource values outside of the wilderness boundary. **Guideline**

5. Do not allow new road construction or reconstruction.

Mineral and Energy Resources

1. Prohibit mineral material removal. **Standard**.

2. Allow oil and gas leasing; however, prohibit ground-disturbing oil and gas activities. **Standard**

Fire

1. Prohibit use of heavy ground-disturbing equipment for fire suppression unless authorized by the Forest Supervisor. **Standard**

2. Minimum Impact Suppression Tactics, MIST, (see glossary) will be used to control fire within wilderness. **Standard**

3. Refer to Chapter 1, Grassland-wide Direction, Section G, for fire suppression direction.

Livestock Grazing

1. Refer to Chapter 1, Grassland-wide Direction, Section I, (Livestock Grazing); and Chapter 2, Geographic Area Descriptions.

Invasive Plant Species

1. Refer to Chapter 1, Grassland-wide Direction, Goal 1.c

Recreation

1. Refer to Chapter 1,Grassland-wide, Section K

Heritage Resource

1. Refer to Chapter 1, Grassland-wide Direction, Section N, for additional heritage resource direction.

Scenery Management

1. Manage area to meet a Scenic Integrity Objective of High (see Appendix G). **Guideline**

Special Uses

1. No new utility corridors or, additional development within existing corridors will be permitted. Existing corridors may be maintained until abandoned. **Standard**

2. Prohibit new special-use facilities. **Guideline**

Infrastructure

1. Allow construction of facilities and structures that are subordinate to the landscape or in keeping with the semi-primitive/primitive character of the area. **Standard**

2. Utilize natural materials in the construction or reconstruction of livestock facilities. **Standard**

3. For additional information refer to Chapter 1, Grassland wide Direction, Section Q Infrastructure and Chapter 2, Geographic Area Direction.

1.31 NONMOTORIZED BACKCOUNTRY RECREATION

Theme

Backcountry, nonmotorized recreation areas are managed to provide recreation opportunities in a natural-appearing landscape.

Desired Conditions

A variety of un-crowded, nonmotorized, recreation opportunities are provided in a natural or natural-appearing setting. There will usually be less than 15 encounters with other parties per day. These areas may offer unique hunting opportunities away from motorized vehicles.

Improvements such as trailheads, trails, signs, bridges, fences, primitive shelters, and water developments, may be present. Existing two-track roads and old roads may be evident but will diminish over time or may become designated trails.

The number of structures and facilities to support management activities is limited. Large pasture size and unobtrusive developments promote an open, natural-appearing landscape.

Vegetation is moving toward the range of natural variability. Natural processes, such as fire, insects, diseases, rest, and grazing control vegetative composition and structure.

Standards and Guidelines

General

1. Allow uses and activities only if they do not degrade semi-primitive character of the area. **Standard**

2. Reclaim disturbed lands to a condition suitable for the purposes for which the area was identified. **Standard**

3. Limit all motorized, including snowmobile use, to authorized administrative, law enforcement, search and rescue, fire suppression, and emergency purposes. **Standard**

4. Prohibit new road construction or reconstruction. **Standard**

Mineral and Energy Resources

1. If access for geophysical surveys is not feasible by off-road travel, use of portable techniques is required. **Guideline**

2. Allow oil and gas leasing; however, no ground-disturbing oil and gas activities are permitted. **Standard**

3. Prohibit mineral material removal. **Standard**

4. Honor all valid existing Oil and Gas leases. Refer to Chapter 1, Grassland-wide Direction, Section D, Oil and Gas. **Standard**

Fire

1. Prohibit use of heavy ground-disturbing equipment for fire suppression unless authorized by the district ranger. **Guideline**

2. Refer to Chapter 1, Grassland-wide Direction, Section G, for fire suppression direction.

Silviculture

1. Trees may be cut or removed under the following circumstances; however, new road construction is prohibited:

- To reduce fuel loads and fire risk, especially to adjoining private land.
- To curtail imminent threat of epidemic insect attack.
- To improve aesthetics, such as enhancing a scenic view from a prominent overlook.
- To enhance growth of rare plant species and community types.
- To enhance wildlife habitat diversity. Guideline

Livestock Grazing

1. Refer to Chapter 1, Grassland wide Direction, Section I, Livestock Grazing; and Chapter 2, Geographic Area Descriptions.

Invasive Plant Species

1. Refer to Chapter 1, Grassland-wide Direction, Goal 1.c and Section J, Invasive Plant Species

Recreation

1. Develop necessary trailhead facilities on public land to provide adequate public parking in these areas, provide for sanitation facilities and to reduce conflicts with private landowners.

2. Refer to Chapter 1, Grassland-wide Direction, Section K.

Heritage Resource

1. Refer to Chapter 1, Grassland-wide Direction, Section N, for additional heritage resource direction.

Scenery Management

1. Manage area to meet a Scenic Integrity Objective of High. **Guideline** (see Appendix G)

Special Uses

1. No new utility corridors or additional development within existing corridors will be permitted. Existing corridors may be maintained until they are abandoned. Valid existing rights will be honored. **Standard**

2. Prohibit new special-use facilities except for valid existing rights **Guideline**

Infrastructure

1. Prohibit construction of facilities and structures that are not visually subordinate to the landscape. **Guideline**

2. Utilize natural materials in the construction/reconstruction of facilities. **Standard**

3. For additional information refer to Chapter 1, Grassland-wide Direction, Section Q Infrastructure and Chapter 2, Geographic Area Direction.

1.31A BACKCOUNTRY RECREATION NONMOTORIZED:

PINE RIDGE NATIONAL RECREATION AREA

Theme

Backcountry, nonmotorized recreation areas are managed to provide recreation opportunities in a natural-appearing landscape.

Desired Conditions

A variety of uncrowded, year-around, nonmotorized, recreation opportunities are provided in a natural or natural-appearing setting. There will usually be less than 15 encounters with other parties per day. These areas may offer unique hunting opportunities away from motorized vehicles.

Improvements, such as trailheads, trails, signs, bridges, fences, primitive shelters, and water developments, may be present. Existing two-track roads and old roads may be evident but will diminish over time or may become designated trails.

The number of structures and facilities to support livestock grazing, such as fences and water tanks, is limited (no net gain). Large pasture size and less intrusive developments promote an open, natural-appearing landscape.

Vegetative composition and structure are controlled by natural processes, such as fire, insects, diseases, and grazing. Vegetation is moving toward the range of natural variability.

Standards and Guidelines

General

1. Allow uses and activities (e.g. recreation, grazing, mineral leasing) only if they do not degrade the characteristics for which the area was identified. **Standard**

2. Reclaim disturbed lands to a condition suitable for the purposes for which the area was identified. **Standard**

3. Limit motorized use to administrative purposes (e.g., fire suppression, grazing administration, noxious weed control). **Standard**

Mineral and Energy Resources

1. Prohibit road construction for geophysical seismic projects. If access is not feasible by off-road travel, use of portable techniques is required. **Standard**

2. Allow oil and gas leasing; however, no ground-disturbing oil and gas activities are permitted. **Standard**

3. Prohibit mineral material removal. **Standard**

Fire

1. Prohibit use of heavy ground-disturbing equipment for fire suppression unless authorized by the district ranger. **Standard**

2. Use control as the wildland fire management strategy. **Guideline**

Silviculture

1. Trees may be cut or removed under the following circumstances; however, new road construction is prohibited:

- To reduce fuel loads and fire risk, especially to adjoining private land.
- To curtail imminent threat of epidemic insect attack.
- To improve aesthetics, such as enhancing a scenic view from a prominent overlook.
- To enhance growth of unique plant species and community types.
- To enhance wildlife habitat diversity. **Guideline**

Livestock Grazing

1. Allow livestock facilities that do not detract from the semi-primitive character of the area. **Standard**

Invasive Plant Species

1. Refer to Chapter 1, Grassland-wide Direction, Goal 1.c and Section J, Invasive Plant Species

Recreation

1. Limit recreation development to trails, sanitation, horse holding and handling facilities, directional and resource signing, and primitive shelters. **Guideline**

Heritage Resource

1. Refer to Chapter 1, Grassland-wide Direction, Section N, for additional heritage resource direction.

Scenery Management

1. Manage according to the scenic integrity objective of high. **Guideline**

Infrastructure

1. Prohibit construction of facilities and structures that are not subordinate to the landscape. **Guideline**

2. Allow no net gain of fences and water developments. **Standard**

Special Uses

1. Prohibit new utility corridors. **Standard**

2. Prohibit new special-use facilities. **Guideline**

2.1 SPECIAL INTEREST AREAS

Theme

Special Interest Areas (SIA) are managed to protect or enhance and, where appropriate, develop and interpret for public education and recreation, areas with unusual characteristics.

Desired Conditions

Evidence of human activities is consistent with the characteristics for which each SIA was established. Encounters between individuals or parties depend on the objectives for each SIA.

Vegetation, terrestrial, and aquatic habitats will usually, but not always, appear natural. Vegetation manipulation may be used to maintain or restore natural conditions; to protect threatened, endangered, and sensitive species; or enhance other values for which the SIA was designated.

Standards and Guidelines

General

1. Allow uses and activities that maintain and enhance the characteristics for which the SIA was designated. **Standard**

2. Reclaim disturbed lands to a condition suitable for the purposes for which the SIA was identified. **Standard**

Mineral and Energy Resources

1. When withdrawal is necessary to protect the values for which the area was designated, request withdrawal from mineral entry in conformance with Section 204 of the Federal Land Policy and Management Act of 1976 (PL 94-576). **Standard**

2. Unless allowed in the specific direction for the individual Special Interest Area, no ground-disturbing activities are permitted. However, existing valid rights will be honored. Refer to Chapter 1, Grassland-wide Directions, Section D, Oil and Gas. **Standard**

3. Prohibit mineral material removal. **Standard**

4. Refer to the Preface and Chapter 2, Geographic Area Direction.

Fire

1. Refer to Grassland-wide Direction, Section G, for fire suppression direction.

Livestock Grazing

1. Reference Chapter 1, Grassland-wide Direction, section I, Livestock Grazing, and Chapter 2, Geographic Area Descriptions.

Invasive Plant Species

1. Refer to Chapter 1, Grassland-wide Direction, Goal 1.c and Section J, Invasive Plant Species.

Recreation

1. Refer to Chapter 1, Grassland-wide Direction, Section K Recreation

Heritage Resources

1. Refer to Chapter 1, Grassland-wide Direction, Section N, for additional heritage resource direction

Scenery Management

1. Manage to meet a Scenic Integrity Objective of High. **Guideline**

Special Use

1. No new utility corridors or additional development within existing corridors will be permitted. Existing corridors may be maintained until they are abandoned. Valid existing rights will be honored (Refer to Preface, Chapter 1, Grassland-wide Direction, Section D, Oil and Gas, and Appendix G) **Standard**

2. Prohibit new special-use facilities except for valid existing rights (Refer to Preface, Chapter 1, Grassland-wide Direction, Section D and Appendix G) **Guideline**

Infrastructure

1. For additional information refer to Chapter 1, Grassland-wide Direction, Section Q Infrastructure and Chapter 2, Geographic Area Direction

SIA Descriptions

Note: *The following SIAs are numbered from 2.1a to 2.1 f and from 2.1h to 2.1m. SIA 2.1g Indian Creek appeared in the Draft plan. In the Final plan, that acreage is now under Management Area 1.2 Recommended for Wilderness.*

Bessey Unit (including the Samuel R. McKelvie National Forest)

2.1a - Bessey/McKelvie Tree Plantations SIA: The 21,710 acres of these accumulated sites are spread out between the Bessey unit and S.R. McKelvie unit, both of which are located in the Sandhills of Nebraska. These areas contain tree plantations of ponderosa pine, jack pine and Eastern red cedar. These plantations were planted between about 1909 and 1945. Some of these stands were planted by Civilian Conservation Corps crews during the Great Depression as "demonstration projects" for area residents. These plantations create the largest hand-planted forests in the United States. Management emphasis is on recreation, scenery, and wildlife.

Additional Direction:

- Allow the use of prescribed fire to accomplish resource objectives such as reducing fuel load buildup, wildlife habitat improvement, preparing seedbeds for natural and/or artificial regeneration and reduction of insect and disease problems. **Standard**
- Silvicultural prescriptions for tree-stand improvement, including thinning and harvest will recognize and evaluate the trade-offs associated with recreation, scenery and wildlife needs and alternative treatments to maintain forest health. The emphasis will be to maintain or improve forest health and structural diversity of the stands. Ponderosa pine is the preferred species. Apply a variety of silvicultural systems and harvest methods that best meet resource management objectives. Optimum economic efficiency and growth of individual stands for timber production is not an objective. There are no scheduled harvest quantities. **Guideline**

2.1b - Mallard Exclosure SIA: This 680-acre exclosure site features a sandhills wetland complex with green ash, cottonwood, and several willow species. Management emphasis is on protecting the unique botanical community.

Buffalo Gap National Grassland (Fall River Ranger District)

2.1c - Edgemont Shark Locality SIA: This 940-acre site features a former picnic area that is continually impacted by fossil collectors. An enormous number of shark and fish teeth, as well as ammonites, are found at the site. The earliest known records of plesiosaurs and mosasaurs in North America have been found at the site. The geologic rock unit exposed in the area is identified as Late Cretaceous Carlile Shale. Management emphasis is on interpretation, education and research of geology and paleontology.

Additional Direction:

- Only allow collection of the paleontological resource through a permit for the purposes of research, mitigation, protection of important specimens, and other official agency responsibilities. **Standard**
- Require monitoring by a professional paleontologist during all soil disturbances. **Standard**
- Allow oil and gas leasing with surface use limitations that will preserve the special values of the area. **Standard**

2.1 d - Marietta South SIA: This 260-acre geologic site features the Belle Fourche, Greenhorn Limestone and Mowry Shale units of the Late Cretaceous Marine Sequence. This site has produced a wide variety of vertebrates, including plesiosaurs and pterosaurs, both rare in the fossil record. Other fossils located at this site include fishes, sharks, turtles and invertebrates, like ammonites and clams. Management emphasis is on interpretation, research and education of geology and paleontology.

Additional Direction:

- Only allow collection of the paleontological resource through a permit for the purposes of research, mitigation, protection of important specimens, and other official agency responsibilities. **Standard**
- Require monitoring by a professional paleontologist during all soil disturbances. **Standard**
- Allow oil and gas leasing with surface use limitations that will preserve the special values of the area. **Standard**

2.1e - One-Mile Hill SIA: This 630-acre site features Late Cretaceous Belle Fourche Shale and Greenhorn Limestone. The site contains a wide variety of fossils, including fish, turtles, sharks, ammonites and clams. It is fairly scenic, with a good deal of big sage and highly erosive soils and exposed shales clearly visible. Management emphasis is on interpretation, research and education of geology and paleontology.

Additional Direction:

- Only allow collection of the paleontological resource through a permit for the purposes of research, mitigation, protection of important specimens, and other official agency responsibilities. **Standard**
- Require monitoring by a professional paleontologist during all soil disturbances. **Standard**
- Allow oil and gas leasing with surface use limitations that will preserve the special values of the area. **Standard**

2.1f - Wallace Ranch Localities SIA: This 420-acre paleontological site is representative of the Late Cretaceous Pierre Shale marine unit, and has produced such fossils as fish, sharks, pterosaurs, mosasaurs, turtles, bacculites and ammonites. A shark specimen found on the site is scientifically significant because is displays preserved cranial elements that in life were of cartilage material, not bone. Management emphasis is on interpretation, research and education of geology and paleontology.

Additional Direction:

- Only allow collection of the paleontological resource through a permit for the purposes of research, mitigation, protection of important specimens, and other official agency responsibilities. **Standard**
- Require monitoring by a professional paleontologist during all soil disturbances. **Standard**
- Allow oil and gas leasing with surface use limitations that will preserve the special values of the area. **Standard**

Pine Ridge Unit (including the Oglala National Grassland)

2.1h - Bur Oak Enclosure SIA: This three-acre site contains a large stand of bur oak that is thought to be native to the area. It is the only known population of bur oak on the Pine Ridge unit. Management emphasis is on protecting the unique botanical community.

Additional Direction:

- This area is unsuitable for livestock grazing. **Standard**
- Limit motorized travel to authorized use. **Standard**

2.1i - Hudson Meng Bison Bonebed SIA: This 40-acre site located on the Oglala National Grassland contains 600 to 1,000 skeletons of an extinct, prehistoric bison species. The skeletons are approximately 10,000 years old. The site is undergoing intense scientific study, and a modern, interpretive visitor center has been built alongside a climate-controlled bonebed enclosure. Thousands of visitors visit the site each year. Management emphasis is on archeology interpretation, research, and visitor satisfaction.

Additional Direction:

- Allow oil and gas leasing; however, prohibit ground-disturbing oil and gas activities. **Standard**
- This area is unsuitable for livestock grazing. **Standard**
- Limit motorized travel to authorized use. **Standard**

2.1j - Mountain Mahogany Stand SIA: This 90-acre site features a mature stand of mountain mahogany, which extends onto adjacent private land. The stand is thought to have become more dominate after a fire in the 1950s reduced competition from ponderosa pine. Management emphasis is on protecting the unique botanical community, and on regeneration and maintenance of species by reducing canopy cover through various treatment methods, such as understory cutting and prescribed burning of ponderosa pine.

2.1k - Quaking Aspen Stand SIA: This 8-acre site, located on the Oglala National Grassland, features a stand of quaking aspen and three beaver ponds. The site provides for the only known quaking aspen on the national grassland. Smaller aspen stands are found along the Pine Ridge of the Nebraska National Forest. Management emphasis is on protecting the unique botanical community, providing a recreational fishery, and natural resource interpretive site.

- Limit motorized travel to authorized use. **Standard**

2.1l - Toadstool Park SIA: This 2,000-acre site, located on the Oglala National Grassland, features badlands terrain of the Tertiary White River Group. The site contains the longest recorded fossil mammal trackway in the world from the Oligocene Epoch. The site has produced mammalian fossils representing the rise of modern mammalian families in North America and contains the geologic type sections of the geologic units from the Eocene and Oligocene epochs. A developed campground and replica sod house are located nearby. Fossil theft and destruction of the trackway by vandals are considerable concerns. Management emphasis is on interpretation, research and education of geology and paleontology. Recreation facilities will enhance public interpretation and visitor satisfaction, and complement the scenic beauty.

Additional Direction:

- Only allow collection of the paleontological resource through a permit for the purposes of research, mitigation, protection of important specimens, and other official agency responsibilities. **Standard**
- Allow oil and gas leasing; however, prohibit ground-disturbing oil and gas activities. **Standard**
- This area is unsuitable for livestock grazing, with the exception of Pasture 33D. **Standard**
- Limit motorized travel to authorized use. **Standard**
- Allow no new road construction. **Standard**

2.1m - Warbonnet/Yellowhand SIA: This 30-acre site features the location of a skirmish between the Fifth Cavalry led by Wesley Merritt and a band of Cheyenne Indians led by Chief Yellowhand. The band was attempting to escape forced confinement at Fort Robinson on July 17, 1876. During this skirmish, Buffalo Bill Cody is reputed to have killed Chief Yellowhand, the only casualty from the battle. Management emphasis is on historical interpretation and visitor satisfaction.

Additional Direction:

- Allow oil and gas leasing; however, prohibit ground-disturbing oil and gas activities. **Standard**

2.2 RESEARCH NATURAL AREAS

Theme

Research Natural Areas (RNA) form a network of ecological reserves designated for non-manipulative research, education, and the maintenance of biodiversity. This prescription is applicable to both designated existing Research Natural Areas and areas proposed for Research Natural Area designation.

Desired Conditions

Maintain natural (relatively pristine/pre-European settlement) conditions by maintaining or restoring natural ecological processes. Vegetation, habitat, soil productivity, water quality, and ecological processes are in a natural condition (within the range of natural variability). Vegetation manipulation may be used to maintain the ecosystem or unique features for which the Research Natural Area was established or to reestablish natural ecological processes, such as fire, rest and herbivory.

Standards and Guidelines

General

1. Until formal establishment, manage proposed RNAs to maintain and enhance the character and ecological values for which the areas have been identified. **Standard**

2. Reclaim disturbed lands to a condition suitable for the purposes for which the RNA was identified. **Standard**

3. Close or obliterate existing roads, except where they provide necessary access for administrative or scientific purposes, or valid private access, as funding allows. **Guideline**

4. Allow uses that maintain or improve the ecological characteristics for which the RNA was designated. **Standard**

5. Require a permit for collection of all products. **Standard**

Mineral and Energy Resources

1. When withdrawal is necessary to protect the values for which the area was designated, request withdrawal from mineral entry in conformance with Section 204 of the Federal Land Policy and Management Act of 1976 (PL 94-576). **Standard**

2. Allow oil and gas leasing; however, no ground-disturbing activities are permitted. **Standard**

3. Prohibit mineral material removal. **Standard**

Fire

1. Refer to Grassland-wide direction, Section G, for fire suppression direction.

Livestock Grazing

1. Do not increase animal unit months (AUMs) or developments unless determined necessary in

the Research Natural Area management plan. Grazing suitability and desired vegetative conditions will be determined by the Research Natural Area management plan. **Standard**

2. Refer to Chapter 1, Grassland-wide Direction, Section I, Livestock Grazing; and Chapter 2, Geographic Area descriptions

Invasive Plant Species

1. Refer to Chapter 1, Grassland-wide Direction, Goal 1.c and Section J Invasive Plant Species

Recreation

1. Restrict recreational use if it hinders achievement of the desired condition for the Research Natural Area. **Standard**

2. Refer to Chapter 1, Grassland-wide Direction, Section K.

Heritage Resource

1. Refer to Chapter 1, Grassland-wide Direction, Section N, for additional heritage resource direction.

Scenery Management

1. Manage area to meet a Scenic Integrity Objective of High (see Appendix G). **Guideline**

Special Uses

1. No new utility corridors or, additional development within existing corridors will be permitted. Existing corridors may be maintained until abandoned. **Standard**

Infrastructure

1. Prohibit the construction of new roads and trails, except when necessary to correct resource damage occurring from existing trails. **Standard**

2. For additional information refer to Chapter 1, Grassland-wide Direction, Section Q Infrastructure and Chapter 2, Geographic Area Direction.

Research Natural Area Descriptions

Samuel R. McKelvie National Forest

Steer Creek RNA: The 2,500-acre Steer Creek area is located approximately 13 miles northeast of the Niobrara Ranger Station on the Samuel R. McKelvie National Forest. The site is within in the Sandhills ecosystem of central Nebraska. The area is represented by dune prairies, dry valleys and wetland communities. Elevation ranges from 2,863 to 2,993 feet above sea level.

The dunes are formed from eolian material. Established hummocks typically give way to sparsely vegetated and shifting depressions of unstable sandy soils, commonly called blow-outs. These blow-outs serve as colonization sites for many specially adapted plant species. Between the sandy dunes lie broad valleys dominated by short grasses and sedges. Blow-outs may occur in these valleys, too. Wetland communities in the area exhibit diverse species associated with wet meadows, freshwater marshes, and aquatic associations of submerged pondweed.

An attractive feature of Steer Creek is that surrounding lands are completely managed by the U.S. Forest Service, which reduces the possibility of conflicts with adjacent landowners. The area is not, however, in pristine condition. Two-track roads do enter the area. In addition, during the grazing period, large reductions in plant leaves and shoots are observed, as well as trampling of creek banks and substantial presence of manure in waterways. Substantial recovery of riparian areas has been observed after the grazing period. Less observable negative and positive effects from grazing likely occur in the area.

Bessey Unit, Nebraska National Forest

Signal Hill: The 700-acre Signal Hill RNA is located about 12 miles south and west of Halsey, Nebraska, in section 3 and 4, T. 21N., R. 27W. and was established in May of 1950. This tract represents vegetative community types of the Nebraska Sandhills, which consists of about 20,000 square miles, making up about one quarter of Nebraska's land area. The terrain is that of choppy hills or sand dunes now supporting a good vegetative cover. The soil is practically pure silica, and contains less than 1 percent of organic matter. The dunes in the vicinity of the RNA are described by geologists as being the youngest of the hills and still are affected by the wind, although it is generally agreed that they have become a good deal more stable. Elevation varies from 2,820 to 2,900 feet. There are no lakes or streams on the area, being an intermingled composition of dunes and small valleys without drainage. The rainfall varies from 15 inches to 26 inches per annum. The rainfall is well distributed throughout the season, although heavier in May, June and July. September, October and November are regarded as the "dry months." The mean annual temperature is 49 degrees Fahrenheit. The mean annual humidity averages about 67 percent.

Sandhill lovegrass is characteristic of the north slopes and in some swales. Sandhill bluestem is a common pioneer in blowouts and on steep south slopes. Sand reedgrass is abundant over a wide range. Other community types include Indian grass, switchgrass, sandhill muhly, needle-and-thread and sedge. Important mixed grass species include western wheatgrass, blue grama, hairy grama, green needlegrass, and red three-awn.

Additional Direction:

- This area is unsuitable for livestock grazing. Grazing suitability, stocking rates, and grazing management systems may be amended by the Research Natural Area management plan. **Standard**

Buffalo Gap National Grassland (Fall River Ranger District)

South Pasture (777 Allotment): The 1,570-acre South Pasture is located about 18 miles west of Fairburn, South Dakota. It is situated in the Tertiary Table Lands and the Pierre Hills Divisions of the Great Plains. The area is characterized by nearly level to rolling hills to very steep badlands formations and gently sloping alluvial fans. Drainages flow into French Creek, which drains into the Cheyenne River. Elevation ranges from 2,950 to 3,250 feet above sea level.

South Pasture contains a wide variety of habitats. In the badlands portions, natural erosion has sculpted mounds, pinnacles, escarpments, overflows and steep drainage banks. Dominant vegetation includes western wheatgrass and needle-and-thread. Nonvegetated badlands outcrops also occur, as do juniper breaks, shrub patches and about one-quarter-mile of deciduous riparian woodland along French Creek. Plant and animal health and diversity are considered quite high,

although some exotic grass species, including smooth and Japanese brome, cheatgrass, and Kentucky bluegrass, can be found in isolated patches.

Current use includes holistic grazing management with a herd of more than 1,000 bison. This herd remains in the area for between six and eleven days per year. This grazing system is an attempt to mimic historic, natural grazing patterns of bison on short- and mixed-grass prairies. Some hunting and hiking also occur in the area.

Buffalo Gap National Grassland (Wall Ranger District)

West Wall RNA: The 1,040-acre area is located about nine miles southwest of Wall, South Dakota. The Cheyenne River drains most of the area. The area is situated in the Tertiary Table Lands and the Pierre Hills Divisions of the Great Plains. Topography varies considerably, from gently rolling uplands to rugged valleys and ravines to the flat Sage Creek floodplain and its terraces. Elevation ranges from 2,456 to 2,963 feet above sea level.

The West Wall area is divided into three pastures containing a wide variety of plant communities. Mixed-grass prairie species dominate, including thick stands of sod-forming grasses and taller native bunch grasses. Woody vegetation is limited to more mesic sites, including the largest area of juniper break habitat on the Buffalo Gap National Grassland. Woody vegetation is common in flat lowlands surrounding Sage Creek and in shallow depressions.

Impacts from past and present livestock grazing are evident. Currently, the stocking level of livestock in the area is considered moderate. Plant community health ranges from fair to good. Some encroachment by exotic grasses can be observed. Hiking and hunting do occur.

Fort Pierre National Grassland

Mallard South RNA: The 1030-acre Mallard South area is located approximately 19 miles south-southeast of Pierre, South Dakota. The landscape is characterized by level to rolling grasslands rising from unglaciated, Cretaceous-aged clay soils, dissected by entrenched intermittent streams. The southern branch of Cedar Creek, an intermittent tributary of the Missouri River, drains the area. Elevation ranges from 1,800 to 2,020 feet above sea level.

Three general types of vegetation dominate the site: mixed-grass prairie hillsides with such grasses as big and little bluestem and porcupine grass, uplands and footslopes of western wheatgrass, and riparian zones supporting a mosaic of grassland, shrub thickets, temporary wetland habitat, and a stringer of widely scattered deciduous trees. Unlike the surrounding landscape, Mallard South contains a relatively diverse, well-vegetated riparian zone. The abundance and vitality of plum, chokecherry and buffaloberry thickets in the area is also a rare feature within the Fort Pierre National Grassland. At least four Forest Service sensitive species occur in the area: regal fritillary butterflies, Northern leopard frogs, greater prairie chickens and upland sandpipers.

The relatively good condition of the riparian zones and high condition of several grassland types suggest that livestock stocking rates have not been excessive in the past few decades. Two exotic plant species, if not actively managed, may pose serious impacts: yellow sweet clover and smooth brome. A lack of natural firebreaks may impede using prescribed fire as an effective management tool.

3.51 BIGHORN SHEEP HABITAT

Theme

These areas are managed to provide adequate amounts of quality forage, cover, escape terrain, and solitude for bighorn sheep and other species.

Desired Conditions

Habitats capable of supporting bighorn sheep are managed to provide an abundant supply of food and cover. Other resource management activities are modified as needed to maintain high habitat suitability levels and desired levels of solitude. To achieve population objectives, the integrity of lambing, breeding and other important habitat features (e.g. escape cover) in occupied and unoccupied habitat will be protected.

Coordinate with other federal and state agencies and private landowners to manage habitat and monitor herd size of existing bands of bighorn sheep. In conjunction with other state game and fish agencies, consider augmenting existing populations with additional sheep introductions.

Consider increasing existing bighorn sheep populations on National Forest System land and other public lands. The integrity of bighorn sheep habitat will be maintained on potential habitats that are currently unoccupied. Activities on these habitats will be limited to those that do not compromise their suitability for future habitation by bighorn sheep. These areas are high priority for introducing bighorn sheep, as necessary, to maintain meta-populations and genetic diversity**.**

Standards and Guidelines

General

1. Resolve conflicts that cannot be mitigated in favor of maintaining bighorn sheep habitat. **Guideline**

2. As funding allows, implement habitat enhancement projects that improve sheep foraging habitat and provide connectivity of foraging areas to escape cover. **Guideline**

Minerals and Energy Resources

1. Allow oil and gas leasing; however, no ground-disturbing activities are permitted. **Standard**

2. As funding allows, identify and implement surface and minerals estate land exchanges that contribute to bighorn sheep management objectives. **Guideline**

Fire

1. Refer to Chapter 1, Grassland-wide Direction, Section G, for fire suppression direction.

Livestock Grazing

1. Do not convert existing livestock allotments to domestic sheep allotments in or adjoining this management area**. Standard**

2. Refer to Chapter 1, Grassland-wide Direction, Section I, Livestock Grazing; and Chapter 2, Geographic Area Descriptions.

Invasive Plant Species

1. Refer to Chapter 1, Grassland-wide Direction, Goal 1.c and Section J, Invasive Plant Species

Recreation

1. Limit recreational activity if it would disturb bighorn sheep breeding and lambing. **Guideline**

2. Restrict motorized travel, as needed, to protect sheep concentrations during lambing, breeding, and winter use, except as authorized and permitted. **Guideline**

3. Refer to Chapter 1, Grassland-wide Direction, Section K and Q.

Heritage Resources

1. Refer to Chapter 1, Grassland-wide Direction, Section N, for additional heritage resource direction.

Scenery Management

1. Manage area to encompass the spectrum of Scenic Integrity Objectives. **Guideline** (see Appendix G and Scenic Integrity Objective maps located in Chapter 2)

Special Uses

1. Allow construction of new utility corridors only if they do not degrade the big horn sheep habitat characteristics for which the area was designated. **Standard**

2. Refer to Chapter 1, Grassland-wide Direction, Section P, Special Uses

Infrastructure

1. Prohibit new road construction across bighorn sheep habitat, however, honor valid existing rights such as oil and gas leases. **Guideline**

2. For additional information refer to Chapter 1, Grassland-wide Direction, Section Q Infrastructure and Chapter 2, Geographic Area Direction.

3.63 BLACK-FOOTED FERRET REINTRODUCTION HABITAT

Theme

Black-tailed prairie dog colony complexes are actively and intensively managed as reintroduction habitat for black-footed ferrets.

Desired Conditions

Large prairie dog colony complexes are established and maintained as suitable habitat for black-footed ferret reintroductions. Land uses and resource management activities are conducted in a manner that is compatible with maintaining suitable ferret habitat.

The Forest Service works with other agencies and organizations to pursue conservation agreements or easements with adjoining land jurisdictions to achieve black-footed ferret recovery objectives. Where landownership patterns are not conducive to effective and successful prairie dog and black-footed ferret management, landownership adjustments with willing landowners may also be used to help resolve management issues.

The U.S. Fish and Wildlife Service is the regulatory agency that determines many of the conditions including when and where black-footed ferrets, an endangered species, may be released.

Standards and Guidelines

General

1. Authorize only those uses and activities in the Conata Basin reintroduction area that do not reduce habitat below the level needed to support a long-term sustainable black-footed ferret population. Until habitat is available to support a long-term sustainable black-footed ferret population in the Smithwick reintroduction habitat, do not authorize uses and activities that would prevent annual increases in the prairie dog population. When ferrets are eventually released by the U.S. Fish and Wildlife Service, follow the same direction for the Conata Basin area described in the first sentence (Amendment 2). **Standard**

~~2. Manage all prairie dog colonies within this Management Area as though they were occupied by black-footed ferrets, and apply all Standards and Guidelines as though black-footed ferrets occupy all colonies. Standard~~ (Amendment 2).

Mineral and Energy Resources

1. Oil and gas stipulations for black-footed ferrets (Appendix D) apply to all prairie dog colonies within this management area. **Standard**

Livestock Grazing

1. Prior to the U.S. Fish and Wildlife Service authorizing a black-footed ferret release, the Forest Service will coordinate and consult with the U.S. Fish and Wildlife Service, the state wildlife agency and other agencies that conduct, authorize or fund predator control to help ensure that predator control activities on the national grassland to reduce livestock losses do not pose significant risks to black-footed ferrets. **Standard**

Fish and Wildlife

1. Use of rodenticides in a colony to reduce prairie dog populations may occur only after consultation and concurrence of the U.S. Fish and Wildlife Service. ~~The conditions when prairie dog poisoning may be authorized are presented in Chapter 1.~~ (Amendment 2) **Standard**

2. Relocation of prairie dogs to establish new colonies and accelerate growth of prairie dog populations in selected areas may occur only after consultation with appropriate state and Federal wildlife agencies. **Standard**

Recreation

1. To help expand and maintain suitable and secure black-footed ferret habitat in the Conata Basin reintroduction area, prohibit recreational prairie dog shooting. However, regulated shooting may be allowed in selected areas along property boundaries to help reduce unwanted colonization of adjoining agricultural lands. Apply this same direction to the Smithwick reintroduction habitat once progress has been made in initiating a cooperative black-footed ferret recovery plan for the area. Coordination with the state wildlife agency will occur prior to any Forest Service actions regarding prairie dog shooting closures. **Standard** (Amendment 2)

3.64 SPECIAL PLANT AND WILDLIFE HABITAT

Theme

These areas are managed to maintain and enhance specific plant and wildlife species at risk and plant and wildlife communities. Habitat enhancement through improved management and close coordination with other resource uses is encouraged.

Desired Conditions

Suitable habitat will be maintained or enhanced for specific plant and wildlife species, guilds, and communities (reference Geographic Area direction for specific desired conditions for individual areas). Riparian areas (streams, seeps, springs, fens) are managed so they maintain their hydrologic regimes. Hardwood draws and woodlands are characterized by broadleaf deciduous trees. Prairie landscapes will have a diversity of warm season and cool season grasses and forbs. Plant communities of high species diversity will act as a seed source for other areas within the landscape where diversity may be reduced.

Standards and Guidelines

General

1. Wetlands habitat will be protected to maintain the hydrology regimes for species viability. **Standard**

2. Maintain disturbance processes (fire, grazing) if required for habitat enhancement, restoration or species viability. **Standard**

3. Allow no new road or trail construction except when necessary to correct resource damage occurring from existing sites. **Guideline**

4. Conflicts that cannot be mitigated are resolved in favor of specific plant and wildlife species and communities. **Guideline**

5. See Chapter 2, Geographic Area for specific direction.

Mineral and Energy Resources

1. Prohibit mineral material removal. **Standard**

Fire

1. Refer to Grassland-wide Direction, section G, for fire suppression direction

Livestock Grazing

1. Refer to Chapter 1, Grassland-wide Direction, Section I, Livestock Grazing; and Chapter 2, Geographic Area descriptions.

Invasive Plant Species

1. Prioritize invasive plant control activities in habitats supporting sensitive species. **Guideline**

2. Refer to Chapter 1, Grassland-wide Direction, Goal 1.c and Section J Invasive Plant Species

Recreation

1. Recreation trails within these areas will be located to prevent habitat damage caused by dispersed use. **Standard**

2. Refer to Chapter 1, Grassland-wide Direction, section K.

Heritage Resource

1. Refer to Chapter 1, Grassland-wide Direction, Section N, for additional heritage resource direction.

Scenery Management

1. Manage area to encompass the spectrum of Scenic Integrity Objectives. **Guideline** (see Appendix G- and Scenic Integrity Objective maps)

Special Uses

1. No new utility corridors or additional development within existing corridors will be permitted. Existing corridors may be maintained until they are abandoned. Valid existing rights will be honored. Refer to Preface, Chapter 1, Grassland-wide Direction, Section D. **Guideline**

2. Prohibit new special-use facilities except for valid existing rights. Refer to Preface, Chapter 1, Grassland-wide Direction, Section D and Appendix G. **Guideline**

3. For direction on plant collecting refer to Chapter 1, Grassland-wide Direction, Section O.

Infrastructure

1. New structural range improvements (fences and water developments) may be constructed as needed to achieve desired future conditions objectives. **Guideline**

2. For additional information refer to Chapter 1, Grassland-wide Direction, Section Q Infrastructure and Chapter 2, Geographic Area Direction.

4.32 DISPERSED RECREATION: HIGH USE

Theme

These areas are managed for recreational opportunities and scenic qualities and are usually adjacent to high use developed recreation sites and bodies of water.

Desired Conditions

Visitors recreate in a relatively natural environment, while pursuing a variety of activities, such as camping, picnicking, hiking, fishing, and motorized vehicle use where allowed. Because of the amount and types of use, these areas offer a more social type of recreational experience. Management activities are evaluated in terms of their impact on the recreational opportunities of the area. Motorized travel may be restricted during certain times of the year.

The areas offer few conveniences for users but may have picnic tables, toilets, trashcans, fire grills, and vehicle barriers if needed to protect resources. Existing improvements, such as roads, trails, bridges, fences, oil and gas wells, and water developments, blend into the landscape where feasible.

The potential for contact with other users is moderate to high. Solitude or isolation is less important than the opportunity to participate in desired recreational activities.

Generally, these areas appear as a natural-appearing landscape over large areas, but modifications on a small scale are acceptable and blend with the area's natural features. Biological communities complement the recreational values.

Standards and Guidelines

General

1. Allow uses and activities only if they do not degrade the recreational characteristics, scenic qualities or the environment. **Guideline**

Minerals and Energy Resources

1. Allow mineral leasing and development. **Guideline**

2. Refer to Chapter1, Grassland-wide Direction; Air, Water, Soils Geology and Minerals, Recreation, Scenery Management and Special Uses, Sections A, B, C, D, K, L, P respectively, for direction.

Fire

1. Refer to Grassland-wide Direction, section G, for fire suppression direction.

Livestock Grazing

1. Do not salt or supplement feed within ¼ mile of existing roads. **Guideline**

2. Refer to Chapter 1, Grassland Wide Direction, Section I, Livestock Grazing; and Chapter 2, Geographic Area descriptions.

Invasive Plant Species

1. Refer to Chapter 1, Grassland-wide Direction, Goal 1.c and Section J, Invasive Plant Species

Recreation

1. Allow new OHV trail construction where resource values can be protected. **Guideline**

2. Provide developed facilities at areas of concentrated use to protect adjacent resources **Guideline**

3. Refer to Recreation Grassland-wide direction Chapter 1, Section K.

Heritage Resource

1. Refer to Chapter 1, Grassland-wide Direction, Section N, for additional heritage resource direction.

Scenery Management

1. Manage area to meet a Scenic Integrity Objective of Moderate (see Appendix G). **Guideline**

Special Uses

1. Allow construction of new utility corridors only if they do not degrade the characteristics for which the area is managed or was designated. **Standard**

2. Locate new utilities along road corridors or within other areas already disturbed. **Guideline**

Infrastructure

1. For additional information refer to Chapter 1, Grassland-wide Direction, Section Q Infrastructure and Chapter 2, Geographic Area Direction.

5.12 GENERAL FOREST AND RANGELANDS: RANGE VEGETATION EMPHASIS

Theme

These areas are managed for the sustainability of physical, biological and scenic values associated with woody vegetation and open grassland.

Desired Conditions

These areas are dominated by open meadows, grasslands, shrublands and areas of woody vegetation. Diversity is achieved by maintaining or enhancing hardwood and coniferous trees, shrub inclusions and other beneficial plant communities and openings. Tree densities vary within stands to create landscape-scale diversity. Fire is used to promote open, park-like timber stands. Late-successional vegetation may be found in the area.

Management emphasis is on a balance of resource uses and opportunities, such as livestock grazing, wildlife habitat, dispersed recreation, minerals management and timber harvest. Some areas produce substantial forage for livestock and wildlife. Though some areas are forested, they usually do not produce commercial wood fiber because of poor site potential.

Recreation facilities may be present. Range and other management activities are coordinated with recreation so they do not conflict with the managed use season. Signs of motorized travel, hunting, hiking, timber harvest, mining and livestock grazing may be evident. Recreation use is moderate throughout the summer and increases during hunting seasons.

See geographic area for further direction.

Standards and Guidelines

Minerals and Energy Resources

1. Allow oil and gas leasing and development. **Guideline**

2. Allow removal of mineral materials. **Guideline**

3. Refer to Chapter 1, Grassland-wide Direction, Geology and Minerals, Air, Water, Soils, Recreation, Scenery Management and Special Uses sections.

Fire

1. Refer to Chapter 1, Grassland-wide Direction, Section G, for fire suppression direction.

Livestock Grazing

1 .Reference Chapter 1, Grassland-wide Direction, Section I, Livestock Grazing; and Chapter 2, Geographic Area descriptions.

Invasive Plant Species

1 .Refer to Chapter 1, Grassland-wide Direction, Goal 1.c and Section J, Invasive Plant Species

Recreation

1. Refer to Recreation Grassland-wide direction Chapter 1, Section K.

Heritage Resource

1. Refer to Chapter 1, Grassland-wide Direction, Section N, for additional heritage resource direction.

Scenery Management

1. Manage area to encompass the spectrum of scenery integrity objectives. (see Scenic Integrity Objective maps in Chapter 2 and Glossary, page G-) **Guideline**.

Special Uses

1. Locate new utilities along road corridors or within other areas already disturbed. **Guideline**

2. Refer to Chapter 1, Grassland-wide Direction, Section P, Special Uses

Infrastructure

1. When reconstructing water impoundments, consider opportunities to enhance native wildlife and plant species habitat and restoration of natural drainage patterns. **Guideline**

2. For additional information refer to Chapter 1, Grassland-wide Direction, Section Q Infrastructure and Chapter 2, Geographic Area Direction.

6.1 RANGELAND WITH BROAD RESOURCE EMPHASIS

Theme

This area is primarily a rangeland ecosystem managed to meet a variety of ecological conditions and human needs. Ecological conditions will be maintained while emphasizing selected biological (grasses and other vegetation) structure and composition that consider the range of natural variability. These lands often display high levels of development, commodity uses, and activity; density of facilities; and evidence of vegetative manipulation. Users expect to see other people and evidence of human activities. Facilities supporting the various resource uses are common. Motorized transportation is common on designated roads and two-tracks.

Desired Conditions

This management area will display low to high levels of livestock grazing developments (such as fences and water developments), oil and gas facilities, and roads.

Livestock will graze most areas annually, but a spectrum of vegetation structure and a high degree of biodiversity will be present. Livestock grazing intensity will vary, however moderate use will prevail over most of the MA. Natural disturbance processes, including grazing and fire, will be used to emulate the natural range of variability of vegetation structure and composition (see objectives in Geographic Area direction). Rest and prescribed fire will be incorporated into the landscape.

Prairie dog colonies will increase in some areas of the MA.

When no substantial threat to high-value resources occurs, natural outbreaks of native insects and disease will be allowed to proceed without intervention.

Standards and Guidelines

Minerals and Energy Resources

1. Allow oil and gas leasing and development. **Guideline**

2. Allow removal of mineral materials. **Guideline**

3. Refer to Chapter 1, Grassland-wide Direction; Air, Water, Soils Geology and Minerals, , Recreation, Scenery Management and Special Uses, Sections A, B, C, D, K, L, and P. respectively, for direction.

Fire

1. Refer to Chapter 1, Grassland-wide Direction, Section G, for fire suppression direction.

Livestock Grazing

1. Refer to Chapter 1, Grassland-wide Direction, Section I, Livestock Grazing; and Chapter 2, Geographic Area Descriptions.

Invasive Plant Species

1. Refer to Chapter 1, Grassland-wide Direction, Goal 1.c and Section J, Invasive Plant Species

Recreation

1. Refer to Chapter 1, Grassland-wide Direction, Section K

Heritage Resource

1. Refer to Chapter 1, Grassland-wide Direction, Section N, for additional heritage resource direction.

Scenery Management

1. Manage area to meet scenic integrity objectives at a minimum of Moderate and Low (see Scenic Integrity Objective maps in Chapter 2 and Glossary, page G). **Guideline**

Special Uses

1. Refer to Chapter 1, Grassland-wide Direction, Section P, Special Uses

Infrastructure

1. Refer to Chapter 1, Grassland-wide Direction, Section Q, Infrastructure and Chapter 2, Geographic Area Direction.

7.1 RESIDENTIAL/FOREST INTERMIX

Theme

Intermingled private and National Forest System lands are managed to build and maintain cooperative relationships between the landowners and other governments with jurisdiction.

Desired Conditions

A variety of plant communities, structural stages and associated wildlife habitats are provided through vegetative manipulation and natural processes. Natural openings, meadows, and other plant communities are maintained to protect soil and water resources, and key wildlife habitat areas. Timber harvest, livestock grazing, and prescribed fire may be used to attain a natural-appearing landscape, and to minimize the risks of catastrophic fires and epidemic levels of insects and diseases.

In high-use recreation areas, human disturbance may limit wildlife viewing to those species that are common or accustomed to the presence of people. Recreational use of these areas may be restricted to the extent necessary to reduce conflicts between landowners and visitors. Firearm use or open fires are restricted, when conditions warrant. Property boundaries are well marked. Trails link other management areas, developed sites, and other nearby trails.

Visitors expect to encounter residential developments on intermingled private land. Residents encounter visitors and management activities. Landscape modifications and facilities may be visible; however, they are mitigated to blend and harmonize with natural features as much as is reasonable.

State and local governments and fire protection districts are consulted in developing fire-hazard reduction plans and ordinances.

Standards and Guidelines

General

1. Allow developments that complement natural features in the foreground. Developments in middle ground and background must be subordinate to the landscape and not obvious to the casual observer. **Guideline**

Fire

1. Treat management activity fuels to the required fireline intensity level within three years after management activities cease. **Guideline**

2. When conducting fuel treatments along property boundaries, use methods that can be controlled with direct attack. **Guideline**

3. Prioritize fuel treatment based on the following conditions:

- Where there is an organization desiring to cooperate in fire-hazard reduction along mutual boundaries.
- National Forest System and adjacent lands having high values that are vulnerable to fire. **Guideline.**

8.5 NURSERY (CHARLES E. BESSEY)

Theme

This area emphasizes production of planting stock and seed storage, while maintaining the historical value and context of the site.

Desired Conditions

The nursery serves as the Forest Service's and other clients' seed extractory and storage facility and provides transfer of technology to federal, state, tribal, private, and international governments, agencies and groups. Native vegetation seed and quality bare root and containerized seedlings are produced to support Forest Service, tribal and cooperating states' seedling requirements.

Nursery operation features may include administrative buildings, storage facilities, greenhouses, seedbeds, refrigerator units, and seed and seedling processing facilities. Historical components of the nursery are enhanced through visitor information, interpretation, restoration, and stabilization. Visitors can expect frequent encounters with people, heavy equipment and noise. Few, if any, restrictions are placed on public use except to ensure public safety and to avoid unreasonable interference with nursery operations. Nonmotorized dispersed recreation is allowed to the extent that it will not interfere with nursery operations.

Insects and diseases are managed to protect vegetation on the nursery site. Trees that are not nursery stock are managed to provide wind protection around buildings and seedbeds, aesthetics and shade. Trees will be removed if they pose a hazard to public health and safety.

Goals and Objectives

The Charles E. Bessey Nursery is a unique area on the Nebraska National Forest. The following goals and objectives are specific to this area and not found in geographic area or grassland-wide direction.

Goals

1. Provide desired quality and quantities of bare-root and container tree seedlings, shrubs, and other vegetative materials to meet the needs of National Forest System, state, American Indian tribes and other customers.

2. Provide seed extraction, testing, and storage services to customers.

3. Provide technical assistance to national forests and grasslands, international visitors, states, American Indian tribes, other federal agencies, and Natural Resource or Conservation Districts in the areas of cone and seed collection, seed and seedling storage and handling, site preparation, and planting

Objectives

1. Annually, provide the desired quantity and quality of tree and shrub seedlings and vegetative materials to meet customer expectations.

2. Annually, maintain accurate records on the quantity and quality of tree seed in the regional seedbank.

3. Annually, provide field trips to local school districts and others to discuss nursery operations, reforestation, seed handling, and storage.

4. Regularly consult with entomologists, pathologists, soil scientists, and hydrologists to identify problems and to evaluate the effectiveness of cultural practices and implement changes if necessary.

5. Over any 5-year period, WCF accounts for trees and tree seed will balance (costs will equal expenditures).

6. Preserve the integrity of historic nursery structures.

7. Protect the water quality in the Middle Loup River.

8. Within 10 years, combine and construct new office facilities with the Bessey Ranger District.

9. As additional funding becomes available, add an additional greenhouse to meet requests for container seedlings.

Standards and Guidelines

General

1. Annually, complete seedling inventories by October 1, and provide reports to customers.

2. Conduct root growth potential tests on all seedlots at the time of lifting. Reports from these tests will be provided to customers.

3. Charge customers equitably for extra materials and services provided to them.

Mineral and Energy Resources

1. Prohibit removal of mineral materials. **Standard**

2. Allow oil and gas leasing; however, no ground-disturbing oil and gas activities are permitted. **Standard**

3. Withdraw the area from locatable mineral activity. **Standard**

Livestock Grazing

1. Prohibit domestic livestock grazing. **Standard**

8.6 ADMINISTRATIVE SITES

Theme

This prescription emphasizes management of administrative sites.

Desired Condition

Site features may include office buildings, parking lots, work centers and storage facilities. Facilities provide adequate improvements to protect the health and safety of workers and visitors.

Landscape modifications and facilities may be visible, but are reasonably mitigated to blend and harmonize with natural features. Vegetation is managed to provide a pleasing appearance for visitors.

Standards and Guidelines

Mineral and Energy Resources

1. Allow oil and gas leasing; however, no ground-disturbing oil and gas activities are permitted. **Standard**