

**Record of Decision**  
**(Bald Horse, Deerfield, Porcupine, Redfern,  
Rimmer, Slate Prairie and Tigerville Allotments)**

**Mystic Range Project**  
**Final Environmental Impact Statement**

**USDA Forest Service**  
**Mystic Ranger District, Black Hills National Forest**  
**Pennington County and Custer County, South Dakota**

## **Background**

Black Hills National Forest (BHNF) personnel recently completed a Final Environmental Impact Statement (FEIS) for the Mystic Range Project. The Mystic Range Project falls under the authority and guidelines of the 1996 schedule the Forest Service provided the US Congress in response to the 1995 Rescission Act. The 1995 Rescission Act directed the Forest Service to complete environmental analysis on grazing allotments on National Forest System lands.

The Mystic Range Project generally lies within the central portion of the Mystic Ranger District, which is located in western South Dakota. The project area encompasses eight grazing allotments: Bald Horse (27,828 acres), Deerfield (7,874 acres), Palmer Gulch (14,190 acres), Porcupine (9,858 acres), Redfern (11,573 acres), Rimmer (2,011 acres), Slate Prairie (5,896 acres), and Tigerville (5,825 acres). The project area consists of approximately 85,055 acres of National Forest System lands.

This Record of Decision considers seven of the eight allotments covered in the Mystic Range Project FEIS: Bald Horse, Deerfield, Porcupine, Redfern, Rimmer, Slate Prairie and Tigerville Allotments. The eighth allotment--Palmer Gulch--is the subject of a separate Record of Decision (ROD) because of unique issues regarding the Norbeck Wildlife Preserve that do not affect the other seven allotments.

The project's main focus was to determine whether or not livestock grazing should continue on the subject allotments and, if so, whether any changes may be needed to meet the Black Hills National Forest Land and Resource Management Plan, as amended (Forest Plan).

The proposed action is to reauthorize grazing of domestic livestock on all subject grazing allotments and improve livestock management as needed. The purpose of and need for the Mystic Range Project is to:

- Improve livestock management so that it is consistent with the goals, objectives, standards, and guidelines of the Forest Plan, as amended.
- Improve species composition of upland vegetation.
- Improve streambank stability.
- Improve riparian vegetation diversity and abundance.
- Reduce the risk of livestock-vehicle collisions.

The Mystic Range Project had considerable public participation during the public involvement process. A Notice of Intent (NOI) to prepare an EIS was published in the *Federal Register* on Friday, June 12, 2009. Comments received during the ensuing scoping period were used to help in defining issues, develop alternatives and analyze effects. The Notice of Availability (NOA) for comment on the DEIS was published in the *Federal Register* on Friday, April 9, 2010. Public comments were received on the DEIS through May 24, 2010. Following this period, the Final Environmental Impact Statement (FEIS) was completed and this Record of Decision (ROD) was prepared. The Mystic Range Project Interdisciplinary (ID) Team analyzed the public comments and provided agency responses to the comments on the DEIS. These comments and associated Responses are located in Appendix A of the Final EIS. No public comments on the Draft EIS generated the need for reanalysis or required major substantive changes to the document. The Final EIS includes changes to the Draft EIS such as typographical corrections, other minor editorial changes, and inclusion of additional or clarifying information made largely in response to comments received on the DEIS.

## Decision

**I have decided to implement Alternative C, as described in detail in Chapter 2 of the FEIS, with a couple of minor modifications.** This decision includes implementation of the Design Criteria and Mitigation Measures included in Appendix B of the FEIS, and the Short Term and Long Term Monitoring plan included in Tables 2-2 and 2-3 of the FEIS. The decision is summarized in the attached Table 1 of this ROD.

This decision reauthorizes term grazing permits and continued livestock grazing on the Bald Horse, Deerfield, Porcupine, Redfern, Rimmer, Slate Prairie, and Tigerville Allotments. It requires construction of specific improvements (fences, water developments, etc.) in places to improve riparian, stream, and upland resource conditions and better distribute livestock use, and to reduce the potential for livestock-vehicle collisions on high speed roads. It also includes adaptive management options that could be implemented, if needed, to meet desired resource conditions. General adaptive management options are presented in Table 2-1 of the FEIS. Detailed adaptive management options are included for each allotment in the description for Alternative C on pages 41 to 45 in the FEIS. Both required range structural improvements and potential adaptive options are presented in the attached Table 1 of this ROD.

This decision includes two minor modifications to Alternative C as presented in the FEIS. It moves the Slate Creek riparian fence in the Redfern Allotment from being required to being an adaptive option; and it changes most of the required fencing and water developments on the Porcupine Holistic Management Allotment from required construction to adaptive options. The rationale for selecting Alternative C along with these minor modifications is presented later in the ROD.

The Selected Action will result in minor boundary adjustments between two allotments (add to Rimmer and reduce from Slate Prairie) and the possible expansion of 80 acres in the Tigerville Allotment. Structural range improvements for all allotments will continue to be maintained annually, and reconstructed as needed. Permittees will be responsible for maintenance and reconstruction of existing improvements where needed, and removal of others that are no longer needed. The Forest Service will assist in funding material costs for reconstruction, as funding

allows. Required reconstruction will generally be completed within the next 3-5 years. Removal of improvements that are no longer needed will be accomplished within the next 5-10 years.

Individual Allotment Management Plans (AMP's) will be assembled from the EIS and this Record of Decision summarizing directions for goals and objectives, approximate season of livestock use, kind and class of livestock, and stocking guidelines (approximate AUMs), applicable Forest Plan standard and guidelines, anticipated rotation of livestock, planned range structural improvements including probable adaptive improvements (if exercised), and monitoring requirements.

Residual levels (or remaining height of key plant species) will be prescribed for riparian areas in Annual Operating Instructions. Initially this will be 4" for key specie(s) (University of Idaho, 2004). Proper allowable use by percent weight is 50 percent for uplands. My decision highlights and reinforces the need to move livestock to the next pasture before thresholds for upland and riparian triggers are reached, based on adherence to Forest Plan Standard 2505. Permittees are responsible for implementation monitoring and moving the livestock. The Forest Service will regularly check to ensure implementation (short-term) monitoring is being conducted and livestock are being moved before exceeding thresholds. The decision also includes a new long-term effectiveness monitoring plan to assess upland and riparian conditions and trends (see Chapter 2 Monitoring in the FEIS). The Forest Service is responsible for this effectiveness monitoring. If monitoring indicates no progress towards desired conditions, changes may be made to the proper allowable use percent utilization by weight from 50% to 45%, and/or increase residual riparian stubble height to six inches, and/or implementation of other adaptive management options.

The actual number of livestock and season of use will be determined each year prior to grazing and will be outlined in the Annual Operating Instructions (AOI). Factors such as drought, fire, resource conditions or other specific management objectives could all influence annual livestock numbers and season of use. These variables are considered during winter meetings with each permittee to determine the upcoming grazing season's permitted use. The degree to which drought impairs the range's potential for future forage production depends on the intensity, frequency, and timing of grazing. Design criteria includes development of a drought management strategy. It is important to understand that actual conditions on the ground will determine the level and timing of use.

## **Summary of the Decision by Allotment**

The location of required range structural improvements and potential adaptive options is presented in Appendix F in the FEIS. More detailed maps are held in the project record. A listing of required and adaptive structures is included in the attached Table 1 of this Record of Decision.

### **Bald Horse Allotment**

The current 27,828 acre Bald Horse Allotment is grazed using a nine pasture deferred rotation system from 06/01 to 10/26 each year, currently using 299 mature cattle (cow/calf pair) for approximately 1921 AUM's. Existing structural improvements include 20 spring developments, 3 ponds, 14 water tanks, and approximately 37 miles of fence.

The Selected Action continues the existing nine pasture deferred rotation system on the Bald Horse Allotment, the current number of livestock and season of use. It continues the practice of

non-use (no grazing) within the Buzzards Roost Pasture. Limited grazing could be allowed in the future if it is determined that such grazing would benefit other resource objectives. This decision varies the order of pasture use each season. It reduces the number of days in the Middle Horse Pasture in order to improve riparian conditions. It would temporarily increase the number of days in the Prairie Creek Pasture to help offset this reduction. No use would be allowed before June 15 in the Prairie Creek Pasture to avoid conflicts with bighorn sheep lambing use.

Some existing improvements will be reconstructed to ensure their effectiveness and others that are no longer needed would be removed. This includes reconstructing the spring enclosure, placing gravel around water tanks, and repairing a pipeline from the Van Pelt Spring in the Lower Victoria Pasture, reconstructing or relocating the water development in the north half of the West Horse Pasture, improving drainage around the existing water tank (south of Twin Sisters) and increasing enclosure protection in the South Bald Hills Pasture, and reconstructing and enlarging the spring enclosure on the northwest end of the Middle Bald Hills Pasture. To prevent cattle from straying into Pactola Basin, the unused cattleguard from FSR 164 will be relocated to FSR 165 replacing the existing steel gate; and fencing will be repaired along the Centennial Trail as needed in the Prairie Creek Pasture. This decision also removes any interior fencing in the Buzzard's Roost Pasture, and removes a defunct water development on southwest corner of the Prairie Pasture.

This decision includes new structures to improve riparian and other resource conditions, gain better livestock distribution, and exclude livestock access from high speed roads. In total, this decision includes construction of approximately 3 miles of fence and four water developments.

New structural improvements include constructing a small corral for stray round-up in the southeastern portion of the Lower Victoria Pasture, fencing off a pond and piping water to a tank in south half of the West Horse Pasture, and developing an alternative water source in the northwest portion of the Middle Victoria drainage to better distribute livestock. It also requires constructing approximately 2.5 miles of fence to restrict cattle from the Sheridan Lake Road ROW, Spring Creek and associated riparian area, and trailhead. A water source will be developed within the draw near NFSR 551 to replace loss of access to Spring Creek.

This decision includes adaptive options for structural improvements if resource conditions warrant their construction. This includes developing additional sources of water to better distribute livestock in the east side of the Middle Horse, North Bald Hills, and in the Lower Victoria Pastures. The spring source along FSR 677 at the common boundary with Redfern Allotment might also be developed for joint use. Other adaptive actions might be to reconstruct on a different alignment with the west boundary of the West Horse Pasture. Also, the spring on the north side of the Middle Bald Hills Pasture against private property might require further protection.

### **Deerfield Allotment**

The current 7,874 acre Deerfield Allotment is grazed using a six pasture system from 06/06 to 10/25 each year, currently using 100 mature cattle (cow/calf pair) for approximately 631 AUM's. A recent term grazing permit waiver left two head unassigned. The Forest Service is retaining these two head since the minimum permit size is 25 head. Existing structural improvements include 9 ponds and approximately 26 miles of fence.

The Selected Action continues the current permitted number of livestock and season of use. It recommends continued use of a range rider for the allotment. The pond at the FSR 691.1J/691.1G junction will be reconstructed for an improved watering source in the Gold Run Pasture. No improvements need removal at this time. As with the current practice, the Selected Action maintains the protective boundary and does not authorize livestock grazing within the McIntosh Pasture. Some limited grazing could be conducted within the McIntosh Pasture if it is determined to be beneficial for weed control or other botanical purposes. This would require development of a separate management plan.

The Selected Action eliminates livestock use in the Lake Shore Pasture, resulting in a five pasture deferred rotation system. This change reduces the risk of livestock – vehicle collisions. This may reduce actual use by six days on the allotment. Additional fencing will be constructed off the existing Gold Run boundary fence to one new cattleguard on the Ditch Creek Road (both on the north end of the pasture) to prevent livestock access to the highway. Additional fencing will be constructed along the ridgeline between the Trap Pasture and Baseline Pasture boundary. An adaptive option that might be employed is constructing over four miles of fence to protect the Heely Creek riparian area.

### **Porcupine Allotment**

The Porcupine Allotment currently uses a Holistic Management (HM) team approach, which has been in effect since 1988. The allotment totals 9,858 acres and utilizes a 12 pasture planned grazing system from 06/09 to 09/30 and average 334 cattle (cow/calf with some yearlings) and an average 1653 AUM's. Variable numbers and season are allowed each year for this HM allotment. Existing structural improvements include 3 vertical wells, 5 spring developments, 19 ponds, 8 water tanks, 9 miles of pipeline, and approximately 34 miles of fence

The Selected Action continues the existing HM planned grazing approach and permitted average number of livestock. It also includes reconstructing the enclosure of North Antelope Springs, constructing a fence to exclude livestock from Wells Spring in the Wells Cabin Pasture, constructing a fence to exclude livestock from The Seeps in the South Wolf 1 Pasture, and resting of one pasture per year over a twelve year cycle unless specific HR Team reasons indicate grazing treatment is necessary. Grazing may be conducted early or late season in the Signal and South Exchange Pastures to favor consumption of noxious weeds.

The Selected Action provides adaptive options to construct new structural improvements if needed for resource management purposes. These adaptive options include construction of approximately 1.75 miles of pasture boundary fence to better control livestock and regulate animal impact in the Babbington-South Wolf 1 Pasture. It also includes the option of installing new water storage and water tanks in the northeast side of the Wildcat-North 1 Pasture. Approximately 0.75 miles of new pipeline would be extended from the Babbington Pasture to the new water development and burying all existing exposed pipelines for protection from wildfire, equipment, and sunlight damage. The above options are likely to occur on this allotment, and are generally endorsed by the diverse Holistic Management Team that provides recommendations on management of this allotment.

Additional adaptive management options in response to Holistic Management objectives include constructing approximately 1.7 miles of cross-fence to split the Antelope Springs Pasture in half on

an east/west axis, along with a cattleguard on FSR 283; and constructing approximately 1 mile of cross-fence to split the South Wolf 1 Pasture in half on an north/south axis, along with a cattleguard on FSR 284. Adaptive options for the Wildcat-North Pasture consists of 0.60 mile of temporary fence in the middle of the pasture to exclude livestock from the Wildcat Quarry, if it is developed; and increasing watering locations in the Signal Pasture by constructing 1.7 miles of new pipeline to two new water storage tanks, and add two new water tanks on the north and east sides of the pasture. Additional water supply might also be desirable in South Exchange Pasture and would include constructing approximately 1 mile of new pipeline to an existing water tank on the north side of the pasture. If the permittee's negotiated access to facilities on Cooper Ranch (State property) were amended by the landowner, an option would be to locate and construct a small corral for loading and unloading livestock on NFS lands on the South Exchange Pasture. Some temporary fencing might be used to confine livestock on the Yount Pasture and an option exists to add approximately 1.2 miles of new pipeline on the West Hells Canyon 1 Pasture.

Approximately 5,300 acres of prescribed broadcast burning is included in this decision for the Porcupine Allotment to reduce fuel loading buildup from dead and down pine trees and to improve forage and browse.

### **Redfern Allotment**

The current 11,573 acres Redfern Allotment utilizes a five pasture deferred rotation system from 06/11 to 10/25, currently using 195 cow/calf pairs for approximately 1159 AUMs. Existing structural improvements include 6 spring developments, 26 ponds, 3 water tanks, and approximately 18 miles of fence.

The total permitted use under the Selected Action is 177 cow/calf pairs for approximately 1052 AUMs, based on a recent permit waiver. The Forest Service is retaining the remaining 18 head in non-use status because of resource protection needs and since the minimum term grazing size is 25 head. The Selected Action maintains the existing structural improvements. It also relocates or reconstructs two water sources in the west central, upland portion of the Slate Creek Pasture, removes a defunct water development located approximately 0.75 miles east of Queen Bee Mine property on the Queen Bee Pasture, and resolves maintenance issues on the horse pasture on the Queen Bee Pasture.

As an adaptive option, this decision provides for fencing off approximately one mile of Slate Creek along FSR 530 to Slate Creek Dam by building approximately 1.5 miles of new fence, and installing one cattleguard in FSR 530.1c where the fence crosses the road. This option would be implemented if riparian conditions along Slate Creek do not move toward or meet desired resource conditions. If the fence is constructed, the riparian acreage fenced off from the longer duration Slate Creek Pasture would be incorporated into the shorter duration Redfern Holding Pasture. Grazing would increase by two days in the Redfern Holding Pasture if the fence is constructed.

### **Rimmer Allotment**

The Rimmer Allotment currently includes 2,011 acres split between two pastures operating from 06/11 to 10/10, currently using 33 cow/calf pairs for approximately 175 AUM's. Existing structural improvements include 1 spring development, 2 ponds, and approximately 5 miles of fence.

The Selected Action maintains the current number of livestock and season of use. It modifies the allotment by incorporating the underutilized West School Pasture from the Slate Prairie Allotment into the Rimmer Allotment to form a third pasture. The number of days will be reduced to lessen the duration of use in the Rimmer Pasture. Initially, the Rimmer Pasture use will be reduced by 10 days and the Grandad Pasture reduced by four days. These reductions will be made up by the added West School Pasture. The allotment will increase in size by approximately 77 acres with the addition of the West School Pasture.

The Selected Action reconstructs the enclosure at Lost Park Springs and repair two gates along the Deerfield Trail 40. It includes adaptive options and additional construction if needed to meet desired resource conditions or other purposes. Some of these options are made possible because the current permittee also runs on the adjacent Slate Prairie Allotment. Possible new construction includes extending existing fencing or connecting segments up to 1.75 miles long if livestock stray off the north and east boundaries of the Rimmer Pasture. Another option would be to increase the size of the West School Pasture by adding the west third of Slate School Pasture (estimated 120 acres) from the Slate Prairie Allotment into the Rimmer Allotment. This would require installation of one cattleguard on NFSR 188 to control livestock. It also could be managed as a separate pasture within the Rimmer Allotment, and called the “188” Pasture. An existing, non-functional water development in the northeast corner of the pasture would need to be reconstructed. Another adaptive option may be to create a fourth additional pasture called the “187” Pasture. While the probability of implementing this option is low because of cost, it might be considered. It would require the installation of one cattleguard and approximately 0.60 miles of new fence at T1N R3E S15 NWSESE. This action would split off an estimated 500 acres from the Rimmer Pasture. Additionally, access to a possible water source in the southeastern corner of the Rimmer Pasture would need to be reconstructed.

### **Slate Prairie Allotment**

The existing 5,896 acre allotment is currently managed using a five pasture deferred rotation system from 06/01 to 10/20 currently using 200 mature cattle (cow/calf) for approximately 1233 AUM's. Existing structural improvements include 23 ponds, 3 water tanks, and approximately 13 miles of fence.

The Selected Action continues the current number of livestock and season of use. It modifies current management by removing the West Slate School Pasture and adding it onto the existing Rimmer Allotment, since it is underutilized by Slate Prairie permitted cattle, and always grazed late in season. Use with the Rimmer Allotment (same permittee) will allow for variation in season of use. It reduces the Slate Prairie Allotment by 77 acres.

The Selected Action maintains existing structural improvements, except as noted below where reconstruction or removal would be required. Reconstruction or removal of existing improvements include the following: reconstruct fence to protect spring from trampling in the north end of the Mystic Pasture; reconstruct spring enclosure in lower Daugherty Gulch, rebuild approximately 0.20 miles of drift fence in Crooked Creek at the junction with Castle Creek, and remove a remnant enclosure in the drainage east of Crooked Creek draw that is overgrown with brush and trees - all on the Whitetail Pasture; and use rock to reinforce the pond spillway on the Slate School Pasture.

The Selected Action includes adaptive options for additional construction, if needed. This includes development of the Browner Spring with the Bittersweet Allotment permittee (located on the west side of this pasture) and constructing up to 0.5 miles of drift fencing on the north boundary of this pasture to keep livestock within assigned area in the Whitetail Pasture. Another option is to expand protection of Daugherty Gulch's existing spring enclosure in the Hay Draw Pasture to improve the distribution of age classes of willows in this drainage. Another option would be to fence off a pond to livestock access, and pipe water to downstream stock water tank in the Slate School Pasture.

### **Tigerville Allotment**

The existing 5,825 acre allotment is currently managed using a six pasture deferred rotation system from 06/01 to 10/25 currently using 112 cow/calf for approximately 715 AUM's. Existing structural improvements include: 4 spring developments, 19 ponds, and approximately 19 miles of fence.

The Selected Action continues the current number of livestock and grazing season. It combines two pastures (Westside and Lena). The common fence now separating the Lena and West Side Pastures will be removed. The fence is no longer functional and not needed for proper management. An existing spring enclosure fence will be reconstructed and enlarged in the northeast corner of the Tigerville Pasture. A portion of the Newton Fork Allotment east of Deerfield Road will be incorporated into the existing Mini Pasture. The Mini Pasture will be grazed once a year with either the Tigerville or Redfern Pasture for approximately 20 days per year or less. An existing water point access to Slate Creek in the Deer Park Pasture will be armored with gravel and rock. The old corral in the Marshall Pasture will be rebuilt into a small holding corral for removal of strays or injured livestock. Old corral materials would be removed.

The Selected Action includes adaptive options for additional construction if needed to meet desired resource conditions or other purposes. This includes construction of protective fencing around breached beaver dams and willow remnants in the southeast corner of the West Side Pasture. Also possible is construction of up to one third of a mile of highway ROW fencing off the southwest corner of the Mini Pasture. This fence would add approximately 80 acres to the pasture. An adaptive option for construction of a small corral may need to be exercised if use of a private, off-NFS lands corral is no longer allowed in the Redfern Pasture. An enclosure may need to be constructed around a fen area located north of Gooseberry Trailer Park in the Deer Park Pasture.

### **Rationale for Selected Action**

**Alternative C-Modified is my Selected Action** because it best meets the purpose and need for action, as determined by management direction and conditions on the allotment; and it responds well to the issues and public comments. This decision will result in maintenance or improvement of upland and riparian resources, while supporting local ranch families and communities. It also reduces the risk of livestock-vehicle collisions on high speed roads. Alternative C-Modified provides the greatest flexibility in terms of range management options. The Selected Action meets requirements under all applicable laws, regulations and policies.

The key to my decision is how re-authorizing livestock grazing in an environmentally acceptable manner is addressed. For clarity, I provide a discussion below of my rationale in terms of Purpose and Need, Management Direction, Issues, and Public Response to the DEIS.

Purpose and Need - As stated in Chapter 1 the FEIS, the purpose of the project is to re-authorize livestock grazing on all or part of the project area and to ensure livestock grazing occurs in an environmentally acceptable manner. The underlying needs for the project include:

- Improve livestock management so that it is consistent with the goals, objectives, standards, and guidelines of the Forest Plan, as amended.
- Improve species composition of upland vegetation.
- Improve streambank stability.
- Improve riparian vegetation diversity and abundance.
- Reduce the risk of livestock-vehicle collisions.

The Selected Action (Alternative C-Modified) responds well to the purpose and need. It re-authorizes grazing on the seven subject allotments in an environmentally acceptable manner. It is consistent with the standards and guidelines in the Forest Plan (see Management Direction below). It improves livestock management using both required actions and adaptive options, and new implementation (short-term) and effectiveness (long-term) monitoring requirements. Upland and riparian vegetation is improved through development of new water sources that will provide for better grazing distribution. Streambank stability in addition to riparian diversity and abundance will be improved through fencing out livestock along specific stream/riparian segments, development of new water sources to pull livestock away from streams/riparian areas, and implementation of new riparian stubble height requirements. The Selected Action reduces the risk of livestock-vehicle collisions along the high-speed Sheridan and Deerfield Roads by requiring fence construction to keep livestock off the roadways. Importantly, the Selected Action allows the full suite of adaptive options to reduce impacts to key areas by livestock.

Management Direction (Forest Plan) – The Forest Plan, as amended, contains goals and objectives, desired conditions and associated management opportunities that currently are not being met in many of the allotments. It is clear that Forest Plan goals and objectives related to soil, air, watershed, wildlife habitat, scenic resources, and recreational opportunities can be negatively affected by livestock grazing. I find that the actions included in the Selected Action provide a proactive approach to achieving the desired conditions embodied in Forest Plan Goals 1 - 3 and associated objectives (BHNF LRMP, pgs. I 3-15). Moving toward achievement of these Goals was a key component in development of the purpose and need for action in the Mystic Range Project.

Forest Plan Goals providing primary management emphasis and direction for the Mystic Range Project are Goals 1-3:

- Goal 1: Protect basic soil, air, water and cave resources.
- Goal 2: Provide for a variety of life through management of biologically diverse ecosystems.
- Goal 3: Provide for sustained commodity uses in an environmentally acceptable manner.

These Forest Plan Goals are supported by the Desired Conditions, Objectives, Standards and Guidelines included in Appendix E of the FEIS. The Selected Action meets Goals 1-3 of the Forest Plan Goals, based on information disclosed in the FEIS and contained in the project record.

The Selected Action protects soil and water resources (Goal 1) in a variety of ways. This includes fencing out livestock in a number of areas to protect stream, water, and soil resources, and improve water flows; developing water sources away from stream influence zones; requiring long-term monitoring utilizing MIMS transects to determine effects on stream banks and soils; and including adaptive management approaches to reduce effects to soil and water resources. The Selected Action provides for a variety of life through management of biologically diverse ecosystems (Goal 2). It includes a new riparian use standard that will reduce effects of livestock grazing on riparian communities and improve vegetative diversity, such as increasing the amount of shrub species and maintaining or increasing the size of riparian areas. Upland vegetation and diversity will be improved through better livestock distribution through construction of new fences and water developments.

The Selected Action provides for sustained commodity uses in an environmentally acceptable manner (Goal 3). It re-authorizes grazing on the subject allotments, which is critically important to the local ranchers that depend on these allotments to make a living and to maintain their home ranches as agricultural land. For some, the loss of these grazing permits could lead to sale and residential development of their private lands. Livestock grazing in this area has occurred for well over 100 years. Grazing use was at much higher levels over most of that time than what occurs today (See Background Section, Chapter 1, of the FEIS). I understand that grazing has some effects on the natural environment, and that it also provides some resource benefits. Based on the information presented in the FEIS and the project record, I find that the level of livestock use and required changes included in the Selected Action achieves a good balance in providing for commodity uses and providing for environmental needs. Additionally, prescribed fire on the Porcupine Allotment will improve range and fuel conditions and assist in providing for sustained commodity uses.

Issues - There were three key issues developed from both internal and external scoping for the Mystic Range Project, as presented on pages 31 through 33 of the FEIS. These issues fit well with the Purpose and Need and Forest Plan direction presented earlier in the ROD. The three key issues include soil and water/stream/riparian, upland vegetation, and social/economics. The Selected Action responds well to each of these issues.

The Selected Action is designed to reduce livestock grazing effects on soils, water, stream and riparian resources. It includes a new riparian stubble height requirement that would limit the amount of time livestock spend within riparian areas and next to streams, builds fences to exclude livestock from some riparian/stream/spring areas and obtain better livestock distribution, and constructs water developments in the uplands to encourage livestock use away from streams and riparian vegetation. It also includes new long-term effectiveness monitoring along stream/riparian habitat to determine if these actions are successfully maintaining or moving towards desired resource conditions, along with stricter requirements if the proposed actions are not being effective.

The Selected Action is designed to regulate effects of livestock grazing on upland vegetation. It requires movement of livestock before reaching upland utilization standards, construction of fences and water developments to gain better livestock distribution, and utilizes livestock as

appropriate to reduce weed infestations in combination with other integrated pest management options. It also includes new long-term effectiveness monitoring of upland vegetation to determine if these actions are successfully maintaining or moving towards desired resource conditions, along with stricter requirements if the proposed actions are not being effective.

The Selected Action is designed to continue livestock grazing, subject to Forest Plan direction and desired resource conditions, and to fence off access along the Deerfield and Sheridan Lake high-speed roads to reduce the risk of livestock-vehicle collisions. The Selected Action includes additional costs to the permittee, varying by allotment, for construction of new fences, water developments and cattle guards. Additionally, I have made it clear in meetings with permittees that actual use on the allotments may be less than that contained in the permit numbers and season of use. Actual use will be based on annual resource conditions and livestock distribution. In dry years or on pastures where livestock congregate within the riparian areas, it is possible livestock will have to be moved earlier; in wet years, or where livestock are well distributed, livestock may remain the full term or potentially longer on the pasture. Use, therefore, is a function of resource conditions derived from natural causes and how well the permittee manages livestock distribution. I recognize these actions could affect the economics of the livestock operations. The Forest Service will see additional costs for long-term monitoring on stream/riparian and upland areas.

Public Comments on the DEIS– There were a number of public comments received on the Draft EIS. These ranged from comments supporting continued grazing in order to support local ranching operations and utilize existing forage, to comments that objected to grazing on public lands. Additional comments expressed concerns about grazing effects on natural resources, and expressing concerns about livestock access within the right-of-way for high speed roads. Two permittees asked that some required activities contained in Alternative C be included as adaptive options, if Alternative C were to become the Selected Action. Other comments asked for clarifications and additional information.

Affected grazing permittees expressed concern about their ability to stay in business. The Selected Action provides for continued grazing but does place additional requirements on both the permittees to improve resource conditions. Some comments objected to grazing being allowed on the National Forest, and some expressed concerns that livestock grazing negatively affects stream, riparian and other wildlife habitats. Goal 3 of the Forest Plan encourages grazing as one of the multiple uses provided it can be accomplished in an environmentally acceptable manner. I fully understand the concerns expressed about livestock grazing affecting streams, riparian and other habitats, and also believe the record clearly shows that grazing, as approved in the Selected Action, will adequately protect these and other resource needs. The Selected Action includes new riparian standards and requires or provides for fencing and other actions to restrict livestock access to sensitive areas. Some comments expressed concern about fencing to restrict livestock access along high speed roads - both for and against. An important part of the decision is to require fencing along the Deerfield and Sheridan Lake Roads. This is necessary to reduce the risk of livestock-vehicle collisions.

Two comments expressed concern about required fencing and other improvements if Alternative C were selected. I have considered these two concerns and this has resulted in my modifications to Alternative C as part of the Selected Action. The first of these comments was from the Porcupine Holistic Resource Management Team. The Team did not object to those improvements listed as

required under Alternative C, but asked for flexibility in keeping with Holistic Management objectives and asked that I classify all structural improvements as adaptive instead of required. Except for three small spring enclosures that need enlarging, I have decided to meet their request because of the excellent working relationship we have with the Holistic Management Team and, most importantly, the good resource conditions they have achieved on the ground. The other comment was expressed in person on a field review with the permittee to Slate Creek on the Redfern Allotment. Alternative C required a fence be constructed to improve riparian conditions along Slate Creek. Our review indicated that the riparian conditions have improved substantially over this past year, in part because the permittee has employed a rider to move the livestock and keep them from congregating in the riparian area. This improvement toward meeting desired resource conditions has caused me to modify Alternative C by changing the fence from being required to being an adaptive option. I am directing my staff to pay close attention to the riparian conditions in this area. I am also encouraging the permittee to continue improvements in riparian conditions on the allotment; otherwise, the fence may still be needed to obtain desired resource conditions

## **Other Alternatives Considered**

Three alternatives were considered in detail in the FEIS. Alternatives A and B are summarized below. Alternative C-Modified is the Selected Action. A detailed comparison of all the alternatives can be found in Chapter 2 of the FEIS.

### **Alternative A (No Action)**

Alternative A is the no action alternative. Under this alternative, grazing would not be reauthorized and the current permit holders would be notified that their term grazing permits would be cancelled. All term grazing permits would be cancelled after two years, pursuant to Forest Service Handbook (FSH) 2209.13 part 16.24, and Code of Federal Regulation (CFR) 36 CFR 222.4(4)(1). The FSH and CFR regulations indicate that a two-year notification is required prior to cancelling a permit, except in emergency situations.

The no action alternative would eliminate livestock grazing on the subject allotments. Permits would not be issued for any of the affected allotments unless a subsequent NEPA analysis and decision to restock the allotments was made.

Maintenance of range developments on the allotments would no longer be the responsibility of the permittees. Developments built to facilitate livestock management, including allotment and pasture fences, livestock enclosures, stock water ponds and water developments would be abandoned. Permittees who participated in the development of range improvements would be reimbursed for their amortized share, consistent with direction in FSH 2209.13, Chapter 70. Developments built that would benefit wildlife or reduce wildlife effects to resources, such as water developments and big game enclosures would remain in place and would continue to be maintained by the Forest Service and/or cooperators. Maintenance of unassigned allotment boundary fences would be assigned to the adjacent permittee, if one is present.

The following structural improvements would be abandoned:

- Approximately 145 miles of fence.
- Approximately 219 water developments.

- Approximately 9 miles of pipeline

Spring boxes and underground pipes associated with water developments would be abandoned; pipes would be disconnected. If left in place, pipes would be capped on one or both ends to prevent water from flowing through the pipes. Unused fences would be removed as funds permit or as opportunities become available to utilize human resource labor programs such as the Youth Conservation Corp or other similar programs. All salvage materials would be stored for re-use, disposed of in a landfill, or recycled.

## **Alternative B**

Alternative B is designed to maintain or improve resource conditions without construction of any new structural improvements such as fences, cattleguards, and water developments. Existing improvements would be maintained or reconstructed, as needed. Structural improvements that need maintained or reconstructed are presented by allotment in Appendix F of the FEIS.

Some tools for effecting change in condition and trend are adjusting the timing and duration of livestock use, and moving to the next pasture before allowable proper use by weight guidelines and/or riparian stubble height requirements are exceeded. The permittee's primary methods may be: 1) strategic salt and/or supplement placement, 2) range riding to influence animal behavior by working the livestock, and 3) culling animals that do not range out from riparian areas. The purpose of using these methods is to achieve grazing efficiency, and reduce adverse effects on soils, riparian areas, and upland vegetation within the allotments that have specific areas that are not meeting desired conditions.

## **Reasons for Not Selecting Other Alternatives**

Alternative A – Under Alternative A (No Grazing), no livestock grazing would be permitted on any of the allotments. This alternative would require the cancellation of all grazing permits upon implementation of the decision and resolution of any appeals. Pursuant to Forest Service Handbook 2209.13, Section 16.13, this alternative could not be implemented until one year after the notification of each affected permittee (36 CFR 222.4(a)(7)(8)). Alternative A would result in the fastest improvement in rangeland and riparian resources in the short term however it would result in the greatest negative economic impact to local ranch families and local communities. This alternative does not meet the purpose and need for the project by eliminating this source of income to local families and reducing economic diversity in local communities.

Based on the analysis in the FEIS, my knowledge of local community dynamics, and public comments on the DEIS, I also feel that there is a high potential for this alternative to result in loss of open space. This is due to the dependence on grazing from National Forest system lands by some range permittees. If these permittees lose the option of grazing on Forest Service lands, it is likely that some ranching operations would no longer be economically viable. Ranchers may be forced to sell their ranchlands for residential or commercial development. Maintaining a level of grazing in an environmentally acceptable manner would reduce the likelihood of these ranches being lost to development. Management actions are available to ensure that livestock grazing can be conducted in a manner that meets resource objectives for the area (see Selected Action). I did not select Alternative A because cancellation of the grazing permits was not

warranted for resource protection based on other available options, especially when cancellation could potentially threaten the livelihood of the affected permittees.

Alternative B – This alternative proposes no new structural range improvements (fences, pipelines, watering facilities). Changes in management needed to move toward the desired conditions would be accomplished through reduced days of livestock use or other nonstructural adaptive management actions. After reviewing the FEIS and the project record, I do not believe that Alternative B provides the best option for managing livestock in an environmentally acceptable manner. It does not allow for any new fencing or other structural improvements that are important tools for livestock management. It does not improve or protect riparian and other resource conditions as much as the other alternatives. It also does not allow for new fencing along the rights-of-way to reduce the risk of livestock-vehicle collisions on Deerfield and Sheridan Lake Roads. For these reasons, I did not select Alternative B.

## **Public Involvement**

During project development and analysis period, an effort was made to involve, interact and cooperate with range permittees, individuals and groups interested in the Mystic Range Project. Part of this effort included public scoping as discussed below.

Scoping is the process of obtaining public comments about proposed federal actions to determine the breadth of issues to be addressed. Comments on the proposed action, potential concerns, and opportunities for managing the Mystic Range Project Area were solicited from members of the public, American Indian Tribes, other public agencies, range permittees, organizations, and Forest Service specialists.

A scoping letter was mailed to approximately 91 interested parties on June 5, 2009. This letter included a description of the project area, and overview of the NEPA process, a general explanation of the actions proposed, and an invitation to comment.

A meeting was scheduled with each permittee, to ensure that they understood the NEPA process and the proposed action.

The project was entered into the Schedule of Proposed Actions (SOPA) in February 2009. SOPA contains a list of Forest Service proposed actions that will soon begin or are undergoing environmental analysis and documentation. It provides information so the public can become aware of and indicate interest in specific proposals (located on-line at [www.fs.fed.us/sopa](http://www.fs.fed.us/sopa)).

The Notice of Intent (NOI) to prepare an EIS was published in the *Federal Register* on Friday, June 12, 2009. This provided official notification that the public comment period for the Mystic Range Project Area would last for 30-days concluding July 13, 2009.

A Notice of Availability (NOA) for the Mystic Range Project Draft Environmental Statement (DEIS) was published in the *Federal Register* on April 9, 2010. This initiated the official public 45-day comment period on the DEIS. This comment period ended May 24, 2010.

During the DEIS comment period, 17 individuals, groups, or agencies submitted comment letters. Public input received during this time period was evaluated using a content analysis process. Approximately 157 comments were identified and responded to by the Mystic Range ID Team.

These comments and associated responses are located in Appendix A of this FEIS. No public comments on the Draft EIS generated the need for reanalysis or required major substantive changes to the document. The Final EIS includes changes to the Draft EIS such as typographical corrections, other minor editorial changes, and inclusion of additional or clarifying information made largely in response to comments received on the DEIS.

## **The Environmentally Preferred Alternative**

Disclosure of one or more environmentally preferable alternatives is required [Section 101 NEPA; 40 CFR 1505.2(b)]. The environmentally preferable alternative is not necessarily the alternative that will be implemented and it does not have to meet the underlying need for the project. It does, however, have to cause the least damage to the biological and physical environment and best protect, preserve, and enhance historical, cultural and natural resources.

In the case of the Mystic Range Project, I have determined that Alternative A is the environmentally preferred alternative because it would eliminate impacts from livestock to soils, water quality, and riparian vegetation.

## **Design Criteria and Mitigation**

Design criteria and mitigation measures describe features and actions applied in the project analysis during the design of the proposed action and alternatives to reduce effects (see FEIS Chapter 2, pg. 47 and Appendix B). They include requirements such as BMP's, standards and guidelines, and standard operating procedures that are incorporated into (made part of) the action design. Design criteria will be implemented on a site-specific basis to reduce the adverse impacts of livestock grazing. These criteria will be applied during project design and implementation by both the Forest Service and range permittees. Measures listed in Chapter 2 of the FEIS are incorporated by reference into this Record of Decision.

## **Monitoring**

Monitoring is integral to adaptive management. Monitoring must be done in order to decide when changes in management are needed. Therefore it is essential that the monitoring plan be focused on areas with resource problems, use simple but effective methods, and be conducted at the level appropriate to identify thresholds and prevent resource damage.

The monitoring activities described in Chapter 2 of the FEIS will be implemented as appropriate. Activities and their effects, including effectiveness of design criteria and any needed mitigation measures, will be monitored during and following project completion. This decision makes no changes to the referenced monitoring activities.

## **Legal Requirements, Regulation, and Policy**

Another aspect of the process of selecting an alternative is ensuring that the planned action comply with all legal requirements and policy. The selected alternative specifically meets the following legal requirements.

## **Federal Laws**

The National Historic Preservation Act of 1966, as amended: All surveyed and inventoried cultural sites considered eligible or potentially eligible for the National Register of Historic Places will be protected from grazing activities. New sites discovered during operations will be protected. Any identified Traditional Cultural Properties and sacred areas will be protected. The South Dakota State Historic Preservation Officer (SHPO) has been consulted concerning the proposed activities in the Mystic Range Project Area. A letter of concurrence was received for each allotment. The SHPO concurred with our determination of “No Historic Properties Affected” in a letter dated October 26, 2009. The approximate 3,500 acres of prescribed burning within the Porcupine Allotment will need SHPO concurrence.

The National Environmental Policy Act (NEPA), 1969: NEPA establishes the format and content requirements of environmental analysis and documentation. The process of preparing the Mystic Range Project EIS and ROD was completed in accordance with NEPA.

The Endangered Species Act, 1973: The project decision is in compliance with the Endangered Species Act (ESA). There are no threatened, endangered or proposed species within the Mystic Range Project Area. Therefore, no consultation was required with the US Fish and Wildlife Service. The bald eagle was recently de-listed under ESA. Potential effects to bald eagles and other sensitive species, along with documentation regarding species covered under ESA, were included in a biological assessment/biological evaluation and summarized in Appendix D of the FEIS.

The Clean Air Act Amendments, 1977: The Selected Action will be implemented to meet the National Ambient Air Quality standards through avoidance of practices that degrade air quality below health and visibility standards.

The Clean Water Act, 1982: The Selected Action will meet and conform to the Clean Water Act as amended in 1982. This act establishes a non-degradation policy for all federally proposed projects. The Selected Action is not likely to degrade water quality below standards set by the State of South Dakota. This will be accomplished through planning, application, and monitoring of Watershed Conservation Practices and other design criteria of project activities. Because this project is designed to improve upon current livestock grazing practices, no further water quality degradation is expected from the proposed project.

The National Forest Management Act (NFMA) 1976, which amends the Forest and Rangeland Renewable Resources Planning Act (RPA) of 1974: All alternatives were developed to be in full compliance and consistent with NFMA as summarized below.

## **Consistency with the Land and Resource Management Plan**

The 1997 Black Hills National Forest Land and Resource Management Plan (Forest Plan) supported by its Final Environmental Impact Statement (FEIS), is the Forest programmatic document required by the rules implementing the Forest and Rangeland Renewable Resources Act of 1974 (RPA), as amended by the National Forest Management Act of 1976 (NFMA). The Forest Plan was amended by the Phase II Forest Plan Amendment (Record of Decision dated October 31, 2005). This amendment provides revised and new Standards and Guidelines, as well

as additional protection measures applicable to a number of plant and wildlife species on the Black Hills National Forest. My decision is consistent with the Plan in that:

- Planned activities will contribute to Forest Plan, as amended, goals and objectives (FEIS, Chapter 1). Actions proposed focus on Forest Plan Goals 1 - 3 by providing commodities to support local families and communities. Other Forest Plan Goals and applicable Objectives also provide management guidance and are achieved to varying degrees.
- I have reviewed the BHNF FY 2008 Monitoring and Evaluation Reports and Region 2 MIS guidance for projects. The effects of planned activities on management indicator species are consistent with the Forest Plan. They are also consistent with the FSM 2670 policy on sensitive species and FSM BHNF supplement 2600-2005-1 on species of local concern.
- Planned activities are consistent with management area direction.
- Planned activities comply or move towards compliance with Forest Plan, as amended.

### **Consistency with the National Forest Management Act**

The 1982 planning rule has been superseded and is no longer in effect. The Forest Service is implementing this project under the 2000 planning rule. The scope of analysis for a Forest Plan's management indicator species is determined by the Forest Plan's management direction, specifically, its standards and guidelines (Chapter II) and monitoring direction (Chapter IV). The Black Hills National Forest Land and Resource Management Plan (Forest Plan) contains no obligation to conduct project-specific monitoring or surveying for MIS (Phase II ROD, pp. 8, 20; Forest Plan as Amended, pg. I-11, Objective 238). The Forest Plan establishes monitoring and evaluation requirements that do not require population monitoring for MIS, but rather employ habitat capability relationships (Phase II ROD, pp. 20; Forest Plan as Amended, pg. I-11, Objective 238). Effects of the proposed project to species designated as MIS by the Forest Plan, as amended by the Phase II Amendment, have been considered. Due to the scale of the proposed project in relation to habitats available across the Forest, there will be no effect on Forest-wide habitat trends for any MIS species. Project effects on MIS are discussed in the FEIS beginning on page 126. The project is consistent with, or moves toward accomplishing Objectives 201 (aspen); 238 a, b, and c (various MIS); and 239 (spruce). Similarly, project effects on Species of Local Concern (SOLC) are discussed in the FEIS beginning on page 154. The project is consistent with, or moves toward accomplishing Objectives 213 (riparian habitat) and 221 (SOLC).

Best Available Science: My decision also is based upon consideration of the best available science. I have reviewed the record which shows a thorough review of relevant scientific information, a consideration of responsible opposing views, and the acknowledgement of incomplete or unavailable information, scientific uncertainty and risk. Specifically, the record shows that extensive literature citations have been reviewed and considered by resource specialists in preparation of the EIS as evidenced by the literature cited sections in the specialist reports. In addition, the record shows that literature cited by the public during the comment period has been reviewed and considered by resource specialists on the Mystic Range Project IDT.

### **Administrative Review**

This decision is subject to administrative review (appeal) pursuant to 36 Code of Federal Regulation (CFR) Part 215. This decision is also subject to administrative review under 36 CFR Part 251 Subpart C, by term grazing permit holders or applicants (§251.86). However, term grazing permit

holders or applicants must choose to appeal under either 36 CFR 251 or 215, but not both (§251.85). Notices of Appeal that do not meet the content requirements of 36 CFR 215.14 or 36 CFR 251.90, as appropriate, will be dismissed.

Appeals filed under 36 CFR Part 215 – Appeals filed under 36 CFR Part 215, must be submitted (by regular mail) to: USDA Forest Service Region 2, Appeals Deciding Officer, 740 Simms Street, Golden, CO 80401 or (by fax) to 303-275-5134. The office business hours for those submitting hand delivered appeals are 7:30 a.m. to 4:30 p.m. Monday through Friday, excluding holidays. Electronic appeals must be submitted in .pdf, rich text format (.rtf), or Word (.doc) to [appeals-rocky-mountain-regional-office@fs.fed.us](mailto:appeals-rocky-mountain-regional-office@fs.fed.us) Include the name of the project being appealed in the subject line. Appellants should normally receive automated electronic acknowledgement as confirmation of agency receipt of electronic appeals. If the appellant does not receive an automated acknowledgement of receipt, it is the appellant’s responsibility to ensure timely receipt by other means. In cases where no identifiable name is attached to an electronic message, a verification of identity will be required. A scanned signature is one way to provide verification.

Appeals, including attachments, must be filed within 45 days from the publication date of notice of this decision in the Rapid City Journal, the newspaper of record. Attachments received after the 45 day appeal period will not be considered. The publication date in the Rapid City Journal, newspaper of record, is the exclusive means for calculated the time to file an appeal. Those wishing to appeal this decision should not rely upon dates or timeframe information provided by any other source.

To be eligible to appeal this decision on this project, an individual or group must have provided a comment or otherwise expressed interest in this project by the close of the comment period. The notice of appeal must meet the appeal content requirements at 36 CFR 215.14.

Appeals filed under 36 CFR Part 251 Subpart C – Appeals filed under 36 CFR Part 251, must be submitted (by regular mail) to: USDA Forest Service, Black Hills National Forest, Attn: Ed Fischer, 1019 N. 5<sup>th</sup> St., Custer, SD 57730, or (by fax) to 605-673-9350, (if hand-delivery or express delivery) to 1019 N. 5<sup>th</sup> St., Custer, SD. The office business hours for those submitting hand-delivered appeals are 8:00 a.m. to 4:30 p.m. Monday through Friday, excluding holidays. Electronic appeals must be submitted in .pdf format, rich text (.rtf), or Word (.doc) to [appeals-rocky-mountain-black-hills@fs.fed.us](mailto:appeals-rocky-mountain-black-hills@fs.fed.us) Include the name of the project being appealed in the subject line. Appellants should normally receive an automated electronic acknowledgement as confirmation of agency receipt of electronic appeals. If the appellant does not receive an automated acknowledgement of receipt, it is the appellant’s responsibility to ensure timely receipt by other means. In cases where no identifiable name is attached to an electronic message, a verification of identity will be required. A scanned signature is one way to provide verification.

Appeals must be filed within 45 days following the date on the notice of the written decision (§251.88). Attachments received after the 45 day appeal period will not be considered. Appeals filed under 36 CFR 251 Subpart C must have a copy of the appeal simultaneously sent to the Deciding Officer (§251.88) at: Deciding Officer, Mystic Ranger District, Black Hills National Forest; Attention: Robert Thompson, District Ranger, 8221 S. Hwy 16, Rapid City, SD 57702 or (by fax) to 605-343-7134.

It is the appellant's responsibility to provide sufficient activity-specific evidence and rationale, focusing on the decision, to show why the Deciding Officer's decision should be reversed (§251.90). The Deciding officer is willing to meet with the applicants and holders to hear and discuss any concerns or issues related to the decision (§251.93).

An appellant may also include in the notice of appeal a request for oral presentation (§251.97) or request for stay of implementation of the decision pending decision on the appeal (§251.91).

## Implementation

Implementation of the selected alternative will occur under the authority of this Record of Decision, subject to the appropriate appeal and implementation procedures cited above. Acreages and locations are approximate and may vary slightly during implementation depending on site-specific conditions.

Pursuant to 36 CFR Part 215, if no appeal is filed within the 45 day time period, implementation of this decision may occur on, but not before, 5 business days from the close of the appeal filing period. If an appeal is received, implementation may occur on, but not before, the 15th business day following the date of the last appeal disposition.

Pursuant to 36 CFR Part 251 Subpart C, if no appeal is filed, implementation of this decision may occur on, but not before, 5 business days from the close of the appeal filing period. If an appeal is received, implementation may occur during the appeal process, unless the Reviewing Officer grants a stay (§251.91).

## Contact Person

For additional information concerning this decision contact Katie Van Alstyne, ID Team Leader, Robert J. Thompson, District Ranger, phone (605) 343-1567 or Ed Fischer, Environmental Coordinator, Black Hills National Forest, 1019 North 5<sup>th</sup> Street, Custer, SD 57730.

*/s/Robert J. Thompson*

*10/12/2010*

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ROBERT J. THOMPSON  
Mystic District Ranger  
Black Hills National Forest  
USDA Forest Service

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Date

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**Table 1: Required Structural Range Improvements (R) and Potential Adaptive Options (A)**

<b>Allotment</b>	<b>Pasture</b>	<b>INFRA Number or Common Name</b>	<b>Type and Estimated Unit</b>	<b>Required and/or Adaptive Option</b>	<b>Remarks</b>
<b>Bald Horse</b>	<b>Burnt Ranch</b>	Sheridan Lake Rd. ROW	Fence 1.75 mi.	R	Restricts cattle from County Road.
		NFSR 551 draw	WD - water tank (1)	R	Replaces water source access lost with ROW fencing of Sheridan Lake Road by developing spring, installing water tanks, and building enclosure.
		901038	Fence - 0.75 mi.	R	Restricts cattle from Sheridan Lake. Road.
	<b>Buzzard Roost</b>	901058	Fence - 0.70 mi.	R	Remove unneeded pasture fence.
	<b>Lower Victoria</b>	NFSR 150 CCC Dam	WD - spring	R	Seal existing pond to retain seep flows.
		NFSR 150 Corral	Corral	R	Construct small corral to handle removal of injured livestock or strays.
		901032 Van Pelt Spring	WD - water tank (1)	R	Replace collapsed pipeline, harden surface around water tank, and improve enclosure at water source.
	<b>Middle Bald Hills</b>	901049	WD - water tank (1)	R	Build larger enclosure fence around spring headbox.
		901067	Fence - 0.30 mi.	A	Seep area may need additional protective fencing.
	<b>Middle Horse</b>	901XXX Unnamed	WD - water tank (1)	A	Develop water source on east side to promote distribution of livestock.
	<b>Middle Victoria</b>	901XXX Unnamed	WD - water tank (1)	A	Develop water source on north side to promote distribution of livestock.
	<b>North Bald Hills</b>	901010	WD - water tank (1)	A	Construct fence enclosure around unused springbox and install water tank.
	<b>Prairie Creek</b>	901075	WD -water tank (1)	R	Remove development from pasture.
		901074	CG (1) - NFSR 164	R	Remove unneeded cattleguard.
		901XXX Unnamed	CG (1) -NFSR 165.1B	R	Install cattleguard in place of metal swing gate to protect walk-in fishery.
		901XXX Unnamed	Fence - 1.0 mi.	R	Install drift fencing as needed to retain cattle in pasture south of Rapid Creek.
	<b>South Bald Hills</b>	901007	WD - water tank (1)	R	Improve drainage around existing water tanks, harden surface around tanks, improve boundary and enclosure fences.

<b>Allotment</b>	<b>Pasture</b>	<b>INFRA Number or Common Name</b>	<b>Type and Estimated Unit</b>	<b>Required and/or Adaptive Option</b>	<b>Remarks</b>
	<b>West Horse</b>	901026	WD - water tank (1)	R	Rebuild spring headbox and enclosure.
		901027	WD - pond (1)	R	Enclose pond with fence and pipe to water tank.
		901040	Fence - 1.75 mi.	A	Existing fence needs reconstruction; rebuild on different alignment to access water source.
		NFSR 677 Spring	WD - water tank (1)	A	Develop spring headbox, fence enclosure, and pipeline to water tanks in 901040 fence line. Common development with Nugget Pasture, Redfern Allotment.
<b>Deerfield</b>	<b>Gold Run</b>	608015	Fence - 1.0 mi.	R	Construct additional fencing to restrict livestock access to Deerfield-South Rochford Highway.
		608XXX Ditch Cr. Rd.	CG (1) - NFSR 291	R	Install cattleguard in conjunction with fence 608015 extension.
		NFSR 691.1J/691.1G junction	WD - pond (1)	R	Improve existing pond to increase available water for livestock and wildlife.
	<b>Heely</b>	608XXX Unnamed	Fence - 4.0 mi.	A	Construct enclosure fencing to protect Heely Creek while allowing for water access point(s) for livestock.
	<b>Trap</b>	608013	Fence - 1.0 mi.	R	Construct additional ridgeline fencing to contain livestock in pasture.
<b>Porcupine</b>	<b>Antelope Springs</b>	616XXX Unnamed	Fence - 1.70 mi.	A	Construct fence to split current pasture into two pastures.
	<b>North Antelope Springs</b>	616064	Fence - 0.30 mi.	R	Improve enclosure fencing to protect spring source.
		NFSR 283	CG (1)	A	Install cattleguard in NFSR 283 in conjunction with new fence.
	<b>Babbington-North Wolf #1</b>	616XXX Unnamed	Fence - 1.75 mi.	A	Construct fence to establish boundaries for existing pastures.
		615XXX Unnamed	Fence - 1.25 mi.	A	Construct fence to further subdivide Babbington-NW#1 Pasture if HRM Team objectives require such work.
		616065	Pipeline 0.70 mi.	A	Install feeder line from existing pipeline to proposed water development in north end of Babbington-NW#1 Pasture if HRM Team objectives require such work.

<b>Allotment</b>	<b>Pasture</b>	<b>INFRA Number or Common Name</b>	<b>Type and Estimated Unit</b>	<b>Required and/or Adaptive Option</b>	<b>Remarks</b>
		North Babbington	WD -water tank (1)	A	Install storage tank and water tanks fed by pipeline in north end of Babbington-NW#1 Pasture if HRM Team objectives require such work.
	<b>Wildcat-North Wolf #1</b>	616065	Pipeline 0.75 mi.	A	Install feeder line from existing pipeline to new water development in north end of Wildcat-NW#1 Pasture.
		616XXX Unnamed	WD - water tanks (1)	A	Install storage tank and water tanks for watering livestock.
		Wildcat Quarry	Fence - 0.60 mi.	A	Future quarry development may require fencing to restrict livestock access.
	<b>North Wolf #3</b>	616XXX Unnamed	Fence - 1.2 mi.	A	Construct fence to further subdivide NW#3 Pasture if HRM Team objectives require such work.
	<b>Signal</b>	Lemming Well	Pipeline - 1.70 mi.	A	Install feeder line from existing pipeline to new water tanks or existing ponds such as 616010, 616011, 616037, and 616063 if HRM Team objectives require such construction.
		616010 & 616011	WD - water tank (2)	A	Install storage tank and water tanks fed by Lemming well pipeline in if HRM Team objectives require such work.
		616037 & 616063	WD - water tank (2)	A	Install storage tank and water tanks fed by Lemming well pipeline in if HRM Team objectives require such work.
	<b>South Exchange</b>	Round-up corral	Corral (1)	A	Locate and construct handling facilities for livestock if needed.
		Lemming Well	Pipeline - 1.0 mi.	A	Install feeder line from existing pipeline to water tanks 616062 if HRM Team objectives require such construction.
		616062	WD -water tank (1)	A	Install storage tank fed by Lemming well pipeline in if HRM Team objectives require such work.
	<b>South Wolf #1</b>	The Seeps	Fence - 0.30 mi.	R	Improve enclosure fencing to protect spring source from trampling.
		616XXX Unnamed	Fence - 1.0 mi.	A	Construct fence to further subdivide SW#1 Pasture if HRM Team objectives require such work.

<b>Allotment</b>	<b>Pasture</b>	<b>INFRA Number or Common Name</b>	<b>Type and Estimated Unit</b>	<b>Required and/or Adaptive Option</b>	<b>Remarks</b>
		NFSR 284	CG (1)	A	Install cattleguard in NFSR 284 in conjunction with new fence.
	<b>Wells Cabin</b>	616068	Fence - 0.30 mi.	R	Improve enclosure fencing to protect spring source from trampling.
	<b>West Hells Canyon #1 &amp; SW #1</b>	616028	Pipeline - 1.2 mi.	A	Install feeder line from existing pipeline to 616051 storage tank.
	<b>Yount</b>	616XXX	Fence - 0.80 mi	A	Install temporary fencing if HRM Team objectives require such work.
	<b>Multiple Pastures</b>	Prescribed burning	Acres, up to 5300	A	Prescribed burning to reduce slash accumulations and improve livestock and big game distribution. See Fire/Fuels Specialist section in EIS.
	<b>Multiple Pastures</b>	Bury pipelines	Pipeline - 8.0 mi.	A	Bury all exposed pipelines to protect from wildfire, suppression and construction equipment, and sunlight.
<b>Redfern</b>	<b>Queen Bee</b>	617050	WD - water tank (1)	R	Reconstruct enclosure to protect spring source from trampling. Remove water tank as drainage runs ample water.
		Horse Pasture	Fence	R	Define scope, standard, and use of horse pasture by permittee. Restore fencing as needed and clean up site.
	<b>Redfern Holding</b>	617016	Fence	A	Expand holding pasture to protect Slate Creek while allowing for water access point(s) for livestock.
		NFSR 530	CG (1)	A	Concurrent with fencing associated with 617016 project, include a new cattleguard in NFSR 530.
	<b>Slate Creek</b>	617008	WD - water tank (1)	R	Reconstruct spring headbox, fence enclosure, and pipeline as needed to establish new water tank; remove unused old materials.
		617011	WD - water tank (1)	R	Reconstruct spring headbox, fence enclosure, and pipeline as needed to establish new water tank; remove unused old materials.
<b>Rimmer</b>	<b>Rimmer</b>	621070	WD - spring (2)	R	Develop spring to provide watering points for Rimmer and adjacent Bittersweet Allotment.

<b>Allotment</b>	<b>Pasture</b>	<b>INFRA Number or Common Name</b>	<b>Type and Estimated Unit</b>	<b>Required and/or Adaptive Option</b>	<b>Remarks</b>
		Deerfield Trail	Gates, Trail (2)	R	Improve gate structures at two points along Trail 40 which enter and exit the Rimmer Pasture.
		619015 Lost Park	Fence - 0.30 mi.	R	Reconstruct spring enclosure to protect source from trampling.
		619017	Fence - 1.25 mi	A	Extend eastern boundary fencing to the north as needed since vegetative barriers have been thinned out.
		619XXX Unnamed	Fence - 0.60 mi.	A	Construct fence to split Rimmer Pasture into two smaller pastures.
		619XXX Unnamed	CG (1)	A	Install cattleguard in new pasture fence where it crosses NFSR 187.
		619017 & 602003	Fence - 0.50 mi.	A	Connect existing allotment boundary fences between Rimmer and Bittersweet Allotments.
		621XXX Unnamed	CG (1)	A	Install cattleguard on NFSR 188 (Slate Prairie Road) to split off and add the west half of Slate School Pasture to the Rimmer Allotment.
<b>Slate Prairie</b>	<b>Hay Draw</b>	621050	WD - spring (1)	A	Enlarge existing spring enclosure fence to allow willow development.
	<b>Mystic</b>	621013	WD - spring (1)	R	Restore spring enclosure fence to protect from trampling.
	<b>Slate School</b>	621005	WD - pond (1)	R	Re-enforce spillway channel with rock.
		621005	WD - pond (1)	A	Restore pond enclosure fence to protect from trampling, and pipe water to water tank downstream.
	<b>Whitetail</b>	621010	WD - spring (1)	R	Remove fencing from spring source since entire drainage is vegetated and flows water.
		621048	WD - spring (1)	R	Reconstruct and enlarge enclosure fence to protect spring from trampling.
		621066 Browner Spring	WD - spring (1)	A	Install water storage tank and water tanks for use by Bittersweet and Slate Prairie Allotments.

<b>Allotment</b>	<b>Pasture</b>	<b>INFRA Number or Common Name</b>	<b>Type and Estimated Unit</b>	<b>Required and/or Adaptive Option</b>	<b>Remarks</b>
		621XXX Unnamed	Fence - 0.20 mi.	R	Reconstruct drift fence across NFSR 182.1C (south of Castle Creek).
		Daugherty Gulch Fen	Fence - 0.30 mi.	R	Install protective fencing around fen, while providing water for livestock and wildlife.
		621XXX Unnamed	Fence - 0.50 mi.	A	Construct fences in vicinity of NFSR 187.L and 187.M to restrict cattle drift into Castle Creek drainage.
<b>Tigerville</b>	<b>Deer Park</b>	Gooseberry Fen	Fence - 0.30 mi.	A	Install protective fencing around fen if needed to restrict livestock use.
	<b>Marshall</b>	624063	Corral (1)	R	Downsize existing corral to minimum needed to handle livestock needs.
	<b>Mini</b>	624XXX Unnamed	Fence - 0.30 mi.	A	Fence along Deerfield Road ROW to incorporate unused portion of Newton Fork Allotment with Mini Pasture.
	<b>Redfern</b>	624XXX Unnamed	Corral (1)	A	Construct small corral to load and unload livestock: possible sites are T1S R4E S4 W1/2NE or S5 E1/2NE.
	<b>Tigerville</b>	624005	WD - spring (1)	R	Reconstruct and enlarge enclosure fence to protect spring from trampling.
	<b>Westside</b>	624026	Fence - 1.0 mi.	R	Remove unused pasture fencing.