USDA United States Department of Agriculture

Record of Decision

Thunder Basin National Grassland 2020 Plan Amendment

Medicine Bow-Routt National Forests and Thunder Basin National Grassland

Campbell, Converse, Crook, Niobrara, and Weston Counties, Wyoming

In accordance with Federal civil rights law and U.S. Department of Agriculture (USDA) civil rights regulations and policies, the USDA, its Agencies, offices, and employees, and institutions participating in or administering USDA programs are prohibited from discriminating based on race, color, national origin, religion, sex, gender identity (including gender expression), sexual orientation, disability, age, marital status, family/parental status, income derived from a public assistance program, political beliefs, or reprisal or retaliation for prior civil rights activity, in any program or activity conducted or funded by USDA (not all bases apply to all programs). Remedies and complaint filing deadlines vary by program or incident.

Persons with disabilities who require alternative means of communication for program information (e.g., Braille, large print, audiotape, American Sign Language, etc.) should contact the responsible Agency or USDA's TARGET Center at (202) 720-2600 (voice and TTY) or contact USDA through the Federal Relay Service at (800) 877-8339. Additionally, program information may be made available in languages other than English.

To file a program discrimination complaint, complete the USDA Program Discrimination Complaint Form, AD-3027, found online at Filing a USDA Program Discrimination Complaint and at any USDA office or write a letter addressed to USDA and provide in the letter all of the information requested in the form. To request a copy of the complaint form, call (866) 632-9992. Submit your completed form or letter to USDA by: (1) mail: U.S. Department of Agriculture, Office of the Assistant Secretary for Civil Rights, 1400 Independence Avenue, SW, Washington, D.C. 20250-9410; (2) fax: (202) 690-7442; or (3) email: program.intake@usda.gov .

USDA is an equal opportunity provider, employer, and lender.

We make every effort to create documents that are accessible to individuals of all abilities; however, limitations with our word processing programs may prevent some parts of this document from being readable by computer-assisted reading devices. If you need assistance with this document, please contact the Medicine Bow-Routt National Forests and Thunder Basin National Grassland at 307-275-0956.

Cover photo: Short-stature vegetation on a prairie dog colony on the Thunder Basin National Grassland in proposed management area 3.67. Photo by Monique Nelson.

Record of Decision for the
Thunder Basin National Grassland 2020 Plan Amendment
Medicine Bow-Routt National Forests and Thunder Basin National Grassland
Campbell, Converse, Crook, Niobrara, and Weston Counties, Wyoming

Lead Agency:	USDA Forest Service
Cooperating Agencies:	U.S. Fish and Wildlife Service, Wyoming Field Office; Natural Resources Conservation Service, Wyoming State Office; Wyoming Department of Agriculture; Wyoming Game and Fish Department; Wyoming State Office of Lands and Investments; Wyoming Weed and Pest Council; Campbell County, WY; Converse County, WY; Crook County, WY; Niobrara County, WY; Weston County, WY
Responsible Official:	RUSSELL BACON, FOREST SUPERVISOR 2468 Jackson St. Laramie, WY 82070
For Information Contact:	MONIQUE NELSON, PLANNING TEAM LEADER Monique.nelson@usda.gov; 307-275-0956

Contents

Introduction

This record of decision documents my decision and rationale for approving the Thunder Basin National Grassland 2020 Plan Amendment. My decision is to select and implement alternative 5, the preferred alternative, as documented in the Thunder Basin National Grassland 2020 Plan Amendment Final Environmental Impact Statement (FEIS). In recent years, dramatic changes in black-tailed prairie dog ("prairie dog") colonies and increasing conflicts related to natural resource management have indicated the need to change the 2002 Thunder Basin National Grassland land and resource management plan ("grassland plan") (USDA Forest Service 2002) to allow Federal land managers to be more responsive to a variety of environmental and social conditions. The FEIS analyzed a no-action alternative and four action alternatives as ways of amending the grassland plan to address ecological, social, and economic issues related to current management of prairie dog colonies and grassland vegetation on the Thunder Basin National Grassland. The preferred alternative is described in detail in chapter 2 of the FEIS, and the environmental consequences of the preferred alternative are documented in chapter 3 of the FEIS and appendices. This decision documents my approval, with rationale, of an amendment to the grassland plan. The amended plan content is included in attachment A of this document. For changes made to amended plan content between the proposed action and the preferred alternative, see appendix A of the FEIS.

This plan amendment was subject to the administrative review process documented at 36 CFR 219 Subpart B[1]. As part of the response to objections received, the reviewing officer provided instructions that resulted in specific changes and clarifications in this record of decision and errata for the FEIS and appendices. Objections, responses, instructions, and the errata sheet for the FEIS are available on the project website at: https://www.fs.usda.gov/project/?project=55479.

Background

Black-tailed prairie dogs are a keystone species native to the northern Great Plains that create and maintain habitat for a variety of other grassland wildlife species, including several at-risk species and the Federally endangered black-footed ferret. Black-tailed prairie dogs are classified as a regional forester's sensitive species in the U.S. Forest Service, Rocky Mountain Region, and as a management indicator species on the Thunder Basin National Grassland. Black-tailed prairie dogs have been petitioned for listing under the Endangered Species Act multiple times, but were most recently found not warranted for listing by the U.S. Fish and Wildlife Service in 2009 because of their observed resilience to population stressors including sylvatic plague and poisoning (FEIS p. E-165). Despite the ecological significance of prairie dogs, the animals cause concern related to agricultural production, public health, land values, and impacts to facilities. In the State of Wyoming, black-tailed prairie dogs are classified as both an agricultural pest [Wyoming Statute 11-5-102 (a)(xii)] and a species of greatest conservation need. Due to these contrasts, issues and public opinions related to prairie dog management can be deeply divided.

The current grassland plan was signed in 2002 as part of a broader Northern Great Plains plan revision effort. Challenges with prairie dog colony management and the potential reintroduction of black-footed ferret have existed since then, continuing through prairie dog population cycles of expansion and decline and through several planning efforts. A plan amendment in 2009 altered the boundary of Management Area 3.63–Black-footed Ferret Reintroduction Habitat and allowed increased use of rodenticides in select situations. It also introduced the Black-Tailed Prairie Dog Conservation Assessment and Management

[1] 36 Code of Federal Regulations, part 219, subpart B, "Predecisional Administrative Review Process:" https://www.govinfo.gov/content/pkg/CFR-2018-title36-vol2/xml/CFR-2018-title36-vol2-part219.xml

Strategy, which designated prairie dog colony acreage objectives and established decision-making processes for prairie dog control. At the request of the Wyoming Governor in 2013, Forest Service staff initiated a plan amendment to more effectively manage expanding prairie dog populations. Rather than a plan amendment, this planning process ultimately resulted in a 2015 update to the prairie dog management strategy and an increased focus on relationship development. Despite these efforts, Forest Service personnel have had limited success minimizing impacts to adjacent landowners using tools in the current plan and strategy.

Between 2015 and 2017, prairie dog colonies expanded to more than 75,000 acres of colonies on the Thunder Basin National Grassland including intermixed non-Federal lands, an extent far greater than anything recorded in recent history. Forest Service personnel were unable to rapidly respond to and control colony expansion with the tools and decision-making processes available in the current plan and strategy. In 2017, a landscape-scale plague epizootic occurred in prairie dog colonies across the grassland, resulting in a decline to 1,100 acres of colonies by 2018.

Over the last few years, Thunder Basin National Grassland staff have been focusing efforts on collaboration and relationship building. In 2015, the University of Wyoming Ruckelshaus Institute completed a situation assessment that revealed a strong desire among stakeholders to work together, and consistent areas of conflict and agreement were documented. Gains have been made socially and regarding shared stewardship projects, yet concerns have persisted over a broad, long-term management approach. In 2018, the Wyoming Department of Agriculture convened a collaborative working group to develop recommendations for a proposed action for a plan amendment. The collaborative group provided a series of letters[2] that informed the April 2019 proposed action. Between April 2019 and May 2020, the project interdisciplinary team, which included representatives from the Wyoming Governor's Office, Wyoming Game and Fish Department, and the local county commissioners in addition to Forest Service resource and planning specialists, completed a draft environmental impact statement, gathered and responded to public feedback, and completed a FEIS. The FEIS addresses issues including viability of at-risk species; recovery of the endangered black-footed ferret; impacts on forage for permitted livestock; prairie dog encroachment onto non-Federal lands; and associated economic, health, and safety concerns.

Planning and Decision Areas

This decision applies to all National Forest System lands on the Thunder Basin National Grassland. This decision amends, removes, and adds plan components in chapters 1, 2, and 3 of the grassland plan, affecting grassland-wide, geographic area, and management area direction.

Decision

Based upon my review of all alternatives, I have decided to implement alternative 5, the preferred alternative. Amended plan direction and management approaches for the preferred alternative are included in attachments A and B of this document and summarized here. See plan components in attachment A for specifics and for clarification of this summary information. If inconsistencies exist between the FEIS and appendices and this decision document, the decision document supersedes the FEIS and appendices. Specifically, edits have been made to the following plan components listed in attachment

[2] Letters from the collaborative working group are available on the project web site at http://www.fs.fed.us/nepa/nepa_project_exp.php?project=55479

A: standards and guidelines H.3, GPA-MA3.67-FWRP-ST-10, GPA-MA3.67-FWRP-ST-13, GPA-MA3.67-FWRP-GL-14, and GPA-MA3.67-FWRP-ST-15.

- Management Area 3.63, "Black-Footed Ferret Reintroduction Habitat," will be re-designated as Management Area 3.67, "Short-Stature Vegetation Emphasis," and boundaries will be redrawn to be more conducive to prairie dog management (figure 1). Within the approximately 42,000-acre management area, total prairie dog colony acreage will be managed toward an objective of 10,000 acres, or 7,500 acres during drought conditions. Control of prairie dogs may be allowed to 7,500 acres, while managing toward the 10,000-acre objective. The acreage objectives for total prairie dog colony extent, as well as other ecosystem and species-specific plan components, will provide the ecological conditions necessary to maintain a viable population of each potential species of conservation concern within the plan area and would contribute to recovery of the black-footed ferret if reintroduction were proposed in the future (36 CFR 219.9(b)(1). There will not be an objective for prairie dog colony acreage outside of management area 3.67. These plan components also continue to maintain viable populations of all native and desired nonnative species and provide management objectives for populations and habitat of regional forester's sensitive species (Forest Service Manual [FSM] 2670.22).
- Boundaries for Management Area 2.1b – Cheyenne River Zoological Special Interest Area will be redrawn to follow the riparian corridor along the Cheyenne River and Antelope Creek. It will be renamed Management Area 2.1b – Cheyenne River-Antelope Creek Zoological Special Interest Area, and its management emphasis will be changed to focus on riparian communities (figure 1).
- Within management area 3.67, there will be ¼-mile boundary management zones around private and state land within which control of prairie dogs will be prioritized to reduce impacts to surrounding landowners. Boundary management zones may be temporarily expanded to ¾ mile in specific circumstances. Priority for control will also be given within 1 mile of residences and where prairie dogs are causing damage to private or public facilities.
- Zinc phosphide will continue to be approved for use to control prairie dogs. Fumigants will be approved for use in boundary management zones, within 1 mile of residences, and within ¼ mile of non-Federal land anywhere on the grassland, but only after two applications of zinc phosphide. Anticoagulant rodenticides such as Rozol will not be approved.
- Recreational shooting of prairie dogs will be seasonally restricted throughout management area 3.67 from February 1 to August 15 each year for conservation of at-risk species; there will be no recreational shooting restriction associated with prairie dogs elsewhere on the grassland.
- A sylvatic plague management plan will be developed, and an integrated approach to plague management (e.g., using tools such as deltamethrin and fipronil) will be implemented annually in management area 3.67. Plague mitigation may also be implemented outside of management area 3.67.
- Geographic and management area direction related to management for large pasture sizes will be revised to allow improvements to rotational grazing as a tool for prairie dog management.
- Geographic area direction including desired conditions and objectives for vegetation and guidelines for vegetation management will be revised to de-emphasize management according to seral and structural stages and emphasize use of ecological site descriptions.
- The plan amendment will include management approaches describing work with a third-party collaborative stakeholder group, management of sylvatic plague, management during drought conditions, prioritization of prairie dog control resources, use of "density control" to achieve

management objectives for vegetation conditions and prairie dog dispersal, and approaches to inventory and mapping of prairie dog colonies.

This decision will not restrict use of tools for sylvatic plague management or prairie dog control that may be developed in the future. For example, a new plague vaccine or rodenticide could be approved by the Environmental Protection Agency and the Wyoming Department of Agriculture; a new method for deterring or relocating prairie dogs may be developed; or science may become available indicating that density control activities will achieve site-specific objectives and maintain habitat requirements for species associated with prairie dog colonies, including black-tailed prairie dogs, mountain plover, and burrowing owl. When a new tool becomes available, the responsible official or district ranger would initiate a National Environmental Policy Act "Section 18" review or a supplemental information report (Forest Service Handbook [FSH] 1909.15, chapter 10, section 18.1), to determine if use of the tool requires additional analysis or a new decision. For density control, a documented review is required to determine if there is sufficient information available to initiate use of density control consistent with standard GPA-MA3.67-FWRP-ST-15. If the responsible official determines use of the tool is consistent and within the scope of the analysis and decision document for this plan amendment, then the tool may be used. If the tool does require additional analysis or a new decision, the analysis can be streamlined by tiering to the FEIS for this plan amendment.

Similarly, new circumstances may arise, such as a proposal to reintroduce black-footed ferrets. In this scenario, the Section 18 review or supplemental information report would include a review of current plan direction in the 2002 grassland plan, as amended. Both the existing plan and this amendment (attachment A) include plan components intended to protect habitat and black-footed ferrets where they are reintroduced. In the case of a proposed reintroduction, if plan direction were determined to be adequate for their protection, the reintroduction effort could proceed without amendment. If the changed circumstances were found to require further changes to the plan, a new analysis and decision would be required. Again, the analysis could be streamlined by tiering to the FEIS for this plan amendment.

The existing Medicine Bow-Routt National Forests and Thunder Basin National Grassland 2016 monitoring plan includes required monitoring of prairie dog colonies and vegetation. There are no proposed changes to the 2016 monitoring plan. Management approaches in attachment B clarify my intent to work collaboratively with stakeholders to identify monitoring needs and collect monitoring information, including for density control work, inventory and mapping of prairie dog colonies, and visits to the national grassland for recreational shooting of prairie dogs.

Finally, I am also documenting an administrative correction in this decision document. In 2011, the US Fish and Wildlife Service withdrew the proposed rule to list the mountain plover as threatened[3]. The mountain plover remains on the USDA Forest Service Regional Forester's List of Sensitive Species for the Rocky Mountain Region. The administrative correction will move plan components associated with mountain plover management from the heading "Threatened, Endangered, and Proposed Species," to the heading, "Sensitive Plant and Animal Species."

The selected alternative is not considered the environmentally preferable alternative. Alternative 4, the prairie dog emphasis alternative, is identified as the environmentally preferable alternative and is described below.

[3] U.S. Fish and Wildlife Service, Mountain Plover: https://www.fws.gov/mountain-prairie/es/mountainPlover.php

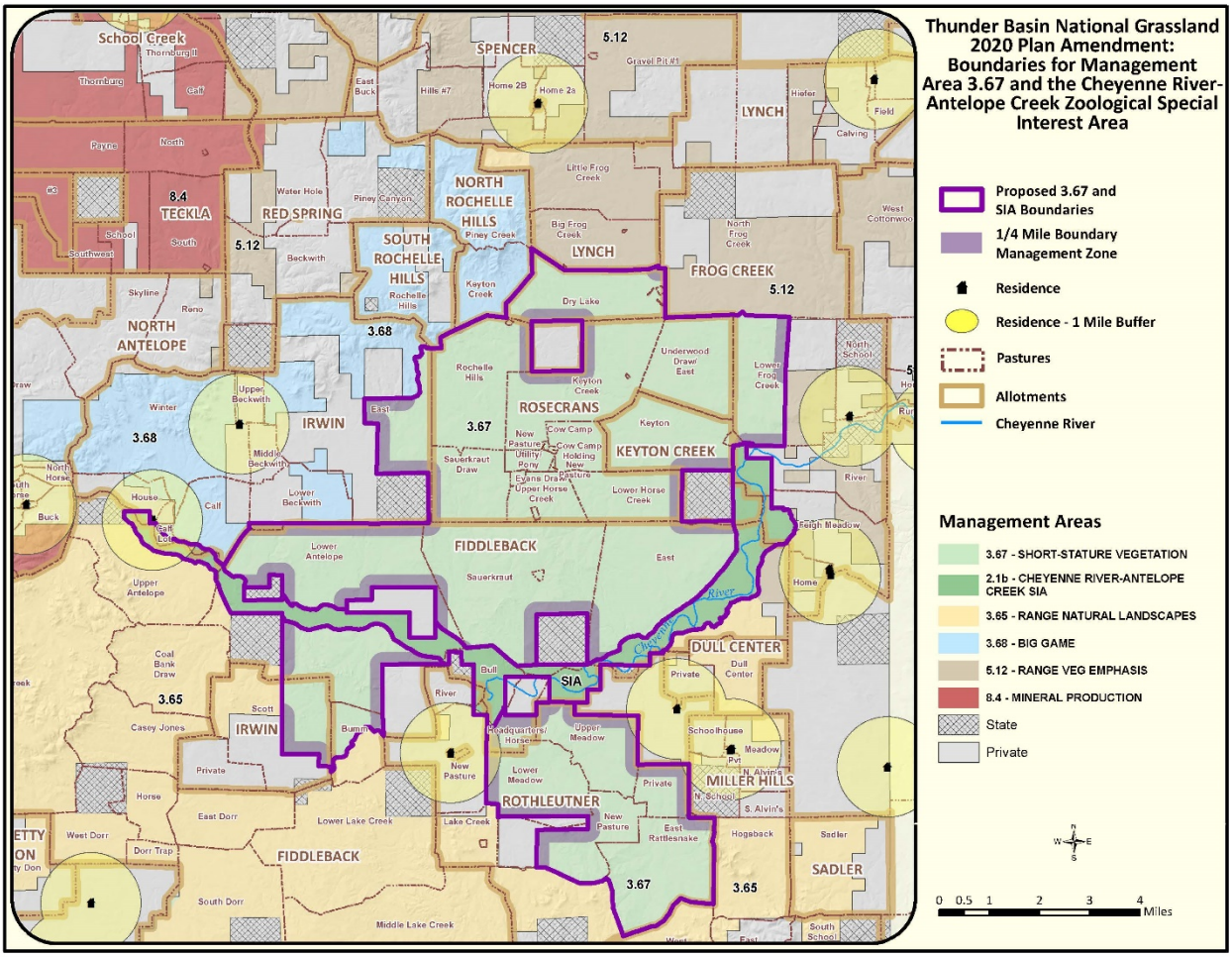


Figure 1. Delineation of Management Area 3.67 – Short-Stature Vegetation Emphasis and Management Area 2.1b – Cheyenne River-Antelope Creek Zoological Special Interest Area

Decision Rationale

How the Selected Alternative Responds to the Purpose and Need

When compared to the other alternatives, alternative 5 best meets the purpose and need for the plan amendment and best achieves a balance between conservation and control of prairie dogs that can be implemented within the management and budgetary constraints of the agency. I anticipate this alternative will allow our land managers to be more responsive to a variety of environmental and social situations on the grassland related to prairie dog management.

Purpose

Provide a wider array of management options to respond to changing conditions

Alternative 5 includes several new management options to respond to changing conditions. For example, fumigants are approved as an additional tool to control prairie dogs in the boundary management zones, within 1 mile of residences, and within ¼ mile of non-Federal land anywhere on the grassland after two applications of zinc phosphide (standard GPA-FW-ADM-ST-05). Zinc phosphide will now be available for use when total prairie dog colony extent exceeds 7,500 acres within management area 3.67 (objective GPA-MA3.67-FWRP-O-07, guideline GPA-MA3.67-FWRP-GL-09, standard GPA-MA3.67-FWRP-ST-

10, guideline GPA-MA3.67-FWRP-GL-11, guideline GPA-MA3.67-FWRP-GL-12) and can be available in many situations across the rest of the national grassland (but see constraints described in standards H.1 and H.3 and guideline GPA-FW-ADM-GL-03). In addition, a plague management plan will be developed and an integrated approach to plague management (e.g., using tools such as deltamethrin and fipronil) will be implemented annually in management area 3.67 (objective GPA-MA3.67-FWRP-O-08, standard GPA-MA3.67-FWRP-ST-18). Plague mitigation may also be implemented outside of management area 3.67 (guideline GPA-FW-FWRP-GL-02).

Minimize prairie dog encroachment onto non-Federal lands
To minimize encroachment onto non-Federal lands, boundary management zones of ¼ mile have been added in management area 3.67 where it shares a boundary with State or private land (standard GPA-MA3.67-FWRP-ST-13, guideline GPA-MA3.67-FWRP-GL-14). Prairie dogs within the boundary management zones will be a high priority for control to prevent movement from Federal land onto State and private land. Outside of management area 3.67, there are no acreage objectives for prairie dog colony extent. Colonies within 1 mile of a residence or that are affecting facilities will be a top priority for control (standard GPA-FW-ADM-ST-06, management approach 2), and colonies that are encroaching upon State or private land across the national grassland can be approved for control and prioritized annually for funding.

Reduce resource conflicts related to prairie dog occupancy and livestock grazing
Reduction in the overall objective for prairie dog colony acres from 33,000 to 10,000 acres on the national grassland is intended to reduce resource conflicts related to prairie dog occupancy and livestock grazing. Each of the alternatives presented a different configuration of the newly designated management area 3.67 and revisions to the Cheyenne River Zoological SIA. The management area 3.67 delineation in the preferred alternative spans approximately 42,000 acres and includes several grazing allotments. This is larger than the management area 3.67 described in the proposed action and is intended to allow colonies to be conserved across several different allotments and to reduce the burden of prairie dog colony conservation for any single grazing permittee. Density control of prairie dog colonies may be considered to reduce conflicts related to forage availability outside of management area 3.67 (but see constraints described in standards H.1 and H.2 and guideline GPA-FW-ADM-GL-03) or within management area 3.67 when total colony acreage is above 7,500 acres, on colonies not counting toward the 7,500-acre minimum. However, density control activities initially will not be allowed in management area 3.67 when colony acreage is below 7,500 acres or on colonies counting toward the 7,500-acre minimum (standard GPA-MA3.67-FWRP-ST-15, guideline GPA-MA3.67-FWRP-GL-16). If scientific information becomes available to demonstrate that colonies will still provide habitat to at-risk species following density control, then density control may be allowed in management area 3.67 when colony acreage is below 7,500 (management approach 4). As described above, this circumstance would require additional documentation of scientific information related to habitat characteristics in a supplemental information report.

Drought conditions may become more common and droughts often last multiple years (FEIS p. 68). The 7,500-acre drought objective (GPA-MA3.67-FWRP-O-07) is intended to help balance resource use when drought reduces forage available for livestock. During drought, permittees often voluntarily reduce stocking or leave pastures early to protect vegetation and soil, even though permitted animal unit months (AUMs) may not decrease (FEIS pp. 83-85, 102). The 7,500-acre drought objective will remove some competition for forage by prairie dogs during this time. A guideline (GPA-MA3.67-FWRP-GL-12) and management approach (management approach 5) are included to describe how we intend to implement the temporary drought objective. Following a drought regardless of duration, management will return to the 10,000-acre objective for prairie dog colony extent. Unlike the 10,000-acre objective, which allows

for use of control tools to below the objective acreage, control tools are not authorized when colony acreage is below 7,500 acres, even during drought (standard GPA-MA3.67-FWRP-ST-10).

Ensure continued conservation of at-risk species

The grassland plan objective for prairie dog colony extent (GPA-MA3.67-FWRP-O-07, which identifies a 10,000-acre objective and a temporary drought objective of 7,500 acres) is focused in management area 3.67 because this is one of the most contiguous areas of Federal land on the Thunder Basin National Grassland, is the area with the highest proportion of suitable prairie dog habitat, and includes the greatest area of historic prairie dog colonies. Ten thousand acres has been identified in scientific literature as the approximate extent of a functional intact grassland ecosystem (Hoogland 2006, see reference FEIS p. 178). In combination with other ecosystem and species-specific plan components, this objective was found to maintain ecological sustainability, provide the ecological conditions necessary to maintain a viable population of each potential species of conservation concern associated with prairie dog colonies in the plan area (219.9(b)(1)), and ensure that the plan amendment would not result in loss of species viability or create significant trends toward Federal listing for those regional forester's sensitive species associated with prairie dog colonies (FSM 2672.41)(FEIS pp. E-2-4).

The analysis area for both potential species of conservation concern and regional forester's sensitive species was the plan area, National Forest System land on the Thunder Basin National Grassland (FEIS p. E-19). However, other spatial scales were considered as part of the analysis to support the determinations of effects. For example, range-wide information on species distribution and abundance was considered for each species to evaluate impacts both within the area of concern and on the species as whole (e.g., FEIS p. E-56)(FSM 2670.32). Where it facilitated comparison among the no action and action alternatives, the analysis focused on management area 3.67 (FEIS p. E-19). Effects determinations in FEIS appendix E were based in part on consideration of localization of effects. For example, direct effects from use of fumigants in spatially limited areas such as residential buffers or boundary management zones would be localized to specific colonies or groups of colonies (standard GPA-FW-ADM-ST-05). Similarly, although recreational shooting is unrestricted across the plan area outside of management area 3.67, the analysis assumed direct effects of shooting would remain localized to individual colonies due to the nature of the activity and its documented effects on colony ecosystems. The effects determinations were also based on habitat availability at multiple broader scales as a result of changes to colony acreage objectives.

The 10,000-acre objective is greater than both the mean (8,397 acres) and median (3,538 acres) for prairie dog colony extent in management area 3.63 since development of the grassland plan in 2001 (FEIS p.6). Sylvatic plague has caused total colony acreage in the management area to be below 7,500 acres in many years (63% of years from 2001 to 2019), and species closely associated with prairie dogs including mountain plover and burrowing owl have persisted through plague events and remain on the landscape. In addition to limits on prairie dog control, the new requirement to implement an integrated approach to plague management in management area 3.67 is intended to reduce impacts from sylvatic plague, decrease the likelihood of major plague events, and help promote conservation of 10,000 acres of colonies. Other ecosystem and species-specific plan components are listed in appendix E of the FEIS as they pertain to maintaining ecological sustainability, providing the ecological conditions necessary to maintain a viable population of each potential species of conservation concern associated with prairie dog colonies within the plan area, and ensuring that the plan amendment would not result in loss of species viability or create significant trends toward Federal listing for those regional forester's sensitive species associated with prairie dog colonies.

Forest Service policy includes requirements to set management objectives for regional forester's sensitive species (FSM 2670.32, 2670.45(2)). The objective of 10,000 acres of prairie dog colonies is intended to

serve as an objective for sensitive species associated with prairie dog colonies and was developed in cooperation with the State of Wyoming and the U.S. Fish and Wildlife Service. Other plan components included in the amendment, such as those that restrict rodenticide use and require an integrated approach to plague management in management area 3.67, are intended to ensure the objective can be achieved.

Support ecological conditions that do not preclude reintroduction of the black-footed ferret
The desired conditions for management area 3.67, acreage objectives for prairie dog colonies (GPA-MA3.67-FWRP-O-07), and requirements to implement an integrated approach to plague management for management area 3.67 (standard GPA-MA3.67-FWRP-ST-18), as well as other ecosystem and species-specific plan components (attachment A), will provide the ecological conditions necessary to contribute to the recovery of the federally endangered black-footed ferret (36 CFR 219.9(b)(1)). Plan components and management approaches included in the amendment will fulfill Forest Service obligations under the National Forest Management Act and the Endangered Species Act. Black-footed ferrets are not present on the grassland and U.S. Fish and Wildlife Service staff and Wyoming Game and Fish Department staff do not currently have plans to reintroduce ferrets to the grassland (FIES pp.9-10). However, the ecological conditions needed for reintroduction have been and will continue to be provided in management area 3.67, should reintroduction be proposed by these lead agencies (FEIS p. 133). The plan amendment is also designed to improve the social context surrounding reintroduction, which has been a limiting factor in reintroduction considerations in the past (FEIS p. 10).

The 2013 Recovery Plan for Black-footed Ferret[4] and 2018 Wyoming Black-footed Ferret Management Plan[5] include objectives of maintaining a minimum of 341 breeding adults distributed among 5 or more populations in Wyoming; maintaining a minimum of 30 breeding adults in each population, with at least 2 populations containing a minimum of 100 breeding adults; and establishing at least 2 populations within white-tailed prairie dog colonies and at least 1 population within black-tailed prairie dog colonies, with remaining populations distributed among colonies of either prairie dog species. These plans also state approximately 4,500 acres of black-tailed prairie dog colonies are expected to be necessary to support at least 30 breeding adult ferrets and more than 15,000 acres are likely needed to support at least 100 ferrets. The acreage objectives for prairie dog colonies provided for in this decision would support reintroduction of 30 or more ferrets. The objective would not provide sufficient habitat to support at least 100 breeding adults and therefore would not contribute to all recovery objectives. However, the ecological conditions on the grassland will be maintained with this plan amendment (i.e., there would not be a land use change or habitat conversion). If reintroduction is proposed in the future and if small reintroductions (e.g., 30 breeding adults) prove successful ecologically and socially, further changes to the grassland plan to accommodate additional progress toward statewide recovery objectives could be considered.

Other changes to plan direction, such as designation of boundary management zones and allowance for control outside of management area 3.67 are intended to meet minimum requirements for reintroduction in Wyoming as described in the Wyoming Game and Fish Department black-footed ferret site prioritization matrix (FEIS pp. 133-136). The current 2002 grassland plan, as amended, does not meet these minimum requirements for reintroduction. In addition, the new requirement to implement an integrated approach to plague management in management area 3.67 is intended to reduce impacts from sylvatic plague and decrease the likelihood of major plague events that could affect available habitat in the future.

[4] The 2013 Recovery Plan for Black-footed Ferret is available at: https://www.fws.gov/mountain-prairie/es/species/mammals/blackfootedferret/2013NovRevisedRecoveryPlan.pdf
[5] The 2018 Wyoming Black-footed Ferret Management Plan is available at: https://wgfd.wyo.gov/WGFD/media/content/PDF/Wildlife/Nongame/Wyoming-BFF-Management-Plan_11-14-2018.pdf

Need

Revise management direction in Management Area 3.63 – Black-Footed Ferret Reintroduction Habitat

The plan amendment revises management direction for Management Area 3.63 – Black-Footed Ferret Reintroduction Habitat by changing the management prescription to Management Area 3.67 – Short-Stature Vegetation Emphasis and updating management area direction in chapter 3 of the grassland plan. Plan direction that pertains to prairie dogs, black-footed ferret reintroduction, and short-stature vegetation has also been updated in the grassland-wide and geographic area direction in chapters 1 and 2 of the grassland plan.

Adjust the boundaries of management area 3.63 to be more conducive to prairie dog management

The plan amendment adjusts the boundaries of management area 3.63 into a new management area 3.67 that will be more conducive to prairie dog management (figure 1). When adjusting boundaries, Forest Service personnel considered where boundary management zones would be most effective; where areas of persistent conflict exist; where prairie dog colonies have existed historically and are likely to continue to exist; where allotment and pasture boundaries are located and how prairie dog colonies could be managed to reduce impacts to any single ranching operation; and where fences, boundaries, and natural features exist to delineate areas for enforcing shooting restrictions, limiting colony expansion, and inventorying prairie dog colonies (FEIS p. 45). As part of adjusting the boundaries for management areas 3.63 and 3.67, the plan amendment also adjusts the boundaries and amends management direction for the Cheyenne River Zoological Special Interest Area (figure 1). This change was recommended to the regional forester, who has authority to designate zoological areas of less than 100,000 acres in size. The regional forester documented her decision to modify the special interest area in a letter to me in May 2020, and the decision is finalized as part of this record of decision.

Increase the availability of lethal prairie dog control tools to improve responsiveness to a variety of management situations, including those that arise due to encroachment of prairie dogs on neighboring lands, natural and human-caused disturbances, and disease

The plan amendment increases the availability of lethal prairie dog control tools by lowering the acreage objective for prairie dog colonies on the grassland and allowing use of fumigants in the boundary management zones, within 1 mile of residences, and within ¼ mile of non-Federal land anywhere on the national grassland after 2 applications of zinc phosphide (standard GPA-FW-ADM-ST-05). Zinc phosphide will now be available for use when prairie dog colony extent exceeds 7,500 acres within management area 3.67 during drought conditions or while maintaining the 10,000 acre objective for prairie dog colony extent (objective GPA-MA3.67-FWRP-O-07, guideline GPA-MA3.67-FWRP-GL-09, standard GPA-MA3.67-FWRP-ST-10, guideline GPA-MA3.67-FWRP-GL-11, guideline GPA-MA3.67-FWRP-GL-12) and can be available in many situations across the rest of the national grassland (but see constraints described in standards H.1 and H.2 and guideline GPA-FW-ADM-GL-03).

I considered the use of anticoagulant rodenticides as another prairie dog control tool, and limited use of anticoagulants was included as part of the grassland-wide alternative (alternative 3) in the FEIS. Similar to the analysis for use of zinc phosphide and fumigants, the FEIS documents impacts from anticoagulant rodenticides to human health (FEIS p. 153), livestock (FEIS p. 154), and wildlife (FEIS pp. E-30-31). The socioeconomic analysis also documents the relative effectiveness and costs of these lethal control tools (FEIS pp. 104, 109). The FEIS documents that anticoagulant rodenticides are generally more expensive to apply (due to required monitoring for a 2-week period following application) and achieve a similar effectiveness rate to zinc phosphide.

Appendix E of the FEIS documents an analysis of the potential for secondary poisoning to scavengers and predators that prey on prairie dogs poisoned by rodenticides. When consumed, anticoagulants concentrate

in the muscle tissue of prairie dogs and can be consumed by raptors and other mammals with secondary poisoning more likely than zinc phosphide (FEIS p. E-32). Zinc phosphide concentrates in the stomach tissue of prairie dogs which is not readily consumed by raptors and mammals, thereby limiting secondary poisoning from carcass consumption (FEIS p. E-32). In addition, while zinc phosphide causes death within a few hours of ingestion, death is usually delayed following anticoagulant ingestion. Anticoagulant rodenticides remain potent within prairie dogs and carcasses for up to 2 weeks, causing risk to predators and scavengers such as foxes and eagles, owls, and other raptors either from poisoned live prey or from carcasses if they are not removed from the environment (FEIS p. E-67). The U.S. Fish and Wildlife Service has expressed concerns related to anticoagulant use on the national grasslands, particularly regarding compliance with the Bald and Golden Eagle Protection Act and the Migratory Bird Treaty Act. Due to the risks associated with use of anticoagulant rodenticides, I am not approving use of anticoagulant rodenticides in this decision (standard GPA-FW-ADM-ST-04).

How Issues were Considered and Addressed

During the scoping and comment periods, commenters raised several issues related to prairie dog management that were considered in the FEIS and are addressed in the preferred alternative and this decision.

Viability of sensitive species and potential species of conservation concern
Commenters are concerned that managed reductions in prairie dog colony size, distribution, or density could decrease the ability of prairie dogs and associated species to persist on the national grassland. These concerns were analyzed in detail in appendix E of the FEIS. The plan amendment addresses this concern by providing an objective of 10,000 acres of prairie dog colonies in management area 3.67 (7,500 acres during drought conditions; objective GPA-MA3.67-FWRP-O-07). As described above under, "*Purpose, Ensure continued conservation of at-risk species,"* these colonies will provide the short-stature vegetation and prairie dog ecosystems on which many species depend (FEIS p. 69-72). In addition, short-stature vegetation and prairie dog colonies will continue to persist in many areas of the grassland outside of management area 3.67, though without the same level of protection. A seasonal shooting restriction (standard GPA-MA3.67-FWRP-ST-17) and the new requirement to implement an integrated approach to plague management (GPA-MA3.67-FWRP-ST-18) in management area 3.67 are also intended to contribute to viability of sensitive species and a preliminary list of potential species of conservation concern.

Ecosystem and species-specific plan components were developed to maintain ecological sustainability, provide the ecological conditions necessary to maintain a viable population of each potential species of conservation concern associated with prairie dog colonies in the plan area (36 CFR 219.9(b)(1)), and ensure that the plan amendment would not result in loss of species viability or create significant trends toward Federal listing for those regional forester's sensitive species associated with prairie dog colonies (FSM 2672.41). In response to the reviewing officer's instructions to revisit the finding of "no substantial adverse impacts and no substantial lessening of protections" (36 CFR 219.13(b)(6)), I have reviewed the record as well as the 2012 Planning Rule and policy. The interdisciplinary team has made corrections to the project record to indicate that the 27 species for which evaluations determined that there is "*potential*" for the proposed plan amendment to cause substantial adverse impacts or substantially lessened protections (Preliminary List of Potential Species of Conservation Concern Species Evaluations, table 1 pp. 6-10) are considered to be substantially affected for the purposes of 36 CFR 219.13(b)(6). An exception to this are those plant species for which insufficient information was available to determine the same "*potential*" at the time of evaluations, but analysis later determined that there would not be adverse impacts or lessening of protections as a result of the plan amendment (FEIS pp. D-30-35, table D-6).

Ecosystem and, where necessary, species-specific plan components were developed for each alternative to provide the ecological conditions necessary to maintain a viable population of each potential species of conservation concern within the plan area (36 CFR 219.9(b)(1)). See FEIS Appendix E for a listing of plan components relevant to each species.

Viability when using control tools below the 10,000-acre objective

In response to the reviewing officer's instructions to ensure that the analysis adequately addressed and disclosed impacts to black-tailed prairie dogs, mountain plover, and burrowing owl under 10,000 acres, including impacts associated with density control, and that the analysis found that management toward the lower objective, as well as density control under 10,000 acres, still supports viable populations of black-tailed prairie dogs, mountain plover, and burrowing owl, I reviewed the analysis and determined no new analysis was required. However, I am providing clarification and examples of the three circumstances under which prairie dog control tools may be used for management outside of boundary management zones and residence buffers in management area 3.67 when the total prairie dog colony acreage is below the 10,000 acre objective: drought, while managing toward 10,000 acres, and use of density control. I also include rationale and conclusions about why the analysis finds that viability for potential species of conservation concern will be maintained within the plan area under these circumstances.

There are three circumstances under which prairie dog control tools may be used for management outside of boundary management zones and residence buffers in management area 3.67 when the total prairie dog colony acreage is below the 10,000 acre objective: drought, while managing toward 10,000 acres, and use of density control. For each of these circumstances, standard GPA-MA3.67-FWRP-ST-10 applies to prohibit use of lethal control tools when colony acreage is below 7,500 acres in management area 3.67. The drought objective is the only circumstance when prairie dog colony acreage will be managed toward 7,500 acres. Unlike the 10,000-acre objective, which allows for use of control tools to below the objective acreage, control tools are not authorized when colony acreage is below 7,500 acres during drought.

Drought: As stated above, droughts are likely to become more common and often span multiple years (FEIS p. 69). Our findings indicate that during drought, habitat will continue to be maintained for black-tailed prairie dogs and species associated with prairie dog colonies, as it has during the last 20 years. Appendix E of the FEIS describes habitat requirements for sensitive species and a preliminary list of potential species of conservation concern. Our findings indicate that the lower colony acreage objective during drought would continue to support the ecological conditions to maintain a viable population of these species, including black-tailed prairie dog (FEIS p. E-172, 180-181), mountain plover (FEIS p. E-146, 1520153) and burrowing owl (FEIS p. E-65-66, 76-77). This is in part because prairie dog colonies are expected to grow relatively rapidly in acreage (although not population) during drought despite use of rodenticides to manage colonies to 7,500 acres. Mountain plover depend on sites with short vegetation and bare ground for nesting habitat on the Thunder Basin, which are expected to increase in prevalence in the plan area during drought (FEIS p. E-148). Although mountain plover benefit from the presence of prairie dogs and are shown to occur in higher population densities on and near prairie dog colonies, habitat conditions for mountain plover are expected to be sufficient during drought periods because of the effects of drought on vegetation outside of prairie dog colonies in addition to the 7,500 acres of prairie dog colonies. Other species associated with prairie dog colonies occur at higher densities than mountain plover (FEIS p. E-63), and our findings indicate that temporary management toward 7,500 acres of colonies during droughts of any duration would not compromise viability of those species. For example, the ecological conditions to support burrowing owl would remain during drought, despite management toward 7,500 acres, because of the higher densities at which the species nests (FEIS p. E-77). The

availability of burrows for burrowing owl nesting would not be expected to be reduced in areas controlled during a drought, except where collapsing of burrows also occurs. Guideline F.62 (as amended) prohibits collapsing of burrows where burrowing owls are present. Following a drought regardless of duration, management will return to the 10,000-acre objective for prairie dog colony extent.

While Managing Toward 10,000 Acres: In addition to the temporary objective of 7,500 acres of prairie dog colonies during drought conditions, the plan amendment allows prairie dog control to a minimum of 7,500 acres of prairie dog colonies when working to maintain the 10,000 acre objective outside of drought conditions (objective GPA-MA3.67-FWRP-O-07, guideline GPA-MA3.67-FWRP-GL-09, standard GPA-MA3.67-FWRP-ST-10, guideline GPA-MA3.67-FWRP-GL-11, guideline GPA-MA3.67-FWRP-GL-12). During periods of colony growth, colony acreage can increase rapidly. Since 2001 in management area 3.63, total colony extents increased in the range of 4-86% during non-plague years when the previous year's colony area was greater than 5,000 acres. At lower total extents, colony area in management area 3.63 has increased up to more than 300% in a single year (FEIS p. 6). When colony acreage is approaching or exceeding 10,000 acres, the Forest Service may use control tools to reduce colony acreage to less than 10,000 acres in anticipation of subsequent colony growth to at or near 10,000 acres within a reasonable timeframe (FEIS page 72). The identification of situations warranting the use of prairie dog control when the total colony acreage in management area 3.67 is less than 10,000 acres and greater than 7,500 acres is at the discretion of the responsible official or the district ranger (FEIS page 47). As an example, in the years 2010, 2011, and 2012, mapping efforts show the extent of prairie dog colonies in management area 3.63 at 3,538; 5,886; and 10,970 acres, respectively. In 2013, mapping showed 15,382 acres of colonies. If a situation similar to 2012 were to arise in the future, the Forest Service would work with partners (Ch. 1, Goals and Objectives, Goal 4.b, Public and Organizational Relations, Objective 2; management approach 1) to determine the best strategy for control and would likely manage colony extent to below 10,000 acres. As with the drought objective, the analysis in appendix E of the FEIS finds that ecological conditions would be maintained under these circumstances for species such as black-tailed prairie dog (FEIS p. E-172, 180-181), mountain plover (FEIS p. E-146, 1520153) and burrowing owl (FEIS p. E-65-66, 76-77), in part because management below 10,000 acres would be temporary and on the condition that 10,000 acres remains the objective. Control work using rodenticides would occur between October 1 and January 30 each year (standard H.2), before prairie dog juveniles emerge from burrows and migratory bird breeding and nesting seasons begin (FEIS p. E-62, E-141). If the responsible official or district ranger decides to initiate colony control when colony acreage is below 10,000 acres, the control activity must comply with guideline GPA-MA3.67-FWRP-GL-09, which states, "When prairie dog colony acreage is less than 10,000 acres, manage to allow or facilitate prairie dog colony growth to provide habitat requirements for species associated with prairie dog colonies." A guideline is a constraint on project and activity decisionmaking that allows for departure from its terms, so long as the purpose of the guideline is being met (36 CFR 219.7(e)(1)(iv)). Project and activity compliance with grassland plan components is required (36 CFR 219.15).

Density Control: Density control is approved in management area 3.67 when total colony acreage is above 7,500 acres, in colonies not counting toward the 7,500-acre minimum (standard GPA-MA3.67-FWRP-ST-15). Density control is proposed as an experimental activity in the plan area because little is known about how different methods of density control affect prairie dog biology and vegetation response. Allowing density control when colony acreage is less than 10,000 acres in management area 3.67 will improve understanding of this control technique and its potential to influence colony growth and dispersal, prevent undesirable vegetation state changes, improve habitat conditions, and promote forage availability.

The management approach and plan components (standard GPA-MA3.67-FWRP-ST-15, guideline GPA-MA3.67-FWRP-GL-16, management approach 4) for density control impose several constraints on density control until scientific information is available based on monitoring of density control activities on the grassland or other analogous data. Guideline GPA-MA3.67-FWRP-GL-16 specifically restricts density control to no more than 50 percent of any individual colony no more than every other year in management area 3.67 to protect habitat requirements for species associated with prairie dog colonies. In addition, Forest Service personnel will avoid density control work on sites occupied by mountain plover, burrowing owl, and swift fox during the most recent monitoring effort (management approach 4). One of the primary purposes of the monitoring protocols and restrictions in management approach 4 is to avoid impacts to associated species until more information is known about how density control affects habitat for those species (e.g., how density control affects the suitability of nesting and denning habitat within colonies for mountain plover, burrowing owl, and swift fox). The temporary and limited nature of density control, the continued presence of prairie dogs in treated colonies, and the presence of 7,500 acres of colonies not subject to density control are expected to maintain ecological conditions for associated species. Density control will not be allowed when colony acreage is below 7,500 acres or on colonies counting toward the 7,500-acre minimum until scientific information becomes available indicating that habitat characteristics will be maintained for these and other species associated with prairie dog colonies such as ferruginous hawk and golden eagle. When that information becomes available, a documented review will determine if there is sufficient information available to initiate use of density control when colonies total less than 7,500 acres, or on colonies contributing to the 7,500 acre minimum, consistent with standard GPA-MA3.67-FWRP-ST-15. The analysis for the effects of density control on black-tailed prairie dogs is within the bounds of the analysis for prairie dog control to 7,500 acres and has been found to not compromise the ability of the plan to maintain ecological conditions for that species.

Black-footed ferret recovery

Commenters are concerned that managed reductions in prairie dog colony size, distribution, or density could reduce the availability of habitat for black-footed ferret reintroduction, the ability to reintroduce black-footed ferrets on the national grassland, and the likelihood of achieving range-wide recovery criteria described in the U.S. Fish and Wildlife Service 2013 recovery plan. These concerns were analyzed in detail in the FEIS (pp. 150-154, summarized at p. 62), with additional information on impacts to black-footed ferret analyzed in a biological assessment provided to the U.S. Fish and Wildlife Service and in appendix E (FEIS pp. E-40-42). As described above under "*Purpose, Support ecological conditions that do not preclude reintroduction of the black-footed ferret*", the acreage objectives for prairie dog colonies (GPA-MA3.67-FWRP-O-07, which identifies a 10,000-acre objective and a temporary drought objective of 7,500 acres) as well as other plan components that are in place to protect any future reintroductions (attachment A), will provide the ecological conditions necessary to contribute to the recovery of this federally endangered species (36 CFR 219.9(b)(1)).

Forage for permitted livestock

Commenters are concerned that management actions that increase or decrease prairie dog colony size, distribution, or density could change forage availability for livestock production on National Forest System land and that encroachment of prairie dogs onto private and State land could impact forage availability for livestock production on private and State land. These concerns were analyzed in detail in the "Rangeland Vegetation and Livestock Grazing" analysis in the FEIS (pp. 91-100). As described above under "*Purpose, Reduce resource conflicts related to prairie dog occupancy and livestock grazing*," the plan amendment addresses these concerns by decreasing the acreage objective for prairie dog colonies on National Forest System lands from 33,000 to 10,000 acres. In addition, designation of boundary management zones and allowance for lethal control outside of management area 3.67 is intended to minimize encroachment and impacts to forage on State and private land.

Economic concerns
Commenters are concerned that changes to forage availability could impact income and jobs associated with ranching activities, and that encroachment of prairie dogs onto private lands could decrease land values and impact facilities. These concerns were analyzed in detail in the "Socioeconomic" analysis in the FEIS (pp. 101-124, summary at p. 102). The plan amendment addresses these concerns by decreasing the acreage objective for prairie dog colonies on National Forest System lands from 33,000 to 10,000 acres, designating boundary management zones, and allowing lethal control outside of management area 3.67. Management approach 2 also describes the Forest Service intent to prioritize control activities within 1 mile of a residence anywhere on the national grassland, where prairie dogs are impacting private or public facilities, and in boundary management zones.

Health and safety concerns
Commenters are concerned that existence of plague among wildlife populations on the Thunder Basin National Grassland could pose a risk to human health and that burrows in prairie dog colonies could create safety hazards for permittees, workers, visitors, and livestock on National Forest System land and where encroachment has occurred on State and private lands. These concerns are analyzed in the "Socioeconomic" analysis in the FEIS (chapter 3). The plan amendment addresses these concerns by designating boundary management zones (standard GPA-MA3.67-FWRP-ST-13), allowing lethal control outside of management area 3.67 (but see constraints described in standards H.1 and H.3 and guideline GPA-FW-ADM-GL-03), and prioritizing control within 1 mile of residences anywhere on the national grassland (GPA-FW-ADM-ST-06). Activities such as collapsing burrows on abandoned or poisoned colonies can also be approved to restore vegetation and minimize safety hazards. The plan amendment authorizes the use of plague mitigation tools anywhere on the grassland (GPA-FW-FWRP-GL-02) and requires implementation of an integrated approach to plague management in management area 3.67 (GPA-MA3.67-FWRP-ST-18).

Recreational shooting
Commenters are concerned that prohibitions or restrictions on shooting may eliminate a tool for controlling prairie dog populations and could reduce recreational opportunities and associated economic benefits for surrounding communities. Other commenters are concerned that allowing shooting within management area 3.67 may disrupt prairie dog reproduction and dispersal dynamics and may cause direct take of associated and protected species. These concerns are analyzed in the "Socioeconomic" analysis in the FEIS (e.g., p. 106, 115) and appendix E (e.g., p. E-173). The plan amendment addresses these concerns by requiring a seasonal restriction on recreational shooting of prairie dogs in management area 3.67 from February 1 to August 15 of each year (GPA-MA3.67-FWRP-ST-17) but allowing year-round recreational shooting of prairie dogs elsewhere on the grassland. The seasonal shooting restriction in management area 3.67 is in place to protect at-risk species associated with prairie dogs, including golden eagles, burrowing owls, and mountain plovers, from human disturbance, accidental or purposeful shooting, or secondary poisoning through ingestion of lead bullets. The seasonal shooting restriction in management area 3.67 would not allow shooting during the summer months most popular for recreational shooting but would allow shooting in the fall during big game seasons when many hunters are on the grassland and when most migratory birds have left the grassland.

Federal land boundary management
Commenters are concerned that boundary management zones of ¼ mile may not be adequate to prevent encroachment onto private and State lands. This concern was addressed by considering a range of alternatives for size and placement of boundary management zones as described in chapter 2 of the FEIS (FEIS p. 57). The plan amendment addresses this concern by allowing control activities under many scenarios across the grassland and by allowing a temporary expansion of the ¼-mile boundary

management zones to ¾ mile in management area 3.67 if the Forest Service determines that prairie dogs on Federal land are moving toward the boundary management zone and are a potential boundary problem or control efforts within ¼ mile of private or State property using appropriate tools for 3 consecutive years have not been successful (GPA-MA3.67-FWRP-GL-14).

Use of rodenticides
Commenters are concerned that rodenticides used to kill prairie dogs could poison and kill other, nontarget wildlife species. Other commenters are concerned that restrictions on rodenticide use could make control of prairie dogs ineffective. These concerns were analyzed in appendix E of the FEIS (e.g., pp. E-30-31, E-66, E-172), and in the "Socioeconomic" analysis (FEIS p. 104, 109). Forest Service resource specialists considered the impacts of zinc phosphide, fumigants, and anticoagulant rodenticides on non-target wildlife species and their effectiveness in controlling prairie dogs. To address concerns related to the effectiveness of rodenticides and their effects on wildlife, the plan amendment continues to allow the use of zinc phosphide (but see constraints described in standard H.1 and guideline GPA-FW-ADM-GL-03) and allows the use of fumigants in boundary management zones, within 1 mile of residences, and within ¼ mile of non-Federal land anywhere on the national grassland after 2 applications of zinc phosphide (standard GPA-FW-ADM-ST-05), both with seasonal timing restrictions to protect at-risk wildlife species that are more restrictive than the pesticide labels allow (standard H.3). Forest Service staff will not allow use of anticoagulant rodenticides with this plan amendment due to the potential for secondary poisoning of non-target wildlife species (standard GPA-FW-ADM-ST-04). Also see the response above under "*Need, Increase the availability of lethal prairie dog control tools*."

Cost of implementing the plan amendment
Commenters are concerned that costs associated with staff time, supplies, and other resources could limit the ability to implement the plan effectively. This concern was analyzed in the "Socioeconomic" analysis (summarized at FEIS p. 113). The plan amendment addresses this concern by selecting an alternative with lower estimated control costs than other action alternatives and lower estimated inventory and mapping costs than other action alternatives. Management approach 2 describes the Forest Service intent to prioritize control activities in the boundary management zones, within 1 mile of residences, and where prairie dogs are impacting facilities, and management approach 1 describes the intent to work closely with a third-party collaborative stakeholder group to set annual priorities for conservation and control across the grassland. These priorities and approaches will help to ensure the most cost-effective use of time and resources for prairie dog management.

Failure to implement current management plan
Commenters are concerned that more aggressive implementation of the current plan could have reduced conflicts and negated the need for a plan amendment. This concern is addressed in the "Purpose and Need" section of the FEIS (pp. 13-17). Changed conditions on the Thunder Basin National Grassland indicated that a plan amendment would be the most effective way to ensure that management direction and intent is clear and consistent on the national grassland even when staff or conditions on the grassland change. Incorporation and revision of content from the 2015 Prairie Dog Management Strategy into the grassland plan will provide clear direction and desired conditions for prairie dog management.

Laws, regulations, and policies
Commenters are concerned that proposed changes to prairie dog management could conflict with requirements of the National Forest Management Act and 2012 Planning Rule (including applying the substantive requirements of 36 CFR 219.8-219.10 and the requirements for plan amendments at 36 CFR 219.13), National Environmental Policy Act (including applying appropriate mitigation measures), Endangered Species Act (including contributions to recovery of listed species), Multiple Use Sustained

Yield Act (including finding an appropriate balance for natural resource management), and Bankhead Jones Farm Tenant Act (including making agriculture the primary driver of grassland management). Commenters were also concerned that conservation of prairie dogs could conflict with State law and county policies that designate black-tailed prairie dogs as an agricultural pest (Wyoming Statute 11-5-102 (a)(xii)). The Forest Service multiple use mandate is described in chapter 1 of the FEIS (pp. 2-4), and compliance with laws, regulations, and policies is described under "Other Required Disclosures" (FEIS pp. 162-167) and later in this decision document. Forest Service personnel attempted to balance the intent of many Federal laws, regulations, and policies as well as State statutes and county policies to best meet the Forest Service mission and the needs of the American people in coming to this decision.

Candidate conservation agreements
Commenters are concerned that candidate conservation agreements and candidate conservation agreements with assurances could reduce the acres of prairie dog colonies needed on Federal land to provide habitat for associated species across the landscape and have not been adequately considered in the plan amendment. This concern is addressed under "Alternatives Considered but Eliminated from Detailed Study" (FEIS p. 51) and "Framing the Analysis" (FEIS pp. 71-72). The 2009 amendment to the grassland plan emphasized the importance of conservation across all lands, and the Forest Service continues to place great value on landscape conservation efforts. According to the 2012 Planning Rule, the Forest Service must provide for viability of at-risk species within the inherent capability of the plan area (36 CFR 219.9). While State and private lands, particularly those that maintain prairie dog colonies through candidate conservation agreements with assurances, should be considered in an analysis of viability or persistence for at-risk species, they cannot be relied upon to provide necessary ecological conditions to ensure viability of at-risk species in the plan area. Because it is within the inherent capability of the National Forest System lands on the Thunder Basin National Grassland to support many at-risk species, the plan amendment has been designed to do so without relying on intermixed or nearby State or private lands.

Greater sage-grouse habitat
Commenters are concerned that occupancy of greater sage-grouse habitat management areas by both prairie dogs and greater sage-grouse could create management conflicts. This concern is analyzed appendix E of the FEIS (pp. E-107-117). The plan amendment addresses this concern by removing a portion of management area 3.63 that currently lies within a greater sage-grouse priority habitat management area (PHMA) and decreasing the acreage objective for prairie dog colony extent. It also identifies greater sage-grouse habitat as a possible priority for control when managing toward the prairie dog colony acreage objective (management approach 2). Although management area 3.67 overlaps with greater sage-grouse general habitat management areas (GHMA) and PHMA, Forest Service staff expect conflicts to be minimal and flexibility in plan direction to allow appropriate management in specific locations and situations.

Within GHMA and PHMA, habitat is of variable quality and contains suitable, marginal, and non-suitable conditions as well as non-habitat areas (e.g., rocky or forested areas). The desired condition for management area 3.67 states that in greater sage-grouse PHMA where greater sage-grouse habitat exists, the desired conditions for PHMA applies. This statement is consistent with the Forest Service current greater sage-grouse plan amendment for Wyoming (USDA FS 2019), which states, "Priority, connectivity, and general habitat management areas may contain non-habitat. Management direction would not apply to those areas of non-habitat if the proposed activity in non-habitat does not preclude effective sage-grouse use of adjacent habitats." It also ensures consistency with the State of Wyoming 2019 Executive Order for Sage-Grouse Core Area Protection. In addition, according to plan components in the Greater Sage-grouse Plan Amendment (USDA Forest Service 2015, 2019), plan direction for management area 3.63/3.67

supersedes plan direction for GHMA when they are in conflict regarding the management of grazing or prescribed fire to achieve desired vegetation conditions.

The Forest Service interdisciplinary team analyzed impacts to GHMA and PHMA, as delineated by the 2015 greater sage-grouse plan amendment for Colorado and Wyoming (USDA Forest Service 2015) and by the preferred alternative in the most recent greater sage-grouse plan amendment effort (USDA Forest Service 2019, designed to be consistent with Wyoming core areas and the State of Wyoming 2019 Executive Order for Sage-Grouse Core Area Protection). The team considered the relative availability and conservation of habitat available to both greater sage-grouse and black-tailed prairie dogs, two native species that have co-existed in Wyoming and in the Powder River Basin since before European settlement. The Thunder Basin has 278,222 acres of GHMA and 274,917 acres of PHMA for greater sage-grouse identified in the 2015 ROD and identifies 317,492 acres of GHMA; 229,076 acres of PHMA; and 6,360 acres of Connectivity Habitat Management Area in the 2019 FEIS.

In this plan amendment I identify an objective of 10,000 acres of prairie dog colonies within an approximately 42,000 acre short-stature vegetation emphasis management area. The acreage overlaps are shown in Table 1. Given the relatively small proportion of GHMA impacted by this plan amendment and the lower priority for sage-grouse management in GHMA relative to PHMA, the interdisciplinary team focused the analysis on impacts to PHMA. My decision to allow overlap among GHMA, PHMA, and management area 3.67 acknowledges the relatively low acreage dedicated to prairie dog conservation versus sage-grouse conservation on the grassland.

Table 1. Overlap of management area 3.67 and the Cheyenne River Zoological Special Interest Area with greater sage-grouse habitat management areas

	Habitat Management Areas from 2015 Forest Service Greater Sage-Grouse Plan Amendments	Habitat Management Areas from Preferred Alternative in 2019 Forest Service Greater Sage-Grouse Plan Amendments*
MA 3.67 overlap with PHMA (acres)	15,794	14,909
MA 3.67 overlap with GHMA (acres)	26,541	27,426
Cheyenne River Zoological SIA overlap with PHMA (acres)	46	46
Cheyenne River Zoological SIA overlap with GHMA (acres)	5,301	5,301

*PHMA is delineated based on State of Wyoming Greater Sage-Grouse Core Areas v. 4

The FEIS concludes that habitat availability and suitability for greater sage-grouse would remain unchanged under the no action alternative and may increase under each of the action alternatives as a result of limiting prairie dog colony extent and reducing the likelihood of prairie dog colony expansion into sagebrush (FEIS page E-112). I do not expect this decision to negatively impact greater sage-grouse or sage-grouse habitat compared to no action.

Collaborative stakeholder group

Commenters are concerned that if the collaborative stakeholder group is poorly organized, unbalanced in membership, or cannot produce consensus recommendations, the group may be ineffective and recommendations may not represent diverse interests. The 2002 grassland plan includes an objective to work in cooperation with Federal, State, and county agencies, individuals, and non-governmental organizations for animal control. The plan amendment revised that goal to describe the intent to work

with partners to seek collaborative solutions to prairie dog management (Ch. 1, Goals and Objectives, Goal 4.b, Public and Organizational Relations, Objective 2). In addition, the plan amendment includes a management approach to describe work with a collaborative stakeholder group (management approach 1). Although Forest Service personnel will not convene or manage participation in this group, they will work with the group and consider their recommendations. Forest Service line officers will retain full decision-making authority.

Other Alternatives Considered

In addition to alternative 5, I considered four other alternatives in detail, which are discussed below and in Table 2. A more detailed comparison of these alternatives can be found in chapter 2 of the FEIS.

Alternative 1 – No Action

Under the no-action alternative, the amended 2002 grassland plan and the 2015 Black-Tailed Prairie Dog Conservation Assessment and Management Strategy would continue to guide management of prairie dogs on the Thunder Basin. No changes would be made to either the plan or the 2015 Black-Tailed Prairie Dog Conservation Assessment and Management Strategy, and prairie dogs would continue to be managed toward an objective of 33,000 acres in category 1, 2, and 3 areas on the national grassland. If on-the-ground management changes occur, they would be within the bounds of the current plan and strategy.

Alternative 2 – Proposed Action

Under the proposed action, management area 3.67 would be approximately 35,000 acres in size. Prairie dog colonies would be managed toward an objective of 10,000 total acres in the management area, and satellite colonies outside of management area 3.67 would be identified, when needed, to contribute to the objective and allow control work inside of management area 3.67. Boundary management zones would be established within management area 3.67.

Alternative 3 – Grassland-Wide Alternative

Under the grassland-wide alternative, management area 3.67 would be approximately 29,000 acres in size and all prairie dog colonies on the grassland would count toward a 10,000-acre to 15,000-acre objective for total prairie dog colony extent. Unlike other alternatives, this alternative would have delineated boundary management zones adjacent to private and State lands across the entire national grassland and anticoagulant rodenticides would be approved for use.

Alternative 4 - Prairie Dog Emphasis Alternative

Under the prairie dog emphasis alternative, much of the management described in the current grassland plan and 2015 Black-Tailed Prairie Dog Conservation Assessment and Management Strategy would be maintained. However, content from the strategy would be added to the grassland plan and the strategy would no longer be used. Category 3 acreage objectives would be removed for a total acreage objective of 27,000 acres in category 1 and 2 areas, and boundary management zones would be added to category 1 and 2 areas.

Alternative 4 is identified as the environmentally preferable alternative. This alternative includes prairie dog colony acreage objectives that are higher than those of all other action alternatives, and the objectives apply to a more well-distributed area of the grassland, including both management area 3.67 and identified category 2 areas. This alternative also includes a year-round shooting prohibition in these same

areas to protect at-risk species. Although the acreage objective for total prairie dog colony extent is lower than that identified in the no-action alternative, alternative 4 includes the addition of boundary management zones in management area 3.67, which would meet requirements for reintroduction of black-footed ferret as described by the State of Wyoming and would also contribute to maintaining the history and culture of local communities that have traditionally relied on livestock grazing for economic vitality. This alternative was not identified as the preferred alternative and was not found to best meet the purpose and need for the project.

Alternatives Considered but Not Analyzed in Detail

Public comments received in response to the proposed action and draft environmental impact statement provided suggestions for alternative methods for achieving the purpose and need for this plan amendment. In some cases, the public provided complete alternatives that included many or most of the elements described in the previous section. In some cases, only one or a few management suggestions that could be considered as elements of alternatives were provided. Suggestions were either integrated into one of the action alternatives, analyzed as part of the no-action alternative, or briefly described and analyzed in the FEIS (pp. 48-55).

Table 2. Comparison of the major elements of alternatives analyzed in the final environmental impact statement

Major Management Elements	Alternative 1 No Action	Alternative 2 Proposed Action	Alternative 3 Grassland-wide	Alternative 4 Prairie Dog Emphasis	Alternative 5 Preferred Alternative
Management area 3.63 or 3.67	Management Area 3.63 – Black-Footed Ferret Reintroduction Habitat is approximately 51,000 acres in size, and the Cheyenne River Zoological Special Interest Area is approximately 5,900 acres.	Management Area 3.63 – Black-Footed Ferret Reintroduction Habitat would be changed to Management Area 3.67 – Rangelands with Short-Stature Vegetation Emphasis. Management area size would change from approximately 51,000 to approximately 35,000 acres. Cheyenne River Zoological Special Interest Area would be redrawn to follow the Cheyenne River along the southeastern border of management area 3.67. Special interest area management direction would be updated to reflect emphasis on riparian habitat. Special interest area size would change from approximately 5,900 to approximately 3,800 acres.	Management Area 3.63 – Black-Footed Ferret Reintroduction Habitat would be changed to Management Area 3.67 – Rangelands with Short-Stature Vegetation Emphasis. Management area size would change from approximately 51,000 to approximately 29,000 acres. Cheyenne River Zoological Special Interest Area would be redrawn to follow the Cheyenne River along the southeastern border of management area 3.67 and Antelope Creek along the southwestern border of management area 3.67. Special interest area management direction would be updated to reflect emphasis on riparian habitat. Special interest area size would change from approximately 5,900 to approximately 5,700 acres.	Management Area 3.63 – Black-Footed Ferret Reintroduction Habitat would be changed to Management Area 3.67 – Prairie Dog Emphasis Area. Management area 3.67 and Cheyenne River Zoological Special Interest Area boundaries would remain the same as current.	Management Area 3.63 – Black-Footed Ferret Reintroduction Habitat would be changed to Management Area 3.67 – Short-Stature Vegetation Emphasis. Management area size would change from approximately 51,000 to approximately 42,000 acres. Cheyenne River Special Interest Area would be redrawn to follow the Cheyenne River and Antelope Creek along the southeastern border of management area 3.67 and renamed Cheyenne River-Antelope Creek Zoological Special Interest Area. Special interest area management direction would be updated to reflect emphasis on riparian habitat. Special interest area size would change from approximately 5,900 to approximately 5,300 acres.

Major Management Elements	Alternative 1 No Action	Alternative 2 Proposed Action	Alternative 3 Grassland-wide	Alternative 4 Prairie Dog Emphasis	Alternative 5 Preferred Alternative
Prairie dog colony acre objective and distribution	Prairie dog colonies and acreage objectives managed based on 2015 management strategy categories: Category 1: 18,000 acres Category 2: 9,000 acres Category 3: 6,000 acres	Prairie dog colonies would be managed toward an objective of 10,000 acres within management area 3.67, except during drought. No complexes would be required or designated in standards or guidelines, but desired conditions for management area 3.67 would describe that within management area 3.67, colonies within approximately 4.5 miles (7 kilometers) of other colonies are maintained, when possible, to develop colony complexes.	Prairie dog colonies across the grassland would be managed within a range of 10,000 to 15,000 acres, except during drought. Colonies located anywhere on national grassland would count toward acre range. One 1,500-acre complex would be required and managed for in management area 3.67, and a guideline would direct management for colonies of 200 to 500 acres to provide optimal nesting habitat for mountain plover.	Prairie dog colonies and acreage objectives managed based on 2015 management strategy categories: Category 1 would remain the same—18,000-acre objective. Category 2 areas would be modified, but would keep the 9,000-acre total objective. Category 3 acreage objectives would be removed. Management area 3.67 would be managed for two 4,500-acre complexes.	Prairie dog colonies would be managed toward an acreage objective of 10,000 acres within management area 3.67, except during drought.
Boundary management zone	No boundary management zone, but may allow rodenticide use if colony is within ½ mile of boundary, under certain circumstances.	¼-mile boundary management zone in management area 3.67. A temporary ¾-mile boundary management zone may be granted under special circumstances. Rodenticide use allowed in boundary management zone regardless of colony acres.	¼-mile grassland-wide. A temporary 1-mile boundary management zone may be granted under special circumstances. Rodenticide use allowed in boundary management zone regardless of colony acres.	¼-mile boundary management zone for category 1; 1/8-mile boundary management zone for category 2. Rodenticide use allowed in boundary management zone regardless of colony acres.	¼-mile boundary management zone in management area 3.67. A temporary ¾-mile boundary management zone may be granted under special circumstances. Rodenticide use allowed in boundary management zone regardless of colony acres.

Major Management Elements	Alternative 1 No Action	Alternative 2 Proposed Action	Alternative 3 Grassland-wide	Alternative 4 Prairie Dog Emphasis	Alternative 5 Preferred Alternative
Thresholds for rodenticide use	Many conditions required for use of rodenticide.	If the district ranger determines lethal control in management area 3.67 is warranted, and colony acres are below the 10,000-acre objective, satellite acres can be identified. If management area 3.67 acres and satellite acres total more than 7,500, interior rodenticide use in management area 3.67 can be allowed to a 7,500-acre minimum. Rodenticides may be used to maintain satellite colonies at designated size.	When acreage is below 10,000 acres grassland-wide, rodenticide use allowed only in boundary management zone or for density control.	Unlike the current strategy, when acreage objectives are met, by category, lethal control would be allowed within that category to return to objective acres.	Rodenticide use and other control tools would be allowed in management area 3.67 when colony acreage is above 7,500 acres. Control tools would be allowed outside of management area 3.67 at any time. Priority for control would be for colonies within 1 mile of a residence, colonies impacting facilities, and the boundary management zone. Other control activities would be prioritized annually.
Approved rodenticides	All forms of zinc phosphide approved for use (October 1-December 31), with many conditions. Only allowed in category 1 area within ½ mile of boundary if acreage objective met and nonlethal options tried. Otherwise conditional based on decision screens.	All forms of zinc phosphide approved for use (allowed only October 1-January 31). Management area 3.67 must have at least 7,500 acres of colonies (within management area 3.67 or in designated satellite colonies) for use outside the boundary management zone, unless used for density control. Anticoagulants and fumigants prohibited.	All forms of zinc phosphide approved for use (allowed only October 1-January 31). Must have at least 10,000 acres of colonies for use the outside boundary management zone, unless used for density control. Anticoagulants and fumigants allowed in the boundary management zone only after three applications of zinc phosphide.	All forms of zinc phosphide approved for use (allowed only October 1-January 31). Must meet acreage objectives in category 1 and 2 areas before using outside the boundary management zone. Anticoagulants and fumigants prohibited.	All forms of zinc phosphide approved for use (allowed only October 1-January 31). Management area 3.67 must have at least 7,500 acres of colonies. Fumigants approved for use (allowed only October 1-January 31) in boundary management zone, residence 1-mile buffer, and within ¼ mile of non-Federal land, only after two applications of zinc phosphide.

Major Management Elements	Alternative 1 No Action	Alternative 2 Proposed Action	Alternative 3 Grassland-wide	Alternative 4 Prairie Dog Emphasis	Alternative 5 Preferred Alternative
Recreational shooting	Year-round shooting prohibition in management area 3.63 and category 1; conditional restrictions in category 2 areas.	Seasonal restriction (no shooting February 1 to August 15) in management area 3.67, including the boundary management zone and any designated satellite acres. No restrictions on rest of grassland.	No restrictions for prairie dog conservation unless developed as part of complex management plan.	Year-round shooting prohibition in management area 3.67 and category 1. Year-round prohibition in category 2 until acreage objective met, then seasonal restrictions (no shooting February 1 to August 15) in category 2.	Seasonal restriction (no shooting February 1 to August 15) in management area 3.67, including the boundary management zone. No restrictions on rest of grassland.
Drought plan	No specific management changes under drought conditions.	To mitigate prairie dog colony expansion during drought conditions, control tools may be used in active prairie dog colonies to work toward a revised objective of 7,500 acres in management area 3.67 and satellite colonies combined.	To mitigate prairie dog colony expansion during drought conditions, control tools may be used in active prairie dog colonies to work toward a temporary objective of 10,000 acres.	No specific management changes under drought conditions.	To mitigate prairie dog colony expansion during extended drought conditions, control tools may be used to work toward a temporary revised acreage objective of 7,500 acres in management area 3.67.
Plague management	Plague-mitigation tools may be used in active prairie dog colonies.	Plague-mitigation tools may be used in active prairie dog colonies.	Plague-mitigation tools may be used in active prairie dog colonies.	Plague-mitigation tools may be used in active prairie dog colonies.	A plague management plan will be developed, and an integrated approach to plague management (e.g., using tools such as deltamethrin and fipronil) will be implemented annually in management area 3.67. Plague mitigation may also be implemented outside of management area 3.67.

Major Management Elements	Alternative 1 No Action	Alternative 2 Proposed Action	Alternative 3 Grassland-wide	Alternative 4 Prairie Dog Emphasis	Alternative 5 Preferred Alternative
Density control	No density control described, but nonlethal density control could be approved.	Density control (for example, using rodenticide, translocation, collapsing burrows) may be used to maintain desired vegetation conditions. Desired vegetation structure and composition may vary by ecological site or colony. When below 7,500 acres in management area 3.67 and satellite colonies, treat no more than 50 percent of any colony. Where density control occurs, pretreatment data must be collected and monitoring data must be collected for a minimum of 2 years after treatment.	Density control (for example, using rodenticide, translocation, collapsing burrows) may be used to maintain desired vegetation conditions. Desired vegetation structure and composition may vary by ecological site or colony. When below 10,000 acres, treat no more than 50 percent of any colony. Where density control occurs, pretreatment data must be collected and monitoring data must be collected for a minimum of 2 years after treatment.	No density control described, but nonlethal density control could be approved.	Experimental density control activities may be authorized in colonies (a) outside of management area 3.67 or (b) in management area 3.67 if colony acreages are above 7,500, and not on colonies contributing to the 7,500 acre minimum. If scientific information is developed and indicates that density control achieves vegetation or dispersal objectives and maintains habitat for associated species, then density control may be authorized in management area 3.67 when acreages are below 7,500. Colonies treated for density control would count toward acreage objective.
Strategy and collaborative working group	The 2015 Prairie Dog Conservation Assessment and Management Strategy would remain in effect, with a collaborative stakeholder group in place.	The grassland plan would no longer refer to a separate prairie dog management strategy and the strategy would be rescinded. A collaborative stakeholder group would provide management recommendations to Forest Service staff.	The grassland plan would no longer refer to a separate prairie dog management strategy and the strategy would be rescinded. A collaborative stakeholder group would provide management recommendations to Forest Service staff.	Components of the 2015 Prairie Dog Conservation Assessment and Management Strategy would be integrated into the grassland plan, and the strategy would be rescinded. A collaborative stakeholder group would provide management recommendations to Forest Service staff.	The grassland plan would no longer refer to a separate prairie dog management strategy and the strategy would be rescinded. A collaborative stakeholder group would provide management recommendations to Forest Service staff.

Public Involvement

As described above under "Background," the Wyoming Department of Agriculture convened a collaborative working group in 2018 to develop recommendations for a proposed action for this plan amendment. The collaborative provided a series of letters in December 2018 that described areas of agreement and disagreement and provided individual and collective recommendations for prairie dog management. This collaborative continues to meet as the Thunder Basin Working Group, and members and organizations involved are presented in the FEIS (chapter 4). In February 2019, I convened an interdisciplinary team of resource specialists, comprised of Forest Service staff as well as representatives from the Wyoming Governor's Office, Wyoming Game and Fish Department, and the local county commissioners and initiated the plan amendment process.

The interdisciplinary team developed a proposed action informed by the collaborative working group recommendations and published a notice of intent to develop an environmental impact statement in the Federal Register on April 18, 2019. The notice of intent asked for public comment on the proposal from April 18, 2019 until May 20, 2019. Forest Service personnel sent approximately 300 letters and 400 emails describing the proposed action and opportunity to comment to local, State, and Federal government staff and leaders; environmental and nongovernmental organizations; grazing association members; and others who expressed interest in the project. Forest Service staff initiated formal consultation with 18 Native American Tribes with an interest in the Thunder Basin National Grassland in April 2019.

Agency personnel presented the proposed action to members of the Thunder Basin Working Group on May 6, 2019; hosted a public meeting at the Converse County library in Douglas, WY to reach other local stakeholders on May 6, 2019; and hosted a webinar to reach a broader audience of stakeholders on May 8, 2019. Approximately 50 people were present at the Thunder Basin Working Group meeting, approximately 10 were present at the local public meeting, and approximately 15 were present on the webinar.

Approximately 500 comment letters were received during the public scoping period, with about 40 unique and substantive comment letters. Commenters included representatives from State and local governments, grazing association members and ranching representatives, individuals with expertise in wildlife management and black-footed ferret reintroduction, and nongovernmental organizations. Several nongovernmental organizations initiated signature-gathering campaigns that garnered more than 18,000 signatures in opposition to the proposal. The interdisciplinary team formally documented the issues to be addressed in the draft environmental impact statement (see above and FEIS chapter 1) and developed two more action alternatives for analysis (see above and FEIS chapter 2).

The notice of availability for the draft environmental impact statement was published in the Federal Register on October 11, 2019. The notice of availability initiated a 90-day public comment period on the draft environmental impact statement that concluded on January 9, 2020. Forest Service personnel sent approximately 300 letters and 400 emails announcing the public comment period and availability of the draft to local, State, and Federal government staff and leaders; environmental and nongovernmental organizations; grazing association members; and others who expressed interest in the project. Forest Service staff also sent formal consultation letters to 18 Native American Tribes.

Agency personnel presented findings from the draft environmental impact statement to members of the Thunder Basin Working group on November 20, 2019; hosted a public meeting at the Converse County Library in Douglas, WY to reach other local stakeholders on that same evening; and hosted a webinar to

reach a broader audience of stakeholders on November 21, 2019. Approximately 50 people were present at the working group meeting, approximately 7 were present at the public meeting, and 11 were present on the webinar.

Approximately 275 comment letters were received during the 90-day public comment period, with about 50 unique and substantive comment letters. Commenters again included representatives from State and local governments, grazing association members and ranching representatives, individuals with expertise in wildlife management and black-footed ferret reintroduction, and nongovernmental organizations. The nongovernmental organization, Defenders of Wildlife, also provided a petition signed by more than 12,000 individuals opposed to the plan amendment. No new issues were raised during the comment period, but commenters provided detailed suggestions for how to improve the analysis and many provided suggestions for a new alternative. Forest Service personnel developed alternative 5, the preferred alternative, in response to these comments and published a notice of availability for the FEIS and draft record of decision in the Federal Register on May 8, 2020.

The FEIS and the draft record of decision were subject to the predecisional administrative review ("objection") process pursuant to 36 CFR Part 219, subpart B. The objection process includes an objection filing period, an interested person filing period, and objection resolution meetings with the Reviewing Officer. This process provides an opportunity for members of the public who have participated in the planning process to have any unresolved concerns reviewed by the Forest Service prior to a final decision by the Responsible Official. The objection review was conducted at the Regional Forester's Office by the delegated reviewing officer: Deputy Regional Forester, Jacqueline Buchanan. The objection filing period ended July 14, 2020, and the interested person filing period began on July 24, 2020. The Forest Service received 15 eligible objections and 21 requests for interested person status. Objection issues were reviewed by a panel of Forest Service planning and resource specialists in August 2020, and an objection resolution meeting was held with objectors and interested persons on September 2, 2014.

The objection issues raised a broad range of complex regulatory and management issues including plan amendment framework, resource management, and public use concerns. Many issues had similarities that warranted consolidation into specific topic areas. The reviewing officer provided a collective written response to all objections to objectors and interested persons on October 10, 2020. The response was an outcome of a deliberative and extensive review of concerns raised by objectors. Although some issues raised in objections are not specifically cited in the responses, all objectors' concerns were considered. The review resulted in instructions to the responsible official, mandatory changes that the reviewing officer determined were required to be completed prior to signing this record of decision. The instructions resulted in specific changes and clarifications in this record of decision and errata for the FEIS and appendices. Objections, responses, instructions, and the errata sheet for the FEIS are available on the project website at: https://www.fs.usda.gov/project/?project=55479.

Interagency Coordination

Formal cooperating agencies, including Federal, State, and local governments and agencies, were identified prior to project scoping, and the relationships were formalized in memoranda of understanding. Cooperating agency representatives from the Wyoming Governor's Office; Wyoming Game and Fish Department; and the Campbell, Converse, and Weston County Commissioners were assigned as full members of the project interdisciplinary team to contribute special expertise and local knowledge to the team. Cooperating agency representatives are involved in the Thunder Basin Working Group, were consulted during preparation of the proposed action and environmental impact statement, and provided

preliminary reviews of the draft environmental impact statement and FEIS. Formal cooperating agencies are:

- U.S. Fish and Wildlife Service, Wyoming Field Office
- USDA Natural Resources Conservation Service, Wyoming State Office
- Wyoming Governor's Office
- Wyoming Department of Agriculture
- Wyoming Game and Fish Department
- Wyoming Office of State Lands and Investments
- Wyoming Weed and Pest Council
- Campbell County, Wyoming
- Campbell County Conservation District
- Campbell County Weed and Pest District
- Converse County, Wyoming
- Converse County Conservation District
- Converse County Weed and Pest District
- Weston County, Wyoming
- Weston County Natural Resource District
- Weston County Weed and Pest District
- Niobrara County, Wyoming
- Niobrara County Conservation District
- Niobrara County Weed and Pest District
- Crook County, Wyoming
- Crook County Conservation District
- Crook County Weed and Pest District

Although not a formal cooperating agency, Forest Service personnel have also worked closely with Agricultural Research Service personnel to access and understand the best available scientific information for the Thunder Basin National Grassland.

Finally, the interdisciplinary team and I have been in communication with the offices of Wyoming Governor Mark Gordon, U.S. Senators John Barrasso and Mike Enzi, and U.S. Representative Liz Cheney. We appreciate their involvement in this plan amendment process.

Forest Service staff completed informal consultation on this project with the U.S. Fish and Wildlife Service Wyoming Field Office. The biological assessment found no effect to northern long-eared bat and black-footed ferret.

Findings Required by Laws and Regulations

Forest Service personnel manage the Thunder Basin National Grassland in conformance with many laws and regulations. My decision is consistent with all relevant laws, regulations, and agency policies. To reach this conclusion, I considered the potential direct, indirect, and cumulative effects of current and reasonably foreseeable activities including the potential for irreversible and irretrievable commitment of resources in the planning area. My decision is based on documentation in the FEIS and the associated project record, including public comments and additional supporting analyses.

Specifically, this decision is consistent with the Bankhead Jones Farm Tenant Act of 1937, the National Historic Preservation Act, the National Environmental Policy Act (NEPA), the Multiple Use Sustained Yield Act of 1960, the Endangered Species Act (ESA), and the National Forest Management Act (NFMA) and its implementing regulations in the 2012 Planning Rule. Following are summaries of how the plan amendment addresses compliance with these laws and regulations. The FEIS includes additional descriptions of how the plan amendment complies with many other laws, regulations, and policies, as amended, including the Migratory Bird Treaty Act of 1918; the Bald and Golden Eagle Protection Act of 1940; the Clean Air Act of 1970; the Clean Water Act of 1972; the Forest and Rangeland Renewable Resources Planning Act of 1974; and the Federal Insecticide, Fungicide, and Rodenticide Act (FEIS chapter 3). To comply with Executive Order 12898 for environmental justice, I considered if there would be any impacts from this plan amendment that would disproportionally impact minority or low-income populations. The Socioeconomic analysis in the FEIS documents there would not be disproportionate human health or environmental impacts to these populations (FEIS pp. 107-108, 113).

Bankhead Jones Farm Tenant Act

The Bankhead-Jones Farm Tenant Act of 1937 (Public Law 75-210) is an act “To create the Farmers’ Home Corporation, to promote secure occupancy of farms and farm homes, to correct the economic instability resulting from some present forms of farm tenancy, and for other purposes.” Land Utilization Project lands, now largely included in national grasslands and national forests, were acquired under this act prior to the repeal of the land acquisition authority Act of October 23, 1962. Management direction for the administration of National Forest System lands under Title III of the Bankhead-Jones Farm Tenant Act, 36 CFR section 213(b) states, “the National Grasslands shall be a part of the National Forest System and permanently held by the Department of Agriculture for administration under the provisions and purposes of title III of the Bankhead-Jones Farm Tenant Act.” Further, the Bankhead-Jones Farm Tenant Act provides:

> “The Secretary [of Agriculture] is authorized and directed to develop a program of land conservation and land utilization, in order thereby to correct maladjustments in land use and thus

> assist in controlling soil erosion, reforestation, preserving natural resources, protecting fish and wildlife, developing and protecting recreation facilities, mitigating floods, preventing impairment of dams and reservoirs, developing energy resources, conserving surface and subsurface moisture, protecting the watershed of navigable streams, and protecting the public lands, health, safety, and welfare, but not to build industrial parks or establish private industrial or commercial enterprises" (Section 31,Title III, Bankhead-Jones Farm Tenant Act of 1937, as amended in 1962, 1966, and 1981)."

Section 213(d) states "the resources shall be managed so as to maintain and improve soil and vegetative cover, and to demonstrate sound and practical principles of land use for the areas in which they are located." Section 213.3 addresses protection, occupancy, use, administration, and exercise of reservations. This section basically states the rules found in 36 CFR section 213 govern the management of these lands. Section 213.4 addresses prior rules and regulations. It states, "Except as provided in section 213.3, the rules and regulations heretofore issued for land utilization projects are hereby superseded as to all such projects administered by the Forest Service, but not as to such projects administered by other agencies."

Multiple use management of National Forest System lands on the national grasslands, including those lands acquired through the Bankhead Jones Farm Tenant Act, is consistent with the act. Multiple uses addressed by this plan amendment include livestock grazing and provision of wildlife habitat, among many others.

National Historic Preservation Act

The National Historic Preservation Act and subsequent amendments require Federal agencies to consider the effects of their undertakings on historic properties. This decision does not approve site-specific ground-disturbing activities. As required under the act, site-specific project areas are subject to requirements for survey, identification of resources, determination of eligibility, evaluation of effect, consultation, and resolution of adverse effects, if any. Projects will comply fully with the laws and regulations that ensure protection of cultural resources. This decision complies with the National Historic Preservation Act and other statues that pertain to the protection of cultural resources.

In addition to consultation on historic properties with the State Historic Preservation Office, the Forest Service also must consult with Native American Tribes regarding potential impacts to traditional cultural properties and cultural resources. Thunder Basin National Grassland personnel are committed to continued government-to-government consultation with Native American Tribes.

National Environmental Policy Act

The National Environmental Policy Act requires public involvement and consideration of potential environmental effects of new projects and programs. My review of the FEIS finds it meets the requirements of the act. Forest Service direction pertaining to implementation of the National Environmental Policy Act and Council on Environmental Quality regulations is contained in chapters 10 and 20 of Forest Service Handbook 1909.15 (Environmental Policy and Procedures). Requirements set forth by the Council on Environmental Quality's regulations for implementing the National Environmental Policy Act (40 CFR 1500-1508) include: (1) considering a broad range of reasonable alternatives; (2) disclosing cumulative effects; (3) using high quality and accurate scientific information; (4) consideration of long-term and short-term effects; and (5) disclosure of unavoidable adverse effects.

During development of this amendment, we provided many opportunities for public involvement, and comments received were used to develop a range of reasonable alternatives that addressed issued raised

by the public, stakeholders, and partners (FEIS chapter 1). Using the best available scientific information, the FEIS provides an adequate effects analysis and discloses the environmental effects of amending grassland plan direction pertaining to prairie dog management.

Adverse effects to prairie dogs and species that depend on prairie dog colonies for habitat are expected while implementing the preferred alternative. However, these effects are not expected to lead to loss of viability for any species in the plan area or range-wide. To the extent possible, while meeting the purpose and need for the project, these effects are avoided or offset through implementation of ecosystem and species-specific plan components. Adverse effects may also be expected to uses such as livestock grazing in areas identified for colony conservation and managed to provide short-stature vegetation for prairie dogs and colony-dependent species. Due to the variable nature of colonies, the ability to control prairie dogs in all action alternatives, and the presence of plague in the system, long-term impacts to livestock grazing are not expected. The plan amendment does not represent an irreversible or irretrievable commitment of resources (FEIS pp. 161-162). Future ground-disturbing activities and projects will be made consistent with the plan amendment and will be subject to additional site-specific environmental analysis.

Endangered Species Act

The Endangered Species Act requires Forest Service personnel to manage for the recovery of threatened and endangered species and the ecosystems upon which they depend. Forest Service personnel are also required to consult with the U.S. Fish and Wildlife Service if a proposed activity may affect a population or critical habitat of a listed species.

A biological assessment was developed for consultation with the U.S. Fish and Wildlife Service Wyoming Field Office. The biological assessment documents the analysis of impacts to the northern long-eared bat and the black-footed ferret. It also documents a finding of no impact from the plan amendment on populations or critical habitat for these species.

The lead agencies for reintroduction of the black-footed ferret in Wyoming are the U.S. Fish and Wildlife Service and the Wyoming Game and Fish Department. While Forest Service management plans have managed some portion of the Thunder Basin National Grassland for potential black-footed ferret reintroduction since 1981, no reintroductions have occurred on the Thunder Basin National Grassland due to sylvatic plague events, limitations on resources for reintroduction efforts, and lack of social acceptance for reintroduction by local landowners and communities (FEIS pp. 8-10). To contribute to the recovery of black-footed ferret, I have decided to set an objective of 10,000 acres of prairie dog colonies in management area 3.67. Ecological conditions appropriate for reintroduction exist in this area and are expected to continue to exist in those 10,000 acres (FEIS p. 133). In addition, a plan standard will require plague mitigation in management area 3.67 annually, perhaps mitigating the impacts of sylvatic plague more effectively than in the past. Finally, designation of boundary management zones and the allowance for control of prairie dogs near private and State lands across the national grassland are intended to improve the social context surrounding prairie dog management and prairie dog conservation and may help to make progress toward future reintroduction.

The Multiple-Use Sustained Yield Act

The Multiple-Use Sustained Yield Act of 1960 (74 Stat. 215: 16 U.S.C. 528-531) requires that economic impacts are considered when establishing management plans or decisions that may affect the management of renewable forest and rangeland resources. Economic impacts, including impacts to local economies related to ranching operations, were analyzed in the socioeconomic analysis (FEIS chapter 3).

My decision meets the requirements of this law by addressing the economic impacts of the project on the local economy.

National Forest Management Act

For this decision, compliance with the National Forest Management Act is based primarily on compliance with regulations for land management planning (the 2012 Planning Rule[6]). The current (2002) grassland plan, as amended, was written under the direction of the 1982 land management planning regulations. In 2012, Forest Service staff issued a new Planning Rule and in 2015 issued agency-wide directives for land management planning in the Forest Service Manual 1920 and Forest Service Handbook 1909.12. An amendment to the 2012 Planning Rule, published in December 2016, described in more detail how it applies to plan amendments rather than plan revisions.[7] The 2012 Planning Rule supersedes the 1982 Planning Rule and any prior planning regulations (36 CFR 219.17(c). It includes requirements for amending forest and grassland land and resource management plans (36 CFR 219.13).

Because this amendment was analyzed in an environmental impact statement, it is considered a significant change in the plan for the purposes of the National Forest Management Act; therefore, a 90-day public comment period was required and provided for the proposed plan amendment and draft environmental impact statement (36 CFR 219.16(a)(2), 36 CFR 219.13(b)(3)), as described under "Public Involvement."

Compliance with the Procedural Requirements of the 2012 Planning Rule

As explained below, this plan amendment complies with the procedural provisions of the 2012 Planning Rule.

1. The responsible official shall use the best available scientific information for assessment; developing, amending, or revising a plan; and monitoring. In doing so, the responsible official shall determine what information is the most accurate, reliable, and relevant to the issues being considered. The responsible official shall document how the best available scientific information was used to inform the assessment, the plan or amendment decision, and the monitoring program as required in sections 219.6(a)(3) and 219.14(a)(3) (36 CFR 2019.3).

    - An interdisciplinary team of resource professionals (FEIS pp. 169-170) compiled and evaluated scientific information relevant to the proposed plan amendment. This information includes material that was readily available from public sources (libraries, research institutions, scientific journals, and online literature), including material recommended by commenters during the April-May 2019 project scoping period. It also includes information obtained from other sources, such as unpublished field surveys, direct experience with implementation of proposed conservation and control tools, consultation with local experts, findings from ongoing research projects, workshops and collaborations, and other professional knowledge and experience. The interdisciplinary team utilized and updated a geographic information system database to evaluate spatial effects resulting from implementation of the alternatives. Resource specialists considered what is most accurate, reliable, and relevant in their use of the best available scientific

[6] 36 Code of Federal Regulations, part 219, subpart A, "National Forest System Land Management Planning" https://www.govinfo.gov/content/pkg/CFR-2018-title36-vol2/xml/CFR-2018-title36-vol2-part219.xml

[7] National Forest System Land Management Planning, Amendment to the 2012 Planning Rule, available at: https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/fseprd527654.pdf.

information. The best available scientific information used to inform the grassland plan amendment is listed in the literature cited sections of the FEIS, appendix D, and appendix E. Literature cited may also include scientific information that is discussed in order to address opposing or misaligned scientific findings, interpretations, or conclusions, as required by the National Environmental Policy Act. Conclusions drawn from synthesis of the best available scientific information are documented in chapter 3 of the FEIS, appendix D, and appendix E.

2. Where the responsible official determines a new assessment is needed to inform an amendment, the responsible official has the discretion to determine the scope, scale, process, and content for the assessment depending on the topic or topics to be addressed (36 CFR 219.6). An assessment is not required to amend a plan (FSH 1909.12, chapter 20, section 21.2).

    - I chose not to pursue formal assessments as part of this plan amendment process. However, evaluations of animal and plant species on a preliminary list of potential species of conservation concern have been completed in support of the plan amendment and are available on the project website.

3. A plan may be amended at any time. Plan amendments may be broad or narrow, depending on the need for change, and should be used to keep plans current and help units adapt to new information or changing conditions. The responsible official has the discretion to determine whether and how to amend the plan and to determine the scope and scale of any amendment (36 CFR 219.13(a)).

    - I have decided to implement a plan amendment that focuses specifically on prairie dog management in order to meet the specific purpose and need identified above. The spatial scale of the amendment spans the full Thunder Basin National Grassland, since many new, amended, and deleted plan components represent grassland-wide and geographic area direction. However, much of the amendment is focused in management area 3.63/3.67 and the Cheyenne River Special Interest Area. The scope of amendment spans many issues and resource areas, as prairie dog management has implications for many facets of natural resource and wildlife management.

4. The responsible official must base an amendment on a preliminary identification of the need to change the plan. The preliminary identification of the need to change the plan may be based on a new assessment; a monitoring report; or other documentation of new information, changed conditions, or changed circumstances (36 CFR 219.13(b)(1)).

    - The need to change the plan is described in the "Background" section above and in the FEIS (pp.13-17). It is based on annual inventory and mapping information for prairie dog colonies, other documentation of new information including correspondence with other land management and wildlife management agencies, and changed conditions.

5. The Forest Service must provide opportunity for public participation and must provide public notification. The responsible official must include information in the initial notice for the amendment about which substantive requirements of the planning rule are likely to be directly related to the amendment (36 CFR 219.13(b)(2)).

    - The plan amendment process provided several opportunities for public participation, including during a 30-day scoping period and a 90-day public comment period, as described above under "Public Participation." Notifications were provided for these and more specific public involvement opportunities such as public meetings and webinars. In the April 2019 notice of intent to develop an environmental impact statement for this project and publicly provided scoping materials, I identified the substantive requirements of the 2012 Planning Rule that are likely to be directly related to the amendment as: 36 CFR 219.8(a) ecological sustainability and

(b) social and economic sustainability, 36 CFR 219.9 diversity of plant and animal communities, and 36 CFR 219.10(a) integrated resource management for ecosystem services and multiple use.

6. The Forest Service is required to amend plans consistent with Forest Service National Environmental Policy Act procedures (36 CFR 219.13 (b)(3)).

    - The draft environmental impact statement and FEIS were prepared to disclose the reasonably foreseeable effects of the proposed amendment and alternatives. Consistency with the National Environmental Policy Act is described above in "Findings Required by Laws and Regulations, National Environmental Policy Act."

7. New or amended plan components must follow the format for plan components set out at section 219.7(e) for the plan direction added or modified by the amendment, except that where an amendment to a plan developed or revised under a prior planning regulation would simply modify the area to which existing direction applies, the responsible official may retain the existing formatting for that direction (36 CFR 219.13(b)(4)).

    - New and amended plan components in the format set in section 219.7 are included in attachment A of this decision.

8. The responsible official must determine which specific substantive requirement(s) of the Planning Rule in sections 219.8 through 219.11 are directly related to the plan direction being added, modified, or removed by the amendment and apply such requirement(s) within the scope and scale of the amendment. The responsible official is not required to apply any substantive requirements in sections 219.8 through 219.11 that are not directly related to the amendment 36 CFR 219.13(b)(5).

    - The substantive requirements of the 2012 Planning Rule directly related to the amendment are: 36 CFR 219.8(a) ecological sustainability and (b) social and economic sustainability, 36 CFR 219.9 diversity of plant and animal communities, and 36 CFR 219.10(a) integrated resource management for ecosystem services and multiple use. The relevance of these requirements is described further in the next section.

9. All plan amendments initiated after May 9, 2015 must be initiated, completed, and approved under the requirements of the 2012 Planning Rule (36 CFR 219.17(b)).

    - This plan amendment process followed provisions of the 2012 Planning Rule.

Compliance with the Substantive Provisions of the 2012 Planning Rule Directly Related to the Plan Amendment

The planning rule requires disclosure of those substantive rule provisions in 36 CFR 219.8 through 219.11 directly related to the amendment. The substantive provisions apply only within the scope and scale of the amendment (36 CFR 219.13(b)(5)).

The substantive requirements of the 2012 Planning Rule directly related to the amendment are: 219.8 Sustainability (a) ecological sustainability and (b) social and economic sustainability; 219.9 diversity of plant and animal communities, (a) ecosystem plan components, (b) additional species-specific plan components, and (c) species of conservation concern; and 219.10 Multiple use (a) integrated resource management for ecosystem services and multiple use. I have applied those provisions within the scope and scale of the amendment.

I found that 219.10(b) is outside the scope of this plan amendment because it applies specifically to plan components for a new plan for plan revision. However, I did consider this regulation when amending plan direction for the Cheyenne River Zoological Special Interest Area consistent with 219.10(b)(1)(vi). I

found that 219.11, timber requirements based on the National Forest Management Act, is not directly related to this amendment because timber management is outside the scope of this amendment.

Scope and Scale of the Amendment
The scope and scale of the amendment is based on the need to change the grassland plan. The scope includes management actions that are directly or indirectly associated with prairie dog management and the scale includes all of the Thunder Basin National Grassland, as grassland-wide direction in chapter 1 of the grassland plan will be amended.

36 CFR 219.8 Sustainability
With respect to the requirements of the rule at 36 CFR 219.8, the analysis in chapter 3 of the FEIS statement shows changes to the plan components maintain ecosystem sustainability and contribute to social and economic sustainability, within the scope of the amendment. This decision applies the substantive provisions described at 219.8.

Ecological Sustainability (219.8(a)).
Forest Service personnel considered the relevant aspects of the list at 36 CFR 219.8(a)(1) for ecological integrity:

i. Interdependence of terrestrial and aquatic ecosystems in the plan area.

ii. Contributions of the plan area to ecological conditions within the broader landscape influenced by the plan area.

Within the scope and scale of the plan amendment, the interdependence of terrestrial and aquatic ecosystems was considered most in the new delineation of the Cheyenne River-Antelope Creek Zoological Special Interest Area with a new focus on riparian communities. New plan direction emphasizes management in the riparian zone, including cottonwood galleries. Contributions of the plan area to ecological conditions within the broader landscape include extensive suitable habitat for black-tailed prairie dogs, and prairie dog colonies that support a suite of associated grassland species and could support the reintroduction of black-footed ferret. The importance of these contributions was considered in development of plan components, including the objective in management area 3.67 to conserve 10,000 acres of prairie dog colonies, standards that require timing restrictions on rodenticide use and recreational shooting of prairie dogs, and a standard that requires plague mitigation in management area 3.67. These plan components are intended to maintain the structure, function, composition, and connectivity of prairie dog ecosystems on the Thunder Basin National Grassland.

iii. Conditions in the broader landscape that may influence the sustainability of resources and ecosystems within the plan area.

iv. System drivers, including dominant ecological processes, disturbance regimes, and stressors, such as natural succession, wildland fire, invasive species, and climate change; and the ability of terrestrial and aquatic ecosystems on the plan area to adapt to change.

Conditions in the broader landscape that may influence the sustainability of resources and ecosystems in the plan area are discussed in cumulative effects analyses (FEIS chapter 3). Within the scope of this plan amendment, those conditions were considered with a focus on beneficial and adverse impacts to rare plants, rangeland vegetation and livestock grazing, socioeconomics, and wildlife.

The plan amendment integrates use of ecological site descriptions on the Thunder Basin National Grassland to delineate land units that respond similarly to management or disturbance and assess their

ability to sustain long-term productivity. Use of ecological site descriptions according to amended plan direction will provide a better understanding of plant community dynamics and disturbances on the grassland and how management can influence plant community composition. In addition, the best scientific information available to describe the vegetation resources and natural disturbance regimes on the Thunder Basin National Grassland was considered and applied to the analysis. A general description of the biophysical environment is provided at the start of the FEIS effects analysis (FEIS pp. 67-69), including descriptions of system drivers and the natural range of variability. These were carried through the analysis. Appendix D and appendix E of the FEIS provide details regarding specific habitat conditions and population stressors for at-risk species in the plan area.

The following elements of the amended grassland plan are intended to conserve prairie dogs to maintain habitat for at-risk species associated with prairie dog colonies:

- new emphasis on ecological site descriptions in geographic area direction
- the amended desired conditions for management area 3.67
- objectives, standards, and guidelines that constrain management in management area 3.67 to manage toward 10,000 acres of prairie dog colonies
- standards that require timing restrictions on rodenticide use and recreational shooting of prairie dogs
- an objective to develop a plague management plan
- a standard that requires an integrated approach to plague management to be implemented annually in management area 3.67.

The objective, standard, and guidelines to manage toward 10,000 acres of prairie dog colonies in management area 3.67 represents an extent of colonies greater than both the mean (8,397 acres) and median (3,538 acres) for management area 3.63 since development of the grassland plan in 2001. In addition to limits on prairie dog control, the new requirement to implement an integrated approach to plague management in management area 3.67 is intended to reduce impacts from sylvatic plague, decrease the likelihood of major plague events, and help promote conservation of 10,000 acres of colonies. Management will aim to conserve and increase the extent of prairie dog colonies when colony acres are less than 10,000 acres and aim to control expansion of prairie dog colonies when colony acres exceed 10,000 acres. These plan components are intended to maintain the structure, function, composition, and connectivity of prairie dog ecosystems on the Thunder Basin National Grassland.

The interdisciplinary team considered the role of the natural range of variation in ecosystems affected by the plan amendment and developed plan components to maintain the natural range of variation and characteristics of a prairie dog ecosystem within management area 3.67 (FSH 1909.12, Chapter 20, 23.11a (1)) or to sustain key ecosystem characteristics and at-risk species (FSH 1909.12, Chapter 20, 23.11a (3)(a)). These include desired conditions to emphasize short-stature vegetation in a mixed-grass prairie ecosystem (MA 3.67 Desired Conditions); the acreage objective for prairie dog colony extent in MA 3.67 (GPA-MA3.67-FWRP-O-07); the objective, standard, and guideline to minimize impacts from the non-native disease sylvatic plague (GPA-MA3.67-FWRP-O-08, GPA-MA3.67-FWRP-ST-18, GPA-FW-FWRP-GL-02); maintenance of grazing on the grassland through existing and amended plan components; and maintenance of Guideline G-6 for use of prescribed fire to maintain or improve habitats. Inclusion of the acreage objective for prairie dog colonies, boundary management zones, and other factors to promote the social and ecological context for reintroduction of black-footed ferret may also increase the likelihood for reintroduction of this native species.

My decision does not base the design of all plan components on those conditions common in the past relative to the natural range of variation. Most notably, anthropogenic control of prairie dogs to manipulate size, extent, and location of prairie dog colonies is not part of the natural range of variation for the ecosystem. In many cases, prairie dog colony growth without control would be contrary to our objectives to balance the social, economic, cultural, and ecological needs in areas of the Thunder Basin National Grassland where prairie dogs are common (FSH 1909.12, Chapter 20, 23.11a (2)(f)). My decision is consistent with the purpose and need for this plan amendment and deviation from the natural range of variation is appropriate to achieve the integrated desired conditions for management on the grassland (FSH 1909.12, Chapter 20, 23.11a (3)(b)).

Appendix E of the FEIS documents consideration of the conditions, trends, and stressors that affect the ability of the plan area to sustain native wildlife, and the rangeland vegetation and livestock grazing analysis (FEIS pp. 78-101) documents consideration of the ability of the plan area to sustain domestic livestock and minimize conflicts between prairie dog management and livestock grazing (FSH 1909.12 chapter 20 section 23.23). The interdisciplinary team developed ecosystem and, where needed, species-specific plan components that would sustain at-risk species based on general scientific and ecological understanding.

v. Wildland fire and opportunities to restore fire adapted ecosystems.

vi. Opportunities for landscape scale restoration.

Wildland fire and opportunities to restore fire adapted ecosystems are largely outside of the scope of the plan amendment. The plan amendment does remove a standard that requires experimental prescribed fire to improve mountain plover habitat but maintains Guideline G-6 for use of prescribed fire to maintain or improve habitats. The amendment does not otherwise address issues related to wildland fire or restrict use of prescribed fire or other means of restoration on the Thunder Basin National Grassland. Opportunities for landscape scale restoration are also largely outside the scope of the plan amendment. However, the integration of ecological site descriptions into plan components for vegetation management will assist in identifying opportunities for restoration and the appropriate restoration pathways for specific ecological sites and plant communities, including those associated with prairie dog colonies.

The Forest Service considered the relevant aspects of the list at 36 CFR 219.8(a)(2) for air, soil, and water:

ii. Soils and soil productivity, including guidance to reduce soil erosion and sedimentation.

Plan components related to soils and soil productivity are generally outside the scope of the amendment. However, some plan components were amended to clarify expected infiltration rates and to state that erosion from prairie dog colonies is expected and within the natural range of variation for the Thunder Basin National Grassland.

The Forest Service considered the relevant aspects of the list at 36 CFR 219.8(a)(3) for riparian areas:

i. The plan must include plan components, including standards or guidelines, to maintain or restore the ecological integrity of riparian areas in the plan area, including plan components to maintain or restore structure, function, composition, and connectivity.

Plan components related to riparian areas are generally outside the scope of the amendment. However, plan components focusing on the ecological integrity of the riparian communities in the Cheyenne River-Antelope Creek Zoological Special Interest Area were included in amended plan direction.

Social and Economic Sustainability (219.8(b))
The Forest Service considered the relevant aspects of the list at 36 CFR 219.8(b), which state the plan must include plan components to guide the plan areas contribution to social and economic sustainability, taking into account:

1. Social, cultural, and economic conditions relevant to the area influenced by the plan
2. Sustainable recreation; including recreation settings, opportunities, and access; and scenic character
3. Multiple uses that contribute to local, regional, and national economies in a sustainable manner
4. Ecosystem services
5. Cultural and historic resources and uses
6. Opportunities to connect people with nature

These aspects of social and economic sustainability were considered and documented in the socioeconomic analysis (FEIS pp. 101-124) within the scope of the plan amendment. Plan components were developed to address issues such as forage for permitted livestock, economic concerns, health and safety concerns, recreational shooting, the cost of plan implementation, and work with a third-party collaborative stakeholder group. See the decision rationale above to understand more how the plan amendment addresses socioeconomic issues.

The interdisciplinary team considered the management plans of local and State governments and agencies, including county land use plans, when developing the plan amendment. A full consistency review of the plan amendment with county land use plans was completed as part of the analysis to understand areas of agreement and disagreement within the scope and scale of the plan amendment (FEIS appendix F).

36 CFR 219.9 Diversity of Plant and Animal Communities
With respect to the requirements at 36 CFR 219.9, the rule states the plan must include ecosystem plan components that maintain or restore the ecological integrity and diversity of ecosystems. The responsible official shall determine whether the ecosystem plan components provide the ecological conditions necessary to contribute to the recovery of Federally listed threatened and endangered species, conserve proposed and candidate species, and maintain a viable population of each species of conservation concern within the plan area. If the responsible official determines the ecosystem plan components are insufficient to provide such ecological conditions, additional, species-specific plan components, including standards or guidelines, must be included in the plan to provide such ecological conditions in the plan area.

For an amendment to a plan developed or revised under a prior planning regulation, if species of conservation concern have not been identified for the plan area and if scoping or environmental effects analysis for the proposed amendment reveals substantial adverse impacts to a specific species, or if the proposed amendment would substantially lessen protections for a specific species, the responsible official must determine whether such species is a potential species of conservation concern, and if so, apply section 219.9(b) with respect to that species as if it were a species of conservation concern (36 CFR 219.13(b)(6)).

Species of conservation concern have not been identified for the Thunder Basin National Grassland. In preparation for amending the 2002 grassland plan, Forest Service personnel prepared species evaluations for 47 animal and plant species that all have factors of rarity and are native to and known to occur on the Thunder Basin National Grassland, meeting the minimum criteria to be considered for identification as potential species of conservation concern, as established in Forest Service directives (FSH1909.12, chapter 10, section 12.52). These evaluations provided background information and the best available scientific information regarding the condition of each species and its habitat on the Thunder Basin National Grassland to assist in the identification of any potential substantial adverse impacts or substantially lessened protections resulting from the plan amendment.

In response to the reviewing officer's instructions to revisit the finding of "no substantial adverse impacts and no substantial lessening of protections" (36 CFR 219.13(b)(6)) published in the FEIS in May 2020, I have reviewed the record as well as the 2012 Planning Rule and policy. The interdisciplinary team has made corrections to the project record to indicate that the 27 species for which evaluations determined that there was "*potential*" for the proposed plan amendment to cause substantial adverse impacts or substantially lessened protections (Preliminary List of Potential Species of Conservation Concern Species Evaluations, table 1 pp. 6-10), are considered to be substantially affected for the purposes of 36 CFR 219.13(b)(6). An exception to this are those plant species for which insufficient information was available to determine the same "*potential*" at the time of evaluations, but analysis later determined that there would not be adverse impacts or lessening of protections as a result of the plan amendment (FEIS pp. D-30-35, table D-6). These corrections are documented as errata to the FEIS and appendices. The requirements at 219.9(b)(1) were applied to this list of 27 animal species.

The 2012 Planning Rule emphasizes use of ecosystem plan components first (219.9(a)), then species-specific plan components (219.9(b)) when needed, to maintain a viable population of each potential species of conservation concern. The interdisciplinary team maintained many existing and developed or revised other ecosystem plan components that describe desired conditions, the desired rate of progress to move toward those conditions, and constraints on projects and activities. Many existing, revised, and newly developed species-specific plan components are also included in the plan amendment where ecosystem plan components were insufficient to provide ecological conditions necessary to maintain a viable population of potential species of conservation concern within the plan area. Species-specific plan components are listed in the analysis for each potential species of conservation concern in Appendix E of the FEIS. Examples of ecosystem plan components are desired conditions for management areas 3.63 and 3.67, objective acreages for prairie dog colony extent, and restrictions on rodenticide use and recreational shooting. Examples of species-specific plan components are specific colony sizes proposed for mountain plover and burrowing owl management.

Contribution to recovery of Federally listed species and effects of the proposed changes in plan direction on a preliminary list of potential species of conservation concern are analyzed in chapter 3 of the FEIS (pp. 150-154), with additional information on impacts to black-footed ferret analyzed in a biological assessment provided to the U.S. Fish and Wildlife Service and in appendix E (FEIS pp. E-40-42). The acreage objective for prairie dog colonies (GPA-MA3.67-FWRP-O-07, which identifies a 10,000-acre objective and a temporary drought objective of 7,500 acres) as well as other plan components that are in place to protect any future reintroductions, will provide the ecological conditions necessary to contribute to the recovery of the federally endangered black-footed ferret (36 CFR 219.9(b)(1). See also the rationale under "*Purpose, Support ecological conditions that do not preclude reintroduction of the black-footed ferret*" and "*How Issues were Considered and Addressed, Black-footed ferret recovery*," in the sections above.

CFR 219.10 Multiple Use

With respect to the requirement of the rule at 36 CFR 219.10(a), the rule requires plan components for integrated resource management to provide for ecosystem services and multiple uses in the plan area. I considered the relevant aspects of the list at 36 CFR 219.10(a):

1. Aesthetic values, air quality, cultural and heritage resources, ecosystem services, fish and wildlife species, forage, geologic features, grazing and rangelands, habitat and habitat connectivity, recreation settings and opportunities, riparian areas, scenery, soil, surface and subsurface water quality, timber, trails, vegetation, viewsheds, wilderness, and other relevant resources and uses.

Plan components exist to address many of these considerations. Within the scope and scale of the plan amendment, new and amended plan components address ecosystem services, wildlife species, forage, grazing and rangelands, habitat and habitat connectivity, recreation opportunities, riparian areas, soil, and vegetation.

4. Opportunities to coordinate with neighboring landowners to link open spaces and take into account joint management objectives where feasible and appropriate.

The Thunder Basin National Grassland represents a landscape of linked open spaces among a checkerboard of landownerships. Plan components that support wildlife habitat and species viability were retained, amended, or developed to ensure viability within the plan area (i.e., only National Forest System land within the administrative boundary of the Thunder Basin National Grassland). However, the contributions of State and private land on and near the Thunder Basin National Grassland, including those managed with candidate conservation agreements and candidate conservation agreements with assurances, were considered.

Plan components also address joint management objectives for prairie dog control such as designation of boundary management zones in management area 3.67, allowance for prairie dog control within ¼ mile of state and private land elsewhere on the grassland, and allowance for a variety of conservation and control tools.

5. Habitat conditions, subject to the requirements of §219.9, for wildlife, fish, and plants commonly enjoyed and used by the public; for hunting, fishing, trapping, gathering, observing, subsistence, and other activities (in collaboration with federally recognized Tribes, Alaska Native Corporations, other Federal agencies, and State and local governments).

See response above to 219.9 for plan components related to wildlife habitat. These include species that individuals enjoy observing and species that individuals shoot recreationally.

6. Land status and ownership, use, and access patterns relevant to the plan area.

Land status and ownership, use, and access patterns relevant to the plan area were major considerations as part of this plan amendment due to the ownership patterns on the Thunder Basin National Grassland. As described above, plan components address joint management objectives with adjacent landowners, grazing permittees, and grazing association members for prairie dog conservation and control. These include designation of boundary management zones in management area 3.67, allowance for prairie dog control within ¼ mile of State and private land elsewhere on the grassland, and allowance for a variety of conservation and control tools.

7. Reasonably foreseeable risks to ecological, social, and economic sustainability.

Reasonably foreseeable risks to ecological, social, and economic sustainability are discussed in cumulative effects analyses (FEIS chapter 3). Those include extreme weather events, droughts, and sylvatic plague outbreaks. Within the scope of this plan amendment, those conditions were considered and plan components developed with a focus on beneficial and adverse impacts to rangeland vegetation and livestock grazing, socioeconomics, and wildlife.

8. System drivers, including dominant ecological processes, disturbance regimes, and stressors, such as natural succession, wildland fire, invasive species, and climate change; and the ability of the terrestrial and aquatic ecosystems on the plan area to adapt to change (§219.10(a)(8)).

See response to 219.8(a)(1)(iii)(iv)(v).

Requirements for plan components listed at 219.10(b) are for a new plan or plan revision. However, I did consider this regulation when amending plan direction for the Cheyenne River Zoological Special Interest Area consistent with 219.10(b)(1)(vi). The regional forester documented her decision to modify the special interest area in a letter to me in May 2020, and the decision is finalized as part of this record of decision. Boundaries for Management Area 2.1b – Cheyenne River Zoological Special Interest Area will be redrawn to follow the riparian corridor along the Cheyenne River and Antelope Creek. It will be renamed Management Area 2.1b – Cheyenne River-Antelope Creek Zoological Special Interest Area and its management emphasis changed to focus on riparian communities (figure 1). Plan components for this SIA are included in attachment A.

Transition to Amended Plan Direction

Application to future projects and authorizations

Projects with decisions made on or after the effective date of this plan amendment must be consistent with the grassland plan as amended at the time of such decision. Projects with decisions made before the effective date of the plan amendment may proceed unchanged; however, any related authorization for such a project that was not made with the project decision would need to be consistent with the forest plan as amended at the time of the authorization.

For newly proposed mineral development and leasing actions, standards, guidelines, and stipulations in the permit would be updated consistent with the record of decision for the plan amendment. Should an oil and gas operator propose to change their surface operations or propose new development or leases, the new standards, guidelines, and stipulations would be applied.

A new closure order will need to be signed to implement the seasonal shooting restrictions in management area 3.67.

The Forest Service will pursue implementation of the amended plan in collaboration with partners through continued use of agreements including the Good Neighbor Authority.

Application to existing authorizations and approved projects or activities

The plan amendment was developed with the understanding that when a plan is amended, existing permits must be made consistent with the amended plan "as soon as practicable" (16 USC 1604(i)). I do not expect any existing authorizations or permits to need to be changed to be consistent with this plan. In particular, grazing permits with the three grazing associations on the Thunder Basin National Grassland will not be modified. Any existing permits that are found to require modification will be modified subject to valid existing rights.

This plan amendment replaces the 2009 plan amendment and record of decision for prairie dog management and supersedes any prior or conflicting management direction. The 2015 Black-tailed prairie dog conservation assessment and management strategy is rescinded as part of this plan amendment.

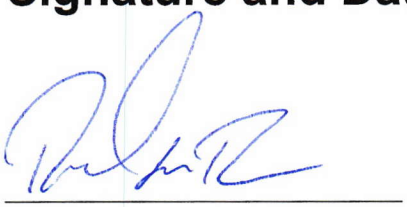
Effective Date of the Amendment

The effective date of the Thunder Basin National Grassland 2020 Plan Amendment will be 30 days after *notice of its approval.*

Contact Person

For additional information concerning this decision, please contact Monique Nelson, Planning Team Leader, at Monique.nelson@usda.gov or 307-275-0956.

Signature and Date



11/6/2020

RUSSELL M. BACON — DATE

Forest Supervisor

Medicine Bow-Routt National Forests and Thunder Basin National Grassland

Attachment A: Amended Plan Components

This attachment provides amended plan direction for the Thunder Basin National Grassland Land and Resource Management Plan. The list of plan components is not comprehensive. It only includes those existing plan components that are proposed for amendment during this plan amendment process. The full grassland plan is available on the Medicine Bow Routt National Forests and Thunder Basin National Grassland website and on the project website (http://www.fs.fed.us/nepa/nepa_project_exp.php?project=55479).

Definitions for Plan Components

On National Forest System land, land and resource management plans guide management activities and contain desired conditions and objectives as well as standards and guidelines that provide direction for project planning and design. Forest Service plan component definitions are in the planning rule at 36 CFR 219.7(e)(1):

- **Desired Condition (DC)** - A description of specific social, economic, and/or ecological characteristics of the plan area, or a portion of the plan area, toward which management of the land and resources should be directed. Desired conditions must be described in terms that are specific enough to allow progress toward their achievement to be determined, but do not include completion dates.
- **Objective (O)** - A concise, measurable, and time-specific statement of a desired rate of progress toward a desired condition or conditions. Objectives should be based on reasonably foreseeable budgets.
- **Standard (ST)** - A mandatory constraint on project and activity decision-making, established to help achieve or maintain the desired condition or conditions, to avoid or mitigate undesirable effects, or to meet applicable legal requirements.
- **Guideline (GL)** - A constraint on project and activity decision-making that allows for departure from its terms, so long as the purpose of the guideline is met. Guidelines are established to help achieve or maintain a desired condition or conditions, to avoid or mitigate undesirable effects, or to meet applicable legal requirements.

Management approaches are defined and presented in attachment B.

Chapter 1 Amended Plan Components:

Component Number	2002 Plan Direction, as Amended in 2009	2020 Plan Amendment
Ch. 1, Goals and Objectives, Goal 4.b, Public and Organizational Relations, Objective 2	Objective: Work in cooperation with federal, state, and county agencies, individuals, and non-governmental organizations for control of noxious weeds and invasive species and animal damage.	Objective: Meet annually with Federal, State, and county agencies and governments; individuals; and non-governmental organizations to determine priorities and approaches for control of noxious weeds and invasive species and for seeking collaborative solutions to prairie dog management.
Ch. 1, Standards and Guidelines, Physical Resources, B.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	Manage land treatments to maintain enough organic ground cover in each land unit to prevent harmful increased runoff (exceptions may occur in special habitat

Component Number	2002 Plan Direction, as Amended in 2009	2020 Plan Amendment
	situations (e.g. prairie dog habitat)). Standard	situations (e.g., prairie dog habitat). Guideline
Ch. 1, Standards and Guidelines, Biological Resources, F.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	In prairie dog colonies known 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
Ch. 1, Standards and Guidelines, Biological Resources, F.19	To help provide suitable habitat for black-footed ferrets and their young during the breeding and whelping seasons, prohibit the following activities within prairie dog colonies, or those portions of larger colonies, occupied or thought to be occupied by black-footed 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	To help provide suitable habitat for black-footed ferrets and their young during the breeding and whelping seasons, prohibit the following activities between March 1 and August 31 within prairie dog colonies, or those portions of larger colonies, occupied by black-footed ferrets: construction of roads, water impoundments, and oil and gas facilities; reclamation; gravel mining operations; drilling of water wells; oil and gas drilling. Standard
Ch. 1, Standards and Guidelines, Biological Resources, F.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 prairie dog colonies, or those portions of larger colonies, occupied or thought to be occupied by black-footed ferrets from March 1 through August 31: construction (e.g. pipelines, utilities, fencing); seismic exploration; permitted recreation events involving large groups of people. Guideline	To help provide suitable habitat for black-footed ferrets and their young during the breeding and whelping seasons, the following activities should not be authorized between March 1 and August 31 within prairie dog colonies, or those portions of larger colonies, occupied by black-footed ferrets: construction of pipelines, utilities, and fences; seismic exploration; permitted recreation events involving large groups of people. Guideline
Ch. 1, Standards and Guidelines, Biological Resources, F.21 (as revised in Amendment 3, 2009)	Any net loss of suitable black-footed ferret habitat as a result of 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 development. Standard	*Remove*
Ch. 1, Standards and Guidelines, Biological Resources, F.22	For routine maintenance, access to oil and gas facilities in prairie dog colonies occupied or thought to be occupied by black-footed ferrets should be limited to daylight hours. This does not apply to emergency repairs. Guideline	For routine maintenance, access to oil and gas facilities in prairie dog colonies occupied by black-footed ferrets should be limited to daylight hours to minimize impacts to ferrets. This does not apply to emergency repairs. Guideline
Ch. 1, Standards and Guidelines, Biological Resources, F.23	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	*Remove*
Ch. 1, Standards and Guidelines, Biological Resources, F.27	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	*Remove*

Component Number	2002 Plan Direction, as Amended in 2009	2020 Plan Amendment
	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	
Ch. 1, Standards and Guidelines, Biological Resources, F.28[8]	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, prohibit the following activities in plover nesting areas or within 0.25 miles of plover nests between April 1 and August 15: construction of roads, water impoundments, and oil and gas facilities; reclamation; seismic exploration; gravel mining operations; oil and gas drilling; drilling of water wells; prescribed burning. Standard
Ch. 1, Standards and Guidelines, Biological Resources, F.29[8]	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 disturbances and risks to nesting mountain plover, the following activities should not be authorized in plover nesting areas or within 0.25 miles of plover nests between April 1 and August 15: construction of pipelines, utilities, and fencing; workover operations for maintenance of oil and gas wells; permitted recreation events involving large groups of people; grasshopper spraying. Guideline
Ch. 1, Standards and Guidelines, Biological Resources, F.32	Vegetation management projects in suitable mountain plover habitat will be designed to maintain or improve mountain plover habitat. Standard	*Remove*
Ch. 1, Standards and Guidelines, Biological Resources, F.34[8]	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	To improve or maintain mountain plover nesting and brooding habitat, vegetation management techniques that enhance short-stature vegetation communities should be considered for use in projects that occur in identified mountain plover habitat. Guideline
Ch. 1, Standards and Guidelines, Biological Resources, F.62	To optimize habitat for burrowing owls, manage for active prairie dog colonies that are larger than 80 acres. Guideline	To optimize habitat for burrowing owls, manage for prairie dog colonies that are larger than 80 acres where appropriate and consistent with geographic area and management area direction. Do not collapse prairie dog burrows from April 15

[8] In 2011, the US Fish and Wildlife Service withdrew the proposed rule to list the mountain plover as threatened. The mountain plover remains on the USDA Forest Service Regional Forester's List of Sensitive Species for the Rocky Mountain Region. An administrative correction approved as part of this plan amendment will move plan components associated with mountain plover management from the heading "Threatened, Endangered, and Proposed Species," to the heading, "Sensitive Plant and Animal Species."

Component Number	2002 Plan Direction, as Amended in 2009	2020 Plan Amendment
		through August 31 or where burrowing owls are present at time of implementation. Guideline
GPA-FW-FWRP-GL-01	Does not exist	To ensure use of best practices and comply with applicable Federal and State law and policy, translocation of prairie dogs in selected areas may occur only after coordination with appropriate Federal and State wildlife agencies, county officials, grazing associations, and non-governmental organizations. Guideline
Ch. 1, Standards and Guidelines, Biological Resources, F.63	Coordinate and consult with the appropriate wildlife management agencies and local landowners to prohibit prairie dog shooting in areas 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. Standard	*Remove*
GPA-FW-FWRP-GL-02	Does not exist	An integrated approach to plague management (e.g., using tools such as deltamethrin and fipronil) may be implemented to mitigate the transmission of sylvatic plague. Guideline
Ch. 1, Standards and Guidelines, Biological Resources, F.65	Evaluate prairie dog management 3 years after management plan approval. Evaluate prairie dog management again when the total acres of active prairie dog colonies expand to 35,000 acres (approximately 7%) of suitable habitat on the Thunder Basin National Grassland. Standard	*Remove*
Ch. 1, Standards and Guidelines, Biological Resources, F.65b (as added in Amendment 3, 2009)	Adopt and implement a black-tailed prairie dog management strategy. This strategy is made a part of this plan (appendix N). Standard	*Remove*
Ch. 1, Standards and Guidelines, Biological Resources, H.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. Standard Damage to private and public facilities, such as cemeteries and residences. Standard On site-specific colonies where unwanted colonization onto adjacent non-Federal lands is occurring and other tools are impractical, ineffective or have been proven to be unsuccessful. Guideline Colonies outside Categories 1, 2, 3, and 4 (as identified in strategy) if the Forest Service determines they are not needed for	Outside of Management Area 3.67, authorize use of prairie dog control only in these situations: Public health and safety risks occur in the immediate area, including any prairie dog colony within 1 mile of a residence. On site-specific colonies where damage to private and public facilities such as cemeteries, dams, ditches, and buildings is occurring. On site-specific colonies where unwanted encroachment onto adjacent non-Federal lands is occurring. On other site-specific colonies where control is requested, after consideration of impacts to nesting, breeding, and denning

Component Number	2002 Plan Direction, as Amended in 2009	2020 Plan Amendment
	habitat for prairie dogs, black-footed ferrets or other associated species. Guideline.	habitat for species associated with prairie dog colonies. Standard
Ch. 1, Standards and Guidelines, Biological Resources, H.2	From January 1 through September 30, don't use rodenticides (above-ground baits) to reduce prairie dog populations. This is necessary to reduce risk to migratory birds. To reduce risk to other wildlife, don't use burrow fumigants in prairie dog colonies. Standard	From February 1 through September 30, do not use rodenticides to reduce prairie dog populations. Standard
GPA-FW-ADM-GL-03	Does not exist	To avoid bait aversion, application of a specific grain-bait rodenticide should not occur for more than 3 consecutive years in a specific location. Guideline
GPA-FW-ADM-ST-04	Does not exist	The use of anticoagulant rodenticides is prohibited. Standard
GPA-FW-ADM-ST-05	Does not exist	Fumigants may be used only in boundary management zones, 1-mile buffers around residences, and within ¼ mile of non-Federal land. Fumigants may be used only after 2 consecutive applications of zinc phosphide at that site in the 2 years prior to use of fumigants. Standard
GPA-FW-ADM-ST-06	Does not exist	Requests for control of prairie dogs within 1 mile of residences will be the highest priority for control, and all prairie dog control tools not otherwise restricted in this plan are available within 1 mile of residences at any time. Standard
Ch. 1, Standards and Guidelines, Biological Resources, H.3	In consultation with the Wyoming Game and Fish Department, determine the appropriate response to complaints of unwanted colonization on adjoining private and state lands. A spectrum of management tools will be considered based on site-specific evaluations. Guideline	Before implementing prairie dog control, the responsible official or district ranger should consider whether adjacent landowners are engaging in concurrent control efforts to ensure effective treatments. Guideline
Ch. 1, Standards and Guidelines, Biological Resources, I.3	As needed, or at a minimum annually, adjust management activities to account for the effects of natural processes (for example, drought, fire, flood, grasshoppers) on forage availability. Guideline	To prevent or minimize impacts to biotic integrity, soil and site stability, hydrologic function, and forage availability, adjust management activities to account for the effects of natural processes (e.g., drought, fire, flood, grasshoppers, prairie dogs, etc.). Guideline
Ch. 1, Standards and Guidelines, Administration, M.3	Consider the following when opportunities to acquire lands occur (Reference 36 CFR 254): Lands with important or unique resources, such as water frontage, wetlands, flood plains 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 resources or	Consider the following when opportunities to acquire lands occur to ensure consistency with local and regional priorities (Reference 36 CFR 254): Lands with important or unique resources, such as water frontage, wetlands, flood plains 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,

Component Number	2002 Plan Direction, as Amended in 2009	2020 Plan Amendment
	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 that already exist on nearby National Forest System lands are a high priority. Important botanical, wildlife, and fishery management areas. This includes lands supporting rare plant communities. Lands with important value for outdoor recreation purposes. Lands 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 reduce Forest Service administrative costs and improvement of management efficiency. This includes: reducing miles of landline boundaries and number of corners, special uses, title claims, rights-of-way grants and easements, numbers of allotments and intermingled ownership livestock pastures, and other factors that decrease administrative costs and improve management efficiency. 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 within or around existing blocks of public ownership of at least 2,000 acres. Lands that would correct maladjustments of land use as described in the Bankhead-Jones Farm Tenant Act. Guideline	important historical, heritage resources 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. Important botanical, wildlife, and fishery management areas. This includes lands supporting rare plant communities. Lands with important value for outdoor recreation purposes. Lands 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 reduce Forest Service administrative costs and improvement of management efficiency. This includes: reducing miles of landline boundaries and number of corners, special uses, title claims, rights-of-way grants and easements, numbers of allotments and intermingled ownership livestock pastures, and other factors that decrease administrative costs and improve management efficiency. 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 within or around existing blocks of public ownership of at least 2,000 acres. Lands that would correct maladjustments of land use as described in the Bankhead-Jones Farm Tenant Act. Guideline

Chapter 2 Amended Plan Components

Component Number	2002 Plan Direction, as Amended in 2009	2020 Plan Amendment
Ch. 2, Broken Hills GA, Desired Conditions	The desired condition in this geographic area is an open, scenic landscape with little evidence of human influence or activity. Insects, diseases, wildfire, and grazing	The desired condition in this geographic area is an open, scenic landscape. Insects, diseases, wildfire, and grazing patterns will create plant communities with diverse

Component Number	2002 Plan Direction, as Amended in 2009	2020 Plan Amendment
	patterns will create plant communities with diverse composition (seral stages) and structure. Natural outbreaks of native insects and diseases will be allowed to proceed without intervention unless there is a substantial threat to high-value resources. This area will have a healthy and diverse mix of grasses, including the following species: western wheatgrass, needle and thread grass, green needlegrass, little bluestem, blue grama, and prairie junegrass. Habitat suitability and effectiveness will be maintained for key wildlife species. Prairie dog colonies will be maintained or increased. The streams and riparian areas will be in proper functioning condition or moving towards proper functioning condition (BLM 1993). Riparian areas/woody draws will be managed to maintain or enhance different age classes of herbaceous plants, shrubs, and trees. Desired riparian species include sedges, rushes, snowberry, rose, willow, cottonwood, as well as other woody plants. Soils in this geographic area will have high infiltration rates and low soil compaction, resulting in minimal overland flow events. Primitive conditions with minimal facility development will be emphasized. Mineral developments, such as oil and gas wells and pipelines, will be present but visually subordinate to the landscape in the mid and background. Pastures will be large.	composition and structure. Natural outbreaks of native insects and diseases will be allowed to proceed without intervention unless there is a substantial threat to high-value resources. This area will have a healthy and diverse mix of grasses, sedges, forbs, and shrubs, including species such as: western wheatgrass (*Pascopyrum smithii*), needle and thread (*Hesperostipa comata*), green needlegrass (*Nassella viridula*), little bluestem (*Schizachyrium scoparium*), blue grama (*Bouteloua gracilis*), prairie Junegrass (*Koeleria macrantha*), buffalograss (*Bouteloua dactyloides*), sand dropseed (*Sporobolus cryptandrus*), sixweeks fescue (*Vulpia octoflora*), marsh muhly (*Muhlenbergia racemosa*), sedges (*Carex* spp.), scarlet globemallow (*Sphaeralcea coccinea*), woolly plantain (*Plantago patagonica*), birdfoot sagebrush (*Artemisia pedatifida*), and plains pricklypear (*Opuntia polyacantha*). Vegetation communities will exist in a variety of states or plant community phases designed to meet multiple desired conditions across management areas. A mosaic of habitats and forage conditions will exist on the landscape as a result of planned vegetation management and natural disturbances. Habitat suitability and effectiveness will be maintained for key wildlife species. Prairie dog colonies are a key component of the ecosystem in some areas. Prairie dog colonies fluctuate in size and location and exist among a spectrum of grassland ecological sites. These colonies provide habitat for a variety of associated species. The streams and riparian areas will be in proper functioning condition or moving towards proper functioning condition (BLM 1993). Riparian areas/woody draws will be managed to maintain or enhance different age classes of herbaceous plants, shrubs, and trees. Desired riparian species include sedges (*Carex* spp.), rushes (*Juncus* spp.), snowberry (*Symphoricarpos* spp.), rose (*Rosa* spp.), willow (*Salix* spp.), cottonwood (*Populus* spp.), as well as other woody plants. Soils in this geographic area will have native soil infiltration rates and low soil compaction, resulting in minimal overland flow events.

Component Number	2002 Plan Direction, as Amended in 2009	2020 Plan Amendment
		Primitive conditions with minimal facility development will be emphasized. Mineral developments, such as oil and gas wells and pipelines, will be present but visually subordinate to the landscape in the mid and background. Pastures will typically be large.
Ch. 2, Broken Hills GA, Management Area Prescription Allocation	1.31, Backcountry Recreation Nonmotorized: 6,545 acres 2.1, Special Interest Area: 14,170 acres 3.63, Black-footed Ferret Reintroduction Area: 13,300 acres 3.65, Rangelands with Diverse Natural-Appearing Landscapes: 71,499 acres 3.68, Big Game Range: 18,426 acres 5.12, General Forest and Rangelands: Range Vegetation Emphasis: 33,577 acres	1.31, Backcountry Recreation Nonmotorized: 6,546 acres 2.1, Special Interest Area: 15,054 acres 3.65, Rangelands with Diverse Natural-Appearing Landscapes: 77,260 acres 3.67, Short-Stature Vegetation Emphasis: 14,478 acres 3.68, Big Game Range: 14,285 acres 5.12, General Forest and Rangelands: Range Vegetation Emphasis: 33,020 acres 8.4, Mineral Production and Development: 5 acres
Ch. 2, Broken Hills GA, Objectives, Vegetation, 1	Desired seral stages (plant species composition) and vegetation structure across the geographic area are as follows: Desired Seral Stages - Objective Late: 15 to 25% Late Intermediate: 30 to 40% Early Intermediate: 25 to 35% Early: 10 to 20% Across the landscape, grass and sagebrush are intermingled. In some areas, grasses are the dominant species; in other areas, sagebrush is the dominant species. The vegetation composition varies depending on seral stage. In grass-dominated communities in mid to late seral stages, the dominant native grass species are western wheatgrass, needle and thread grass, green needlegrass, and little bluestem. In grass-dominated sites in early to mid seral stages, grasses such as blue grama often dominate. Threeawn and blue grama are commonly the dominant grasses on prairie dog colonies in early seral stage. In sagebrush-dominated communities, there is more sagebrush in the mid to late seral stages than in early to mid seral stages. As the community moves from early to late seral stage, the percentage of grasses declines. In the understory, the dominant native plant species are western wheatgrass and green needlegrass.	*Remove (see added content in desired conditions)*

Component Number	2002 Plan Direction, as Amended in 2009	2020 Plan Amendment
	Desired Vegetation Structure - Objective High: 30 to 40% Moderate: 40 to 50% Low: 15 to 25% High vegetation structure can be achieved on moderate and highly productive grasslands dominated by mid grasses (late or late intermediate seral stages). Grasslands on moderate to highly productive soils but in an early seral condition and dominated by short-stature plant species generally do not have the capability to provide high vegetation structure. Management changes may be necessary to move some existing seral conditions toward a higher seral condition to meet structure objectives. Prairie dog colonies provide low structure, as do grassland areas grazed by livestock at high intensities. Low vegetation structure can result from a dominance of low stature plant species or from heavy utilization of mid grasses. The height and density of grasses, forbs and sedges in the understory of sagebrush stands are important factors influencing structure for several wildlife species. The relationship of structure to quality nesting habitat for sage grouse is described in Appendix H. Appendix H describes quality nesting as sagebrush understories with residual herbaceous cover averaging at least 7 inches in height. This objective is primarily provided when sagebrush habitat types are in a late seral condition.	
Ch. 2, Broken Hills GA, Objectives, Infrastructure, 1	Increase the average pasture size as opportunities arise over the next 15 years. Objective	Increase pasture size as opportunities arise over the next 15 years, unless smaller pasture sizes would meet or make progress toward desired conditions for resources such as vegetation, wildlife habitat, and scenery. Objective
Ch. 2, Broken Hills GA, Objectives, Wildlife, Black-tailed Prairie Dog (MIS), 1	Maintain an increasing trend of black-tailed prairie dog populations across the geographic area over the next 10 to 15 years. Objective	Contribute to achieving the objective of 10,000 acres of prairie dog colonies in Management Area 3.67 each year during the life of the plan. Objective
Ch. 2, Broken Hills GA, Objectives, Wildlife, Black-tailed Prairie Dog (MIS), 2	Maintain and expand the current distribution of black-tailed prairie dogs across the geographic area over the next 10 to 15 years. Objective	*Remove*
Ch. 2, Broken Hills GA, Objectives,	Improve the complex of prairie dog colonies (10 or more colonies with distances	*Remove*

Component Number	2002 Plan Direction, as Amended in 2009	2020 Plan Amendment
Wildlife, Black-tailed Prairie Dog (MIS), 3	between nearest colonies not exceeding 6 miles) in the central part of this geographic area over the next 10 to 15 years. This area has been designated as MA 3.63. Objective	
Ch. 2, Broken Hills GA, Objectives, Wildlife, Black-tailed Prairie Dog (MIS), 4	To help increase prairie dog populations and habitat for associated species, allow and encourage expansion of the prairie dog colony complex (10 or more colonies with a total colony acreage of at least 1,000 acres and intercolony distances of less than 6 miles) in the central portion of this 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	*Remove*
Ch. 2, Broken Hills GA, Standards and Guidelines, Vegetation, 2	Manage vegetation by Management Area (MA) according to the following table[9] to achieve the desired seral stage (plant species composition) objectives for the Geographic Area. Guideline	To maintain or move toward desired vegetation communities, ecological site descriptions should be used to inform site-specific project and activity decisions related to soil and vegetation management, including suitability of land uses, vegetation management and restoration activities, and grazing management. Guideline
Ch. 2, Broken Hills GA, Standards and Guidelines, Vegetation, 3	Manage vegetation by Management Area (MA) according to the following table[10] to achieve the desired structural objectives for the Geographic Area. Guideline	*Remove*
Ch. 2, Broken Hills GA, Standards and	Maintain or increase average pasture size. Guideline	Maintain or increase average pasture size to allow opportunities to enhance habitat

[9] Existing plan component: Broken Hills Geographic Area Guideline 2. Targets and value ranges for percentage of management areas in late, late intermediate, early intermediate, and early seral stages.

Management Area	Late: Target	Late: Range	Late Intermediate: Target	Late Intermediate: Range	Early Intermediate: Target	Early Intermediate: Range	Early: Target	Early: Range
1.31	25%	25-30%	35%	35-40%	30%	25-30%	10%	10-15%
2.1	15%	15-20%	35%	30-35%	35%	30-35%	15%	15-20%
3.63	15%	10-15%	10%	10-15%	15%	15-20%	60%	60-65%
3.65	20%	20-25%	35%	30-35%	30%	30-35%	15%	10-15%
3.68	25%	25-30%	35%	30-35%	25%	25-30%	15%	10-15%
5.12	15%	15-20%	35%	30-35%	35%	30-35%	15%	15-20%

[10] Existing plan component: Broken Hills Geographic Area Guideline 3. Targets and value ranges for percentage of management areas in high, moderate, and low structural stages.

Management Area	High: Target	High: Range	Moderate: Target	Moderate: Range	Low: Target	Low: Range
1.31	30%	30-35%	50%	45-50%	20%	15-20%
2.1	30%	30-35%	50%	45-50%	20%	15-20%
3.63	30%	30-35%	10%	10-15%	60%	60-65%
3.65	35%	30-35%	50%	45-50%	15%	10-15%
3.68	40%	40-45%	50%	45-50%	10%	10-15%
5.12	40%	40-45%	40%	40-45%	20%	15-20%

Component Number	2002 Plan Direction, as Amended in 2009	2020 Plan Amendment
Guidelines, Infrastructure, 1		management and connectivity, unless smaller pastures would contribute to meeting desired conditions for the geographic or management area. Guideline
Ch. 2, Broken Hills GA, Standards and Guidelines, Wildlife, Black-tailed Prairie Dog (MIS), 1	Emphasize an active landownership adjustment program adjacent to the complex, throughout the 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. Landownership adjustments may need to be completed in some locations before implementation of some actions to accelerate prairie dog population growth. Guideline	Emphasize an active landownership adjustment program throughout the geographic area to reduce private land conflicts over prairie dog management and to enhance long-term management opportunities in this area. Guideline
Ch. 2, Broken Hills GA, Standards and Guidelines, Wildlife, Black-tailed Prairie Dog (MIS), 2	A range of 23,616 to 31,488 acres of low structure grasslands is prescribed for this geographic area. Much of this acreage should be located in the northeast portion of the geographic area in areas adjoining existing colonies and where prairie dog colonies are known to have occurred in the recent past. This will accelerate expansion of existing colonies and re-establishment of past colonies that are not along private land boundaries. Guideline	*Remove*
Ch. 2, Cellers Rosecrans GA, Desired Conditions	Insects, diseases, wildfire, and grazing patterns will create plant communities with diverse composition and structure. This area will have a healthy and diverse mix of grasses, including the following species: western wheatgrass, needle and thread grass, green needlegrass, little bluestem, blue grama, and prairie junegrass. Management activities will maintain or enhance hardwood and coniferous trees, woody shrub inclusions and other beneficial plant communities and increase vegetative diversity. Tree densities within stands will vary to create landscape-scale diversity. Fire will be used in some areas to promote open park-like timber stands. Late successional-stage vegetation may be found in the area. Riparian areas/woody draws will be managed to maintain or enhance different age classes of herbaceous plants, shrubs, and trees. Some areas will be managed to achieve rapid development of cottonwood and willow riparian habitats. Desired riparian species include sedges, rushes, snowberry, rose, willow, cottonwood, and other woody plants.	Insects, diseases, wildfire, and grazing patterns will create plant communities with diverse composition and structure. This area will have a healthy and diverse mix of grasses, sedges, forbs, and shrubs, including species such as: western wheatgrass (*Pascopyrum smithii*), needle and thread (*Hesperostipa comata*), green needlegrass (*Nassella viridula*), little bluestem (*Schizachyrium scoparium*), blue grama (*Bouteloua gracilis*), prairie Junegrass (*Koeleria macrantha*), buffalograss (*Bouteloua dactyloides*), sand dropseed (*Sporobolus cryptandrus*), sixweeks fescue (*Vulpia octoflora*), marsh muhly (*Muhlenbergia racemosa*), sedges (*Carex* spp.), scarlet globemallow (*Sphaeralcea coccinea*), woolly plantain (*Plantago patagonica*), birdfoot sagebrush (*Artemisia pedatifida)*, and plains pricklypear (*Opuntia polyacantha*). Vegetation communities will exist in a variety of states or plant community phases designed to meet multiple desired conditions across management areas. A mosaic of habitats and forage conditions will exist on the landscape as a result of planned vegetation management and natural disturbances.

Component Number	2002 Plan Direction, as Amended in 2009	2020 Plan Amendment
	Management direction in Special Interest Areas will emphasize cultural and zoological resources. Plant and animal species and communities associated with black-footed ferrets and black-tailed prairie dogs will be actively restored. Primitive conditions with minimal facility development will be emphasized. Mineral developments such as oil and gas wells and pipelines will be present but visually subordinate in the mid and background. Pastures will remain large.	Prairie dog colonies are a key component of the ecosystem in some areas. Prairie dog colonies fluctuate annually in size and location and exist among a spectrum of grassland ecological sites. These colonies provide habitat for a variety of associated species. Management activities will maintain or enhance hardwood and coniferous trees, woody shrub inclusions and other beneficial plant communities and increase vegetative diversity. Tree densities within stands will vary to create landscape-scale diversity. Fire will be used in some areas to promote open park-like timber stands. Late successional-stage vegetation may be found in the area. Riparian areas/woody draws will be managed to maintain or enhance different age classes of herbaceous plants, shrubs, and trees. Some areas will be managed to achieve rapid development of cottonwood and willow riparian habitats. Desired riparian species include sedges (*Carex* spp.), rushes (*Juncus* spp.), snowberry (*Symphoricarpos* spp.), rose (*Rosa* spp.), willow (*Salix* spp.), cottonwood (*Populus* spp.), and other woody plants. Management direction in Special Interest Areas will emphasize cultural and zoological resources. In the Cheyenne River-Antelope Creek Zoological Special Interest Area, plant and animal species associated with riparian areas will predominate (see chapter 3 for specific management direction regarding Special Interest Areas). Primitive conditions with minimal facility development will be emphasized. Mineral developments such as oil and gas wells and pipelines will be present but visually subordinate in the mid- and background. Pastures will typically be large.
Ch. 2, Cellers Rosecrans GA, Unique Attributes	A proposed Cheyenne River Valley reintroduction site for the endangered black-footed ferret. Significant populations of black-tailed prairie dogs. Large, consolidated areas of public land.	Host to populations of black-tailed prairie dogs and associated wildlife species. Large, consolidated areas of public land.

Component Number	2002 Plan Direction, as Amended in 2009	2020 Plan Amendment
Ch. 2, Cellers Rosecrans GA, Management Area Prescription Allocation	2.1, Special Interest Areas: 6,940 acres 2.2, Research Natural Areas: 1,213 acres 3.63, Black-footed Ferret Reintroduction Area: 31,126 acres 3.68, Big Game Range: 6 acres 5.12, General Forest and Rangelands: Range Vegetation Emphasis: 81,562 acres	2.1, Special Interest Areas: 5,850 acres 2.2, Research Natural Areas: 1,215 acres 3.65, Rangelands with Diverse Natural Appearing Landscapes: 2,526 acres 3.67, Short-Stature Vegetation Emphasis: 27,857 acres 3.68, Big Game Range: 17 acres 5.12, General Forest and Rangelands: Range Vegetation Emphasis: 84,413 acres 6.1, Rangelands with Broad Resource Emphasis: 2 acres
Ch. 2, Cellers Rosecrans GA, Objectives, Vegetation, 1	Desired seral stages (plant species composition) and vegetation structure across the geographic area are as follows: Desired Seral Stages - Objective Late: 10 to 20% Late Intermediate: 20 to 30% Early Intermediate: 25 to 35% Early: 25 to 35% Across the landscape, grass and sagebrush are intermingled. In some areas, grasses are the dominant species; in other areas, sagebrush is the dominant species. The vegetation composition varies depending on seral stage. In grass-dominated communities in mid to late seral stages, the dominant native grass species are western wheatgrass, needle and thread grass, green needlegrass, and little bluestem. In grass dominated sites in early to mid seral stages, grasses such as blue grama often dominate. Threeawn and blue grama are commonly the dominant grasses on prairie dog colonies in early seral stage. In sagebrush-dominated communities, there is more sagebrush in the mid to late seral stages than in early to mid seral stages. As the community moves from early to late seral stage, the percentage of grasses declines. In the understory, the dominant native plant species are western wheatgrass and green needlegrass. Desired Vegetation Structure - Objective High: 30 to 40% Moderate: 25 to 35% Low: 30 to 40%	*Remove (see added content in desired conditions)*

Component Number	2002 Plan Direction, as Amended in 2009	2020 Plan Amendment
	High vegetation structure can be achieved on moderate and highly productive grasslands dominated by mid grasses (late or late intermediate seral stages). Grasslands on moderate to highly productive soils but in an early seral condition and dominated by short-stature plant species generally do not have the capability to provide high vegetation structure. Management changes may be necessary to move some existing seral conditions toward a higher seral condition to meet structure objectives. Prairie dog colonies provide low structure, as do grassland areas grazed by livestock at high intensities. Low vegetation structure can result from a dominance of low stature plant species or from heavy utilization of mid grasses. The height and density of grasses, forbs and sedges in the understory of sagebrush stands are important factors influencing structure for several wildlife species. The relationship of structure to quality nesting habitat for sage grouse is described in Appendix H. Appendix H describes quality nesting as sagebrush understories with residual herbaceous cover averaging at least 7 inches in height. This objective is primarily provided when sagebrush habitat types are in a late seral condition.	
Ch. 2, Cellers Rosecrans GA, Objectives, Infrastructure, 1	The landscape is dominated by large pasture size. Objective	Increase pasture size as opportunities arise over the next 15 years, unless smaller pasture sizes would meet or make progress toward desired conditions for resources such as vegetation, wildlife habitat, and scenery. Objective
Ch. 2, Cellers Rosecrans GA, Objectives, Wildlife, Black-tailed Prairie Dog (MIS), 1	Maintain an increasing trend of black-tailed prairie dog populations across the geographic area over the next 10 to 15 years. Objective	Contribute to achieving the objective of 10,000 acres of prairie dog colonies in Management Area 3.67 each year during the life of the plan. Objective
Ch. 2, Cellers Rosecrans GA, Objectives, Wildlife, Black-tailed Prairie Dog (MIS), 2	Maintain and expand the current distribution of black-tailed prairie dogs across the geographic area over the next 10 to 15 years. Objective	*Remove*
Ch. 2, Cellers Rosecrans GA, Objectives, Wildlife, Black-tailed Prairie Dog (MIS), 3	Improve the complex of prairie dog colonies (10 or more colonies with distances between nearest colonies not exceeding 6 miles) in the southwestern part of this geographic area over the next 10 to 15 years. This area has been designated as MA 3.63. Objective	*Remove*

Component Number	2002 Plan Direction, as Amended in 2009	2020 Plan Amendment
Ch. 2, Cellers Rosecrans GA, Objectives, Wildlife, Black-tailed Prairie Dog (MIS), 4	To help increase prairie dog populations and habitat for associated species, allow and encourage expansion of the prairie dog colony complex (10 or more colonies with a total colony acreage of at least 1,000 acres and intercolony distances of less than 6 miles) in the central portion of this 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	*Remove*
Ch. 2, Cellers Rosecrans GA, Standards and Guidelines, Vegetation, 2	Manage vegetation by Management Area (MA) according to the following table11 to achieve the desired seral stage (plant species composition) objectives for the Geographic Area. The table has a target percent displayed, with an acceptable range of percents included. Guideline	To maintain or move toward desired vegetation communities, ecological site descriptions should be used to inform site-specific project and activity decisions related to soil and vegetation management, including suitability of land uses, vegetation management and restoration activities, and grazing management. Guideline
Ch. 2, Cellers Rosecrans GA, Standards and Guidelines, Vegetation, 3	Manage vegetation by Management Area (MA) according to the following table12 to achieve the desired structural objectives for the Geographic Area. The table has a target percent displayed, with an acceptable range of percents included. Guideline	*Remove*
Ch. 2, Cellers Rosecrans GA, Standards and Guidelines, Infrastructure, 1	Maintain or increase average pasture size in Management Areas 2.1, 2.2, and 3.63. Guideline	Maintain or increase average pasture size to allow opportunities to enhance habitat management and connectivity, unless smaller pastures would contribute to meeting desired conditions for the geographic or management area. Guideline

[11] Existing plan component: Cellers Rosecrans Geographic Area Guideline 2. Targets and value ranges for percentage of management areas in late, late intermediate, early intermediate, and early seral stages.

Management Area	Late: Target	Late: Range	Late Intermediate: Target	Late Intermediate: Range	Early Intermediate: Target	Early Intermediate: Range	Early: Target	Early: Range
2.1	15%	15-20%	35%	30-35%	35%	30-35%	15%	15-20%
2.2	15%	15-20%	35%	30-35%	35%	30-35%	15%	15-20%
3.63	15%	10-15%	10%	10-15%	15%	15-20%	60%	60-65%
3.68	25%	25-30%	35%	30-35%	25%	25-30%	15%	10-15%
5.12	15%	15-20%	35%	30-35%	35%	30-35%	15%	15-20%

[12] Existing plan component: Cellers Rosecrans Geographic Area Guideline 3. Targets and value ranges for percentage of management areas in high, moderate, and low structural stages.

Management Area	High: Target	High: Range	Moderate: Target	Moderate: Range	Low: Target	Low: Range
2.1	30%	30-35%	50%	45-50%	20%	15-20%
2.2	40%	35-40%	40%	35-40%	20%	15-20%
3.63	30%	30-35%	10%	10-15%	60%	60-65%
3.68	40%	40-45%	50%	45-50%	10%	10-15%
5.12	40%	40-45%	40%	40-45%	20%	15-20%

Component Number	2002 Plan Direction, as Amended in 2009	2020 Plan Amendment
Ch. 2, Cellers Rosecrans GA, Standards and Guidelines, Wildlife, Black-tailed Prairie Dog (MIS), 1	Emphasize an active landownership adjustment program adjacent to the complex, throughout the 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. Landownership adjustments may need to be completed in some locations before implementation of some actions to accelerate prairie dog population growth. Guideline	Emphasize an active landownership adjustment program throughout the geographic area to reduce private land conflicts over prairie dog management and to enhance long-term management opportunities in this area. Guideline
Ch. 2, Cellers Rosecrans GA, Standards and Guidelines, Wildlife, Black-tailed Prairie Dog (MIS), 2	A range of 36,324 to 42,378 acres of low structure grasslands is prescribed for this geographic area. Much of this acreage should be located in the northeast portion of the geographic area in areas adjoining existing colonies and where prairie dog colonies are known to have occurred in the recent past. This will accelerate expansion of existing colonies and re-establishment of past colonies that are not along private land boundaries. Guideline	*Remove*
Ch. 2, Fairview Clareton GA, Desired Conditions	Grazing will be a significant activity. The area will be managed to provide a rural/agricultural landscape. This area will have a healthy and diverse mix of grasses, including the following species: western wheatgrass, needle and thread grass, green needlegrass, little bluestem, blue grama, and prairie junegrass. The streams and riparian areas will be in proper functioning condition or moving towards proper functioning condition (BLM 1993). Riparian areas/woody draws will be managed to maintain or enhance different age classes of herbaceous plants, shrubs, and trees. Desired riparian species include sedges, rushes, snowberry, rose, willow, cottonwood, as well as other woody plants. Soils in this geographic area will have high infiltration rates and low soil compaction, resulting in minimal overland flow events. There will be more development and a moderate number of facilities in this geographic area. Facilities and landscape modifications will be visible but reasonably mitigated to blend with natural features. Portions of the area will contain frequent fences, livestock developments, and roads. Structures associated with mineral development (e.g., oil and gas wells, pipelines) will be clearly visible. In some locations, operations will dominate the landscape; in others, they will be visually	Grazing will be a significant activity. The area will be managed to provide a rural/agricultural landscape. This area will have a healthy and diverse mix of grasses, including the following species: western wheatgrass (*Pascopyrum smithii*), needle and thread (*Hesperostipa comata*), green needlegrass (*Nassella viridula*), little bluestem (*Schizachyrium scoparium*), blue grama (*Bouteloua gracilis*), and prairie Junegrass (*Koeleria macrantha*). Vegetation communities will exist in a variety of states or plant community phases designed to meet multiple desired conditions across management areas. A mosaic of habitats and forage conditions will exist on the landscape as a result of planned vegetation management and natural disturbances. The streams and riparian areas will be in proper functioning condition or moving towards proper functioning condition (BLM 1993). Riparian areas/woody draws will be managed to maintain or enhance different age classes of herbaceous plants, shrubs, and trees. Desired riparian species include sedges (*Carex* spp.), rushes (*Juncus* spp.), snowberry (*Symphoricarpos* spp.), rose (*Rosa* spp.), willow (*Salix* spp.), cottonwood (*Populus s*pp.), as well as other woody plants. Soils in this geographic area will have native soil infiltration rates and low soil

Component Number	2002 Plan Direction, as Amended in 2009	2020 Plan Amendment
	subordinate in the background. At the conclusion of mineral activities, lands will be reclaimed to approximate pre-disturbance levels or to meet a specific purpose consistent with the management area direction.	compaction, resulting in minimal overland flow events.
Ch. 2, Fairview Clareton GA, Management Area Prescription Allocation	2.1, Special Interest Areas: 5,670 acres 4.32 Dispersed Recreation High Use: 5,650 5.12, General Forest and Rangelands: Range Vegetation Emphasis: 14,165 acres 6.1, Rangeland with Broad Resource Emphasis: 66,653	2.1, Special Interest Areas: 5,669 acres 4.32 Dispersed Recreation High Use: 5,652 5.12, General Forest and Rangelands: Range Vegetation Emphasis: 14,195 acres 6.1, Rangeland with Broad Resource Emphasis: 66,179
Ch. 2, Fairview Clareton GA, Objectives, Vegetation, 1	Desired seral stages (plant species composition) and vegetation structure across the geographic area are as follows: Desired Seral Stages - Objective Late: 10 to 20% Late: Intermediate 30 to 40% Early: Intermediate 30 to 40% Early: 10 to 20% Across the landscape, grass and sagebrush are intermingled. In some areas, grasses are the dominant species; in other areas, sagebrush is the dominant species. The vegetation composition varies depending on seral stage. In grass-dominated communities in mid to late seral stages, the dominant native grass species are western wheatgrass, needle and thread grass, green needlegrass, and little bluestem. In grass-dominated sites in early to mid-seral stages, grasses such as blue grama often dominate. Threeawn and blue grama are commonly the dominant grasses on prairie dog colonies in early seral stage. In sagebrush-dominated communities, there is more sagebrush in the mid to late seral stages than in early to mid seral stages. As the community moves from early to late seral stage, the percentage of grasses declines. In the understory, the dominant native plant species are western wheatgrass and green needlegrass. Desired Vegetation Structure - Objective High: 25 to 35% Moderate: 45 to 55% Low: 15 to 25%	*Remove (see additions to desired conditions)*

Component Number	2002 Plan Direction, as Amended in 2009	2020 Plan Amendment
	High vegetation structure can be achieved on moderate and highly productive grasslands dominated by mid grasses (late or late intermediate seral stages). Grasslands on moderate to highly productive soils but in an early seral condition and dominated by short-stature plant species generally do not have the capability to provide high vegetation structure. Management changes may be necessary to move some existing seral conditions toward a higher seral condition to meet structure objectives. Prairie dog colonies provide low structure, as do grassland areas grazed by livestock at high intensities. Low vegetation structure can result from a dominance of low stature plant species or from heavy utilization of mid grasses. The height and density of grasses, forbs and sedges in the understory of sagebrush stands are important factors influencing structure for several wildlife species. The relationship of structure to quality nesting habitat for sage grouse is described in Appendix H. Appendix H describes quality nesting as sagebrush understories with residual herbaceous cover averaging at least 7 inches in height. This objective is primarily provided when sagebrush habitat types are in a late seral condition.	
Ch. 2, Fairview Clareton GA, Standards and Guidelines, Vegetation, 2	Manage vegetation by Management Area (MA) according to the following table13 to achieve the desired seral stage (plant species composition) objectives for the Geographic Area. The table has a target percent displayed, with and acceptable range of percents included. Guideline	To maintain or move toward desired vegetation communities, ecological site descriptions should be used to inform site-specific project and activity decisions related to soil and vegetation management, including suitability of land uses, vegetation management and restoration activities, and grazing management. Guideline

[13] Existing plan component: Fairview Clareton Geographic Area Guideline 2. Targets and value ranges for percentage of management areas in late, late intermediate, early intermediate, and early seral stages.

Management Area	Late: Target	Late: Range	Late Intermediate: Target	Late Intermediate: Range	Early Intermediate: Target	Early Intermediate: Range	Early: Target	Early: Range
2.1	15%	15-20%	35%	30-35%	35%	30-35%	15%	15-20%
4.32	15%	15-20%	35%	30-35%	35%	30-35%	15%	15-20%
5.12	15%	15-20%	35%	30-35%	35%	30-35%	15%	15-20%
6.1	15%	15-20%	35%	30-35%	35%	30-35%	15%	15-20%

Component Number	2002 Plan Direction, as Amended in 2009	2020 Plan Amendment
Ch. 2, Fairview Clareton GA, Standards and Guidelines, Vegetation, 3	Manage vegetation by Management Area (MA) according to the following table14 to achieve the desired structural objectives for the Geographic Area. The table has a target percent displayed, with and acceptable range of percents included. Guideline	*Remove*
Ch. 2, Hilight Bill GA, Desired Conditions	Minerals exploration and development and livestock grazing will be significant management activities in this geographic area. In some areas, there may be restrictions on public use to ensure public safety and to avoid unreasonable interference with mineral operations. In those areas where mining is emphasized, reclamation activities will restore the area to a reasonable level of its pre-mining condition. In areas with other management emphases, existing vegetative diversity and structural conditions will be maintained and enhanced. This area will have a healthy and diverse mix of grasses, including the following species: western wheatgrass, needle and thread grass, green needlegrass, little bluestem, blue grama, and prairie junegrass. The streams and riparian areas will be in proper functioning condition or moving towards proper functioning condition (BLM 1993). Riparian areas/woody draws will be managed to maintain or enhance different age classes of herbaceous plants, shrubs, and trees. Desired riparian species include sedges, rushes, snowberry, rose, willow, cottonwood, as well as other woody plants. Soils in this geographic area will have high infiltration rates and low soil compaction, resulting in minimal overland flow events. There will be more development and a moderate number of facilities in this geographic area. Facilities and landscape modifications will be visible but reasonably mitigated to blend with natural features.	Minerals exploration and development and livestock grazing will be significant management activities in this geographic area. In some areas, there may be restrictions on public use to ensure public safety and to avoid unreasonable interference with mineral operations. In those areas where mining is emphasized, reclamation activities will restore the area to a reasonable level of its pre-mining condition. In areas with other management emphases, existing vegetative diversity and structural conditions will be maintained and enhanced. This area will have a healthy and diverse mix of grasses, including the following species: western wheatgrass (*Pascopyrum smithii*), needle and thread (*Hesperostipa comata*), green needlegrass (*Nassella viridula*), little bluestem (*Schizachyrium scoparium*), blue grama (*Bouteloua gracilis*), and prairie Junegrass (*Koeleria macrantha*). Vegetation communities will exist in a variety of states or plant community phases designed to meet multiple desired conditions across management areas. A mosaic of habitats and forage conditions will exist on the landscape as a result of planned vegetation management and natural disturbances. The streams and riparian areas will be in proper functioning condition or moving towards proper functioning condition (BLM 1993). Riparian areas/woody draws will be managed to maintain or enhance different age classes of herbaceous plants, shrubs, and trees. Desired riparian species include

[14] Existing plan component: Fairview Clareton Geographic Area Guideline 3. Targets and value ranges for percentage of management areas in high, moderate, and low structural stages.

Management Area	High: Target	High: Range	Moderate: Target	Moderate: Range	Low: Target	Low: Range
2.1	30%	30-35%	50%	45-50%	20%	15-20%
4.32	30%	30-35%	50%	45-50%	20%	15-20%
5.12	40%	40-45%	40%	40-45%	20%	15-20%
6.1	30%	25-30%	50%	50-55%	20%	15-20%

Component Number	2002 Plan Direction, as Amended in 2009	2020 Plan Amendment
	Higher fence densities and intensive mineral development may occur. Mineral developments and facilities such as coal mines, railroads, oil and gas wells, and pipelines will be present and will often dominate the landscape. When mineral activities are concluded, the disturbed lands will be reclaimed to blend in with adjacent undisturbed areas.	sedges (*Carex* spp.), rushes (*Juncus* spp.), snowberry (*Symphoricarpos* spp.), rose (*Rosa* spp.), willow (*Salix* spp.), cottonwood (*Populus s*pp.), as well as other woody plants. Soils in this geographic area will have native soil infiltration rates and low soil compaction, resulting in minimal overland flow events. There will be more development and a moderate number of facilities in this geographic area. Facilities and landscape modifications will be visible but reasonably mitigated to blend with natural features. Higher fence densities and intensive mineral development may occur. Mineral developments and facilities such as coal mines, railroads, oil and gas wells, and pipelines will be present and will often dominate the landscape. When mineral activities are concluded, the disturbed lands will be reclaimed to blend in with adjacent undisturbed areas.
Ch. 2, Hilight Bill GA, Management Area Prescription Allocation	3.68, Big Game Range: 1,354 acres 6.1, Rangeland with Broad Resource Emphasis: 51,440 acres 8.4, Mineral Production and Development: 47,993 acres	3.65, Rangelands with Diverse Natural Appearing Landscapes: 69 acres 3.68, Big Game Range: 876 acres 6.1, Rangeland with Broad Resource Emphasis: 51,219 acres 8.4, Mineral Production and Development: 45,904 acres
Ch. 2, Hilight Bill GA, Objectives, Vegetation, 1	Desired seral stages (plant species composition) and vegetation structure across the geographic area are as follows: Desired Seral Stages - Objective Late: 10 to 20% Late Intermediate: 30 to 40% Early Intermediate: 30 to 40% Early: 10 to 20% Across the landscape, grass and sagebrush are intermingled. In some areas, grasses are the dominant species; in other areas, sagebrush is the dominant species. The vegetation composition varies depending on seral stage. In grass-dominated communities in mid to late seral stages, the dominant native grass species are western wheatgrass, needle and thread grass, green needlegrass, and little bluestem. In grass-dominated sites in early to mid seral stages, grasses such as	*Remove (see additions to desired conditions)*

Component Number	2002 Plan Direction, as Amended in 2009	2020 Plan Amendment
	blue grama often dominate. Threeawn and blue grama are commonly the dominant grasses on prairie dog colonies in early seral stage. In sagebrush-dominated communities, there is more sagebrush in the mid to late seral stages than in early to mid seral stages. As the community moves from early to late seral stage, the percentage of grasses declines. In the understory, the dominant native plant species are western wheatgrass and green needlegrass. Desired Vegetation Structure - Objective High: 25 to 35% Moderate: 45 to 55% Low: 15 to 25% High vegetation structure can be achieved on moderate and highly productive grasslands dominated by mid grasses (late or late intermediate seral stages). Grasslands on moderate to highly productive soils but in an early seral condition and dominated by short-stature plant species generally do not have the capability to provide high vegetation structure. Management changes may be necessary to move some existing seral conditions toward a higher seral condition to meet structure objectives. Prairie dog colonies provide low structure, as do grassland areas grazed by livestock at high intensities. Low vegetation structure can result from a dominance of low stature plant species or from heavy utilization of mid grasses. The height and density of grasses, forbs and sedges in the understory of sagebrush stands are important factors influencing structure for several wildlife species. The relationship of structure to quality nesting habitat for sage grouse is described in Appendix H. Appendix H describes quality nesting as sagebrush understories with residual herbaceous cover averaging at least 7 inches in height. This objective is primarily provided when sagebrush habitat types are in a late seral condition.	

Component Number	2002 Plan Direction, as Amended in 2009	2020 Plan Amendment
Ch. 2, Hilight Bill GA, Standards and Guidelines, Vegetation, 2	Manage vegetation by Management Area (MA) according to the following table15 to achieve the desired seral stage (plant species composition) objectives for the Geographic Area. The table has a target percent displayed, with and acceptable range of percents included. Guideline	To maintain or move toward desired vegetation communities, ecological site descriptions should be used to inform site-specific project and activity decisions related to soil and vegetation management, including suitability of land uses, vegetation management and restoration activities, and grazing management. Guideline
Ch. 2, Hilight Bill GA, Standards and Guidelines, Vegetation, 3	Manage vegetation by Management Area (MA) according to the following table16 to achieve the desired structural objectives for the Geographic Area. The table has a target percent displayed, with and acceptable range of percents included. Guideline	*Remove*
Ch. 2, Spring Creek GA, Desired Conditions	Insects, diseases, wildfire, and grazing patterns will create plant communities with diverse composition and structure. This area will have a healthy and diverse mix of grasses, including the following species: western wheatgrass, needle and thread grass, green needlegrass, little bluestem, blue grama, and prairie junegrass. Management activities will maintain or enhance hardwood and coniferous trees, woody shrub inclusions and other beneficial plant communities and increase vegetative diversity. Tree densities within stands will vary to create landscape-scale diversity. Fire will be used in some areas to promote open park-like timber stands. Late successional-stage vegetation may be found in the area.	Insects, diseases, wildfire, and grazing patterns will create plant communities with diverse composition and structure. This area will have a healthy and diverse mix of grasses, including the following species: western wheatgrass (*Pascopyrum smithii*), needle and thread (*Hesperostipa comata*), green needlegrass (*Nassella viridula*), little bluestem (*Schizachyrium scoparium*), blue grama (*Bouteloua gracilis*), and prairie Junegrass (*Koeleria macrantha*). Management activities will maintain or enhance hardwood and coniferous trees, woody shrub inclusions and other beneficial plant communities and increase vegetative diversity. Tree densities within stands will vary to create landscape-scale diversity. Fire will be used in some areas to promote open

[15] Existing plan component: Highlight Bill Geographic Area Guideline 2. Targets and value ranges for percentage of management areas in late, late intermediate, early intermediate, and early seral stages.

Management Area	Late: Target	Late: Range	Late Intermediate: Target	Late Intermediate: Range	Early Intermediate: Target	Early Intermediate: Range	Early: Target	Early: Range
3.68	25%	25-30%	35%	30-35%	25%	25-30%	15%	10-15%
6.1	15%	15-20%	35%	30-35%	35%	30-35%	15%	15-20%
8.4	15%	15-20%	35%	30-35%	35%	30-35%	15%	15-20%

[16] Existing plan component: Highlight Bill Geographic Area Guideline 3. Targets and value ranges for percentage of management areas in high, moderate, and low structural stages.

Management Area	High: Target	High: Range	Moderate: Target	Moderate: Range	Low: Target	Low: Range
3.68	40%	40-45%	50%	45-50%	10%	10-15%
6.1	30%	25-30%	50%	50-55%	20%	15-20%
8.4	30%	25-30%	50%	50-55%	20%	15-20%

Component Number	2002 Plan Direction, as Amended in 2009	2020 Plan Amendment
	Riparian areas/woody draws will be managed to maintain or enhance different age classes of herbaceous plants, shrubs, and trees. Some areas will be managed to achieve rapid development of cottonwood and willow riparian habitats. Desired riparian species include sedges, rushes, snowberry, rose, willow, cottonwood, and other woody plants. Areas with heavy recreation use will have picnicking and camping facilities available. Motorized and nonmotorized trails will have signs to distinguish different uses. Primitive conditions with minimal facility development will be emphasized. Mineral developments such as oil and gas wells and pipelines will be present but visually subordinate in the mid and background. Pastures will remain large.	park-like timber stands. Late successional-stage vegetation may be found in the area. Vegetation communities will exist in a variety of states or plant community phases designed to meet multiple desired conditions across management areas. A mosaic of habitats and forage conditions will exist on the landscape as a result of planned vegetation management and natural disturbances. Riparian areas/woody draws will be managed to maintain or enhance different age classes of herbaceous plants, shrubs, and trees. Some areas will be managed to achieve rapid development of cottonwood and willow riparian habitats. Desired riparian species include sedges (*Carex* spp.), rushes (*Juncus* spp.), snowberry (*Symphoricarpos* spp.), rose (*Rosa* spp.), willow (*Salix* spp.), cottonwood (*Populus s*pp.), as well as other woody plants. Areas with heavy recreation use will have picnicking and camping facilities available. Motorized and nonmotorized trails will have signs to distinguish different uses. Primitive conditions with minimal facility development will be emphasized. Mineral developments such as oil and gas wells and pipelines will be present but visually subordinate in the mid and background. Pastures will remain large to the extent feasible.
Ch. 2, Spring Creek GA, Management Area Prescription Allocation	3.65, Rangelands with Diverse Natural-appearing Landscapes: 12,332 acres 4.32, Dispersed Recreation High Use: 1,929 acres 5.12, General Forest and Rangeland: Range Vegetation Emphasis: 34,481 acres	3.65, Rangelands with Diverse Natural-appearing Landscapes: 12,334 acres 4.32, Dispersed Recreation High Use: 1,929 acres 5.12, General Forest and Rangeland: Range Vegetation Emphasis: 34,208 acres
Ch. 2, Spring Creek GA, Objectives, Vegetation, 1	Desired seral stages (plant species composition) and vegetation structure across the geographic area are as follows: Desired Seral Stages - Objective Late: 10 to 20% Late Intermediate: 30 to 40% Early Intermediate: 30 to 40% Early: 10 to 20% Across the landscape, grass and sagebrush are intermingled. In some areas, grasses are the dominant species; in other	*Remove (see additions to desired conditions)*

Component Number	2002 Plan Direction, as Amended in 2009	2020 Plan Amendment
	areas, sagebrush is the dominant species. The vegetation composition varies depending on seral stage. In grass-dominated communities in mid to late seral stages, the dominant native grass species are western wheatgrass, needle and thread grass, green needlegrass, and little bluestem. In grassdominated sites in early to mid seral stages, grasses such as blue grama often dominate. Threeawn and blue grama are commonly the dominant grasses on prairie dog colonies in early seral stage. In sagebrush-dominated communities, there is more sagebrush in the mid to late seral stages than in early to mid seral stages. As the community moves from early to late seral stage, the percentage of grasses declines. In the understory, the dominant native plant species are western wheatgrass and green needlegrass. Desired Vegetation Structure (Objective) High: 35 to 45% Moderate: 35 to 45% Low: 15 to 25% High vegetation structure can be achieved on moderate and highly productive grasslands dominated by mid grasses (late or late intermediate seral stages). Grasslands on moderate to highly productive soils but in an early seral condition and dominated by short-stature plant species generally do not have the capability to provide high vegetation structure. Management changes may be necessary to move some existing seral conditions toward a higher seral condition to meet structure objectives. Prairie dog colonies provide low structure, as do grassland areas grazed by livestock at high intensities. Low vegetation structure can result from a dominance of low stature plant species or from heavy utilization of mid grasses. The height and density of grasses, forbs and sedges in the understory of sagebrush stands are important factors influencing structure for several wildlife species. The relationship of structure to quality nesting habitat for sage grouse is described in	

Component Number	2002 Plan Direction, as Amended in 2009	2020 Plan Amendment
	Appendix H. Appendix H describes quality nesting as sagebrush understories with residual herbaceous cover averaging at least 7 inches in height. This objective is primarily provided when sagebrush habitat types are in a late seral condition.	
Ch. 2, Spring Creek GA, Standards and Guidelines, Vegetation, 2	Manage vegetation by Management Area (MA) according to the following table17 to achieve the desired seral stage (plant species composition) objectives for the Geographic Area. The table has a target percent displayed, with and acceptable range of percents included. Guideline	To maintain or move toward desired vegetation communities, ecological site descriptions should be used to inform site-specific project and activity decisions related to soil and vegetation management, including suitability of land uses, vegetation management and restoration activities, and grazing management. Guideline
Ch. 2, Spring Creek GA, Standards and Guidelines, Vegetation, 3	Manage vegetation by Management Area (MA) according to the following table18 to achieve the desired structural objectives for the Geographic Area. The table has a target percent displayed, with and acceptable range of percents included. Guideline	*Remove*
Ch. 2, Upton Osage GA, Desired Conditions	Insects, diseases, wildfire, and grazing patterns will create plant communities with diverse composition and structure. This area will have a healthy and diverse mix of grasses, including the following species: western wheatgrass, needle and thread grass, green needlegrass, little bluestem, blue grama, and prairie junegrass. Management activities will maintain or enhance hardwood and coniferous trees, woody shrub inclusions, and other beneficial plant communities and increase vegetative diversity. Tree densities within stands will vary to create landscape-scale diversity. Fire will be used in some areas to	Insects, diseases, wildfire, and grazing patterns will create plant communities with diverse composition and structure. This area will have a healthy and diverse mix of grasses, including the following species: western wheatgrass (*Pascopyrum smithii*), needle and thread (*Hesperostipa comata*), green needlegrass (*Nassella viridula*), little bluestem (*Schizachyrium scoparium*), blue grama (*Bouteloua gracilis*), and prairie Junegrass (*Koeleria macrantha*). Vegetation communities will exist in a variety of states or plant community phases designed to meet multiple desired conditions

[17] Existing plan component: Spring Creek Geographic Area Guideline 2. Targets and value ranges for percentage of management areas in late, late intermediate, early intermediate, and early seral stages.

Management Area	Late: Target	Late: Range	Late Intermediate: Target	Late Intermediate: Range	Early Intermediate: Target	Early Intermediate: Range	Early: Target	Early: Range
3.65	20%	20-25%	35%	30-35%	30%	30-35%	15%	10-15%
4.32	15%	15-20%	35%	30-35%	35%	30-35%	15%	15-20%
5.12	15%	15-20%	35%	30-35%	35%	30-35%	15%	15-20%

[18] Existing plan component: Spring Creek Geographic Area Guideline 3. Targets and value ranges for percentage of management areas in high, moderate, and low structural stages.

Management Area	High: Target	High: Range	Moderate: Target	Moderate: Range	Early: Target	Early: Range
3.65	35%	30-35%	50%	45-50%	15%	10-15%
4.32	30%	30-35%	50%	45-50%	20%	15-20%
5.12	40%	40-45%	40%	40-45%	20%	15-20%

Component Number	2002 Plan Direction, as Amended in 2009	2020 Plan Amendment
	promote open park-like timber stands. Late successional-stage vegetation may be found in the area. Riparian areas/woody draws will be managed to maintain or enhance different age classes of herbaceous plants, shrubs, and trees. Some areas will be managed to achieve rapid development of cottonwood and willow riparian habitats. Desired riparian species include sedges, rushes, snowberry, rose, willow, cottonwood, and other woody plants. Areas with heavy recreation use will have picnicking and camping facilities available. Motorized and nonmotorized trails will have signs to distinguish different uses. Primitive conditions with minimal facility development will be emphasized. Mineral developments such as oil and gas wells and pipelines will be present but visually subordinate in the mid and background. Bentonite mining operations will be present, but will typically be less than 160 acres in size. Some mines may be much larger than 160 acres, but they will not dominate the landscape. When mineral activities are concluded, the disturbed lands will be reclaimed to blend in with adjacent undisturbed areas. Pastures will remain large.	across management areas. A mosaic of habitats and forage conditions exist on the landscape as a result of planned vegetation management and natural disturbances. Management activities will maintain or enhance hardwood and coniferous trees, woody shrub inclusions, and other beneficial plant communities and increase vegetative diversity. Tree densities within stands will vary to create landscape-scale diversity. Fire will be used in some areas to promote open park-like timber stands. Late successional-stage vegetation may be found in the area. Riparian areas/woody draws will be managed to maintain or enhance different age classes of herbaceous plants, shrubs, and trees. Some areas will be managed to achieve rapid development of cottonwood and willow riparian habitats. Desired riparian species include sedges (*Carex* spp.), rushes (*Juncus* spp.), snowberry (*Symphoricarpos* spp.), rose (*Rosa* spp.), willow (*Salix* spp.), cottonwood (*Populus s*pp.), as well as other woody plants. Areas with heavy recreation use will have picnicking and camping facilities available. Motorized and nonmotorized trails will have signs to distinguish different uses. Primitive conditions with minimal facility development will be emphasized. Mineral developments such as oil and gas wells and pipelines will be present but visually subordinate in the mid and background. Bentonite mining operations will be present, but will typically be less than 160 acres in size. Some mines may be much larger than 160 acres, but they will not dominate the landscape. When mineral activities are concluded, the disturbed lands will be reclaimed to blend in with adjacent undisturbed areas. Pastures will remain large to the extent feasible.
Ch. 2, Upton Osage GA, Management Area Prescription Allocation	3.68, Big Game Range: 14,107 acres 4.32, Dispersed Recreation High Use: 18,200 acres	3.68, Big Game Range: 14,108 acres 4.32, Dispersed Recreation High Use: 18,201 acres
Ch. 2, Upton Osage GA, Objectives, Vegetation, 1	Desired seral stages (plant species composition) and vegetation structure across the geographic area are as follows: Desired Seral Stages - Objective Late 15 to 25%	*Remove (see additions to desired condition)*

Component Number	2002 Plan Direction, as Amended in 2009	2020 Plan Amendment
	Late Intermediate 30 to 40% Early Intermediate 25 to 35% Early 10 to 20% Across the landscape, grass and sagebrush are intermingled. In some areas, grasses are the dominant species; in other areas, sagebrush is the dominant species. The vegetation composition varies depending on seral stage. In grass-dominated communities in mid to late seral stages, the dominant native grass species are western wheatgrass, needle and thread grass, green needlegrass, and little bluestem. In grass-dominated sites in early to mid- seral stages, grasses such as blue grama often dominate. Threeawn and blue grama are commonly the dominant grasses on prairie dog colonies in early seral stage. In sagebrush-dominated communities, there is more sagebrush in the mid to late seral stages than in early to mid seral stages. As the community moves from early to late seral stage, the percentage of grasses declines. In the understory, the dominant native plant species are western wheatgrass and green needlegrass. Desired Vegetation Structure - Objective High 30 to 40% Moderate 45 to 55% Low 10 to 20% High vegetation structure can be achieved on moderate and highly productive grasslands dominated by mid grasses (late or late intermediate seral stages). Grasslands on moderate to highly productive soils but in an early seral condition and dominated by short-stature plant species generally do not have the capability to provide high vegetation structure. Management changes may be necessary to move some existing seral conditions toward a higher seral condition to meet structure objectives. Prairie dog colonies provide low structure, as do grassland areas grazed by livestock at high intensities. Low vegetation structure can result from a dominance of low stature plant species or from heavy utilization of mid grasses.	

Component Number	2002 Plan Direction, as Amended in 2009	2020 Plan Amendment
	The height and density of grasses, forbs and sedges in the understory of sagebrush stands are important factors influencing structure for several wildlife species. The relationship of structure to quality nesting habitat for sage grouse is described in Appendix H. Appendix H describes quality nesting as sagebrush understories with residual herbaceous cover averaging at least 7 inches in height. This objective is primarily provided when sagebrush habitat types are in a late seral condition.	
Ch. 2, Upton Osage GA, Standards and Guidelines, Vegetation, 2	Manage vegetation by Management Area (MA) according to the following table19 to achieve the desired seral stage (plant species composition) objectives for the Geographic Area. The table has a target percent displayed, with and acceptable range of percents included. Guideline	To maintain or move toward desired vegetation communities, ecological site descriptions should be used to inform site-specific project and activity decisions related to soil and vegetation management, including suitability of land uses, vegetation management and restoration activities, and grazing management. Guideline
Ch. 2, Upton Osage GA, Standards and Guidelines, Vegetation, 3	Manage vegetation by Management Area (MA) according to the following table20 to achieve the desired structural objectives for the Geographic Area. The table has a target percent displayed, with and acceptable range of percents included. Guideline	*Remove*

Chapter 3 Amended Plan Components

Component Number	2002 Plan Direction, as Amended in 2009	2020 Plan Amendment
Ch. 3, MA 2.1, SIA Descriptions	*2.1b – Cheyenne River Zoological SIA*: This 5,980-acre site provides for approximately 3,000 acres of prairie dog complex, including	*2.1b – Cheyenne River-Antelope Creek Zoological SIA*: This 5,361-acre site provides for a diverse biotic riparian community along the Cheyenne River and Antelope Creek.

[19] Existing plan component: Upton Osage Geographic Area Guideline 2. Targets and value ranges for percentage of management areas in late, late intermediate, early intermediate, and early seral stages.

Management Area	Late: Target	Late: Range	Late Intermediate: Target	Late Intermediate: Range	Early Intermediate: Target	Early Intermediate: Range	Early: Target	Early: Range
3.68	25%	25-30%	35%	30-35%	25%	25-30%	15%	10-15%
4.32	15%	15-20%	35%	30-35%	35%	30-35%	15%	15-20%

[20] Existing plan component: Upton Osage Geographic Area Guideline 3. Targets and value ranges for percentage of management areas in high, moderate, and low structural stages.

Management Area	High: Target	High: Range	Moderate: Target	Moderate: Range	Low: Target	Low: Range
3.68	40%	40-45%	50%	45-50%	10%	10-15%
4.32	30%	30-35%	50%	45-50%	20%	15-20%

Component Number	2002 Plan Direction, as Amended in 2009	2020 Plan Amendment
	occupied mountain plover habitat and potential black-footed ferret habitat. About 6 ¾ miles of the Cheyenne River winds through the area, offering habitat for fish and beaver. Raptors also nest in the area. The river corridor also offers potential habitat for the Ute's lady's tresses and bald eagle winter roost sites. Management emphasis is on protecting and enhancing habitat conditions. Additional Direction: ● Coordinate and consult with the appropriate state wildlife agency to prohibit prairie dog shooting and fur harvest within the SIA. Standard ● Restrict motorized travel to locations and time periods when it would not reduce the optimum habitat effectiveness of the area. Standard ● Allow oil and gas leasing; however, prohibit ground-disturbing oil and gas activities if they may have adverse effects on black-footed ferret reintroduction objectives. Standard. ● Prohibit locatable mineral operating plans that would reduce effectiveness of the habitats emphasized. Standard ● Prohibit new special-use facilities except for valid existing rights. Guideline ● Manage livestock grazing and stocking rates to achieve the most rapid development of mature cottonwood willow riparian area while promoting best habitat conditions for mountain plover breeding, nesting, and brood rearing. Standard	Channels and adjacent tree galleries offer habitat for wildlife species and rare plants. Management emphasis is on protecting and enhancing habitat conditions. Additional Direction: ● Restrict motorized travel to locations and time periods when it would not reduce the optimum habitat effectiveness of the area. Standard ● Allow oil and gas leasing. Adhere to the stipulations found in Appendix D. Standard ● Prohibit locatable mineral operating plans that would reduce effectiveness of the habitats emphasized. Standard ● Prohibit new special-use facilities except for valid existing rights to minimize impacts to riparian habitats. Guideline ● Manage livestock grazing to promote development of mature cottonwood willow riparian areas and other desired habitat conditions. Standard
Ch. 3, MA 3.67, Theme	Black-tailed prairie dog colony complexes are actively and intensively managed as reintroduction habitat for black-footed ferrets.	This area is managed to provide a mosaic of high-, mid-, and low-structure vegetation communities, with an emphasis on distribution of low-structure (i.e., short-stature) vegetation and habitat for associated wildlife species.
Ch. 3, MA 3.67, 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,	Vegetation communities are managed to provide for a mosaic of native plant communities, with an emphasis on short-stature herbaceous communities. In greater sage-grouse priority habitat management areas where greater sage-grouse habitat exists, desired conditions for priority habitat management areas apply. Noxious and invasive plant species are controlled to the extent possible, and vegetation is maintained at a level that promotes native grass and forb species. Reseeding of areas and reclamation may be evident.

Component Number	2002 Plan Direction, as Amended in 2009	2020 Plan Amendment
	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.	Short-statured plant communities may contain: grasses such as blue grama (*Bouteloua gracilis*), buffalograss (*Bouteloua dactyloides*), western wheatgrass (*Pascopyrum smithii*), sand dropseed (*Sporobolus cryptandrus*), sixweeks fescue (*Vulpia octoflora*), and marsh muhly (*Muhlenbergia racemosa*); sedges (*Carex* spp.); forbs such as scarlet globemallow (*Sphaeralcea coccinea*) and woolly plantain (*Plantago patagonica*); and prostrate shrub species such as birdfoot sagebrush (*Artemisia pedatifida*) and plains pricklypear (*Opuntia polyacantha*). Riparian areas and streams are managed for healthy plant communities and water quality. Some restored or improved riparian areas and streams are evident. Trees are uncommon outside of riparian areas. Prairie dog colonies are present and vary in size and density. Colonies provide habitat and landscape-scale connectivity for species associated with prairie dog colonies such as mountain plover, burrowing owl, other grassland birds, and swift fox. Plant community composition varies over time on colonies, and colonies may exhibit characteristics of short stature vegetation and bare ground communities. Colonies are also managed to prevent undesired encroachment onto adjoining lands and to minimize occurrence of sylvatic plague. Livestock and prairie dogs utilize forage in most areas annually, but some areas receive little to no use. Forage is available for both wildlife and livestock, and livestock and prairie dogs often occupy the same areas.
GPA-MA3.67-FWRP-O-07	Does not exist	Manage toward 10,000 acres of prairie dog colonies in the management area each year during the life of the plan. In drought years, temporarily manage toward an objective of 7,500 acres of prairie dog colonies. Objective
GPA-MA3.67-FWRP-O-08	Does not exist	Develop a plague management plan within 3 years of 2020 plan amendment approval. Objective
Ch. 3, MA 3.63, Standards and Guidelines, General, 1 (as revised in Amendment 3, 2009)	Authorize only those uses and activities in the 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, do not authorize uses and activities that would prevent annual increases in the prairie dog population. Standard	*Remove*

Component Number	2002 Plan Direction, as Amended in 2009	2020 Plan Amendment
Ch. 3, MA 3.63, Standards and Guidelines, General, 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	*Remove*
Ch. 3, MA 3.63, Standards and Guidelines, 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	*Remove*
Ch. 3, MA 3.63, Standards and Guidelines, 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	*Remove*
GPA-MA3.67-FWRP-GL-09	Does not exist	When prairie dog colony acreage is less than 10,000 acres, manage to allow or facilitate prairie dog colony growth to provide habitat requirements for species associated with prairie dog colonies. Guideline
GPA-MA3.67-FWRP-ST-10	*Does not exist*	Do not authorize use of control tools when prairie dog colony acreage is less than 7,500 acres, except in boundary management zones or residence buffers or if approved for density control based on best available scientific information. Standard
GPA-MA3.67-FWRP-GL-11	*Does not exist*	When prairie dog colony acreage is greater than 10,000 acres, use prairie dog control tools to maintain the 10,000-acre objective to minimize resource management conflicts. Guideline
GPA-MA3.67-FWRP-GL-12	*Does not exist*	During drought, to mitigate prairie dog colony expansion, the total colony acreage in the management area may be managed toward a temporary alternate objective of 7,500 acres. Drought is defined as any year or sequence of years when annual precipitation amounts are less than 75 percent of normal, based on local climate data and in consultation with the United States Drought Monitor. Guideline
GPA-MA3.67-FWRP-ST-13	*Does not exist*	Boundary management zones generally extend ¼ mile into the management area from private and state property boundaries. In boundary management zones, control of prairie dogs using rodenticides will be prioritized to reduce impacts to surrounding landowners. All other prairie dog control tools not otherwise restricted in this plan are

Component Number	2002 Plan Direction, as Amended in 2009	2020 Plan Amendment
		also available in the boundary management zones at any time. Any part of a colony within a boundary management zone will not count toward the acreage objective for prairie dog colonies (GPA-MA3.67-FWRP-O-07). Standard
GPA-MA3.67-FWRP-GL-14	Does not exist	A temporary (i.e., 1 to 3 year) ¾-mile boundary management zone that includes the standard ¼-mile boundary management zone may be used at specific locations within Management Area 3.67 to address imminent or persistent prairie dog encroachment if (a) the Forest Service determines that prairie dogs on Federal land are moving toward the boundary management zone and are a potential boundary problem or (b) control efforts within ¼-mile of private or state property using appropriate tools for 3 consecutive years have not been successful. Before expanding a boundary management zone, the responsible official should consider the total area of prairie dog colonies relative to the acreage objective for prairie dog colonies (GPA-MA3.67-FWRP-O-07), impacts to species associated with prairie dog colonies, compliance with other plan components, site-specific information, and concurrent treatment by the adjacent landowner. Guideline
GPA-MA3.67-FWRP-ST-15	Does not exist	Do not authorize prairie dog density control activities when total colony acreage is less than 7,500 acres or on colonies contributing to the minimum of 7,500 acres for prairie dog control (GPA-MA3.67-FWRP-ST-10), unless best available scientific information has been documented to demonstrate that density control activities will achieve site-specific objectives and maintain habitat requirements for species associated with prairie dog colonies. Colonies treated for density control will continue to count toward the 10,000-acre objective for prairie dog colonies. Standard
GPA-MA3.67-FWRP-GL-16	Does not exist	To ensure conservation of habitat requirements for species associated with prairie dog colonies, density control of prairie dog colonies should not occur in more than 50 percent of any colony, by acres, in any year. Density control should occur no more than every other year. Guideline
Ch. 3, MA 3.63, Standards and Guidelines, 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. Standard	*Remove*

Component Number	2002 Plan Direction, as Amended in 2009	2020 Plan Amendment
Ch. 3, MA 3.63, Standards and Guidelines, Fish and Wildlife, 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	*Remove (in Chapter 1)*
GPA-MA3.67-FWRP-ST-17	Does not exist	Recreational prairie dog shooting is prohibited from February 1 to August 15. Standard
GPA-MA3.67-FWRP-ST-18	Does not exist	An integrated approach to plague management (e.g., using tools such as deltamethrin and fipronil) will be implemented annually. Standard
GPA-MA3.67-FWRP-ST-19	Does not exist	Any effort to reintroduce black-footed ferret shall occur in coordination with the Wyoming Game and Fish Department and the U.S. Fish and Wildlife Service. Standard
Ch. 3, MA 3.63, Standards and Guidelines, Recreation, 1	To help expand and maintain suitable black-footed ferret habitat, coordinate and consult with the state wildlife agency to prohibit prairie dog shooting within black-footed ferret reintroduction habitat.	*Remove*
Ch. 3, MA 6.1, 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 management area. Natural disturbance processes, including grazing and fire, will be used to emulate the natural range of variability of vegetation structure and composition (see matrix 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 management area. When no substantial threat to high-value resources occurs, natural outbreaks of native insects and disease will be allowed to proceed without intervention. See chapters 1 and 2 for further direction.	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 management area. Natural disturbance processes, including grazing and fire, will be used to emulate the natural range of variability of vegetation structure and composition. Rest and prescribed fire will be incorporated into the landscape. When no substantial threat to high-value resources occurs, natural outbreaks of native insects and disease will be allowed to proceed without intervention. See chapters 1 and 2 for further direction.

Appendices

Component Number	2002 Plan Direction, as Amended in 2009	2020 Plan Amendment
Appendix D, Wildlife, Wildlife – Timing Limitations (TL)	**Resource: Mountain Plover (TL)** **Stipulation** Surface use is prohibited from March 15 through July 31 within 0.25 miles (line of sight) of a mountain plover nest or nest aggregation areas. **Objective (Justification)** For justification refer to the Land and Resource Management Plan Grassland-wide Direction, Fish, Wildlife, and Rare Plants, number 28. The objective is to prevent reduced reproductive success. **Application Methodology** This stipulation applies to mountain plover nests and nest aggregation areas. This stipulation applies to drilling, testing, new construction projects, and to workover operations. This does not apply to emergency repairs. **Waivers** This stipulation may be waived if the authorized officer determines conditions have changed and there are no nests or nest aggregation areas within the leasehold or within the stipulated distance from the leasehold. **Exceptions** The authorizing officer may grant an exception to this stipulation if the operator submits a plan that demonstrates impacts from the proposed action are acceptable or can be adequately mitigated. An exception may be granted if the nest or nest aggregation area has not been used by June 10 of the current year. **Modifications** The boundaries of the stipulated area may be modified if the authorizing officer determines that portions of the area do not include mountain plover nests and nesting areas.	**Resource: Mountain Plover (TL)** **Stipulation** Surface use is prohibited from April 1 through August 15 within 0.25 miles (line of sight) of a mountain plover nest or nest aggregation areas. **Objective (Justification)** For justification refer to the Land and Resource Management Plan Grassland-wide Direction, Fish, Wildlife, and Rare Plants, number 28. The objective is to prevent reduced reproductive success. **Application Methodology** This stipulation applies to mountain plover nests and nest aggregation areas. This stipulation applies to drilling, testing, new construction projects, and to workover operations. This does not apply to emergency repairs. **Waivers** This stipulation may be waived if the authorized officer determines conditions have changed and there are no nests or nest aggregation areas within the leasehold or within the stipulated distance from the leasehold. **Exceptions** The authorizing officer may grant an exception to this stipulation if the operator submits a plan that demonstrates impacts from the proposed action are acceptable or can be adequately mitigated. An exception may be granted if the nest or nest aggregation area has not been used by June 25 of the current year. **Modifications** The boundaries of the stipulated area may be modified if the authorizing officer determines that portions of the area do not include mountain plover nests and nesting areas.
Appendix D, Wildlife, Wildlife – Timing Limitations (TL)	**Resource: Black-footed Ferret Habitat (TL)** **Stipulation** Surface use is prohibited from March 1 through August 31 within 0.125 mile (line	**Resource: Black-footed Ferret (TL)** **Stipulation** Surface use is prohibited from March 1 through August 31 within 0.125 mile (line of

Component Number	2002 Plan Direction, as Amended in 2009	2020 Plan Amendment
	of sight) of prairie dog colonies occupied or thought to be occupied by black-footed ferrets. **Objective (Justification)** For justification refer to the Land and Resource Management Plan Grassland-wide Direction, Fish, Wildlife, and Rare Plants, number 19. The objective is to protect ferrets when breeding and rearing young. **Application Methodology** This stipulation applies to prairie dog colonies occupied by black-footed ferrets. The spatial buffer extends out from the outer boundary of a prairie dog colony occupied by black-footed ferrets. This stipulation applies to drilling and testing and new construction projects, not to operation or maintenance of production facilities. **Waivers** The authorized officer may grant a waiver if ferret surveys, following protocol approved by the U.S. Fish and Wildlife Service, indicate a low probability that ferrets occur in prairie dog colonies located in the leasehold or if the U.S. Fish and Wildlife Service determines that black-footed ferrets do not occur in the area. **Exceptions** The authorizing officer may grant an exception to this stipulation if the operator submits a plan that demonstrates impacts from the proposed action are acceptable or can be adequately mitigated. An exception may be granted if surveys indicate a low probability that ferrets occur in a prairie dog colony where drilling, testing or new construction is proposed. **Modifications** The boundaries of the stipulated area may be modified if the authorizing officer determines that black-footed ferrets do not occur in portions of the area.	sight) of prairie dog colonies occupied by black-footed ferrets. **Objective (Justification)** For justification refer to the Land and Resource Management Plan Grassland-wide Direction, Fish, Wildlife, and Rare Plants, number 19. The objective is to protect ferrets when breeding and rearing young. **Application Methodology** This stipulation applies to prairie dog colonies occupied by black-footed ferrets. The spatial buffer extends out from the outer boundary of a prairie dog colony occupied by black-footed ferrets. This stipulation applies to drilling and testing and new construction projects, not to operation or maintenance of production facilities. **Waivers** The authorized officer may grant a waiver if ferret surveys, following protocol approved by the U.S. Fish and Wildlife Service, indicate a low probability that ferrets occur in prairie dog colonies located in the leasehold or if the U.S. Fish and Wildlife Service determines that black-footed ferrets do not occur in the area. **Exceptions** The authorizing officer may grant an exception to this stipulation if the operator submits a plan that demonstrates impacts from the proposed action are acceptable or can be adequately mitigated. An exception may be granted if surveys indicate a low probability that ferrets occur in a prairie dog colony where drilling, testing or new construction is proposed. **Modifications** The boundaries of the stipulated area may be modified if the authorizing officer determines that black-footed ferrets do not occur in portions of the area.
Appendix D, Wildlife, Wildlife – Controlled Surface Use (CSU)	**Resource: Black-footed Ferret Habitat (CSU)** **Stipulation** Operations in prairie dog colonies known or thought to be occupied by black-footed	**Resource: Black-footed Ferret (CSU)** **Stipulation** Operations in prairie dog colonies known to be occupied by black-footed ferrets are subject to the following constraints:

Component Number	2002 Plan Direction, as Amended in 2009	2020 Plan Amendment
	ferrets are subject to the following constraints: Limit oil and gas development to no more than one location per 80 acres. Suitable black-footed ferret habitat lost as a result of new facilities within prairie dog colonies must be replaced within 1 year. Access for routine maintenance of oil and gas facilities in prairie dog colonies is limited to daylight hours. This does not apply to emergency repairs. If it's necessary to place a new road in a prairie dog colony, align the road to minimize habitat loss. **Objective (Justification)** For justification refer to the Land and Resource Management Plan Grassland-wide Direction, Fish, Wildlife, and Rare Plants, number 18, 21, 22, and 69. The objective is to protect against activities that could result in adverse impacts on black-footed ferrets or ferret recovery objectives. **Application Methodology** This stipulation applies to prairie dog colonies occupied by black-footed ferrets. **Waivers** The authorized officer may waive this stipulation if black-footed ferrets are released under an experimental non-essential population status; this stipulation may be waived for areas inside the experimental population area but outside management area 3.63. **Exceptions** No conditions for an exception are anticipated, and approval of an exception is unlikely. **Modifications** No conditions for a modification are anticipated, and approval of a modification is unlikely.	Limit oil and gas development to no more than one location per 80 acres. Replacement of prairie dog colonies lost as a result of new facilities will be evaluated as needed to meet the acreage objective for prairie dog colonies for Management Area 3.67. Access for routine maintenance of oil and gas facilities in prairie dog colonies is limited to daylight hours. This does not apply to emergency repairs. If it's necessary to place a new road in a prairie dog colony, align the road to minimize habitat loss. **Objective (Justification)** For justification refer to the Land and Resource Management Plan Grassland-wide Direction, Fish, Wildlife, and Rare Plants, number 18, 22, and 66, and management area 3.67 direction. The objective is to protect against activities that could result in adverse impacts on black-footed ferrets or ferret recovery objectives. **Application Methodology** This stipulation applies to prairie dog colonies occupied by black-footed ferrets. **Waivers** The authorized officer may waive this stipulation if black-footed ferrets are released under an experimental non-essential population status; this stipulation may be waived for areas inside the experimental population area but outside management area 3.67. **Exceptions** No conditions for an exception are anticipated, and approval of an exception is unlikely. **Modifications** No conditions for a modification are anticipated, and approval of a modification is unlikely.
Appendix D, Wildlife, Wildlife – Controlled Surface Use (CSU)	**Resource: Mountain Plover Habitat (CSU)** **Stipulation** Operations in mountain plover nesting and brooding habitat are subject to the following constraints: Limit oil and gas development to no more than one location per 80a cares.	**Resource: Mountain Plover Habitat (CSU)** **Stipulation** Operations in mountain plover nesting and brooding habitat are subject to the following constraints: Limit oil and gas development to no more than one location per 80 acres.

Component Number	2002 Plan Direction, as Amended in 2009	2020 Plan Amendment
	Suitable mountain plover habitat lost as a result of new facilities must be replaced within 1 year. Access for routine maintenance of oil and gas facilities in mountain plover nesting and brooding habitat will be between 9 am and 5 pm. This does not apply to emergency repairs. If it's necessary to place a new road in a prairie dog colony, align the road to minimize habitat loss. **Objective (Justification)** For justification refer to the Land and Resource Management Plan Grassland-wide Direction, Fish, Wildlife, and Rare Plants, numbers 26, 27, 30, and 69. The objective is to prevent reductions in reproductive success. **Application Methodology** This stipulation applies to identified nesting and brooding habitat. Multiple facilities concentrated at a site are allowed. **Waivers** No conditions for a waiver are anticipated, and approval of a waiver would be unlikely. **Exceptions** No conditions for an exception are anticipated, and approval of an exception would be unlikely. **Modifications** The boundary of the stipulated area may be modified if the authorizing officer determines that portions of the area do not contain active prairie-dog colonies.	Replacement of prairie dog colonies lost as a result of new facilities will be evaluated as needed to meet the acreage objective for prairie dog colonies for management area 3.67. Access for routine maintenance of oil and gas facilities in mountain plover nesting and brooding habitat will be between 9 am and 5 pm. This does not apply to emergency repairs. If it's necessary to place a new road in a prairie dog colony, align the road to minimize habitat loss. **Objective (Justification)** For justification refer to the Land and Resource Management Plan Grassland-wide Direction, Fish, Wildlife, and Rare Plants, numbers 26, 30, and 66, and management area 3.67 direction. The objective is to prevent reductions in reproductive success. **Application Methodology** This stipulation applies to identified nesting and brooding habitat. Multiple facilities concentrated at a site are allowed. **Waivers** No conditions for a waiver are anticipated, and approval of a waiver would be unlikely. **Exceptions** No conditions for an exception are anticipated, and approval of an exception would be unlikely. **Modifications** The boundary of the stipulated area may be modified if the authorizing officer determines that portions of the area do not contain prairie-dog colonies.
Appendix D, Management Area Prescriptions, MA 2.1 Special Interest Areas – Zoological, Controlled Surface Use (CSU)	**Resource: Cheyenne River Zoological Area (CSU)** **Stipulation** Operations may be moved or modified if it is determined that the proposed action will have adverse effects on black-footed ferret reintroduction objectives. **Objective (Justification)** For justification refer to the Land and Resource Management Plan Management	**Resource: Cheyenne River-Antelope Creek Zoological Area (CSU)** **Stipulation** Operations may be moved or modified if it is determined that the proposed action will have adverse effects on riparian wildlife and plant communities. **Objective (Justification)** For justification refer to the Land and Resource Management Plan Management

Component Number	2002 Plan Direction, as Amended in 2009	2020 Plan Amendment
	Area Direction MA 2.1 Cheyenne River Special Interest Area. The objective is to protect against activities that will adversely impact black-footed ferret reintroduction objectives. **Application Methodology** Use this stipulation in MA 2.1 SIA, Cheyenne River Zoological. **Waivers** No conditions for a waiver are anticipated, and approval of a waiver would be unlikely. **Exceptions** No conditions for an exception are anticipated, and approval of an exception would be unlikely. **Modifications** No conditions for a modification are anticipated, and approval of a modification would be unlikely.	Area Direction MA 2.1 Cheyenne River-Antelope Creek Zoological Special Interest Area. The objective is to protect against activities that will adversely impact the riparian ecosystem in the special interest area. **Application Methodology** Use this stipulation in MA 2.1 SIA, Cheyenne River-Antelope Creek Zoological Special Interest Area. **Waivers** No conditions for a waiver are anticipated, and approval of a waiver would be unlikely. **Exceptions** No conditions for an exception are anticipated, and approval of an exception would be unlikely. **Modifications** No conditions for a modification are anticipated, and approval of a modification would be unlikely.
Appendix D, Management Area Prescriptions	**MA 3.63 Black-footed Ferret Reintroduction Habitat** **Controlled Surface Use (CSU)** **Resource: Black-footed Ferret Reintroduction Habitat (CSU)** **Stipulation** To preserve black-footed ferret habitat (management area 3.63), operations in all prairie dog colonies are subject to the following constraints: Limit oil and gas development to no more than one location per 80 acres. Suitable black-footed ferret habitat lost as a result of new facilities within prairie dog colonies must be replaced within 1 year. Access for routine maintenance of oil and gas facilities in prairie dog colonies is limited to daylight hours. This does not apply to emergency repairs. If it's necessary to place a new road in a prairie dog colony, align the road to minimize habitat loss. **Objective (Justification)** For justification refer to the Land and Resource Management Plan Management Area Direction, MA 3.63, Black-footed	**MA 3.67 Short-Stature Vegetation Emphasis** **Controlled Surface Use (CSU)** **Resource: Short-Stature Vegetation and Prairie Dog Colony Associated Species (CSU)** **Stipulation** To preserve habitat for wildlife species associated with prairie dog colonies (management area 3.67), operations in all prairie dog colonies are subject to the following constraints: Limit oil and gas development to no more than one location per 80 acres. Replacement of prairie dog colonies lost as a result of new facilities will be evaluated as needed to meet the acreage objective for prairie dog colonies for the management area. Access for routine maintenance of oil and gas facilities in prairie dog colonies is limited to daylight hours. This does not apply to emergency repairs. If it's necessary to place a new road in a prairie dog colony, align the road to minimize habitat loss.

Component Number	2002 Plan Direction, as Amended in 2009	2020 Plan Amendment
	Ferret Reintroduction Habitat, Standards and Guidelines, Minerals and Energy resources number 1, and the Land and Resource Management Plan Grassland-wide Direction, Fish, Wildlife, and Rare Plants, number 18, 21, 22, and 69. The objective is to protect against activities that will adversely impact black-footed ferret reintroduction objectives. **Application Methodology** Use this stipulation in MA 3.63, black-footed ferret reintroduction habitat. **Waivers** No conditions for a waiver are anticipated, and approval of a waiver is unlikely. **Exceptions** No conditions for an exception are anticipated, and approval of an exception is unlikely. **Modifications** No conditions for a modification are anticipated, and approval of a modification is unlikely.	**Objective (Justification)** For justification refer to the Land and Resource Management Plan Management Area Direction, MA 3.67, and the Land and Resource Management Plan Grassland-wide Direction, Fish, Wildlife, and Rare Plants, number 18, 22, and 66. The objective is to protect against activities that will adversely impact areas containing short-stature vegetation and species associated with prairie dog colonies. **Application Methodology** Use this stipulation in MA 3.67. **Waivers** No conditions for a waiver are anticipated, and approval of a waiver is unlikely. **Exceptions** No conditions for an exception are anticipated, and approval of an exception is unlikely. **Modifications** No conditions for a modification are anticipated, and approval of a modification is unlikely.
Appendix G Glossary, Boundary Management Zone	*Does not exist*	**Boundary Management Zone** – A defined area of National Forest System land that adjoins non-National Forest System land in which prairie dog colonies may be controlled at all times to prevent colony encroachment onto the adjoining lands.
Appendix G Glossary, Ecological Site	*Does not exist*	**Ecological site:** A distinctive kind of land with specific soil and physical characteristics that differs from other kinds of land in its ability to produce a distinctive kind and amount of vegetation and its response to management actions and natural disturbances.
Appendix G Glossary, Prairie Dog Encroachment	*Does not exist*	**Encroachment, Prairie Dog** – The expansion of a prairie dog colony from National Forest System land onto non-National Forest System land.
Appendix G Glossary, Integrated Pest Management (IPM)	**Integrated Pest Management (IPM)** - A process for evaluating and selecting a program from available techniques to reduce pest populations in an ecologically, economically, and socially acceptable manner. Programs may include one or a combination of available techniques: for example, the use of pesticides, cultural or silvicultural treatments, biological control agents, host resistance, genetic control,	**Integrated Pest Management (IPM)** - A process for evaluating and selecting a program from available techniques to reduce pest populations in an ecologically, economically, and socially acceptable manner. Programs may include one or a combination of available techniques: for example, the use of pesticides, cultural or silvicultural treatments, biological control agents, host resistance, genetic control,

Component Number	2002 Plan Direction, as Amended in 2009	2020 Plan Amendment
	mechanical destruction or trapping, and behavioral chemicals, including attractants and repellants.	mechanical destruction or trapping, and behavioral chemicals, including attractants and repellants. An integrated pest management program may involve periods of rest or non-application of pest management techniques. Integrated pest management encompasses integrated plague management.
Appendix G Glossary, Integrated Plague Management	*Does not exist*	**Integrated Plague Management** – See Integrated Pest Management (IPM).
Appendix G Glossary, Prairie Dog Colony	*Does not exist*	**Prairie Dog Colony** – An area containing active prairie dog burrows that is clearly distinguishable from surrounding areas by a space that does not contain burrows, as delineated by the inventory and mapping protocol.
Appendix G Glossary, Prairie Dog Colony Complex	**Prairie Dog Colony Complex** – A group of at least 10 prairie dog colonies with nearest-neighbor intercolony distances not exceeding 6 miles and with a total colony complex acreage of at least 1,000 acres.	*Remove*
Appendix G Glossary, Prairie Dog Conservation Tools	*Does not exist*	**Prairie Dog Conservation Tools** – Actions used to promote the growth or prevent the reduction of prairie dog colonies. Tools may include but are not limited to: translocation of prairie dogs; plague mitigation tools, such as deltamethrin and fipronil; restrictions on recreational shooting; and vegetation management, including prescribed fire.
Appendix G Glossary, Prairie Dog Control	*Does not exist*	**Prairie Dog Control -** A management action or set of management actions implemented with the intent to decrease the size or density of a prairie dog colony, to remove a prairie dog colony from an area, or to prevent recolonization of an area.
Appendix G Glossary, Prairie Dog Control Tools	*Does not exist*	**Prairie Dog Control Tools** – Actions used to carry out prairie dog control. Tools may include but are not limited to: rodenticides registered for use under State law, including some forms of zinc phosphide and some fumigants; vegetation barriers; translocation of prairie dogs; and mechanical treatments such as blading and collapsing burrows. In this plan, recreational shooting is not considered a control tool.
Appendix G Glossary, Prairie Dog Density Control	*Does not exist*	**Prairie Dog Density Control** – A management action or set of management actions implemented with the intent to reduce the number of live prairie dogs within a prairie dog colony or some portion of a colony without reducing the total area of the colony. Such management actions

Component Number	2002 Plan Direction, as Amended in 2009	2020 Plan Amendment
		would occur most often via the use of rodenticides but other control tools may be used. Objectives for density control are site-specific and include influencing colony growth and dispersal and preventing undesirable vegetation state changes.
Appendix N *(as revised in 2015)*	*2015 Prairie Dog Conservation Assessment and Management Strategy*	*Rescind*

Attachment B: Management Approaches

The 2012 Planning Rule allows for inclusion of optional content in the plan, such as potential management approaches or strategies and partnership opportunities or coordination activities (36 CFR 219.7(f)(2)). The planning rule does not require project consistency with optional content in the plan (36 CFR 219.15(d)). Optional content in the plan can be changed after public notification under the planning rule provision for administrative changes (36 CFR 219.13(c)).

- **Management Approach (MA) -** A management approach can describe the principal strategies and program priorities the responsible official intends to employ to carry out projects and activities developed under the land management plan. The management approaches are related to the desired conditions for the alternative. Management approaches can convey the management emphasis, relate to desired conditions and may indicate the future course or direction of change. These may discuss potential processes such as analysis, assessment, inventory, project planning, or monitoring.

The management approaches described below are incorporated into the grassland plan as optional plan content. They describe how the Forest Service intends to implement the 2020 plan amendment for prairie dog management.

1. Collaborative Stakeholder Group

Interested parties have been working together for decades to improve management of prairie dog colonies on the Thunder Basin National Grassland. Since the 2009 grassland plan amendment, stakeholders have come together to develop conservation agreements (2010), as part of an interdisciplinary planning team (2013-2014), to revise the prairie dog conservation assessment and management strategy (2015), to assess the situation surrounding prairie dog management (2015), and to develop recommendations for the 2020 plan amendment (2018). A collaborative stakeholder group continues to discuss management challenges, provide management recommendations, and consider the most effective ways for stakeholders to participate in prairie dog management.

Working with a third-party collaborative stakeholder group may be the best way to achieve strategic long-term solutions and pragmatic short-term decisions for prairie dog colony management. A grassland-wide “objective” included in this plan amendment emphasizes the importance of meeting regularly with Federal, State, and county agencies and governments, individuals, and non-governmental organizations for seeking collaborative solutions to prairie dog management. Forest Service personnel will work actively with and accept input on prairie dog management and monitoring from a third-party collaborative stakeholder group. The district ranger will share relevant information with the group and be responsive to information presented by the group. Forest Service personnel will meet with the group or representatives of the group a minimum of one time per year, and often more frequently. The collaborative stakeholder group is expected to include a diverse group of stakeholders representing a wide range of perspectives that work together toward recommendations. Diverse stakeholders include State and local agencies and governments, educational and research institutions, ranching groups, grazing association members, environmental organizations, individuals with expert knowledge on topics such as rangeland and wildlife management, private landowners, and other interested parties.

Grassland personnel will work with members of the collaborative stakeholder group throughout plan implementation. They will likely discuss topics such as inventory and mapping of prairie dog colonies, lethal and non-lethal prairie dog control within 1 mile of residences and in boundary management zones, management considerations for managing colonies toward the target acreage (including translocation and

rodenticide use), lethal and non-lethal prairie dog control outside of boundary management zones, sylvatic plague management, prairie dog density control, and public outreach.

2. Priorities for Prairie Dog Control

When funding available for prairie dog control is not sufficient to meet all needs or requests for prairie dog control, the use of funding for prairie dog control will be prioritized according to the list below. This list of priorities adds detail to the prioritization of the 1-mile buffers around residences found in the plan components. Beyond prioritization of the 1-mile residence buffers, the listed priorities will guide use of funding generally, but recommendations from the collaborative stakeholder group or extraordinary on-the-ground circumstances could warrant deviation from this prioritization structure. In addition to these priorities, the responsible official or district ranger will consider whether adjacent landowners are engaging in concurrent control efforts prior to initiating prairie dog control to prevent encroachment onto non-Federal land.

Prioritization of use of resources for prairie dog control:

1. Control in 1-mile residence buffer anywhere on the national grassland.
2. Control to prevent damage to private and public facilities such as cemeteries, dams, ditches, and buildings anywhere on the national grassland.
3. Control in boundary management zones within management area 3.67.
4. Control in management area 3.67 outside boundary management zones, or control outside management area 3.67.
    - Prioritized on an annual basis and informed by collaborative recommendations. Could address issues such as areas where prairie dogs are impacting other important habitat (e.g., greater sage-grouse priority habitat management areas), encroaching on private or State lands, occupying the Cheyenne River-Antelope Creek Zoological Special Interest Area, or to address forage availability.
    - Control work in management area 3.67 outside boundary management zones is contingent on total colony acreage in the management area exceeding 7,500 acres and working toward the objective of 10,000 acres or 7,500 during drought years.

3. Sylvatic Plague Management

Sylvatic plague (*Yersinia pestis*) was first detected on the Thunder Basin National Grassland in the mid-1990s, and the first landscape-scale plague epizootic among the black-tailed prairie dog population began in 2001. Since that time, plague has likely been continuously active in prairie dog colonies on the Grassland. Two subsequent landscape-scale epizootics began in 2005 and 2017.

Plague dynamics in prairie dog colonies are not well understood, especially the mechanisms for enzootic and epizootic phases of plague in a location after it first enters a colony. Several management tools to minimize the transmission of plague can help reduce the likelihood of epizootics, including insecticides to control vector flea populations and vaccines for prairie dogs and other susceptible species.

An integrated approach to plague management (e.g., using tools such as deltamethrin and fipronil) will be implemented annually in management area 3.67 and may be implemented outside of management area 3.67. Consistent with other forms of integrated pest management, this does not mean that action must be taken every year, but that action will be taken when and where it is determined to be appropriate following consideration of many aspects of plague management. For example, fleas can develop

resistance to insecticides such as deltamethrin or fipronil, and an integrated approach to plague management may include alternating application of these products on a specific colony or not applying insecticides to a colony for 1 or more years. Plague mitigation tools may be used during the same years that control tools are used to maintain the 10,000-acre objective for prairie dog colonies in management area 3.67.

The Forest Service will develop a plague management plan for management are 3.67 within 3 years of approval of the plan amendment. This plan should be developed based on the best available scientific information and in collaboration with knowledgeable partners including the collaborative stakeholder group. The intent of the plan is to identify the techniques and priorities for plague management and develop an outyear plan for how to use integrated plague management to achieve the desired conditions and acreage objectives for management area 3.67.

4. Prairie Dog Density Control

Prairie dog density control is a specific type of prairie dog control that reduces the density of prairie dogs within a colony rather than eliminating a colony or reducing the extent of a colony. Density control would likely most often occur using rodenticides, but also could occur using translocation, or other physical disturbances to the soil that might cause prairie dogs to disperse away from an area or act as a deterrent from re-occupying an area (e.g., levelling and filling in mounds). Density control could occur in different spatial patterns and at different intensities. The objectives of density control would be site-specific and could include influencing colony growth and dispersal, preventing undesirable vegetation state changes, improving habitat conditions, and promoting forage availability.

Little is known about how different methods of density control affect prairie dog biology and vegetation response, with outcomes potentially being quite variable. Therefore, density control is proposed as an experimental activity on the Thunder Basin National Grassland. The grassland plan does not allow density control if total colony acreage is less than 7,500 acres or in colonies contributing to the minimum of 7,500 acres of colonies in management area 3.67 until scientific information has been developed and Forest Service staff are able to document (in a Section 18 review or supplemental information report citing scientific information) that density control can meet site-specific objectives and maintain habitat for species associated with prairie dog colonies. Because density control would be exploratory, Forest Service personnel intend for site-specific objectives and monitoring protocols to be developed for each instance of density control. This will help ensure that each instance contributes to an understanding of the effects of density control and provides insight into how future instances of density control might affect prairie dogs and vegetation.

Plan components do not require spatial and temporal constraints on density control for colonies outside of management area 3.67 where prairie dog control would be already authorized. However, the following approach to density control is recommended for all instances of density control so that each instance can contribute to development of best available scientific information for density control.

To facilitate the exploration of density control, develop an understanding of its effects, and be precautionary in its use, Forest Service personnel will adopt several general rules in its approach to density control. For each density control activity, Forest Service personnel should:

- map colony extent before and during density control;
- treat no more than 50 percent of a colony, by acres, in any year;
- treat no more frequently than every other year; and

- use monitoring information to inform annual decisions on whether or not to continue density control.

Initially, density control (both lethal and non-lethal) will be allowed in colonies outside management area 3.67 and in colonies inside management area 3.67 if total colony acreages are greater than 7,500 acres, and only in colonies not counting toward the 7,500-acre minimum. For initial density control projects, Forest Service personnel should:

- work with the collaborative stakeholder group to identify potential pilot sites, objectives, and methods of control;
- partner with research institutes to design pilot projects and develop understanding of effects of density control;
- collect pre-treatment vegetation and ground cover data on the density control site and an experimental control site, and collect monitoring data for a minimum of 2 years following treatment; monitoring techniques may include, but would not be limited to line point intercept, clipping by species, plant census, Daubenmire frames, and photopoints;
- avoid density control work on sites occupied by mountain plover, burrowing owl, and swift fox during the most recent monitoring effort; and
- establish pilot sites on high productivity sites to understand effectiveness for achieving vegetation objectives. The initial use of density control should be limited to more productive ecological sites such as the loamy and lowland sites where the likelihood of achieving vegetation objectives is higher. Density control should be considered when grass/forb ratios are shifting towards a community dominated by forbs and increased bare ground. This information should be recorded as pre-treatment monitoring data.

Density control work can be expanded to be allowed in management area 3.67 when total colony acreages are less than 7,500 acres or on colonies contributing to the 7,500 acre minimum if the best available scientific information indicates that density control achieves objectives and maintains habitat requirements for associated species and a Section 18 review or supplemental information report has been completed citing this information. If density control is used in management area 3.67, colonies in which density control has been implemented would continue to contribute to the 10,000-acre objective for prairie dog colonies.

5. Drought Management

Drought is a periodic driver of vegetation characteristics on the Thunder Basin National Grassland. Droughts occur at different spatial scales and with different frequency, intensity, and duration across the grassland. Because they affect the availability of forage resources, droughts may affect prairie dog dispersal and colony movement. Colonies may expand especially rapidly during drought, when forage is scarce within colonies, as individuals spread outward to find food. Colony population density likely decreases when colonies expand during drought. See the biological evaluation for additional information about prairie dog responses to drought.

Because of the effects of drought on forage availability and prairie dog movement, drought can heighten conflicts related to prairie dog occupancy and livestock grazing. Drought can also affect the risk of colony encroachment onto non-Federal lands. To address these issues, plan components allow for managing toward the minimum colony acreage (i.e., 7,500 acres within management area 3.67) for rodenticide use during drought conditions.

The definition of drought from the 2002 grassland plan as stated in the glossary is "any year or sequence of years when annual precipitation amounts are less than 75 percent of normal." The plan component for prairie dog management under drought conditions expands upon this definition, stating that the identification of annual precipitation amounts will be "based on local climate data and in consultation with the United States Drought Monitor."

During drought conditions, the timing of precipitation, prairie dog colony mapping information, and prairie dog control requests will all be considered. Use of the alternate lower prairie dog colony acreage objective during drought should be triggered by 2 consecutive years of less than 75 percent of normal precipitation. In the second year of less than 75 percent of normal precipitation, the responsible official or district ranger should consider control measures to limit colony expansion, especially on productive ecological sites. Annual precipitation amounts should be calculated at the end of the spring growing season (approximately June 1), and any subsequent colony control efforts should occur during the following rodenticide use season (October 1-January 31).

6. Inventory, Monitoring, and Mapping

Prairie Dog Colony Inventory and Mapping

Inventory and mapping of prairie dog colonies to inform management decisions is critical to successful plan implementation. Forest Service staff, working with partners and the collaborative stakeholder group, should inventory and map the locations and extent of prairie dog colonies annually in management area 3.67. Outside management area 3.67, Forest Service personnel, again working with partners and the collaborative stakeholder group, should map the location and extent of prairie dog colonies at least every 5 years. Forest Service personnel should encourage annual inventory of colony location and expansion through landowner and livestock grazing permittee reporting. Across the national grassland, all prairie dog control and plague mitigation treatments will be mapped and documented annually.

Protocols have been based on best practices for inventory and mapping prairie dogs in the past, but sample designs and protocols have adapted over time or even annually depending on priorities and funding. The Forest Service will work with partners including the collaborative stakeholder group to develop a consistent, science-based inventory and mapping protocol that can be used annually to meet the needs of the amended grassland plan.

Monitoring of Recreational Shooting

The Thunder Basin National Grassland will document phone calls and check-ins of individuals and groups participating in recreational shooting of prairie dogs, including dates and size of parties. This information can be used to inform evaluations of management toward the 10,000-acre objective for prairie dog colonies in management area 3.67. Because this information will not be able to be collected in a comprehensive manner, it will not be able to be used to attribute causation of growth or decline of colony extent but can contribute to a general understanding along with information on other influencing factors.