

Preliminary Environmental Assessment

Great Falls Area

Grazing Lease Renewal

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Lewistown Field Office



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Chapter 1

Introduction

Information in this chapter is organized into the following headings.

- 1.0 Purpose and Need
- 1.1 Background
- 1.2 Location
- 1.3 Decision Needed
- 1.4 Conformance with Land Use Plan
- 1.5 Issues and Objectives
 - 1.5.1 Upland Health
 - 1.5.2 Riparian Health
 - 1.5.3 Water Quality
 - 1.5.4 Biodiversity
 - 1.5.5 Noxious Weeds
 - 1.5.6 Privacy Act Notice

1.0 Purpose and Need

This environmental assessment (EA) evaluates rangeland health standards and analyzes impacts associated with renewing grazing leases within the Great Falls area. The purpose of the proposed action is to analyze the impacts of modifying and/or renewing grazing leases as it relates to current resource conditions on allotments where grazing leases are expiring. There is a need to address expiring grazing leases, make administrative changes, and adjust current management where required.

The Bureau of Land Management (BLM) is required to complete an environmental analysis when renewing 10-year grazing leases. This analysis will review the grazing allotments in the Great Falls area for compliance with the Standards for Rangeland Health and Guidelines for Livestock Management. Existing leases would be cancelled and new 10-year grazing leases would be offered at the conclusion of this effort. Associated impacts of this action include, but are not limited to, construction of range improvement projects, modifications to current grazing management, where required, and continuation of appropriate grazing practices and

noxious weed control. Other management activities that impact upland and riparian health, water and air quality, and biodiversity will also be considered where necessary.

This EA will define the issues, detail the alternatives considered, describe the biological and physical characteristics of the affected environment, and explain the environmental consequences of each alternative. Individual allotments will also be addressed on a site-specific basis.

1.1 Background

The BLM Lewistown Field Office (LFO) has undertaken a field office-wide planning effort, focused on implementing decisions in the Headwaters Resource Management Plan (HRMP) approved in July 1984 (BLM 1994) and Judith Resource Management Plan (J RMP) approved in September 1994. The LFO administers about 1 million acres of public land in nine central Montana counties which spans an area approximately 225 miles long by 150 miles wide. The vastness of this jurisdictional area, combined with direction from the Judith and Headwaters RMP has prompted the LFO to delineate smaller, manageable planning units.

1.2 Location

The planning area is administered by LFO and contains portions of Meagher, Cascade, Lewis and Clark, Teton and Pondera Counties, Montana. These lands are found throughout the Smith, Dearborn, Missouri-Cascade, Missouri-Choteau, Sun, Teton, Two Medicine, Marias, Belt, Upper Musselshell and Judith Watersheds. The planning area is roughly 100 miles long, 200 miles wide and encompasses over 8 million acres. This includes 48,361 acres of land administered by the BLM, in addition to other lands administered by the state of Montana, U.S. Fish & Wildlife Service, Bureau of Reclamation and private land. A total of 100 BLM grazing allotments are authorized to 92 lessees.

1.3 Decision Needed

The LFO manager is the responsible official who must decide whether to implement decisions analyzed in the proposed action. These decisions would be issued separately on individual allotments and include the following:

- Renewing grazing leases based on determinations of meeting Standards for Rangeland Health and Guidelines for Livestock Grazing Management (Standards and Guidelines).
- Initiating and sustaining cooperative noxious weed control efforts.
- Implementing grazing management actions on allotments not meeting Standards and Guidelines or on allotments requiring other administrative changes.
- Implementing range improvement projects.

1.4 Land Use Plan Conformance

The Headwaters Resource Management Plan (approved in July 1984) set forth the land use decisions and conditions guiding management of public land and minerals within the Great Falls administrative area. All uses and activities within the area must conform to the decisions, terms and conditions described in this plan. Appendix A describes the land use plan guidance contained in the Headwaters RMP that is pertinent to the Great Falls planning area.

The Headwaters RMP specifies that implementation of changes or continuation of current management on individual allotments will be conducted on a site-specific basis and will consider management based on present resource condition and the potential for improvement. Under the Headwaters RMP, livestock grazing will be managed through the development of activity or similar plans designed to achieve objectives for wildlife habitat, watersheds, vegetation condition and

livestock forage production (pp. 24-25 Headwaters RMP DEIS). Livestock use adjustments will be made by changing one or more of the following: the kind or class of livestock grazing an allotment, the season of use, the stocking rate or the pattern of grazing. Management of grazing will be in accordance with the grazing administration regulations found in 43 CFR Part 4100.

The Headwaters RMP was amended by the Standards for Rangeland Health and Guidelines for Livestock Grazing Management for Montana, North Dakota, and South Dakota, which was approved by the Secretary of the Interior in August 1997. Livestock grazing is managed under the Lewistown District (Lewistown and Malta Field Offices) Standards for Rangeland Health and Guidelines for Livestock Grazing Management (BLM 1997) (Appendices B and C). Standards are statements of physical and biological condition or degree of function required for healthy sustainable rangelands and guidelines focus on establishing and maintaining proper functioning conditions and the application of the guidelines is dependent on individual management objectives.

The Fire/Fuels Management Plan/Plan Amendment for Montana and the Dakotas (BLM 2003) also amended the Headwaters RMP. This amendment included language to bring the RMP up to date with the federal wildland fire management policy.

1.5 Issues and Objectives

1.5.1 Upland Health

Issue: The upland health standard is not being met for some of the upland areas on public lands. Livestock are a significant factor in some cases.

Short-term objective: Maintain the 80 allotments that are meeting the upland standard. Improve the nine allotments that are not meeting the upland standard due to causes other than livestock grazing. Continue improvement on

these allotments that are already making significant progress towards achieving health standards. Implement management actions that would ensure significant progress is made toward meeting the standard on the 11 allotments that are not meeting the standard due to current livestock management (Appendix E). Also, enter into cooperative weed control agreements (or re-emphasize current cooperative agreements) with leases where allotments are not meeting the health standards due to noxious weed infestations.

Long-term objective: Maintain or improve upland areas so that all allotments are meeting the upland health standard within 10 years.

1.5.2 Riparian Health

Issue: Lewistown Standard 2 (Riparian and wetland areas are in proper functioning condition) is not being met for some of the riparian areas on public lands. Current livestock management is a significant factor in some cases.

Short-term objective: The BLM's goal is to improve and maintain riparian health on all streams within the planning area to Proper Functioning Condition or above. It is also to ensure the establishment and recruitment of cottonwood, willow, birch, silverberry and other desirable woody species on sites capable of supporting such species.

Long-term objective: Maintain or improve the 29.42 miles of riparian areas to Proper Functioning Condition or above within 10 years. Some areas, such as Birch Creek in Pondera County, may never achieve PFC and our goal would be to move these riparian areas towards their capability.

1.5.3 Water Quality

Issue: Lewistown Standard 3 (Water quality meets Montana State standards) is not being met on six allotments within the planning area where livestock are a significant factor.

Short-term objective: The BLM aims to address the water quality concerns on the water quality impaired streams by generating improving trends in condition. This would be accomplished by maintaining riparian and upland areas that are in good health and improving degraded riparian and upland areas.

Long-term objective: Maintain or improve the 29.42 miles of riparian areas to Proper Functioning Condition or above within 10 years. Maintain or improve upland areas so that all allotments are meeting the upland health standard within 10 years.

1.5.4 Biodiversity

Issue: The biodiversity health standard is not being met on some allotments. Livestock are a significant factor in some cases.

Short-term objective: Maintain the 75 allotments that are meeting the biodiversity standard. Improve the 12 allotments that are not meeting the biodiversity standard due to causes other than livestock management and ensure significant progress is made toward meeting the standard on the 13 allotments that are not meeting the standard as a result of current livestock management.

Long-term objective: Maintain or improve rangeland health so that all allotments are meeting the biodiversity standard or making significant progress within 10 years.

1.5.5 Noxious Weeds

Issue: Noxious weed populations are present on public, private, and state lands within the watershed.

Objective: Continue control of known noxious weed infestations and all newly identified infestations. Initiate new cooperative weed control agreements with grazing lessees within the watershed and re-emphasize current agreements. Eradicate any new populations of Category 3 weeds (see Noxious Weeds; Chapter 3.4 for a description of weed categories).

1.5.6 Privacy Act Notice

The BLM frequently receives inquiries from organizations, individuals and media for information about grazing leases and lessees. The BLM's Washington Office, in consultation with the solicitor's office, has recommended that such inquires be treated as Freedom of Information Act requests. Doing so allows the

BLM to provide consistent responses and to comply with a Privacy Act notice that encompasses grazing leases. Until LFO receives further guidance, the names of individual livestock grazing lessees will not be used in planning documents unless the lessee is registered as a public entity.

Chapter 2 Alternatives

Two alternatives, No Action and Proposed Action, were developed to address the issues outlined in Chapter 1.

The National Environmental Policy Act (NEPA) and BLM policy require preparation of an EA as an integral component of livestock grazing lease issuance or renewal. This EA will address the following:

- Issuing a new lease with the same terms and conditions as the expiring lease.
- Issuing a new lease based on Standards and Guidelines for Rangeland Health (proposed action).

The information in this chapter is organized into the following headings:

- 2.1 Alternatives considered but not further Analyzed
 - 2.1.1 No Grazing Alternative
- 2.2 No Action Alternative/Continuation of Current Management
 - 2.2.1 Rangeland Administration
 - 2.2.2 Noxious Weeds
- 2.3 Proposed Action
 - 2.3.1 Rangeland Administration
 - 2.3.2 Standards for Rangeland Health and Guidelines for Livestock Management
 - 2.3.3 Range Improvement Projects
 - 2.3.4 Noxious Weeds
 - 2.3.5 Wildlife/Threatened, Endangered and Sensitive species (TES)
 - 2.3.6 Fire Management
 - 2.3.7 Cultural/Historical
 - 2.3.8 Management in Common to all Allotments
 - 2.3.9 Proposed Actions for Individual Allotments in Cascade County
 - 2.3.10 Proposed Action for Individual Allotments in Lewis & Clark County
 - 2.3.11 Proposed Action for Individual Allotments in Meagher County
 - 2.3.12 Proposed Action for Individual Allotments in Pondera County

- 2.3.13 Proposed Action for Individual Allotments in Powell County
- 2.3.14 Proposed Action for Individual Allotments in Teton County

2.1 Alternatives considered but not further analyzed

2.1.1 No Grazing Alternative

The BLM manages grazing on the public rangelands by statutory authority, i.e. the Taylor Grazing Act, the Federal Land Policy and Management Act (FLPMA) and the Public Rangelands Improvement Act. Under these statutes, the BLM is required to develop regulations to manage public land resources on a multiple-use and sustained yield basis.

Grazing allocations on newly acquired land will be based on management needs and objectives for the acquisition. A no grazing alternative would be considered on newly acquired lands, or when considering permitting unallocated parcels in accordance with the Headwaters Resource Management Plan. There are approximately 55 unallocated parcels of BLM land within this planning area. Most of these lands are ungrazeable. Since no determination has been made regarding which parcels may, or may not be suitable for grazing, issuing, or not issuing, grazing leases on parcels that could potentially receive livestock use will be addressed in a separate analysis. However, in cases where unallocated parcels are intermixed with private grazing lands, these parcels may be incorporated into existing grazing leases. Analysis of these actions would be conducted on a site-specific basis under the proposed actions for individual allotments found in Chapter 2.

Eliminating livestock grazing on all allotments was considered but eliminated from detailed study because it does not meet the purpose and need of this EA and it was previously analyzed in the Missouri Breaks Grazing Environmental Impact Statement (November 1979). A “no grazing” alternative is not consistent with the Headwaters Resource Management Plan Final Environmental Impact Statement 1983 which

states on page 10: “In Summary, implementation of a no grazing alternative is not considered to be feasible or necessary except in specific, localized situations where livestock use is incompatible with other important management objectives.”

2.2 No Action Alternative

The No Action alternative is the continuation of current management.

2.2.1 Rangeland Administration

This alternative would renew the grazing leases within the planning area with the same terms and conditions as the current leases. No changes would be made and range improvement projects would not be proposed or constructed. Cooperative weed control would not be made a condition of the grazing lease.

Livestock grazing would remain consistent with the current lease and no new projects would be constructed to protect/enhance upland, riparian, biodiversity or water resource values. If allotments are currently not meeting standards and guidelines, this alternative would provide no measures for corrective actions. Issue objectives would not be met with this alternative. Allotments that are not meeting, or not already making significant progress toward achieving standards, would not be in compliance with Fundamentals of Rangeland Health and Standards and Guidelines for Grazing Administration (43 CFR 4180).

2.2.2 Noxious Weeds

Under the No Action Alternative, the BLM would continue current weed control efforts including chemical, biological and mechanical methods. Precaution would be implemented to avoid damage to desirable vegetation, especially woody species.

The BLM would continue to develop cooperative agreements with livestock grazing lessees for noxious weed control on upland weed infestations. Under these agreements, the BLM

agrees to provide the proper type and amount of herbicide and the lessees agree to apply the herbicide. Application may be made by the properly licensed lessees or may be contracted to a licensed applicator at the lessee's cost. Biological control efforts would continue through release and dissemination of newly available and established biocontrol agents. Cooperative weed control agreements would be independent of the terms and conditions of renewed grazing leases. The issue objectives for weeds would be minimally met in this alternative.

2.3 Proposed Action

This alternative proposes changes to better manage desirable vegetation, water, soils, wildlife habitat and noxious weeds. Management changes for allotments not meeting standards and guidelines for rangeland health due to livestock are included in the proposed action listed under each grazing allotment in this section (Appendix E).

2.3.1 Rangeland Administration

Current grazing leases would be cancelled and new 10 year grazing leases would be offered with Standards for Rangeland Health and Guidelines for Livestock Management incorporated into the terms and conditions of the lease. The following term and condition would be added to each individual lease:

Appendices B and C (pages B1-C2 of the Great Falls Area Grazing Lease Renewal EA) provide the Standards for Rangeland Health and Guidelines for Livestock Grazing Management.

On allotments with significant public land resources and where actual use records are required to supplement BLM monitoring efforts, the following term and condition may be included:

Actual use (Form 4130-5) will be submitted annually to this office within 15 days following grazing use.

Unless a more specific term and condition is proposed under Sections 2.3.9 through 2.3.14,

the following term and condition would be incorporated into leases designated as custodial:

Custodial grazing is authorized only during the listed season unless approved in advance by the authorized officer. Grazing use will not exceed the recognized carrying capacity of the public land. This allotment may be used in conjunction with your normal operation as long as standards for rangeland health are being met or significant progress is being made toward achieving those standards (43 CFR 4180).

Allotments would be listed as custodial when there is no information available regarding the amount of forage existing on intermixed lands which are not administered by the BLM. On these allotments, BLM permitted use only refers to the carrying capacity of BLM lands even though it may be fenced in with lands of varying ownership. Typically, these allotments consist of BLM parcels that are relatively small, non-contiguous and/or constitute an insignificant percentage of an entire pasture. Alternatively, leases designated as active use would refer specifically to allotments where the carrying capacity on both BLM and non-BLM lands has been determined allowing a carrying capacity to be established for all lands within a pasture. Modifications to type use are addressed on an allotment-specific basis in Sections 2.3.9 through 2.3.14.

For allotments located within the grizzly bear distribution zone, the following term and condition would be incorporated into the lease:

The lessee is required to properly treat or dispose of livestock carcasses to eliminate any potential attractant for bears. The lessee should notify Montana Fish, Wildlife and Parks if they need carcass disposal assistance. The lessee is also required to notify the BLM of any grizzly bear depredation on livestock or conflicts between grizzly bears and livestock.

This term and condition would be applied to the allotments listed in Table 2.1:

Table 2.1	
Allotment Name	Allotment No.
East Birch Creek	06322
Homesite	06324

Table 2.1	
Allotment Name	Allotment No.
Swift Dam	06321
West Birch Creek	06323
Waddell Lakes	06320
Chicken Coulee	06303
Choteau Mountain	06304
Cowtract	06306
Indian Head Rock	07659
Blackfeet Gulch	06335
Ear Mountain Individual	09835
Salmond Ranch Company	06342
Deep Creek	06310
Battle Creek	06307
Green Timber Gulch	06308
Tunnel Lake	06312
Castle Reef	07613
Willow Creek Canal	07612
Black Coulee	06313
Pishkun Reservoir	06315
Alkali Flat (East)	07615
Alkali Flat (West)	06295
Black Reef	07609
Willow Creek	07608
Roost Hill	07607
East Farmers Reservoir	06316
Pishkun	06311
Willow Creek Pasture	06314
Bean Lake	07605
River BLM	06325
Bedrock Creek	06347
Middle Fork	07604
Middle Fork Dearborn	07603

In addition, allotment-specific terms and conditions may be added to individual leases as identified under the proposed action for each allotment. Other modifications to the lease, if proposed, are also addressed in specific allotment discussions in Sections 2.3.9 through 2.3.14.

Pending and future transfers of permitted use would be approved where management actions, including terms and conditions, continue to meet standards for rangeland health and the objectives described in individual proposed actions for each allotment. On allotments where base property is controlled through private lease agreements, new grazing leases would be generated as these base property leases are renewed provided mandatory terms and conditions are unchanged and the allotment is in conformance with Standards for Rangeland Health and Guidelines for Livestock Management. The term of new leases would not extend beyond analysis of this document.

2.3.2 Standards for Rangeland Health and Guidelines for Livestock Management

Standards for livestock grazing (Appendix B) state that rangelands should be meeting or making significant and measurable progress toward meeting the upland, riparian, water quality, air and biodiversity standards for rangeland health. Significant progress toward meeting standards would be accomplished and adherence to guidelines would be followed through a variety of management techniques. Management on allotments that are not meeting standards would be modified to improve resource conditions and meet standards. Rangeland conditions which do not meet standards could be improved with changes to allotment management, including, but not limited to:

- increasing length of rest periods between grazing periods
- changing season of use
- altering livestock turnout location
- changing grazing intensity
- changing grazing duration
- improving livestock distribution

Improved livestock distribution could be achieved through construction of water developments and fences, selective salt and/or mineral placement, and changes to livestock turnout location and season of use. In some cases, fencing may be used to protect upland and/or riparian areas. When resource objectives cannot be met through measures listed above, stocking rates may be recalculated using estimates of forage conditions and livestock weights based on unfavorable year production models and current county averages of livestock weights.

Livestock grazing is based on the Guidelines for Grazing Management (Appendix C). Upland objectives were developed for individual allotments on a case-by-case basis, based on vegetation production and ground cover objectives consistent with the site potential by ecological site. Under the proposed action, a

variety of monitoring techniques that may include stubble height or percent utilization limits of key upland grass species would be applied as a monitoring tool to ensure upland objectives and guidelines for livestock grazing management are met. The stubble height or utilization limit is based on studies that demonstrate greater vigor of grasses grazed at moderated levels (Heady 1950, Troxel and White 1989, Vallentine 1990, Van Pollen and Lacey 1997). The forage utilization limit of key upland grass species would be limited to 4 inches (6 inch stubble height for bluebunch wheatgrass) or 50% at the end of the grazing season. Appropriate and timely action would be taken if the stubble height or percent utilization measurements indicate that grazing management is not achieving the desired upland objectives or if significant progress is not being made toward meeting standards.

Although it is understood that riparian stubble height and woody species utilization does not fill the role of a long-term management objective, they can be used as a direct and indirect guide for current grazing impacts to riparian areas (Clary and Leininger, 2000). Stubble height and woody species utilization will be used as indicators of the current year's grazing impacts.

Utilization of key, palatable, woody species such as willows and cottonwoods would be limited to light-to-moderate browsing as described in the woody species use classes and descriptions in "Monitoring Stream Channels and Riparian Vegetation-Multiple Indicators" (Burton and others, 2008).

Utilization of key riparian grasses would be limited to an average 4" stubble height.

A monitoring strategy for each reach would be decided based upon the inventory data. The LFO would monitor the soil, hydrology, or vegetation attribute which caused the reach to be at risk or nonfunctional (the NO's on the Proper Functioning Condition checklist). For example, if it was a vegetation attribute such as large percentages of bare ground or disturbance related plant species (i.e. Kentucky bluegrass or foxtail barley), the monitoring strategy would be

greenline composition and successional status found in Winward (2000). If a soil or hydrology attribute such as streambank alteration or lack of root mass protection is the cause of degradation, the monitoring strategy would be greenline stability rating with use guidelines of percent streambank alteration.

The utilization of preferred woody species and key riparian grasses and streambank alteration measurements are not objectives, but rather they are indicators of impending resource damage and triggers for movement of livestock. If intense browse levels are noted on preferred woody species or the 4" stubble height requirement is met, it is time for livestock to be moved. The browse level on preferred woody species needs to be looked at where there are enough plants to conduct a browse survey. Widely spaced, individual plants are not appropriate.

Failure to meet the stubble height requirement or intense browsing would prompt an assessment of resource condition and indicate the need to make appropriate changes.

Although there are many streams within the planning area that are listed in Montana Department of Environmental Quality's (MDEQ) water quality database, the following discussion is geared towards the listed water bodies that BLM land borders or is a significant landowner within the watershed. These streams include the Sun, Missouri, Dearborn, Teton, Musselshell, and Smith Rivers amongst others. In making BLM's water quality standard determination, the BLM first considers the State of Montana's determination. If the State determination is that water quality meets standards, the BLM determination conforms to the state determination. If the State determination for a particular stream (or its immediate receiving water) indicates the water body is not meeting water quality standards or the standard for the water body in question is undetermined, BLM collects information to evaluate whether BLM lands are likely contributing to impairment of streams based upon the cause of impairment and likely sources. BLM has evaluated resource conditions and

plans to address allotments with degraded upland and riparian condition, which may be contributing pollutants to water quality impaired streams.

Air quality in the watersheds within the planning area is generally considered good to excellent; the air quality standard is being met on all allotments.

The biodiversity standard is being met on the majority of allotments within the planning area. Primary causes for the biodiversity standard not being met are due to the predominance of non-native vegetative species such as Kentucky bluegrass, common timothy, smooth brome, noxious weeds and annual invasive species. For rehabilitation and restoration activities occurring within the planning area, unrelated to livestock grazing, BLM would discourage use of non-native species which may negatively impact rangeland health.

Allotments may also fail to meet the biodiversity standard due to degraded riparian conditions, insufficient residual vegetative cover and alteration of community composition caused by livestock grazing or other land uses. Management actions are primarily proposed on allotments not meeting the biodiversity standard due to livestock grazing. Implementation of the proposed action would lead to significant progress toward meeting the standard.

During periods of drought, livestock grazing on public lands would be administered in accordance with the BLM's Montana/ Dakotas drought policy. (Appendix D)

A summary table of proposed standards evaluations for each allotment in the Great Falls area is located in Appendix E. A description of monitoring and evaluations are found in Appendix F and Appendix G.

2.3.3 Range Improvement Projects

Several range improvement projects are proposed which include livestock water developments and cross-fences (Appendix H). Range improvements proposed by the BLM and

lessees are discussed under the proposed action for individual allotments. It is important to note that range improvement project funding occurs on a yearly basis and although variable from year to year, funding is typically limited and never fulfills the total needs. In addition, even with adequate funding, staffing may limit the amount of project work that can occur in any given year. Considering these factors, projects proposed within this watershed plan would be prioritized and implemented based on the following key considerations:

- Allotments not meeting rangeland health standards; livestock grazing is a significant factor.
- To mitigate livestock impacts to important resource values on the allotment (cultural/historical properties, wildlife habitat, riparian/wetland habitat, springs, fisheries habitat, etc.).
- Multiple resource value benefits would occur from the proposed action (wildlife, range, riparian, etc.).
- Projects are components of a grazing management system (e.g., deferment, rest, etc.).

Regardless of funding and range improvement projects, lessees must manage livestock according to standards and guidelines (Appendices B and C). Proper livestock grazing management would ensure that allotments not meeting standards would begin to make significant progress towards meeting standards by the start of the next grazing season. Maintenance of all existing and proposed projects would be the responsibility of the lessee unless otherwise specified. Projects would not be limited to the list; additional projects could be initiated to improve management and meet standards.

Cultural resource surveys would be conducted prior to implementation of range improvement projects, including vegetation treatments. Monitoring of noxious weeds would be conducted for two years following any surface disturbance.

2.3.4 Noxious Weeds

Noxious weeds have been identified on uplands and riparian areas within the planning area (Appendix J). The proposed action would implement an aggressive, integrated weed control effort. Weed control efforts would be increased where identified in the proposed action for each allotment.

The BLM would incorporate cooperative weed control agreements into the terms and conditions of ten-year grazing leases with noxious weed infestations. On all allotments, the following term and condition would be added to address existing and future infestations of noxious weeds:

Cooperative agreements between BLM and the lessee(s) will be established for control of existing or new infestations of noxious weeds found in the allotment(s) during the term of the lease in accordance with the Great Falls Area Grazing Lease Renewal Environmental Assessment.

Cooperative weed control agreements could be initiated any time during the tenure of a lease if weeds are identified on an allotment. Under these agreements, the BLM would provide the proper type and amount of herbicide and the lessees would apply the herbicide. Application would be made by the properly licensed lessee or contracted to a licensed applicator at the lessee's cost. Lease terms and conditions would be modified to reflect the identification of noxious weeds and implementation of a cooperative weed control agreement.

Continued inventory and monitoring would provide weed infestation trend data. Noxious weed inventory and monitoring within the watershed areas would be a continual, dynamic workload accomplished by permanent and seasonal BLM employees, private landowners and cooperating agency personnel. Inventory and monitoring data would be compiled by the LFO weed specialist and used to analyze the effectiveness of weed control efforts, project infestation trend patterns and provide guidance for future weed control planning and implementation.

The chemical component of the integrated weed control program would be closely monitored by the LFO weed specialist. All herbicide applications would utilize BLM approved herbicides (BLM annually revises an approved herbicide formulation list) administered by experienced, licensed applicators. All applications would comply with label restrictions and guidelines. In riparian areas, extreme caution would be taken to avoid damage to desirable vegetation, especially woody species. Herbicide applications within a riparian zone or within 100 feet of any body of water would be limited to hand spot spraying. Site-specific exceptions could be granted if woody or desirable forb species are absent within a riparian zone. BLM would utilize permanent and seasonal employees to implement site-specific herbicide prescriptions which would be identified outside of areas permitted for livestock grazing.

Biological control efforts would continue through release, dissemination and monitoring of newly available and established biocontrol agents. The BLM would continue a cooperative relationship with the Agricultural Research Service (ARS) by providing suitable experimental and research sites and assisting with associated biocontrol projects. Biological control would continue to be a valuable tool for control of Category 1 weeds (effective biocontrol of Russian knapweed and whitetop is being researched, but is not available at the time this document was written).

Noxious weed control measures would apply to all wildfire areas. Post-burn inventories or assessments would indicate if weed treatment is needed. During the livestock grazing rest period, (if required) the BLM would continue weed treatment as necessary. After the interim grazing management period, BLM would work with lessees in accordance with the cooperative weed control agreements discussed above.

2.3.5 Wildlife/TES Species

Management activities near or adjacent to the Rocky Mountain Front would continue to be directed by the Interagency Rocky Mountain

Front Management Guidelines for Selected Species (September 1987).

2.3.6 Fire Management

Fire suppression would be in accordance with the Fire/Fuels Management Plan Environmental Assessment/Plan Amendment for Montana and the Dakotas (July 2003) and the Central Montana Fire Zone, Lewistown Field Office (LFO), Fire Management Plan (September 2004).

In regards to prescribed fire treatments, Fire Regime Condition Class (FRCC) would be used, in conjunction with rangeland health objectives to determine site-specific fire prescriptions. Project-level FRCC inventories would be conducted. Priority for projects would be in areas where rangeland health is deteriorating due to significant deviations in fire regime condition class.

Requirements for resting or deferring areas from livestock grazing following fire would depend on a variety of factors including resource objectives, the type of fuel, time and intensity of burn, accessibility of the burned area to livestock, and post-burn climatic factors.

2.3.7 Cultural/Historical

Cultural resource surveys would be conducted prior to implementation of range improvement projects, including vegetation treatments or any other activity that results in ground disturbance.

Where required to mitigate impacts from livestock, exclosures or other structures would be constructed to prevent damage to cultural/historical properties.

Lessees would notify BLM upon discovery of sites or items of cultural or historical significance occurring on BLM lands.

2.3.8 Management in Common to all Allotments

Future actions or modifications would be implemented to alter the course of management if the proposed action is failing to achieve goals and objectives, or if circumstances require the need to make adjustments to management.

Management in common to all allotments recognizes in advance that no amount of planning would be able to consider every possible combination of events, contingencies, or foresee the degree of impact from unplanned events or new management direction. A flexible management approach recognizes the need to provide mechanisms to allow corrective actions and adjustments to occur based on monitoring results. Achieving standards for rangeland health with goals and objectives outlined in this plan would be the catalyst for change.

Under common management alternatives, various actions could be considered to address problematic livestock grazing issues, including, but not limited to:

- increasing length of rest periods between grazing periods
- changing season of use
- altering livestock turnout location
- changing grazing intensity
- changing grazing duration
- improving livestock distribution
- Suspending all or part of permitted use
- Recalculating stocking rates

Improved livestock distribution could be achieved by constructing water developments and fences, selective salt and/or mineral placement, and changes to livestock turnout location and season of use. In some cases, exclosure fencing would be used to protect riparian areas.

If monitoring indicates that allotments are not meeting standards and are not making significant progress towards achieving standards, corrective actions would be

implemented, but would be subject to site-specific analysis.

2.3.9 Proposed Action for Individual Allotments in Cascade County (1) BELT CREEK #09710

Public acres – 348
AUMs - 20
Public land – 100%
Livestock No. – 5 Cattle
Season of Use – 6/1 to 9/30
Type Use - Active

Meeting Upland Standard:

- No
- Due to historical timber harvest unrelated to current livestock management.

Upland Objectives:

- Maintain vegetation in Potential Natural Community (PNC) in unlogged areas to reduce and prevent expansion of Kentucky bluegrass, timothy and thistle. Reduce abundance and production of invasive plants and noxious weeds.

Meeting Riparian Health Standard:

- No riparian habitat on public land exists within this allotment.

Meeting Water Quality Standard:

- N/A

Meeting Biodiversity Standard:

- No, due to historical logging activities.

Biodiversity Objectives:

- Maintain residual cover and increase native vegetation within the allotment.
- Increase canopy cover and density of forest structure.

Conforms with Guidelines for Livestock Grazing Management:

- Yes

Proposed Action: The current permitted use would be modified as follows:

Livestock # and kind	Season	Public land	Type use	AUM
5 Cattle	6/1 to 9/30	100	Custodial	20

Total permitted use would remain 20 AUM's.

Lessee would complete removal of an unauthorized jack leg fence on southern boundary of parcel. Wires would be removed off-site.

(2) BIG EDDY #06332

Public acres – 120
 AUMs - 17
 Public land – 100%
 Livestock No. – 3 Cattle
 Season of Use – 9/1 to 2/28
 Type Use- Custodial

Meeting Upland Standard:

- Yes

Upland Objectives:

- Maintain desirable bunchgrasses and native plant community to prevent spread and expansion of cheatgrass. Improve ecological condition class from mid-seral to late-seral or Potential Natural Community (PNC).

Meeting Riparian Health Standard:

- No riparian habitat on public land within this allotment.

Meeting Water Quality Standard:

- N/A

Meeting Biodiversity Standard:

- Yes

Biodiversity Objectives:

- Maintain condition of browse species within the allotment.

Conforms with Guidelines for Livestock Grazing Management:

- Yes

Proposed Action: The current permitted use would be modified as follows to allow for use consistent with private crop fields fenced within the allotment:

Livestock # and kind	Season	Public land	Type use	AUM
3 cattle	8/1-2/28	100	Custodial	17

Total permitted use would remain 17 AUM's.

(3) BIRD CREEK #09812

Public acres – 480
 AUMs - 43
 Public land – 100%
 Livestock No. – 11 Cattle
 Season of Use – 6/1 to 9/30
 Type Use – Custodial

Meeting Upland Standard:

- Yes

Upland Objectives:

- Maintain native plants in Potential Natural Community (PNC)
- Reduce and prevent expansion of Kentucky bluegrass.

Meeting Riparian Health Standard:

- No riparian habitat on public land within this allotment.

Meeting Water Quality Standard:

- N/A

Meeting Biodiversity Standard:

- Yes

Biodiversity Objectives:

- Maintain quality of elk and mule deer winter range and provide habitat for spring concentrations.

Conforms with Guidelines for Livestock Grazing Management:

- Yes

Proposed Action: Permitted use would continue as follows:

Livestock # and kind	Season	Public land	Type use	AUM
11 Cattle	6/1 to 9/30	100	Custodial	43

Total permitted use would remain 43 AUMs.

BLM would change the name of this allotment to Upper Bird Creek to prevent confusion with Bird Creek Allotment #11190.

(4) BIRD CREEK #11190

Public acres – 40
 AUMs - 7
 Public land – 100%
 Livestock No. – 20 Cattle
 Season of Use – 3/1 to 2/28
 Type Use – Custodial

Meeting Upland Standard:

- Yes

Upland Objectives:

- Maintain native plant communities.
- Reduce and prevent expansion of Kentucky bluegrass, cheatgrass, houndstongue and spotted knapweed.

Meeting Riparian Health Standard:

- No riparian habitat on public land within this allotment.

Meeting Water Quality Standard:

- N/A

Meeting Biodiversity Standard:

- Yes

Biodiversity Objectives:

- Maintain quality of elk and mule deer winter range and provide habitat for spring concentrations.

Conforms with Guidelines for Livestock Grazing Management:

- Yes

Proposed Action: The current permitted use would continue as follows:

Livestock # and kind	Season	Public land	Type use	AUM
20 Cattle	3/1 to 2/28	100	Custodial	7

Total permitted use would remain 7 AUM's.

The base property associated with the Bird Creek Allotment #11190 has changed ownership. Upon approval of the transfer by the authorized officer, BLM would transfer 7 AUM's of grazing preference to the current owners of the associated base property. The proposed action includes issuing a grazing lease to the new owner. Transfer of the grazing preference constitutes a name change only. Management of the allotment would remain within the family of the current lease holder. Management activities would continue to be consistent with the existing grazing management system included in the conservation easement outlined by the Montana Department of Fish, Wildlife and Parks. The grazing applications would be consistent with all mandatory terms and conditions of the lease analyzed in this document.

BLM would change the name of this allotment to Lower Bird Creek to prevent confusion with Bird Creek Allotment #09812.

(5) BLACK BUTTE #09723

Public acres – 1,362
 AUMs - 190
 Public land – 100%
 Livestock No. – 38 Cattle
 Season of Use – 7/1-11/1
 Type Use - Custodial

Meeting Upland Standard:

- No
- Due to predominance of introduced species, specifically timothy.

Upland Objectives:

- Reduce amounts and dominance of invasive species.
- Increase cover and abundance of desirable species such as bluebunch wheatgrass and needlegrasses by allowing maturation of seed heads on individual plants of those species.

Meeting Riparian Health Standard:

- No riparian habitat on public land within this allotment.

Meeting Water Quality Standard:

- N/A

Meeting Biodiversity Standard:

- No
- Due to the abundance of non-native, introduced species particularly timothy.

Biodiversity objectives:

- Increase diversity of native grasses and forbs.
- Reduce production and abundance of timothy.

Conforms with Guidelines for Livestock Grazing Management:

- Yes

Proposed Action: The current permitted use would continue as follows:

Livestock and kind	#	Season	Public land	Type use	AUM
38 Cattle		7/01 to 11/01	100	Custodial	190

Total permitted use would remain 190 AUM's

The Ryan Coulee Allotment #06330 is also contained within this grazing lease. See (22) listed under Cascade County for provisions specific to this allotment.

(6) BLACKFEET GULCH #06329

Public acres – 40

AUMs - 14

Public land – 100%

Livestock No. – 2 Cattle

Season of Use – 5/1-10/31

Type Use - Custodial

Meeting Upland Standard:

- Yes

Upland Objectives:

- Maintain desirable bunchgrasses and native plant community to prevent spread and expansion of cheatgrass.

Meeting Riparian Health Standard:

- No riparian habitat on public land within this allotment.

Meeting Water Quality Standard:

- N/A

Meeting Biodiversity Standard:

- Yes

Biodiversity Objectives:

- Maintain good residual cover for ground nesting birds.

Conforms with Guidelines for Livestock Grazing Management:

- Yes

Proposed Action: The current permitted use would continue as follows:

Livestock and kind	#	Season	Public land	Type use	AUM
2 Cattle		5/1-10/31	100%	Custodial	14

Total permitted use would remain 14 AUM's

Due to a BLM administrative error incurred during the 2000 transfer from Nuemayer Farms Inc, the grazing lease would be reissued to Elton Campbell Ranches Inc.

The name of the allotment would be changed from Blackfeet Gulch to Portage. This would prevent confusion with Blackfeet Gulch Allotment #06335.

(7) CALVERT #01166

Public acres – 40

AUMs - 8

Public land – 100%

Livestock No. – 1 cattle

Season of Use – 6/1 to 11/01

Type Use - Custodial

Meeting Upland Standard:

- No
- Livestock is considered to be a significant factor.

Upland Objectives:

- Increase overall residual forage.
- Reduce amounts and dominance of invasive, noxious and increaser species particularly Kentucky bluegrass.
- Improve reproductive capability of desirable species such as bluebunch wheatgrass and needlegrasses by allowing maturation of seed heads on individual plants of those species.
- Decrease utilization of native bunchgrass and woody browse species such as currant.

Meeting Riparian Health Standard:

- No riparian habitat on public land within this allotment.

Meeting Water Quality Standard:

- N/A

Meeting Biodiversity Standard:

- No
- Livestock is considered to be a significant factor.

Biodiversity Objectives:

- Increase abundance and diversity of native forage and browse species for wildlife.

Conforms with Guidelines for Livestock Grazing Management:

- No, the allotment does not conform to Lewistown Guidelines #1, #2, #4, #5, #9, #10, #11 and #12.

Proposed Action: The current season of use would be modified to achieve significant progress toward meeting standards and guidelines for rangeland health.

Livestock and kind	#	Season	Public land	Type use	AUM
1 Cattle		7/1 to 10/15	100	Custodial	8

Total permitted use would remain 8 AUM's.

(8) DEVIL CANYON #09709

Public acres – 480
 AUMs - 48
 Public land – 100%
 Livestock No. – 4 Cattle
 Season of Use – 3/1 to 2/28
 Type Use - Active

Meeting Upland Standard:

- Yes

Upland Objectives:

- Maintain native plant community to prevent spread and expansion of noxious weeds and naturalized invasives such as timothy.

Meeting Riparian Health Standard:

- No riparian habitat on public land within this allotment.

Meeting Water Quality Standard:

- N/A

Meeting Biodiversity Standard:

- Yes

Biodiversity Objectives:

- Maintain quality of elk winter range and spring concentration areas. Reduce conifer encroachment, particular in aspen stands.

Conforms with Guidelines for Livestock Grazing Management:

- Yes

Proposed Action: The current permitted use would be modified as follows:

Livestock and kind	#	Season	Public land	Type use	AUM
4 Cattle		3/1 to 2/28	100	Custodial	48

Total permitted use would remain 48 AUM's.

(9) FORD COULEE #07831

Public acres – 150
 AUMs - 30
 Public land – 100%

Livestock No. – 3 Cattle
 Season of Use – 6/1 to 11/15
 Type Use - Custodial

Meeting Upland Standard:

- Yes

Upland Objectives:

- Maintain desirable bunchgrasses and native plant community in late-seral or Potential Natural Community (PNC) to prevent spread and expansion of invasive species.

Meeting Riparian Health Standard:

- Yes

Riparian Objectives:

- Maintain the riparian area on Ford Coulee at or above proper functioning condition.
- Maintain streamside vegetation and regeneration of preferred woody species such as willow.

Meeting Water Quality Standard:

- Yes

Water Quality Objectives:

- Continue to support healthy upland and riparian areas in order to mitigate non-point source pollution.
- Maintain streambank vegetative cover of willow, sedges, and rushes.

Meeting Biodiversity Standard:

- Yes

Biodiversity Objectives:

- Maintain residual forage and cover for upland game bird nesting and mule deer winter range and spring concentration areas.

Conforms with Guidelines for Livestock Grazing Management:

- Yes

Proposed Action: The current permitted use would continue as follows:

Livestock # and kind	Season	Public land	Type use	AUM
3 Cattle	6/1 to 11/15	100	Custodial	30

Total permitted use would remain 30 AUM's.

Due to a BLM administrative error incurred during the 1999 transfer from Whitetail Grazing Association, the grazing lease would be reissued to Pendergras Incorporated.

(10) HARDY #06336

Public acres – 200
 AUMs - 54
 Public land – 100%
 Livestock No. – 11 Cattle
 Season of Use – 5/1 to 9/30
 Type Use -Active

Meeting Upland Standard:

- No
- Current livestock is not considered to be a significant factor in this rating.

Upland Objectives:

- Maintain residual forage.
- Reduce amounts and dominance of invasive, noxious and increaser species particularly cheatgrass.
- Improve reproductive capability of desirable species such as bluebunch wheatgrass and needlegrasses by allowing maturation of seed heads on individual plants of those species.

Meeting Riparian Health Standard:

- No riparian habitat on public land within this allotment.

Meeting Water Quality Standard:

- N/A

Meeting Biodiversity Standard:

- No
- Current livestock is not considered to be a significant factor.

Biodiversity Objectives

- Maintain and improve the native plant community and cover to reduce and prevent further expansion of noxious weeds and invasives grasses.

Conforms with Guidelines for Livestock Grazing Management:

- Yes

Proposed Action: The current permitted use would continue as follows:

Livestock # and kind	Season	Public land	Type use	AUM
11 Cattle	5/1 to 9/30	100	Active	55

Total permitted use would remain 54 AUM's.

Proposed Action: Permitted use would continue as follows.

Livestock # and kind	Season	Public land	Type use	AUM
10 Cattle	6/1 to 10/31	100	Custodial	51

Total permitted use would remain 51 AUM's.

The North Antelope Mountain Allotment #06338 is also contained within this grazing lease. See (18) listed under Cascade County for provisions specific to this allotment.

(11) HARDY CREEK #06334

Public acres – 401

AUMs - 51

Public land – 100%

Livestock No. – 10 cattle

Season of Use – 6/1 to 10/31

Type Use - Custodial

Meeting Upland Standard:

- Yes

Upland Objectives:

- Maintain desirable bunchgrasses and native plant community to prevent spread and expansion of cheatgrass, Kentucky bluegrass, smooth brome and other invasive and noxious plant species.

Meeting Riparian Health Standard:

- No riparian habitat on public land within this allotment.

Meeting Water Quality Standard:

- N/A

Meeting Biodiversity Standard:

- Yes

Biodiversity Objectives:

- Maintain quality of mule deer winter range and spring concentration areas.

Conforms with Guidelines for Livestock Grazing Management:

- Yes

(12) HOUND #09747

Public acres – 160

AUMs - 35

Public land – 100%

Livestock No. – 7 cattle

Season of Use – 6/1 to 10/31

Type Use - Active

Meeting Upland Standard:

- Yes

Upland Objectives:

- Maintain desirable bunchgrass and native plant community in a late seral to Potential Natural Community (PNC) ecological condition rating.

Meeting Riparian Standard:

- No riparian habitat on public land within this allotment.

Meeting Water Quality Standard:

- N/A

Meeting Biodiversity Standard:

- Yes

Biodiversity Objectives:

- Maintain residual cover for ground nesting birds and mule deer.

Conforms with Guidelines for Livestock Grazing Management:

- Yes

Proposed Action: The current permitted use would be modified as follows:

Livestock and kind	#	Season	Public land	Type use	AUM
7 Cattle		6/1 to 10/31	100	Custodial	35

Total permitted use would remain 35 AUM's.

(13) LOWER FLAT CREEK #06331

Public acres – 321
 AUMs - 62
 Public land – 17%
 Livestock No. – 90 cattle
 Season of Use – 6/1-9/30
 Type Use - Active

Meeting Upland Standard:

- Yes

Upland Objectives:

- Maintain desirable bunchgrass and native plant community in a late seral to Potential Natural Community (PNC) ecological condition rating.

Meeting Riparian Health Standard:

- No riparian habitat on public land within this allotment.

Meeting Water Quality Standard:

- N/A

Meeting Biodiversity Standard:

- Yes

Biodiversity Objectives:

- Maintain residual cover for ground nesting birds and other wildlife species within the allotment.

Conforms with Guidelines for Livestock Grazing Management:

- Yes

Proposed Action: Permitted use would continue as follows:

Livestock and kind	#	Season	Public land	Type use	AUM
90 Cattle		6/1 to 9/30	17	Active	61

Total permitted use would remain 62 AUM's.

(14) LOWER SAND COULEE #09836

Public acres – 559
 AUMs - 55
 Public land – 100
 Livestock No. – 18 Cattle
 Season of Use – 6/15 to 9/15
 Type Use – Active

Meeting Upland Standard:

- Yes

Upland Objectives:

- Increase overall residual forage.
- Improve infiltration by reducing coverage of clubmoss.
- Reduce amounts and dominance of other invasive and increaser species such as timothy and shrubby cinquefoil.
- Improve reproductive capability of desirable species such as bluebunch wheatgrass and needlegrasses by allowing maturation of seed heads on individual plants of those species.
- Decrease utilization of native bunchgrass.

Meeting Riparian Health Standard:

- No riparian habitat on public land within this allotment.

Meeting Water Quality Standard:

- N/A

Meeting Biodiversity Standard:

- Yes

Biodiversity Objectives:

- Increase abundance and diversity of native forage.
- Improve habitat structure and site production by reducing coverage of clubmoss.

Conforms with Guidelines for Livestock Grazing Management:

- Yes

Proposed Action: The current permitted use would be modified as follows:

Livestock # and kind	Season	Public land	Type use	AUM
18 Cattle	6/15 to 9/15	100	Custodial	55

Total permitted use would remain 55 AUM's.

(15) MIDDLE CREEK #09704

Public acres – 960

AUMs - 111

Public land – 100%

Livestock No. – 28 Cattle

Season of Use – 6/1 to 9/29

Type Use - Active

Meeting Upland Standard:

- Yes

Upland Objectives:

- Maintain desirable bunchgrass and native plant community in a late seral to Potential Natural Community (PNC) ecological condition rating.

Meeting Riparian Health Standard:

- No riparian habitat on public land within this allotment.

Meeting Water Quality Standard:

- N/A

Meeting Biodiversity Standard:

- Yes

Biodiversity Objectives:

- Maintain residual cover and native vegetation within the allotment.

Conforms with Guidelines for Livestock Grazing Management:

- Yes

Proposed Action: The current permitted use would be modified as follows:

Livestock # and kind	Season	Public land	Type use	AUM
21 Cattle	6/1 to 9/29	100	Custodial	111

Total permitted use would remain 111 AUM's.

(16) MING COULEE #09715

Public acres – 319

AUMs - 15

Public land – 100%

Livestock No. – 7 Cattle

Season of Use – 7/1 to 8/31

Type Use - Active

Meeting Upland Standard:

- Yes

Upland Objectives:

- Maintain desirable bunchgrass and native plant community in a late seral to Potential Natural Community (PNC) ecological condition rating.

Meeting Riparian Health Standard:

- No riparian habitat on public land within this allotment.

Meeting Water Quality Standard:

- N/A

Meeting Biodiversity Standard:

- Yes

Biodiversity Objectives:

- Provide residual forage and browse for the maintenance of high quality elk and mule deer winter range and spring concentrations areas found within the allotment.

Conforms with Guidelines for Livestock Grazing Management:

- Yes

Proposed Action: The current permitted use would be modified as follows:

Livestock # and kind	Season	Public land	Type use	AUM
7 Cattle	7/1 to 8/31	100	Custodial	15

Total permitted use would remain 15 AUM's.

(17) MONARCH #09722

Public acres – 165
AUMs - 5
Public land – 100%
Livestock No. – 1 Cattle
Season of Use – 5/20 to 12/31
Type Use - Active

Meeting Upland Standard:

- Yes

Upland Objectives:

- Prevent expansion of non-native species such as timothy and brome from adjacent private lands to the north.
- Maintain native upland plant community.

Meeting Riparian Health Standard:

- Yes

Riparian Objectives:

- Maintain streambank vegetative cover.
- Maintain riparian species such as red-osier dogwood.

Meeting Water Quality Standard:

- Yes

Water Quality Objectives:

- Maintain upland and riparian vegetative cover.

Meeting Biodiversity Standard:

- Yes

Biodiversity Objectives:

- Reduce conifer encroachment in and around aspen groves and areas of aspen expansion.

Conforms with Guidelines for Livestock Grazing Management:

- Yes

Proposed Action: Historical base properties associated with this allotment were subdivided prior to lease issuance by BLM in 1983. Lessee has maintained BLM grazing lease through a series of private tract lease payments, ownership retention of deeded parcels, and application of state fence laws. Lessee would submit grazing application 4130-1a. During the comment

period for this EA, BLM would accept grazing applications from adjacent property owners and other qualified applicants. Conflicting applications will be considered based on criteria outlined in 43 CFR 4130.1-2. The permitted use would be modified as follows:

Livestock # and kind	Season	Public land	Type use	AUM
1 Cattle	5/20 to 12/31	100	Custodial	5

Total permitted use would remain 5 AUM's.

(18) N. ANTELOPE MOUNTAIN #06338

Public acres – 40
AUMs - 8
Public land – 100%
Livestock No. – 1 Cattle
Season of Use – 5/1 to 9/30
Type Use - Custodial

Meeting Upland Standard:

- Yes

Upland Objectives:

- Maintain desirable bunchgrass and native plant community in a Potential Natural Community (PNC) ecological condition rating.

Meeting Riparian Health Standard:

- No known riparian habitat on public land within this allotment.

Meeting Water Quality Standard:

- N/A

Meeting Biodiversity Standard:

- Yes

Biodiversity Objectives:

- Maintain quality of mule deer winter range and provide habitat for spring concentrations.

Conforms with Guidelines for Livestock Grazing Management:

- Yes

Proposed Action: Permitted use would continue as follows:

Livestock # and kind	Season	Public land	Type use	AUM
1 Cattle	5/1 to 9/30	100	Custodial	8

Total permitted use would remain 8 AUM's.

The Hardy Creek Allotment #06334 is also contained within this grazing lease. See #11 listed under Cascade County for provisions specific to this allotment.

(19) N. FORK SHEEP CR. #09726

Public acres – 2,614

AUMs - 158

Public land – 100%

Livestock No. – 40 Cattle

Season of Use – 6/1 to 9/30

Type Use - Active

Meeting Upland Standard:

- Yes

Upland Objectives:

- Maintain native plant community in a Potential Natural Community (PNC) ecological condition rating.

Meeting Riparian Health Standard:

- Yes

Riparian Objectives:

- Maintain woody communities of cottonwood, alder, and red-osier dogwood.

Meeting Water Quality Standard:

- Yes

Water Quality Objectives:

- Maintain existing beneficial uses of North Fork of Sheep Creek, including cold water fishery.

Meeting Biodiversity Standard:

- Yes

Biodiversity Objectives:

- Maintain quality of elk and mule deer winter range and provide habitat for spring concentrations.

Conforms with Guidelines for Livestock Grazing Management:

- Yes

Proposed Action: The current permitted use would be modified as follows:

Livestock # and kind	Season	Public land	Type use	AUM
40 Cattle	6/1 to 9/30	100	Custodial	158

Total permitted use would remain 158 AUM's.

(20) PAUL CREEK #07618

Public acres – 160

AUMs - 8

Public land – 100%

Livestock No. – 2 Horses

Season of Use – 6/1 to 9/30

Type Use - Custodial

Meeting Upland Standard:

- Yes

Upland Objectives:

- Maintain desirable bunchgrasses and native plant community to prevent spread and expansion of cheatgrass and other annual invasives.

Meeting Riparian Health Standard:

- Yes

Riparian Objectives:

- Maintain streambank vegetative cover.

Meeting Water Quality Standard:

- Yes

Water Quality Objectives:

- Maintain upland and riparian vegetative cover.

Meeting Biodiversity Standard:

- Yes

Biodiversity Objectives:

- Maintain residual cover and native vegetation within the allotment.

Conforms with Guidelines for Livestock Grazing Management:

- Yes

Proposed Action: The current permitted use would continue as follows:

Livestock # and kind	Season	Public land	Type use	AUM
2 Horses	6/1 to 9/30	100	Custodial	8

Total permitted use would remain 8 AUM's.

The Sugarloaf Allotment #11186 is also contained within this grazing lease. See (27) listed under Cascade County for provisions specific to this allotment.

(21) RIVER TRACT # 09691

Public acres – 100
 AUMs - 25
 Public land – 100%
 Livestock No. – 6 Cattle
 Season of Use – 11/1 to 2/28
 Type Use - Custodial

Meeting Upland Standard:

- No
- Current livestock management considered to be a significant factor.

Upland Objectives:

- Decrease and prevent further expansion of noxious weeds and naturalized invasive grass species, particularly Kentucky bluegrass, smooth brome, and cheatgrass

Meeting Riparian Health Standard:

- No

Riparian Objectives:

- Improve the riparian area on the Missouri River to PFC or above.
- Decrease the percent streambank composition of Kentucky bluegrass.

Meeting Water Quality Standard:

- No

Water Quality Objectives:

- Increase streambank stability.
- Decrease percent streambank alteration.

Meeting Biodiversity Standard:

- No

Biodiversity Objectives:

- Improve structure and browse by increasing shrub component.
- Decrease mortality of sandbar willow.

Conforms with Guidelines for Livestock Grazing Management:

- Yes

Proposed Action: The pasture containing BLM lands would be rested in 2010 and 2011. Subsequent grazing would annually defer hot season grazing to promote riparian vegetation. Current permitted use would be modified as follows to achieve significant progress towards meeting rangeland health standards:

Livestock # and kind	Season	Public land	Type use	AUM
4 Cattle	9/15 to 12/15	100	Custodial	12
	3/1 to 5/31			12

Total permitted use would remain 25 AUM's.

The following term and condition would be added to the permit:

Custodial grazing is authorized during either spring or fall season for the grazing year. Grazing use will not exceed the recognized carrying capacity of the public land. This allotment may be used in conjunction with your normal operation as long as standards for rangeland health are being met or significant progress is made toward meeting those standards. Grazing use will be in conformance with Guidelines for Livestock Management (43 CFR 4180).

The Crooked Creek Allotment #09688 is contained within this grazing lease. See (5) listed under Meagher County for provisions specific to this allotment.

(22) RYAN COULEE #06330

Public acres – 251
 AUMs - 51
 Public land – 100%
 Livestock No. – 17 Cattle
 Season of Use – 11/10 to 2/12

Type Use - Custodial

Meeting Upland Standard:

- Yes

Upland Objectives:

- Maintain desirable bunchgrasses, decrease forb species and native shrub community to prevent spread and expansion of annual invasive species such as cheatgrass.

Meeting Riparian Health Standard:

- Yes

Riparian Objectives:

- Maintain functionality of the spring within the allotment.

Meeting Water Quality Standard:

- Yes

Water Quality Objectives:

- Maintain vegetative buffer around spring site.

Meeting Biodiversity Standard:

- Yes

Biodiversity Objectives:

- Maintain residual cover for ground nesting birds and mule deer.

Conforms with Guidelines for Livestock Grazing Management:

- Yes

Proposed Action: The permitted use would be modified as follows to coincide with grazing on adjacent croplands.

Livestock # and kind	Season	Public land	Type use	AUM
17 Cattle	12/1 to 2/28	100	Custodial	51

Total permitted use would remain 51 AUM's.

The Black Butte Allotment #09723 is also contained within this grazing lease. See (5) listed under Cascade County for provisions specific to this allotment.

(23) SAND COULEE #09820

Public acres – 80

AUMs - 3

Public land – 100%

Livestock No. – 3 Cattle

Season of Use – 6/1 to 10/31

Type Use - Custodial

Meeting Upland Standard:

- Yes

Upland Objectives:

- Maintain desirable bunchgrasses, decrease forb species and native shrub community to prevent spread and expansion of naturalized invasive species such as timothy, Kentucky bluegrass and smooth brome.

Meeting Riparian Health Standard:

- No riparian habitat on public land within this allotment.

Meeting Water Quality Standard:

- N/A

Meeting Biodiversity Standard:

- Yes

Biodiversity Objectives:

- Maintain residual forage, and browse for the maintenance of elk and mule deer range.

Conforms with Guidelines for Livestock Grazing Management:

- Yes

Proposed Action: The current permitted use would continue as follows:

Livestock # and kind	Season	Public land	Type use	AUM
3 Cattle	6/1 to 10/31	100	Custodial	3

Total permitted use would remain 3 AUM's.

(24) SIMMS CREEK #06328

Public acres – 160

AUMs - 59

Public land – 100%
 Livestock No. – 15
 Season of Use – 12/15-4/15
 Type Use - Custodial

Meeting Upland Standard:

- No
- Current livestock is a significant factor.

Upland Objectives:

- Decrease utilization of native bunchgrass and browse species.
- Increase residual forage.
- Reduce amounts and dominance of invasive, noxious and increaser species such as Japanese brome, Kentucky bluegrass, Canada thistle, fringed sagewort, blue grama and dandelion.
- Reduce coverage of clubmoss to improve infiltration and overall site production.
- Improve reproductive capability of desirable species by allowing maturation of seed heads on individual plants of those species.

Meeting Riparian Health Standard:

- No riparian habitat on public land within this allotment.

Meeting Water Quality Standard:

- n/a

Meeting Biodiversity Standard:

- No

Biodiversity Objectives:

- Increase abundance and diversity of native forage and browse species for wildlife.

Conforms with Guidelines for Livestock

Grazing Management:

- No
- Lewistown Guidelines #1, #2, #4, #10, #11, #12 are not being met due to current and historical utilization from livestock which has resulted in a loss of bunchgrass community and lack of residual cover.

Proposed Action: Winter use cannot be implemented due to lack of available water in this pasture during these months. The current permitted use would be modified to defer grazing until maturation for cool season bunchgrass species.

Livestock # and kind	Season	Public land	Type use	AUM
20 Cattle	8/1 to 10/31	100	Custodial	59

Total permitted use would remain 59 AUM's.

The 2.5 mile cross-fence located on boundary of Sections 19 and 20 extending southward into Section 29 would be repaired. This fence exists solely on deeded lands, however, it is necessary to provide management of the pasture that includes BLM lands. Repair of this fence would prevent season-long grazing use within this pasture and allow for improved management.

(25) SOUTH CANAL DITCH #06326

Public acres – 40
 AUMs - 13
 Public land – 100%
 Livestock No. – 2 Cattle
 Season of Use – 6/1 to 10/31
 Type Use - Custodial

Meeting Upland Standard:

- No
- Current livestock management is considered to be a significant factor.

Upland Objectives:

- Decrease utilization of native bunchgrass and browse species.
- Increase residual forage.
- Reduce amounts and dominance of invasive, noxious and increaser species such as Japanese brome, Kentucky bluegrass, Canada thistle, fringe sagewort, blue grama and dandelion.
- Reduce coverage of clubmoss to improve infiltration and overall site production.
- Improve reproductive capability of desirable species, particularly bluebunch

wheatgrass and other native bunchgrasses by allowing maturation of seed heads on individual plants of those species.

grazing is authorized, use would be deferred during the hot season. The current permitted use would be modified to achieve significant progress toward meeting standards and guidelines for rangeland health.

Meeting Riparian Health Standard:

- No

Riparian Objectives:

- Improve the riparian area on the unnamed tributary to Muddy Creek to PFC or above.
- Decrease utilization of streambank stabilizer plant species.

Meeting Water Quality Standard:

- No

Water Quality Objectives:

- Decrease width/depth ratios and percent streambank alteration.

Meeting Biodiversity Standard:

- No

Biodiversity Objectives:

- Increase native forage, browse and cover for wildlife.

Conforms with Guidelines for Livestock Grazing Management:

- No.
- The allotment does not conform with Lewistown Guidelines for livestock management #1, #2, #4, #10, #11, #12 due to heavy utilization from livestock which has resulted in a loss of bunchgrass community, lack of residual cover, altered stream bed and banks, heavy browse on woody species, and dominance of invasive, increaser and noxious species.

Proposed Action: The pasture containing BLM and Bureau of Reclamation (BOR) lands was rested in 2009. It will receive an additional year of rest for the 2010 grazing season. Two years of rest would be followed by implementation of an alternating grazing system that would rest the pasture in even numbered years and use the pasture in uneven numbered years. In years

Livestock and kind	Season	Public land	Type use	AUM
1 Cattle	9/1 to 2/28	100	custodial	6
	3/1 to 5/31			3

Total permitted use would remain 13 AUM's.

The following term and condition would be incorporated into the grazing lease:

** Grazing use will occur in odd-numbered years (2011, 2013, 2015, 2017, 2019, 2021). Custodial grazing is authorized during either spring or fall season. Grazing will not exceed the recognized carrying capacity of the public land. This allotment may be used in conjunction with your normal operation as long as standards for rangeland health are being met or significant progress is made toward meeting those standards. Grazing use will be in conformance with Guidelines for Livestock Management (43 CFR 4180).*

If no significant progress is made toward achieving standards within five years, a water-gap would be incorporated into a cross fence originating in the NW1/4SW1/4NE1/4 of Section 8 (T21N, R1E). The water gap would be constructed allowing access from BOR lands to water along the South Canal Ditch. The cross fence would extend eastward approximately 1400'. The pasture containing BLM lands would be rested for the remainder of the term of the lease. BLM would provide materials for the water gap and fence. Lessee would provide construction and maintenance. Materials and specifications for the fence would be determined through cooperative agreement between the lessee and BLM.

(26) S. FORK SHEEP CR. #09655

Public acres – 768
AUMs - 35

Public land – 100%
 Livestock No. – 2 Cattle
 10 Cattle
 Season of Use – 6/1 to 8/31
 Type Use - Active
 Meeting Upland Standard:

- Yes

Upland Objectives:

- Maintain native plant community in a late seral to Potential Natural Community (PNC) ecological condition rating.

Meeting Riparian Health Standard:

- Yes

Riparian Objectives:

- Maintain woody communities of cottonwood, red-osier dogwood, and Rocky Mountain maple.

Meeting Water Quality Standard:

- Yes

Water Quality Objectives:

- Maintain existing beneficial uses of South Fork of Sheep Creek, including cold water fishery.

Meeting Biodiversity Standard:

- Yes

Biodiversity Objectives:

- Maintain residual cover, riparian and upland browse species and other native vegetation within the allotment.

Conforms with Guidelines for Livestock Grazing Management: Yes

Proposed Action: The current permitted use would be modified as follows:

Livestock # and kind	Season	Public land	Type use	AUM
12 Cattle	6/1 to 8/31	100	Custodial	35

Total permitted use would remain 35 AUM's.

(27) SUGARLOAF #11186

Public acres – 120 Acres

AUMs - 10
 Public land – 100%
 Livestock No. – 2 Horses
 Season of Use – 7/1 to 10/31
 Type Use - Custodial

Meeting Upland Standard:

- Yes

Upland Objectives:

- Maintain native plant community in a late seral to Potential Natural Community (PNC) ecological condition rating. Prevent expansion of annual invasive grass species such as cheatgrass and Japanese brome.

Meeting Riparian Health Standard:

- No riparian habitat on public land within this allotment.

Meeting Water Quality Standard:

- N/A

Meeting Biodiversity Standard:

- Yes

Biodiversity Objectives:

- Maintain residual cover for ground nesting birds, mule deer and other wildlife species.

Conforms with Guidelines for Livestock Grazing Management:

- Yes

Proposed Action: The current permitted use would continue as follows:

Livestock # and kind	Season	Public land	Type use	AUM
2 Horses	7/1 to 10/31	100	Custodial	10

Total permitted use would remain 10 AUM's.

The Paul Creek Allotment #07618 is also contained within this grazing lease. See #20 listed under Cascade County for provisions specific to this allotment.

(28) SUN RIVER DITCH #06327

Public acres – 114
 AUMs – 30

Public land – 100%
 Livestock No. – 8 Cattle
 Season of Use – 8/1 to 12/31
 Type Use - Custodial

Meeting Upland Standard:

- No

Upland Objectives:

- Maintain native plant community in a late seral to Potential Natural Community (PNC) ecological condition rating. Restore approximately 23 acres of farmed ground to native rangelands.

Meeting Riparian Health Standard:

- No riparian habitat on public land within this allotment.

Meeting Water Quality Standard:

- N/A

Meeting Biodiversity Standard:

- No

Biodiversity Objectives:

- Maintain and expand residual cover and habitat for ground nesting birds, mule deer and other wildlife species.

Conforms with Guidelines for Livestock Grazing Management: Yes

Proposed Action: The current permitted use would continue as follows:

Livestock # and kind	Season	Public land	Type use	AUM
8 Cattle	8/1 to 12/31	100	Custodial	30

Total permitted use would remain 30 AUM's.

Approximately 23 acres of BLM lands have been converted to cropland within this allotment. BLM would consult with lessees to determine boundaries and extent of agricultural trespass. BLM would provide a species list appropriate for soil type and ecological site. Lessee would provide seed, labor and fencing, (if required) to reseed and restore affected areas.

(29) TIGER BUTTE #07832

Public acres – 520
 AUMs – 20
 Public land – 10%
 Livestock No. – 40 Cattle
 Season of Use – 6/1 to 10/31
 Type Use - Active

Meeting Upland Standard:

- Yes

Upland Objectives:

- Maintain native plant community in a late seral to Potential Natural Community (PNC) ecological condition rating.

Meeting Riparian Health Standard:

- No riparian habitat on public land within this allotment.

Meeting Water Quality Standard:

- N/A

Meeting Biodiversity Standard:

- Yes

Biodiversity Objectives:

- Maintain residual cover and native vegetation within the allotment.

Conforms with Guidelines for Livestock Grazing Management:

- Yes

Proposed Action: The current permitted use would be modified as follows:

Livestock # and kind	Season	Public land	Type use	AUM
4 Cattle	6/1 to 10/31	100	Custodial	20

Total permitted use would remain 20 AUM's.

The base property associated with the Tiger Butte Allotment #07832 has changed ownership. Upon approval of the transfer by the authorized officer, BLM would transfer 20 AUM's of grazing preference to the current owners of the associated base property. The proposed action includes issuing a grazing lease to the new owner. Transfer of the grazing preference constitutes a name change only. Management of

the allotment would remain within the family of the current lease holder. Management activities would continue to be consistent with the existing grazing management system. The grazing applications would be consistent with all mandatory terms and conditions of the lease analyzed in this document.

(30) TINTINGER SLOUGH #06337

Public acres – 17
 AUMs - 3
 Public land – 2%
 Livestock No. –30 Cattle
 Season of Use – 5/15 to 10/01
 Type Use - Active

Meeting Upland Standard:

- No
- Current livestock management is not a significant factor.

Upland Objectives:

- Reduce dominance of naturalized invasive grass species (timothy, Kentucky bluegrass smooth brome) and noxious weeds such as Canada thistle. Increase desirable bunchgrasses such as bluebunch wheatgrass and Idaho fescue.

Meeting Riparian Health Standard:

- Yes

Riparian Objectives:

- Maintain riparian area on Missouri River in PFC or above.
- Maintain multiple age classes of willow species.

Meeting Water Quality Standard:

- Yes

Water Quality Objectives:

- Maintain streambank stabilizer plant species and willow composition to mitigate non-point source pollution into the Missouri River.

Meeting Biodiversity Standard:

- No

Biodiversity Objectives:

- Maintain native shrub component. Increase production of cool season native grasses.

Conforms with Guidelines for Livestock Grazing Management:

- Yes

Proposed Action: The current permitted use would continue as follows:

Livestock # and kind	Season	Public land	Type use	AUM
30 cattle	5/15 to 10/01	2	Active	3

Total permitted use would remain 3 AUM's.

The grazing lease would be reissued to Taft Ranch Company.

(31) TOMS GULCH #07762

Public acres – 700
 AUMs - 19
 Public land – 100%
 Livestock No. – 2 Horses
 Season of Use – 5/1 to 11/30
 Type Use - Active

Meeting Upland Standard:

- Yes

Upland Objectives:

- Maintain native plant community in a late seral to Potential Natural Community (PNC) ecological condition rating.

Meeting Riparian Health Standard:

- No riparian habitat on public land within the allotment.

Meeting Water Quality Standard:

- N/A

Meeting Biodiversity Standard:

- Yes

Biodiversity Objectives:

- Maintain quality of elk and mule deer winter range and provide habitat for spring concentrations.

Conforms with Guidelines for Livestock Grazing Management:

- Yes

Proposed Action: The current permitted use would be modified as follows:

Livestock # and kind	Season	Public land	Type use	AUM
2 Horses	5/1 to 11/30	100	Custodial	19

Total permitted use would remain 19 AUM's.

(32) UPPER PASTURE #02558

Public acres – 50

AUMs - 10

Public land – 100%

Livestock No. – 1 cattle

Season of Use – 3/1 to 2/28

Type Use - Custodial

Meeting Upland Standard:

- Yes

Upland Objectives:

- Maintain desirable bunchgrass and native plant community in a Potential Natural Community (PNC) ecological condition rating.

Meeting Riparian Health Standard:

- No riparian habitat on public land within the allotment.

Meeting Water Quality Standard:

- N/A

Meeting Biodiversity Standard:

- Yes

Biodiversity Objectives:

- Maintain residual forage for mule deer winter range and provide habitat for spring concentrations.
- Conforms with Guidelines for Livestock Grazing Management: Yes

Proposed Action: The current permitted use would be modified as follows:

Livestock # and kind	Season	Public land	Type use	AUM
1 Cattle	3/1 to 2/28	100	Custodial	5
1 Horse	3/1 to 2/28	100	Custodial	5

Total permitted use would remain 10 AUM's.

(33) WATER TANK SMITH RIVER #09806

Public acres – 328

AUMs - 70

Public land – 100%

Livestock No. – 12 Cattle

Season of Use – 6/1 to 11/30

Type Use – Active

Meeting Upland Standard:

- Yes

Upland Objectives:

- Maintain native plant community in a late seral to Potential Natural Community (PNC) ecological condition rating. Prevent and reduce presence of noxious weeds, particularly spotted knapweed.

Meeting Riparian Health Standard:

- No riparian habitat on public land within this allotment.

Meeting Water Quality Standard:

- n/a

Meeting Biodiversity Standard:

- Yes

Biodiversity Objectives:

- Maintain residual cover and native vegetation within the allotment.
- Prevent spread and reduce presence of spotted knapweed and other invasive species which are known to occur on this allotment.

Conforms with Guidelines for Livestock Grazing Management: Yes. There were no signs of current livestock grazing.

Proposed Action: The lease would be reissued to new applicants as follows:

Livestock # and kind	Season	Public land	Type use	AUM
12 Cattle	6/1 to 11/30	100	Custodial	70

Total permitted use would remain 70 AUM's.

The grazing lease was terminated on October 30, 2006 for failure of former lessee to provide documentation of control of base property. In March 2010, the adjacent landowners submitted grazing applications 4130-1, 4130-1a, 4130-1b and 4120-8 along with documentation of control of base property and have met all other qualifications to hold a grazing lease. The grazing applications are consistent with the mandatory terms and conditions analyzed in this document.

(34) W. FORK HOUND CR. #09780

Public acres – 541
 AUMs - 17
 Public land – 100%
 Livestock No. – 4 Cattle
 Season of Use – 6/1 to 10/15
 Type Use - Custodial

Meeting Upland Standard:

- Yes

Upland Objectives:

- Maintain native plant community in a late seral to Potential Natural Community (PNC) ecological condition rating.

Meeting Riparian Health Standard:

- No riparian habitat on public land within this allotment.

Meeting Water Quality Standard:

- N/A

Meeting Biodiversity Standard:

- Yes

Biodiversity Objectives:

- Maintain residual forage for elk and mule deer summer range.

Conforms with Guidelines for Livestock Grazing Management:

- Yes

Proposed Action: The current permitted use would continue as follows:

Livestock # and kind	Season	Public land	Type use	AUM
4 Cattle	6/1 to 10/15	100	Custodial	17

Total permitted use would remain 17 AUM's.

The base property associated with the West Fork Hound Creek Allotment #09780 has changed ownership. Upon approval of the transfer by the authorized officer, BLM would transfer 17 AUM's of grazing preference to the current owners of the associated base property. The proposed action includes issuing a grazing lease to the current owner. Transfer of the grazing preference constitutes a name change only. Management of the allotment would remain within the family of the current lease holder. Management activities would continue to be consistent with the existing grazing management system. The grazing applications would be consistent with all mandatory terms and conditions of the lease analyzed in this document.

(35) WILLOW CREEK #07775

Public acres – 81
 AUMs - 12
 Public land – 47%
 Livestock No. – 20 Cattle
 Season of Use – 7/2 to 8/10
 Type Use - Custodial

Meeting Upland Standard:

- No
- Current livestock management is not considered to be a significant factor.

Upland Objectives:

- Reduce naturalized invasive species such as Kentucky bluegrass and timothy
- Improve reproductive capability of desirable species by allowing maturation

of seed heads on individual plants of those species, particularly bluebunch wheatgrass, Columbia/Richardson's needlegrass and rough fescue.

Meeting Riparian Health Standard:

- No riparian habitat on public land within this allotment.

Meeting Water Quality Standard:

- N/A

Meeting Biodiversity Standard:

- Yes

Biodiversity Objectives:

- Increase coverage and residual native bunchgrasses.
- Maintain desirable shrub species such as serviceberry, chokecherry and currant.
- Maintain aspen component.

Conforms with Guidelines for Livestock Grazing Management:

- Yes

Proposed Action: Current permitted use would be modified as follows:

Livestock # and kind	Season	Public land	Type use	AUM
20 Cattle	7/02 to 8/10	47	Active	12

Total permitted use would remain 12 AUM's.

The following term and condition would remain on the lease:

Grazing use will be managed in a three-pasture, deferred rotation grazing system in accordance with the Yendrick Allotment Management Plan, dated 1981.

Private pastures would be grazed early and late in the season. BLM and Forest Service lands would be used mid season from July 2 to August 10.

The base property associated with the Willow Creek (Yendrick) Allotment #07775 has changed ownership. Upon approval of the transfer by the authorized officer, BLM would

transfer 12 AUM's of grazing preference to the new owners of the associated base property. The proposed action includes issuing a grazing lease to the new owner. Transfer of the grazing preference constitutes a name change only. Management activities would continue to be consistent with the existing grazing management system outlined in the Yendrick Allotment Management Plan (1981) by the United States Forest Service. The grazing applications are consistent with all mandatory terms and conditions of the lease analyzed in this document.

The name of this allotment would be changed from Willow Creek to Yendrick. This would prevent confusion with Willow Creek #07608, Willow Creek Canal #07612 and Willow Creek Pasture #06314.

(36) WINDY HOLLOW #09818

Public acres – 5043

AUMs - 545

Public land – 100%

Livestock No. – 121

Season of Use – 6/1 to 10/15

Type Use - Custodial

Meeting Upland Standard:

- Yes

Upland Objectives:

- Maintain native plant community in a late seral to Potential Natural Community (PNC) ecological condition rating.

Meeting Riparian Health Standard:

- No

Riparian Objectives:

- Maintain or improve riparian areas on South Fork of Stickney Creek, Tyrell Creek, and East Fork of Hound Creek to PFC or above.
- Improve the riparian area on Wegner Creek to PFC or above.

- Decrease the percent streambank composition of Kentucky bluegrass on Wegner Creek.
- Decrease utilization of preferred woody species on Wegner Creek.

Meeting Water Quality Standard:

- No

Water Quality Objectives:

- Continue to support designated and existing beneficial uses on South Fork of Stickney Creek, Tyrell Creek and East Fork of Hound Creek, including cold water fishery.
- Improve streambank stability and streambank vegetative composition on Wegner Creek to mitigate non-point source pollution into Wegner Creek.

Meeting Biodiversity Standard:

- No
- Due to concentrated livestock use on Wegner Creek.

Biodiversity Objectives:

- Increase woody browse species on Wegner Creek.
- Maintain residual forage in uplands.

Conforms with Guidelines for Livestock Grazing Management:

- Yes

Proposed Action: Windy Hollow contains numerous pastures with intermixed deeded, state and federal lands. BLM parcels located in the upper reaches of Spring, Pole, and Tyrell Creeks along with those parcels located in the far west and southern portions of the allotment are managed in conjunction with deeded and state lands which are used under a short duration, high intensity grazing system with approximately 20% of these lands being rested annually. BLM parcels located mainly in the South Fork of Stickney Creek, Wegner Creek and lands west of Pole Creek are managed in conjunction with the Cottonwood Creek Allotment #7716 (Whitetail Pasture). A three-pasture deferred rotation is attempted in these pastures, however there is no cross-fence between the South Fork of Stickney Creek and

Wegner Creek. Deferment is attempted by timing and turnout location, but due to perennial water sources in Wegner Creek, livestock often cross the divide and re-use Wegner Creek. A cross-fence is proposed beginning in the northwest corner of section 30 (T15N, R1W). The cross-fence would cross BLM lands near Baldy and follow a two-track trail southeasterly along the divide into the southeast quarter of section 32 where it would terminate at an existing drift fence near the NE1/4NE1/4 of Section 5 (T14N, R1W). This would prevent livestock from re-entering a pasture, particularly Wegner Creek, resulting in seasonal deferment and less concentration along watercourses for pastures in the west side of the allotment. The fence would consist of three-strand, smooth wire with an electric charger that would be removed in the offseason. Wire spacing would be 16-18", 26-28" and 38-40". Posts would be spaced approximately 60' apart. BLM and lessee would enter into a cooperative agreement detailing construction and maintenance responsibilities.

The current scheduled use would be modified as follows to ensure significant progress is being toward meeting riparian standards:

Wegner/S.F. Stickney/Cottonwood-Whitetail

Livestock and kind	Season	Public land	Type use	AUM
36 Cattle	5/15 to 11/15	100	Custodial	219

**Custodial grazing is authorized during the listed season. Pastures will be used in a three-pasture, deferred rotation system in conjunction with the Cottonwood Creek Allotment #07716. Grazing use will not exceed the recognized carrying capacity of the public land. These pastures may be used in conjunction with your normal operation as long as standards for rangeland health are met or significant progress is being made toward achieving standards and grazing use is in conformance with guidelines (43 CFR 4180).*

East Fork Hound Creek

Livestock and kind	Season	Public land	Type use	AUM
3 Horses	3/1 to 2/28	100	Custodial	35

Windy Hollow

Livestock and kind	Season	Public land	Type use	AUM
24 Cattle	3/1 to 2/28	100	Custodial	291

**BLM parcels within these pastures are used in a short-duration, high intensity grazing rotation. These lands may be used in conjunction with your normal operation as long as standards for rangeland health are maintained and conformance with guidelines for livestock grazing is being achieved (43 CRR 4180).*

Total permitted use for the Windy Hollow Allotment #09818 would remain 545 AUM's.

The Dog Creek Allotment #007825 is also contained within this grazing lease. See (1) listed under Powell County for provisions specific to this allotment.

2.3.10 Proposed Action for Individual Allotments in Lewis & Clark County

(1) ALKALI FLAT #07615

Public acres – 440

AUMs – Split Rock- 40 AUMs

Long Reservoir- 50 AUMs

Sun River- 10 AUMs

Public land – 100%

Livestock No. –

Split Rock- 85 Cattle

Long Reservoir-60 Cattle

Sun River-85 Cattle

Season of Use –

Split Rock: 05/15-07/14

Long Reservoir: 5/1-9/30

Sun River: 03/01-02/28

Type Use - Custodial

Meeting Upland Standard:

- Yes

Upland Objectives:

- Improve reproductive capability of desirable bunchgrass species by allowing maturation of seed heads on individual plants of those species, particularly bluebunch wheatgrass.

Meeting Riparian Health Standard:

- Yes

Riparian Objectives:

- Maintain the riparian area on the Sun River and the unnamed, lentic wetland at PFC or above.

- Decrease the amount of spotted knapweed on the Sun River.

Meeting Water Quality Standard:

- Maintain streambank vegetation of sedges, rushes, cottonwood, and willow to mitigate non-point source pollution from entering the Sun River.

Meeting Biodiversity Standard:

- Yes

Biodiversity Objectives:

- Increase desirable bunchgrass component.
- Maintain habitat for nesting and foraging raptors, bald eagle winter concentration and grizzly bears.

Conforms with Guidelines for Livestock Grazing Management:

- Yes

Proposed Action: The current permitted use would continue as follows:

Split Rock Pasture:

Livestock # and kind	Season	Public land	Type use	AUM
85 Cattle	5/15 to 7/14	100	Custodial	40

Total permitted use would remain 40 AUM's.

Long Reservoir Pasture:

Livestock # and kind	Season	Public land	Type use	AUM
60 Cattle	5/1 to 9/30	100	Custodial	50

Total permitted use would remain 50 AUM's.

Sun River Pasture:

Livestock # and kind	Season	Public land	Type use	AUM
85 Cattle	3/1 to 2/28	100	Custodial	10

Total permitted use would remain 10 AUM's.

BLM proposes changing the name of the allotment to Alkali Flat East to prevent confusion with Alkali Flat #06295.

(2) ALKALI FLAT #06295

Public acres – 245
 AUMs - 30
 Public land – 50%
 Livestock No. – 30 Cattle
 Season of Use – 6/1 to 7/31
 Type Use - Active

Meeting Upland Standard:

- Yes

Upland Objectives:

- Maintain native plant community in a late seral to Potential Natural Community (PNC) ecological condition rating.

Meeting Riparian Health Standard:

- No riparian habitat on public land within this allotment.

Meeting Water Quality Standard:

- N/A

Meeting Biodiversity Standard:

- Yes

Biodiversity Objectives:

- Maintain residual native vegetation.
- Maintain habitat for nesting and foraging raptors, bald eagle winter concentration and grizzly bears.

Conforms with Guidelines for Livestock Grazing Management:

- Yes

Proposed Action: The current permitted use would continue as follows:

Livestock and kind	#	Season	Public land	Type use	AUM
30 Cattle		6/1 to 7/31	50	Active	30

Total permitted use would remain 30 AUM's.

The base property associated with the Alkali Flat Allotment #06295 has been held in an estate which has recently been placed into a bypass trust. Upon approval of the transfer by the authorized officer, BLM would transfer 30 AUM's of grazing preference to the current

owners of the associated base property. The proposed action includes issuing a new, revised grazing lease to the current owners. Transfer of the grazing preference constitutes a name change only. Management of the allotment would remain within the family of the current lease holder. Management activities would continue to be consistent with the existing grazing lease. The grazing applications would be consistent with all mandatory terms and conditions of the lease analyzed in this document.

BLM proposes changing the name of the allotment to Alkali Flat West to prevent confusion with Alkali Flat #07615.

(3) BEAN LAKE #07605

Public acres – 1955
 AUMs - 112
 Public land – 100%
 Livestock No. – 44 Cattle
 Season of Use – 7/16 to 9/30
 Type Use - Active

Meeting Upland Standard:

- Yes

Upland Objectives:

- Maintain native plant community in a late seral to Potential Natural Community (PNC) ecological condition rating.

Meeting Riparian Health Standard:

- Yes

Riparian Objectives:

- Maintain woody communities of red-osier dogwood and Rocky Mountain maple.

Meeting Water Quality Standard:

- Yes

Water Quality Objectives:

- Continue to support existing beneficial uses on Clemons Creek.

Meeting Biodiversity Standard:

- Yes

Biodiversity Objectives:

- Maintain residual native vegetation for mule deer and elk winter range.
- Maintain habitat for grizzly bears.

Conforms with Guidelines for Livestock Grazing Management:

- Yes

Proposed Action: The current permitted use would be modified as follows:

Livestock # and kind	Season	Public land	Type use	AUM
44 Cattle	7/16 to 9/30	100	Custodial	112

Total permitted use would remain 112 AUM's.

(4) BEDROCK CREEK #06347

Public acres – 40

AUMs - 4

Public land – 100%

Livestock No. – 1 cattle

Season of Use – 3/1 to 2/28

Type Use - Custodial

Meeting Upland Standard:

- No

Upland Objectives:

- Decrease utilization of native bunchgrass and woody browse species.
- Increase overall residual forage.
- Reduce amounts and dominance of invasive, noxious and increaser species particularly Kentucky bluegrass, Canada thistle, cheatgrass, dandelion, houndstongue and mullein.
- Improve reproductive capability of desirable species by allowing maturation of seed heads on individual plants of those species.

Meeting Riparian Health Standard:

- No

Riparian Objectives:

- Decrease utilization levels on preferred woody species.
- Decrease streambank composition of Kentucky bluegrass.
- Decrease leafy spurge in riparian zone on Bedrock Creek.

Meeting Water Quality Standard:

- No

Water Quality Objectives:

- Decrease stream channel width/depth ratios and percent of altered streambanks.

Meeting Biodiversity Standard:

- No

Biodiversity Objectives:

- Increase abundance and diversity of native forage and browse species for wildlife.

Conforms with Guidelines for Livestock

Grazing Management:

- No
- The allotment does not conform to Lewistown Guidelines #1, #2, #4, #5, #9, #10, #11, and #12.

Proposed Action: The current permitted use would continue as follows:

Livestock # and kind	Season	Public land	Type use	AUM
1 Cattle	3/1 to 2/28	100	Custodial	4

Total permitted use would remain 4 AUM's.

BLM would construct two spur fences to prevent livestock from accessing Bedrock Creek and adjacent uplands. The western spur would begin on Bedrock Creek near the western boundary of the NWNE of Section 4. The fence would extend northward approximately 300' and terminate in a band of rocky cliffs. The eastern spur would begin in the NWNE portion of the BLM parcel and extend northwesterly approximately 400' terminating at the section line. BLM may extend the southeastern toe of the enclosure downstream to incorporate the remaining reach of Bedrock Creek if substantial recovery occurs and expansion of the enclosure

is warranted. It may also be necessary to modify the drift fence as needed, if breach or other livestock problems are incurred.

Livestock and kind	Season	Public land	Type use	AUM
171 Cattle	5/15 to 9/30	23	Custodial	180

Total permitted use would remain 180 AUM's.

(5) BLACK REEF #07609

Public acres – 1391
 AUMs - 180
 Public land – 23%
 Livestock No. – 171
 Season of Use – 5/15 to 9/30
 Type Use - Custodial

Meeting Upland Standard:

- Yes

Upland Objectives:

- Maintain native plant community in a late seral to Potential Natural Community (PNC) ecological condition rating.

Meeting Riparian Health Standard:

- Yes

Riparian Objectives:

- Maintain the riparian condition on the unnamed, lentic wetland at PFC or above.

Meeting Water Quality Standard:

- Yes

Water Quality Objectives:

- Maintain vegetative buffer around the unnamed, lentic site.

Meeting Biodiversity Standard:

- Yes

Biodiversity Objectives:

- Maintain residual native vegetation.
- Maintain habitat for nesting and foraging raptors, bald eagle winter concentration and grizzly bears.

Conforms with Guidelines for Livestock Grazing Management:

- Yes

Proposed Action: The current permitted use would continue as follows:

The following term and condition would be incorporated into the lease:

**Custodial grazing is authorized during the listed season. Pastures will be used in a three-pasture, deferred, rotation system in conjunction with deeded and state lands. Grazing use will not exceed the recognized carrying capacity of the public land. BLM pastures may be used in conjunction with your normal operation as long as standards for rangeland health continue to be met and grazing use is in conformance with guidelines (43 CFR 4180).*

(6) COTTONWOOD CREEK #07716

Public acres – 200
 AUMs - 22
 Public land – 100
 Livestock No. – 87 cattle
 Season of Use – 6/15 to 10/14
 Type Use - Custodial

Meeting Upland Standard:

- Yes

Upland Objectives:

- Maintain native plant community.

Meeting Riparian Health Standard:

- No riparian habitat on public land within the allotment.

Meeting Water Quality Standard:

- N/A

Meeting Biodiversity Standard:

- Yes

Biodiversity Objectives:

- Maintain residual native vegetation for elk winter range.

Conforms with Guidelines for Livestock Grazing Management:

- Yes

Proposed Action: The Cottonwood Creek Allotment would be used in a three-pasture

deferred rotation grazing system in conjunction with the South Fork of Stickney Creek and Wegner Creek Pastures of the Windy Hollow Allotment #09818. The current permitted use would be modified as follows to facilitate the season of use required for this grazing system.

Livestock # and kind	Season	Public land	Type use	AUM
4 Cattle	5/15 to 11/15	100	Custodial	22

Total permitted use would remain 22 AUM's.

The following term and condition would be incorporated into the lease:

The Cottonwood Creek Allotment will be used in a three-pasture deferred rotation grazing system with pastures located in the Windy Hollow Allotment #09818.

(7) FLORENCE CANAL #07614

Public acres – 80
 AUMs - 16
 Public land – 100%
 Livestock No. – 3 Cattle
 Season of Use – 5/1 to 10/31
 Type Use - Custodial

Meeting Upland Standard:

- Yes

Upland Objectives:

- Maintain native plant community in a late seral to Potential Natural Community (PNC) ecological condition rating.
- Decrease utilization in low-lying areas that are easily accessible to livestock grazing.
- Improve reproductive capability of desirable species by allowing maturation of seed heads on individual plants of those species.

Meeting Riparian Health Standard:

- No riparian habitat on public land within the allotment.

Meeting Water Quality Standard:

- N/A

Meeting Biodiversity Standard:

- Yes

Biodiversity Objectives:

- Increase desirable bunchgrass and shrub component.
- Reduce amounts and patch sizes of blue grama to improve bunchgrass and structure and increase forbs.

Conforms with Guidelines for Livestock Grazing Management:

- Yes

Proposed Action: The current permitted use would continue as follows:

Livestock # and kind	Season	Public land	Type use	AUM
3 Cattle	5/1 to 10/31	100	Custodial	16

Total permitted use would remain 16 AUM's.

(8) MIDDLE FORK #07604

Public acres – 160
 AUMs - 20
 Public land – 100%
 Livestock No. – 5 Cattle
 Season of Use – 6/15 to 10/15
 Type Use - Active

Meeting Upland Standard:

- Yes

Upland Objectives:

- Maintain native plant community in a late seral to Potential Natural Community (PNC) ecological condition rating.

Meeting Riparian Health Standard:

- Yes

Riparian Objectives:

- Maintain streambank cover of sedges, rock, and downed woody debris.

Meeting Water Quality Standard:

- Yes

Water Quality Objectives:

- Maintain upland and riparian vegetative cover.

Meeting Biodiversity Standard:

- Yes

Biodiversity Objectives:

- Maintain habitat for nesting and foraging raptors, mule deer and elk winter range and grizzly bears.

Conforms with Guidelines for Livestock Grazing Management:

- Yes

Proposed Action: The current permitted use would be modified as follows:

Livestock and kind	Season	Public land	Type use	AUM
5 Cattle	6/15 to 10/15	100	Custodial	20

Total permitted use would remain 20 AUM's.

(9) MIDDLE FORK DEARBORN #07603

Public acres –640

AUMs - 35

Public land – 100%

Livestock No. – 12 Cattle

Season of Use – 6/15 to 9/15

Type Use - Custodial

Meeting Upland Standard:

- No
- Due to significant deviations from expected vegetative conditions resulting from land use practices not related to livestock grazing.

Upland Objectives:

- Allow natural processes to allow plant community to achieve a late seral or Potential Natural Community (PNC) ecological condition rating.

Meeting Riparian Health Standard:

- No riparian habitat on public land in the allotment.

Meeting Water Quality Standard:

- N/A

Meeting Biodiversity Standard:

- No
- Due to lack of overstory caused by logging practices.

Biodiversity Objectives:

- Maintain overstory and understory structure of northern parcel in late seral to Potential Natural Community (PNC) ecological condition rating.
- Increase canopy cover and density of forest structure on the southern parcel to improve habitat for grizzly bear, lynx and elk winter range.

Conforms with Guidelines for Livestock Grazing Management:

- Yes

Proposed Action: The current permitted use would continue as follows:

Livestock and kind	Season	Public land	Type use	AUM
12 Cattle	6/15 to 9/15	100	Custodial	35

Total permitted use would remain 35 AUM's.

The base property associated with the Middle Fork Dearborn Allotment #07603 has been organized into a family limited partnership by the current owners. Upon approval of the transfer by the authorized officer, BLM would transfer 35 AUM's of grazing preference to the Ingersoll Ranch FLP. The proposed action includes issuing a new, revised grazing lease to the partnership. Transfer of the grazing preference constitutes a name change only. Management of the allotment would remain within the family of the current lease holder. Management activities would continue to be consistent with the existing grazing lease. The grazing applications would be consistent with all mandatory terms and conditions of the lease analyzed in this document.

(10) RIVER BLM #06325

Public acres – 40

AUMs - 11
 Public land – 100%
 Livestock No. – 1 Cattle
 Season of Use – 3/1 to 2/28
 Type Use - Custodial

Meeting Upland Standard:

- Yes

Upland Objectives:

- Maintain native plant community in a late seral to Potential Natural Community (PNC) ecological condition rating.
- Prevent spread and expansion of houndstongue.

Meeting Riparian Health Standard:

- No riparian habitat on public land within the allotment.

Meeting Water Quality Standard:

- N/A

Meeting Biodiversity Standard:

- Yes

Biodiversity Objectives:

- Maintain habitat for nesting and foraging raptors, and mule deer winter range.

Conforms with Guidelines for Livestock Grazing Management:

- Yes

Proposed Action: The current permitted use would continue as follows:

Livestock # and kind	Season	Public land	Type use	AUM
1 Cattle	3/1 to 2/28	100	Custodial	11

Total permitted use would remain 11 AUM's.

(11) ROOST HILL #07607

Public acres -600 leased
 -400 unleased

AUMs - 1
 Public land – 100%
 Livestock No. – 1 Cattle

Season of Use – 6/1 to 9/1
 Type Use – Custodial

Meeting Upland Standard:

- Yes

Upland Objectives:

- Maintain native plant community in a late seral to Potential Natural Community (PNC) ecological condition rating.
- Improve reproductive capability of desirable species, particularly rough fescue, by allowing maturation of seed heads on individual plants of those species.
- Increase abundance and production of rough fescue and other desirable native bunchgrasses.
- Reduce and prevent further expansion of non-native invasive species such as Kentucky bluegrass and timothy.

Meeting Riparian Health Standard:

- Yes.

Riparian Objectives:

- Maintain riparian area on Cutrock Creek in PFC or above.

Meeting Water Quality Standard:

- Yes

Water Quality Objectives:

- Continue to support existing beneficial uses on Cutrock Creek.

Meeting Biodiversity Standard:

- Yes

Biodiversity Objectives:

- Maintain habitat for nesting and foraging raptors, grizzly bears, elk calving and winter range, as well as, bighorn sheep lambing and winter range.
- Improve habitat structure and forage abundance by increasing bunchgrass component in open, grazeable areas.

Conforms with Guidelines for Livestock Grazing Management:

- Yes

Proposed Action: BLM lands within the allotment were reevaluated and determined to be providing more forage than one animal unit month currently allocated. The permitted use would be increased to account for existing forage consumption.

The permitted use would be modified as follows:

Livestock and kind	#	Season	Public land	Type use	AUM
3 Cattle		6/1 to 10/1	100	Custodial	14

Total permitted use would be increased to 14 AUM's.
The following term and condition would be added to the lease:

Pastures containing BLM lands are to be used in variable-season, rest-rotation grazing system in conjunction with adjacent private and forest service lands. Grazing use will not exceed 45 days in any pasture.

This allotment contains two unallocated parcels. Roost Hill (1052) contains 520 acres of BLM located in T20N, R8W, Section 6 (NE1/4, NENW1/4, N1/2SE1/2) and Section 5 (NW1/4, N1/2SW1/4). Shed Creek contains 40 acres in the SW1/4SW1/4 of Section 34 (T21, R8W). The Headwaters RMP (pg. 27) directs the Roost Hill parcel remain unleased due to land and forage reservation needed for grizzly bear, bighorn sheep and elk habitat protection. The Shed Creek parcel is to remain unleased due to a forage reservation needed for elk winter habitat. These parcels would continue to remain unallocated for livestock grazing.

(12) SOUTH FORK #06443

Public acres – 640
AUMs - 45
Public land – 100%
Livestock No. – 15 Cattle
Season of Use – 6/1 to 9/15
Type Use - Custodial

Meeting Upland Standard:

- Yes

Upland Objectives:

- Maintain native plant community in a late seral to Potential Natural Community (PNC) ecological condition rating.

Meeting Riparian Health Standard:

- Yes

Riparian Objectives:

- Maintain woody communities of red-osier dogwood and Rocky Mountain maple.
- Maintain the riparian area on South Fork of Stickney Creek in PFC or above.

Meeting Water Quality Standard:

- Yes

Water Quality Objectives:

- Continue to support designated and existing beneficial uses on South Fork of Stickney Creek, including cold water fishery.

Meeting Biodiversity Standard:

- Yes

Biodiversity Objectives:

- Maintain residual forage for deer, elk and ground nesting birds.
- Maintain desirable shrub species such as red-osier dogwood and Rocky Mountain Maple.

Conforms with Guidelines for Livestock Grazing Management:

- Yes

Proposed Action: The current proposed action would continue as follows:

Livestock and kind	#	Season	Public land	Type use	AUM
1 Cattle		6/1 to 9/15	100	Custodial	45

Total permitted use would remain 45 AUM's.

This allotment contains unallocated parcels known as South Fork (1044) which consists of 1,320 acres of BLM lands. These lands are designated to remain unleased by the Headwaters RMP (pg. 27) for forage

reservation needed for riparian habitat and big game habitat protection.

The base property associated with the South Fork #06443 has been organized into a limited liability corporation by the current owners. Upon approval of the transfer by the authorized officer, BLM would transfer 45 AUM's of grazing preference to the Turtle Butte LLC. The proposed action includes issuing a new, revised grazing lease to Turtle Butte LLC. Transfer of the grazing preference constitutes a name change only. Management of the allotment would remain within the family of the current lease holder. Management activities would continue to be consistent with the existing grazing lease. The grazing applications would be consistent with all mandatory terms and conditions of the lease analyzed in this document.

(13) WILLOW CREEK #07608

Public acres – 40
 AUMs - 4
 Public land – 100
 Livestock No. –1 Cattle
 Season of Use – 7/1 to 10/15
 Type Use - Active

Meeting Upland Standard:

- Yes

Upland Objectives:

- Maintain native plant community in a late seral to Potential Natural Community (PNC) ecological condition rating.

Meeting Riparian Health Standard:

- No riparian habitat on public land within the allotment.

Meeting Water Quality Standard:

- N/A

Meeting Biodiversity Standard:

- Yes

Biodiversity Objectives:

- Maintain residual native vegetation.

Conforms with Guidelines for Livestock Grazing Management:

- Yes

Proposed Action: The current permitted use would be modified as follows:

Livestock # and kind	Season	Public land	Type use	AUM
1 Cattle	3/1 to 10/15	100	Custodial	4

Total permitted use would remain 4 AUM's.

The base property associated with the Willow Creek Allotment #7608 has been held in an estate which has recently been settled. Upon approval of the transfer by the authorized officer, BLM would transfer 4 AUM's of grazing preference to the current owners of the associated base property. The proposed action includes issuing a new, revised grazing lease to the current owners. Transfer of the grazing preference constitutes a name change only. Management of the allotment would remain within the family of the current lease holder. Management activities would continue to be consistent with the existing grazing lease. The grazing applications would be consistent with all mandatory terms and conditions of the lease analyzed in this document.

(14) WILLOW CREEK CANAL #07612

Public acres – 939
 AUMs – 127
 32
 Public land – 42%
 – 100%
 Livestock No. – 60 Cattle
 6 Cattle
 Season of Use – 6/1 to 10/31
 Type Use – Active
 Custodial

Meeting Upland Standard:

- Yes

Upland Objectives:

- Maintain native plant community in a late seral to Potential Natural

Community (PNC) ecological condition rating.

Meeting Riparian Health Standard:

- Yes

Riparian Objectives:

- Maintain woody communities of cottonwood, willow, and silverberry.

Meeting Water Quality Standard:

- Yes

Water Quality Objectives:

- Maintain streambank vegetation in order to mitigate non-point source pollution from entering the Sun River.

Meeting Biodiversity Standard:

- Yes

Biodiversity Objectives:

- Maintain habitat for nesting and foraging raptors, grizzly bears.
- Maintain forage for mule deer and elk primary winter range, as well as, for bighorn sheep lambing and winter range.

Conforms with Guidelines for Livestock Grazing Management:

- Yes

Proposed Action: Due to changes in land ownership, the percentage of public land would be modified to reflect current forage production on state, private and federal lands within the allotment. The current mandatory terms and conditions would be modified as follows:

Livestock # and kind	Season	Public land	Type use	AUM
138 Cattle	6/1 to 10/31	23	Active	160

Total permitted use would remain 159 AUM's.

(15) WILLOW CR. PASTURE #06314

Public acres – 80
 AUMs - 27
 Public land – 100%
 Livestock No. – 6 Cattle

Season of Use – 6/15 to 10/15

Type Use – Custodial

Meeting Upland Standard:

- Yes

Upland Objectives:

- Decrease utilization of desirable native bunchgrasses, particularly bluebunch wheatgrass.
- Improve reproductive capability of bluebunch wheatgrass by allowing maturation of seed heads on individual plants of those species.
- Reduce abundance and dominance of needleandthread.
- Increase overall residual forage.

Meeting Riparian Health Standard:

- No riparian habitat on public land within the allotment.

Meeting Water Quality Standard:

- n/a

Meeting Biodiversity Standard:

- Yes

Biodiversity Objectives:

- Increase residual forage for ground nesting birds and other species.

Conforms with Guidelines for Livestock Grazing Management:

- No
- the allotment does not conform with Lewistown Guideline #5. Grazing should be managed to encourage growth and productivity of bluebunch wheatgrass. Season of use should be maintained to limit use of bluebunch wheatgrass during active growth and development.

Proposed Action: The current permitted use would continue as follows:

Livestock # and kind	Season	Public land	Type use	AUM
6 Cattle	6/15 to 10/15	100	Custodial	27

Total permitted use would remain 27 AUM's.

Grazing Record #2507650 is issued under a lease agreement between Fairfield Cattlemen's

Association and Greenfields Irrigation District. This agreement will terminate December 31, 2015. The proposed action includes the lease renewal agreement and annual grazing lease extension. If a new agreement is signed with the same mandatory terms and conditions as analyzed above, a subsequent grazing lease would be generated for the term of the new agreement, but not to exceed the 10-year term of the BLM grazing lease.

Pishkun Reservoir Allotment #06315 is also listed under Grazing Record #2507650. See proposed action (15) listed under Teton County for the proposed action specific to the Pishkun Reservoir Allotment.

WINDY HOLLOW #09818
(See Cascade County)

2.3.11 Proposed Action for Individual Allotments in Meagher County

(1) BATTLE CREEK #09814

Public acres – 200
AUMs - 67
Public land – 100%
Livestock No. – 67 Cattle
Season of Use – 10/15 to 11/14
Type Use - Active

Meeting Upland Standard:

- Yes

Upland Objectives:

- Maintain native plant community in a late seral to Potential Natural Community (PNC) ecological condition rating.
- Decrease coverage of clubmoss.

- Decrease bare ground.
 - Increase residual forage.
- Meeting Riparian Health Standard:

- Yes

Riparian Objectives:

- Maintain the riparian area on Battle Creek in PFC or above.

Meeting Water Quality Standard:

- Yes

Water Quality Objectives:

- Maintain streambank vegetative cover of sedges and rushes in order to mitigate non-point source pollution from entering Battle Creek, and its receiving water Sixteenmile Creek.

Meeting Biodiversity Standard:

- Yes

Biodiversity Objectives:

- Maintain canopy coverage and overall condition of sage brush to provide habitat for sage grouse and other sage-dependent species.

Conforms with Guidelines for Livestock Grazing Management:

- Yes

Proposed Action: The current permitted use would be modified as follows:

Livestock and kind	Season	Public land	Type use	AUM
67 Cattle	10/15 -11/14	100	Custodial	67

Total permitted use would remain 67 AUM's.

(2) BERG LEASE #07601

Public acres – 80
AUMs - 13
Public land – 100%
Livestock No. – 1 Cattle
Season of Use – 3/1 to 2/28
Type Use - Custodial

Meeting Upland Standard:

- No

- Livestock is considered to be a significant factor.

Upland Objectives:

- Reduce livestock concentration along the accessible reaches of the creek and the lower upland saddle and basin areas.
- Decrease utilization of desirable native bunchgrasses, particularly bluebunch wheatgrass.
- Improve reproductive capability of bluebunch wheatgrass by allowing maturation of seed heads on individual plants of those species.
- Reduce abundance and dominance of clubmoss.
- Increase overall residual forage, particularly in southern portion of parcel.

Meeting Riparian Health Standard:

- No

Riparian Objectives:

- Decrease utilization levels on preferred woody species, such as cottonwood.
- Improve the riparian area on the unnamed tributary to the South Fork of the Musselshell to PFC or above.

Meeting Water Quality Standard:

- No

Water Quality Objectives:

- Decrease the percentage of altered streambanks.
- Decrease the percentage of bare ground in streamside zones.

Meeting Biodiversity Standard:

- No

Biodiversity Objectives:

- Reduce browsing and mechanical damage of preferred trees and shrubs such as cottonwood, willow, and rocky mountain maple.
- Increase diversity of grasses, forbs and shrubs.
- Increase residual forage and cover.
- Increase productivity by reducing clubmoss.

Conforms with Guidelines for Livestock Grazing Management:

- No
- The allotment does not conform to Lewistown Guidelines 2, 4, 5 and 10. Grazing is not being maintained to maintain watershed vegetation, species richness and floodplain function. Long-term resource capabilities may not be sustainable. Grazing is not being managed to promote desired plants and plant communities. Livestock Management is not utilizing practices, such as those referenced by NRCS published prescribed grazing technical guide to maintain, restore or enhance water quality. Guidelines are not in conformance due to concentrated livestock use resulting in a shift of plant communities, stream bank alteration and decreased regeneration of desirable woody species.

Proposed Action: Livestock concentrations occur in the unnamed tributary to the South Fork of the Musselshell River due to the presence of perennial water and shade. The current permitted use would be modified as follows:

Livestock and kind	Season	Public land	Type use	AUM
1 Cattle	7/1 to 9/15	100	Custodial	13

Total permitted use would remain 13 AUM's.

The following term and condition would be incorporated into the lease:

**Custodial grazing is authorized during the listed season. Grazing use will not exceed the recognized carrying capacity of the public land. Pastures will be used in conjunction with deeded lands as long as standards for rangeland health are met or significant progress is being made toward achieving those standards and grazing use is in conformance with guidelines (43 CFR 4180).*

A drift fence would be constructed beginning in the NW1/4SW1/4SW1/4 of Section 24 (T8N, R10E). The fence would continue from the quarter section line north for approximately 800' along the west boundary of Section 24. The fence would corner northeasterly for an additional 100-200' where it would terminate at a cliff band on the east side of the unnamed drainage effectively sealing drift of livestock from the west. The fence would be constructed of 2-3 strand electric fence meeting BLM specifications. In five years, lessee and BLM would re-evaluate progress toward riparian health standard. If significant progress is being made, a permanent fence consisting of standard, three-strand steel and wire with set corner posts would be constructed, with the opportunity for sections of jackleg where soils are excessively rocky.

If no significant progress is being made the fence would be reconfigured to extend northward along the western boundary of the BLM parcel to an existing fence corner in the SW1/4NW1/4NW1/4 of Section 24. The associated AUM's would be placed in temporary suspension and the parcel would be rested for the remainder of the term of the lease to allow for recovery.

Control of listed base property associated with the Berg Lease Allotment #07601 has changed. In February 2010, 9-F Ranch Company Incorporated submitted application forms 4130-1, 4130-1a, and 4130-1b. Upon approval of the transfer by the authorized officer, BLM would transfer 13 AUM's of grazing preference to the 9-F Ranch Co. Inc who control the associated base property. The proposed action includes issuing a new, revised grazing lease to the current lessee. Transfer of the grazing preference constitutes a name change only. Management of the allotment would remain within the family of the current lease holder. Management activities would continue to be consistent with the existing grazing lease. The grazing applications would be consistent with all mandatory terms and conditions of the lease analyzed in this document.

(3) BLACK CANYON #09849

Public acres – 480
 AUMs - 35
 Public land – 100
 Livestock No. – 7 Cattle
 Season of Use – 6/1 to 10/31
 Type Use - Active

Meeting Upland Standard:

- Yes

Upland Objectives:

- Maintain native plant community in a late seral to Potential Natural Community (PNC) ecological condition rating.
- Limit expansion and reduce abundance of houndstongue and mullein.

Meeting Riparian Health Standard:

- No riparian habitat on public land within the allotment.

Meeting Water Quality Standard:

- N/A

Meeting Biodiversity Standard:

- Yes

Biodiversity Objectives:

- Maintain forest canopy and understory vegetation consisting of desirable grasses with a variety of forbs.
- Maintain residual forage.

Conforms with Guidelines for Livestock Grazing Management:

- Yes

Proposed Action: The current permitted use would be modified as follows:

Livestock # and kind	Season	Public land	Type use	AUM
7 Cattle	6/1 to 10/31	100	Custodial	35

Total permitted use would remain 35 AUM's.

Lessee proposes construction of a turkey guzzler in the NW1/4SE1/4NW1/4 of Section 2 (T13N,

R3E) for elk and occasional livestock use. The guzzler would consist of a galvanized catchment area approximately 26' long by 12' wide. Water would be piped into a sump box 18" x 18" x 12" deep. A hail screen would be installed to prevent debris collection. Lessee would be responsible for construction, materials and maintenance. BLM and lessee would enter into cooperative agreement prior to construction.

(4) COYOTE CREEK #09663

Public acres – 156
 AUMs - 27
 Public land – 100%
 Livestock No. – 2 Cattle
 Season of Use – 3/1 to 2/28
 Type Use - Active

Meeting Upland Standard:

- No
- Current livestock distribution is considered to be a factor.

Upland Objectives:

- Decrease utilization of desirable native bunchgrasses, particularly rough fescue.
- Improve reproductive capability of bunchgrasses by allowing maturation of seed heads on individual plants of those species.
- Increase overall residual forage, particularly in the N1/2NW1/2 of Section 6 around the spring site and associated uplands.
- Maintain residual vegetation in E1/2NE1/4 of Section 6.

Meeting Riparian Health Standard:

- No riparian habitat on public land within the allotment.

Meeting Water Quality Standard:

- N/A

Meeting Biodiversity Standard:

- No
- Due to lack of winter residual forage .

Biodiversity Objectives:

- Increase residual forage and cover of rough fescue on ridge near spring.

Conforms with Guidelines for Livestock Grazing Management:

- No
- Lewistown Guidelines not conformed to: 4, 5, and 8. Grazing is not being maintaining watershed vegetation, species richness and floodplain function. Long-term resource capabilities may not be sustainable. Grazing is not being managed to promote desired plants and plant communities.

Proposed Action: Lessees have entered into an Environmental Quality Incentive Program (EQIP) contract with Natural Resource Conservation Service (NRCS). The contract would result in construction of cross-fencing on adjacent deeded lands that would split the current pasture into multiple-pastures. Lessees would combine two herds into one which would allow for implementation of a twice-thru, three pasture rotational grazing system. Permitted use would be modified to address livestock distribution and achieve progress toward meeting standards and guidelines for rangeland health.

Livestock # and kind	Season	Public land	Type use	AUM
2 Cattle	6/10 to 12/1	100	Custodial	27

Total permitted use would be increased to 30 AUM's due to the inclusion of the NW1/4 Section 5 (T8N, R10E).

The following term and condition would be incorporated into the grazing lease:

**Custodial grazing is authorized during the listed season. Pastures will be used in a three-pasture, deferred, rotation system in conjunction with deeded lands. Grazing use will not exceed the recognized carrying capacity of the public land. A twice-through grazing system may be used as long as standards for rangeland health are met or significant progress is being made toward achieving standards and grazing use is in conformance with guidelines (43 CFR 4180).*

**Salt blocks and other nutritional supplements will not be placed on BLM lands.*

The NE1/4 of Section 5 (T8N, R10E) is fenced in with pastures containing the Coyote Creek allotment. The parcel has previously been unleased due to topography, forest cover, lack of water and inaccessibility to livestock. Implementation of cross-fencing would likely result in some incidental use of this parcel by livestock. The proposed action includes incorporating this parcel into the Coyote Creek Allotment. The parcel contains 20 acres of grazeable area which would increase the permitted use by three AUM's.

Conforms with Guidelines for Livestock Grazing Management:

- Yes.

Proposed Action: The current permitted use would continue as follows:

Livestock # and kind	Season	Public land	Type use	AUM
4 Cattle	6/1 to 10/31	100	Custodial	19

Total permitted use would remain 19 AUM's.

The River Tract Allotment #09691 is contained within this grazing lease. See #21 listed under Cascade County for provisions specific to this allotment.

(5) CROOKED CREEK #09688

Public acres – 81
 AUMs - 19
 Public land – 100%
 Livestock No. – 4 cattle
 Season of Use – 6/1 to 10/31
 Type Use - Custodial

Meeting Upland Standard:

- Yes

Upland Objectives:

- Decrease utilization of desirable native bunchgrasses, particularly bluebunch wheatgrass.
- Improve reproductive capability of bluebunch wheatgrass by allowing maturation of seed heads on individual plants of those species.
- Reduce abundance and dominance of Kentucky bluegrass and timothy.

Meeting Riparian Health Standard:

- No riparian habitat on public land within the allotment.

Meeting Water Quality Standard:

- N/A

Meeting Biodiversity Standard:

- Yes

Biodiversity Objectives:

- Improve structure by increasing bunchgrass component.

(6) DAISY DEAN CREEK #09675

Public acres – 40
 AUMs - 10
 Public land – 100%
 Livestock No. – 1 Cattle
 Season of Use – 3/1 to 2/28
 Type Use - Custodial

Meeting Upland Standard:

- Yes

Upland Objectives:

- Maintain native vegetation, canopy cover and understory in late seral to Potential Natural Community (PNC) ecological condition rating.

Meeting Riparian Health Standard:

- No
- Livestock is considered to be a significant factor in this rating.

Riparian Objectives:

- Improve the riparian area on Mud Creek to PFC or above.
- Increase the percent cover of willow, red-osier dogwood, and other preferred woody species.
- Decrease utilization levels on preferred woody species.

Meeting Water Quality Standard:

- No

Water Quality Objectives:

- Improve the riparian area on Mud Creek to PFC or above to mitigate non-point source pollution from entering Mud Creek.

Meeting Biodiversity Standard:

- No

Biodiversity Objectives:

- Improve heath, vigor and coverage of willow, dogwood and other woody browse species.
- Reduce livestock concentrations adjacent to Mud Creek to improve riparian health.

Conforms with Guidelines for Livestock Grazing Management:

- No
- Guidelines not conformed to: 2, 3, 4, 10, 12 ; There are limited upland areas capable of supporting livestock grazing within the allotment. Grazing is primarily limited to within 20 to 40 yards of the stream because of terrain and forest. Abundant pugging and slumping of saturated soils indicate concentrated use by livestock. Data indicates a decrease in the health and vigor of willow and dogwood species

Proposed Action: Lessee purchased base property for the allotment in 2003. Herd size has been reduced from 200 cattle for the ranch unit to less than 50, however, trespass from adjacent pastures and distribution has still resulted in a lack of significant improvement toward achieving standards for riparian health. Lessee would repair allotment boundary fences to prevent trespass and implement a deferred rotation grazing system. Deeded pastures containing crested wheatgrass would be used early each year to delay turnout into upper pastures.

The current permitted use would be modified as follows to achieve significant progress toward meeting standards and guidelines for rangeland health:

Livestock and kind	Season	Public land	Type use	AUM
1 Cattle	6/1 to 12/31	100	Custodial	10

Total permitted use would remain 10 AUM's.

The following term and condition would be incorporated into the lease:

**Custodial grazing is authorized during the listed season. Pasture containing BLM land will be used in a five-pasture, deferred rotation system in conjunction with deeded lands. Grazing use will not exceed the recognized carrying capacity of the public land. These pastures may be used in conjunction with your normal operation as long as standards for rangeland health are met or significant progress is being made toward achieving standards and grazing use is in conformance with guidelines (43 CFR 4180).*

If no significant progress is made within five years, BLM would construct a drift fence beginning at the north fence boundary located in the NE1/4NW1/4NE1/4 of Section 20 (T10N, R11E) extending south approximately 700' and cornering southeast an additional 100' tying into a dense lodgepole pine stand. The fence would be a three-wire standard fence. Wire would be spaced 16-18", 26"-28" and 38-40". The bottom strand would be smooth. Wood corners would be used and a gate would be constructed in the bottom. BLM would consider alternative fence methods provided fence specifications are met. BLM and lessee would enter into a cooperative agreement for the project prior to construction. Permitted use would be placed in suspension for the remainder of the term of the lease to allow for recovery.

Cattle only designation would continue on this lease. No horse use would be authorized.

Control of listed base property associated with the Daisy Dean Allotment #09675 has changed. Upon approval of the transfer by the authorized officer, BLM would transfer 10 AUM's of grazing preference to the HET and JDT Ranch Holdings LLC who control the associated base property. The proposed action includes issuing a new, revised grazing lease to the current lessees. Transfer of the grazing preference constitutes a name change only. Management of the allotment would remain within the family of the current lease holder. Management activities would

continue to be consistent with the existing grazing lease. The grazing applications would be consistent with all mandatory terms and conditions of the lease analyzed in this document.

(7) DEER CREEK #09728

Public acres – 80
 AUMs - 18
 Public land – 100%
 Livestock No. – 9 Cattle
 Season of Use – 4/1 to 5/31
 Type Use - Active

Meeting Upland Standard:

- Yes

Upland Objectives:

- Maintain native plant community in a late seral to Potential Natural Community (PNC) ecological condition rating.
- Reduce patch size and abundance of clubmoss areas.

Meeting Riparian Health Standard:

- No riparian habitat on public land within the allotment.

Meeting Water Quality Standard:

- N/A

Meeting Biodiversity Standard:

- Yes

Biodiversity Objectives:

- Maintain residual vegetation and cover.

Conforms with Guidelines for Livestock Grazing Management:

- Yes

Proposed Action: The current permitted use would be modified as follows:

Livestock # and kind	Season	Public land	Type use	AUM
9 Cattle	4/1 to 5/31	100	Custodial	18

Total permitted use would remain 18 AUM's.

(8) DIVIDE CREEK #19660

Public acres – 1082
 AUMs - 234
 Public land – 100%
 Livestock No. – 42 Cattle
 Season of Use – 5/15 to 10/31
 Type Use - Active

Meeting Upland Standard:

- Yes

Upland Objectives:

- Maintain native plant communities in a late seral to Potential Natural Community (PNC) ecological condition rating to prevent colonization of noxious weed species.
- Provide for natural reestablishment of sagebrush on approximately 30 acres in T11N, R9W Section 31 (NESE).

Meeting Riparian Health Standard:

- Yes

Riparian Objectives:

- Maintain the riparian area on the North Fork of the Musselshell River in PFC or above.
- Decrease the percentage of spotted knapweed within the riparian zone.

Meeting Water Quality Standard:

- Yes

Water Quality Objectives:

- Maintain streambank vegetative cover of sedges, rushes, and willow to mitigate non-point source pollution from entering the North Fork of the Musselshell River.

Meeting Biodiversity Standard:

- No
- Current livestock management is not considered to be a significant factor in this rating.

Biodiversity Objectives:

- Prevent expansion and colonization of spotted knapweed.
- Eliminate activities that could result in future mortality of sage brush.

Conforms with Guidelines for Livestock Grazing Management:

- No.
- The allotment does not conform to Lewistown Guidelines #9 and #12. Knapweed is present in one site and threatens through expansion to reduce plant diversity and negatively affect wildlife habitat. A cooperative agreement would be established for control of noxious weeds.

Proposed Action: The current permitted use would be modified as follows:

Livestock and kind	#	Season	Public land	Type use	AUM
42 Cattle		5/15 to 10/31	100	Custodial	235
8 Sheep		5/15 to 10/31	100	Custodial	9

Total permitted use would be increased to 243 AUM's due to the inclusion of NENE Section 28 (T10N, R9E).

The following term and conditions would be incorporated into the lease:

**Custodial grazing is authorized during the listed season. Pastures will be used in a rest-rotation system in conjunction with deeded and state lands. Grazing use will not exceed the recognized carrying capacity of the public land. Sheep use is authorized up to ten days per pasture as long as standards for rangeland health continue to be met and grazing use is in conformance with guidelines (43 CFR 4180).*

The NE1/4NE1/4 of Section 28 (T10N, R9E) is fenced in with pastures containing the Divide Creek allotment. The parcel has previously been unleased due to administrative oversight. The parcel was not recorded as public domain on historical records and no conveyance was made in 1985 when the remaining tracts of BLM land in Sections 28 and 29 were sold. The proposed action includes incorporating this parcel into the Divide Creek Allotment. The parcel contains 40 acres of grazeable area which would increase the permitted use by nine AUM's.

BLM and lessee would enter into cooperative agreement for control of noxious weeds.

(9) DRY BEAVER CREEK #06294

Public acres – 640
 AUMs - 50
 Public land – 100%
 Livestock No. –10 Cattle
 Season of Use – 3/1 to 2/28
 Type Use - Custodial

Meeting Upland Standard:

- Yes

Upland Objectives:

- Maintain native plant community in a late seral to Potential Natural Community (PNC) ecological condition rating.

Meeting Riparian Health Standard:

- No riparian habitat on public land within the allotment.

Meeting Water Quality Standard:

- N/A

Meeting Biodiversity Standard:

- Yes

Biodiversity Objectives:

- Maintain residual forage and native plant communities.

Conforms with Guidelines for Livestock Grazing Management:

- Yes

Proposed Action: The current permitted use would continue as follows:

Livestock and kind	#	Season	Public land	Type use	AUM
10 Cattle		3/1 to 2/28	100	Custodial	50

Total permitted use would remain 50 AUM's.

(10) DRY HILLS #9743

Public acres
 Section 14- 320
 Section 22- 480
 Section 24- 40

AUMs

Section 14- 47 AUMs

Section 22- 74 AUMs

Section 24- 6 AUMs

Public land

Section 14- 37%

Section 22- 75%

Section 24-100%

Livestock No.

Section 14- 128 cattle

Section 22- 96 cattle

Section 24- 1 cattle

Season of Use

Section 14: 05/10-06/10

Section 22: 05/10-06/10

Section 24: 03/01-02/28

Type Use - Custodial

Meeting Upland Standard:

- No
- Livestock grazing is considered to be a significant factor in this rating.

Upland Objectives:

- Increase production and diversity of decreaser forbs and native bunchgrass species.
- Increase residual forage.
- Reduce amounts and dominance of invasive, noxious and increaser species such as Japanese brome, Kentucky bluegrass and cheatgrass.
- Reduce coverage of clubmoss to improve infiltration and overall site production.
- Improve reproductive capability of desirable species by allowing maturation of seed heads on individual plants of those species, particularly bluebunch wheatgrass, rough fescue and needlegrass species.
- Reduce coverage of bare ground and improve soil stability.

Meeting Riparian Health Standard:

- No riparian habitat on public land within the allotment.

Meeting Water Quality Standard:

- N/A

Meeting Biodiversity Standard:

- No
- Livestock grazing is considered to be a significant factor in this rating.

Biodiversity Objectives:

- Improve structure by increasing cover and abundance of desirable bunchgrass species.
- Increase residual forage for game and non-game wildlife species.

Conforms with Guidelines for Livestock

Grazing Management:

- No
- The allotment does not conform to Lewistown Guidelines 1,2,4,5,12,13. Non-conformance to these guidelines is due to the following factors:

*This allotment is predominately made up of increaser grasses such as cheatgrass, Kentucky bluegrass and annual invasive forbs.

*Bare ground is excessive for this ecological site and the soil is starting to move creating pedestals and flow patterns. (Study site #2)

*The site lacked diversity and production of decreaser forbs and bunchgrass species.

Proposed Action: The Dry Range AMP (1986) would be amended by the proposed action to incorporate a multiple pasture, short-duration, high intensity rest-rotational grazing system. Deeded crested wheatgrass pastures would be used in early spring to delay turnout into pastures containing BLM parcels which would allow for increased maturation of cool season, native species. Section 14 would be rested in 2010 and Section 22 would be used first in rotation followed by Section 15 and Section 23 pastures. The sequence would be repeated alternating rest pastures and seasonal deferrals. The Section 24 parcel would be used in conjunction with deeded lands during calving between January 1 and April 1.

The current permitted use would be modified to achieve significant progress toward meeting standards and guidelines for rangeland health.

Section 14

Livestock and kind	#	Season	Public land	Type use	AUM
51 Cattle		6/1 to 8/15	37	Custodial	47

Total permitted use would remain 47 AUM's.

Section 22

Livestock and kind	#	Season	Public land	Type use	AUM
40 Cattle		6/1 to 8/15	75	Custodial	75

Total permitted use would remain 74 AUM's.

Section 24

Livestock and kind	#	Season	Public land	Type use	AUM
2 Cattle		3/15 to 6/15	100	Custodial	6

Total permitted use would remain 6 AUM's.

The following terms and conditions would be added to the lease:

**Custodial grazing is authorized during the listed season. Pastures will be used in a multiple-pasture, deferred, rest-rotation system in conjunction with deeded lands. Grazing use will not exceed the recognized carrying capacity of the public land. A short-duration, high intensity grazing system may be used as long as standards for rangeland health are met or significant progress is being made toward achieving standards and grazing use is in conformance with guidelines (43 CFR 4180).*

**Salt blocks and other nutritional supplements will not be placed on BLM lands.*

The base properties associated with this allotment have been controlled in combination between a pasture lease and land ownership. Base property lands are now solely controlled through warranty deed. Upon approval of the transfer by the authorized officer, BLM would transfer 127 AUM's of grazing preference to the current owners. The proposed action includes transfer of permitted use and change of base property designation. Transfer of the grazing preference constitutes a name change only. Management of the allotment would remain within the family of the current lease holders. Management activities would continue to be consistent with the existing grazing lease. The grazing applications submitted to BLM in March 2010 are consistent with all mandatory terms and conditions of the lease analyzed in this document.

Range improvement projects:

The operators of Dry Hills #09743 propose construction of a stockwater pipeline extension located in Section 22 of T12N, R4E. The pipeline would originate at an existing stocktank near the half section line between sections 15 and 22. A terminal stocktank would be installed near the center of section 22. Depending on design of pipeline, the tank may be installed approximately one-quarter mile to the west. (See Alternate Route B on map H-2)

The pipeline would be approximately 2800' in length. Construction would be using a trenching method to a depth of six feet. If rocks or other features prohibit installation below the frostline, high density pipe would be used or suitable drains would be installed in the line to prevent freeze damage. Lessees would provide materials, construction and maintenance. A cooperative agreement would be developed prior to implementation. The proposed project would require additional site-specific design and cultural resource inventory.

(11) EAGLE CREEK #09672

Public acres – 360
 AUMs - 57
 Public land – 100%
 Livestock No. – 16 Cattle
 Season of Use – 6/1 to 9/15
 Type Use - Active

Meeting Upland Standard:

- Yes

Upland Objectives:

- Maintain native plant community in a late seral to Potential Natural Community (PNC) ecological condition rating.
- Prevent expansion of timothy, cheatgrass and Kentucky bluegrass.

Meeting Riparian Health Standard:

- Yes

Riparian Objectives:

- Maintain or improve the riparian areas on Park Creek and Eagle Creek to PFC or above.

Meeting Water Quality Standard:

- Yes

Water Quality Objectives:

- Maintain streamside vegetative covers in order to mitigate non-point source pollution from entering Eagle Creek and its receiving water, the Smith River.

Meeting Biodiversity Standard:

- Yes

Biodiversity Objectives:

- Maintain residual cover for ground nesting birds, mule deer, elk and other wildlife species.

Conforms with Guidelines for Livestock Grazing Management:

- Yes

Proposed Action: The current permitted use would continue as follows:

Livestock # and kind	Season	Public land	Type use	AUM
16 Cattle	6/1 to 9/15	100	Custodial	57

Total permitted use would remain 57 AUM's.

(12) EAST LOCO CREEK #07611

Public acres – 40

AUMs - 8

Public land – 2%

Livestock No. – 175 Cattle

Season of Use – 7/1 to 9/15

Type Use - Custodial

Meeting Upland Standard:

- Yes

Upland Objectives:

- Maintain litter and residual forage on site.
- Increase cover and abundance of bunchgrass species such as bluebunch wheatgrass.
- Prevent expansion of houndstongue, cheatgrass and Canada thistle.

Meeting Riparian Health Standard:

- Yes

Riparian Objectives:

- Maintain the riparian area on Loco Creek in PFC or above.
- Decrease utilization levels on preferred woody species on Loco Creek.

Meeting Water Quality Standard:

- Yes

Water Quality Objectives

- Continue to support existing beneficial uses in Loco Creek, including cold-water fisheries.

Meeting Biodiversity Standard:

- Yes

Biodiversity Objectives:

- Improve functional/structural groups by increasing bunchgrass component.

Conforms with Guidelines for Livestock Grazing Management:

- Yes

Proposed Action: The current permitted use would be modified to reflect current mandatory terms and conditions authorized by the U.S. Forest Service. Livestock numbers and kind would be changed as follows:

Livestock # and kind	Season	Public land	Type use	AUM
148 Cattle	7/1 to 9/15	2	Active	7

Total permitted use would remain 8 AUM's.

The following term and condition would be added to the lease:

The East Loco Creek Allotment is contained within a larger USFS/NRCS grazing management system permitted by the Lewis and Clark National Forest. 148 cow/calf pairs are authorized in this pasture alternating seasons of use 07/01-08/06 or 08/07-09/15.

(13) ELK CREEK #09800

Public acres – 149

AUMs - 30
 Public land – 100%
 Livestock No. – 7 Cattle
 Season of Use – 6/1 to 9/30
 Type Use - Custodial

Meeting Upland Standard:

- Yes

Upland Objectives:

- Maintain native plant community in a late seral to Potential Natural Community (PNC) ecological condition rating.

Meeting Riparian Health Standard:

- Yes

Riparian Objectives:

- Maintain the riparian area on Elk Creek in PFC or above.
- Decrease spotted knapweed in streamside zones.

Meeting Water Quality Standard:

- Yes

Water Quality Objectives:

- Maintain stream channel function and streambank vegetation of willow and alder in order to mitigate non-point source pollution from entering Elk Creek.

Meeting Biodiversity Standard:

- Yes

Biodiversity Objectives:

- Maintain canopy cover and structure of existing native vegetation.

Conforms with Guidelines for Livestock Grazing Management:

- Yes

Proposed Action: The current permitted use would continue as follows:

Livestock and kind	Season	Public land	Type use	AUM
7 Cattle	6/1 to 9/30	100	Custodial	30

Total permitted use would remain 30 AUM's.

(14) GIPSY CREEK #09671

Public acres – 184
 AUMs - 59
 Public land – 100%
 Livestock No. – 16 Cattle
 Season of Use – 7/1 to 10/20
 Type Use - Active

Meeting Upland Standard:

- Yes

Upland Objectives:

- Maintain productivity and abundance of native bunchgrasses.
- Reduce occurrence and prevent expansion of cheatgrass and Kentucky bluegrass where present in areas accessible to livestock grazing.

Meeting Riparian Health Standard:

- No riparian habitat on public land within the allotment.

Meeting Water Quality Standard:

- N/A

Meeting Biodiversity Standard:

- Yes

Biodiversity Objectives:

- Maintain residual forage and native vegetation.
- Prevent increase of invasive species.

Conforms with Guidelines for Livestock Grazing Management:

- Yes

Proposed Action: The current permitted use would be modified as follows:

Livestock and kind	Season	Public land	Type use	AUM
16 Cattle	7/1 to 10/20	100	Custodial	59

Total permitted use would remain 59 AUM's.

Control of listed base property associated with the Gipsy Creek Allotment #09671 has changed. Upon approval of the transfer by the authorized officer, BLM would transfer 59 AUM's of grazing preference to the Buckingham Ranch LLC who control the associated base property.

The proposed action includes issuing a new, revised grazing lease to the current lessee. Transfer of the grazing preference constitutes a name change only. Management of the allotment would remain within the family of the current lease holder. Management activities would continue to be consistent with the existing grazing lease. The grazing applications would be consistent with all mandatory terms and conditions of the lease analyzed in this document.

A stocktank exists on the parcel. Continued use would be permitted through cooperative agreement provided resource objectives are being met.

Historical mine adits, associated pit sites and related wastes would be reclaimed on BLM lands.

- Maintain abundance and diversity of native grasses and forbs.
- Maintain residual forage and cover.

Conforms with Guidelines for Livestock Grazing Management:

- Yes

Proposed Action: The current permitted use would continue as follows:

Livestock # and kind	Season	Public land	Type use	AUM
1 Cattle	3/1 to 2/28	100	Custodial	13

Total permitted use would remain 13 AUM's.

(15) HOLLIDAY L&L IND. #09735

Public acres – 40
 AUMs - 13
 Public land – 100%
 Livestock No. – 1 Cattle
 Season of Use – 3/1 to 2/28
 Type Use - Custodial

Meeting Upland Standard:

- Yes

Upland Objectives:

- Maintain native plant community in a late seral to Potential Natural Community (PNC) ecological condition rating.

Meeting Riparian Health Standard:

- No riparian habit on public land within the allotment.

Meeting Water Quality Standard:

- N/A

Meeting Biodiversity Standard:

- Yes

Biodiversity Objectives:

The base property lease associated with the Holliday L & L Individual Allotment has expired. In June of 2009, representatives submitted an updated lease agreement and Grazing Application form 4130-1. The proposed action includes the lease renewal agreement and grazing lease extension. The grazing applications are consistent with all mandatory and other terms and conditions of the grazing lease analyzed in this document. The revised grazing lease expires May 31, 2014. If a new agreement is signed with the same mandatory terms and conditions as analyzed above, a subsequent grazing lease would be generated for the term of the new agreement, but not to exceed the 10 year term of the BLM grazing lease.

(16) INDIAN CREEK #07617

Public acres – 240
 AUMs -37
 Public land – 100%
 Livestock No. – 6 Cattle
 Season of Use – 7/1 to 11/30
 Type Use - Custodial

Meeting Upland Standard:

- Yes

Upland Objectives:

- Increase cover and abundance of desirable bunchgrass species such as rough fescue, bluebunch wheatgrass, and needlegrasses.
- Prevent expansion and increase of non-native invasives such as Kentucky bluegrass and timothy.

Meeting Riparian Health Standard:

- No riparian habitat on public land within the allotment.

Meeting Water Quality Standard:

- N/A

Meeting Biodiversity Standard:

- Yes

Biodiversity Objectives:

- Maintain and increase regeneration and canopy cover of aspen.
- Improve structure by increasing bunchgrass component.
- Maintain residual forage for elk range and other wildlife species.

Conforms with Guidelines for Livestock Grazing Management:

- Yes

Proposed Action: The current permitted use would continue as follows:

Livestock # and kind	Season	Public land	Type use	AUM
6 Cattle	7/1 to 11/30	100	Custodial	37

Total permitted use would remain 37 AUM's.

(17) LITTLE ELK CREEK #09708

Public acres – 120

AUMs - 30

Public land – 100%

Livestock No. – 7 Cattle

Season of Use – 6/1 to 10/31

Type Use - Custodial

Meeting Upland Standard:

- Yes

Upland Objectives:

- Increase production and diversity of decreaser forbs and native bunchgrass species, such as bluebunch wheatgrass and rough fescue.
- Increase residual forage.
- Reduce amounts of fringed sagewort and other increaser species.
- Reduce coverage of clubmoss to improve infiltration and overall site production.
- Improve reproductive capability of desirable species by allowing maturation of seed heads on individual plants of those species, particularly bluebunch wheatgrass and rough fescue.

Meeting Riparian Health Standard:

- Yes

Riparian Objectives

- Maintain the riparian area on Little Elk Creek in PFC or above.
- Continue to support preferred tree and shrub regeneration.

Meeting Water Quality Standard:

- Yes

Water Quality Objectives:

- Maintain upland and riparian vegetative covers.

Meeting Biodiversity Standard:

- Yes

Biodiversity Objectives:

- Improve structure by increasing cover and abundance of desirable bunchgrass species.
- Increase residual forage for game and non-game wildlife species.

Conforms with Guidelines for Livestock Grazing Management:

- Yes

Proposed Action: The current permitted use would continue as follows:

Livestock # and kind	Season	Public land	Type use	AUM
7 Cattle	6/1 to 10/31	100	Custodial	30

Total permitted use would remain 30 AUM's.

(18) LITTLE SULPHUR CREEK #09732

Public acres – 50
 AUMs -16
 Public land – 100%
 Livestock No. – 1 Cattle
 Season of Use – 3/1 to 2/28
 Type Use - Custodial

Meeting Upland Standard:
 • Yes

Upland Objectives:
 • Maintain native vegetation in a Potential Natural Community (PNC) ecological condition rating.

Meeting Riparian Health Standard:
 • No riparian habitat on public land within the allotment.

Meeting Water Quality Standard:
 • N/A

Meeting Biodiversity Standard:
 • Yes
 Biodiversity Objectives:
 • Maintain residual forage.
 • Maintain abundance and cover of native vegetation.

Conforms with Guidelines for Livestock Grazing Management:
 • Yes

Proposed Action: The current permitted use would continue as follows:

Livestock # and kind	Season	Public land	Type use	AUM
1 Cattle	3/1 to 2/28	100	Custodial	16

Total permitted use would remain 16 AUM's.

(19) LOWER SPRING CR. AMP #09673

Public acres – 155
 AUMs - 5
 Public land – 2%
 Livestock No. – 60 Cattle
 Season of Use – 6/21 to 10/15
 Type Use - Active

Meeting Upland Standard:
 • Yes
 Upland Objectives:
 • Maintain native vegetation in a Potential Natural Community (PNC) ecological condition rating.

Meeting Riparian Health Standard:
 • No riparian habitat on public land within the allotment.

Meeting Water Quality Standard:
 • N/A

Meeting Biodiversity Standard:
 • Yes
 Biodiversity Objectives:
 • Maintain residual forage.
 • Maintain abundance and cover of native vegetation.

Conforms with Guidelines for Livestock Grazing Management:
 • Yes

Proposed Action: The current permitted use would continue as follows:

Livestock # and kind	Season	Public land	Type use	AUM
60 Cattle	6/21 to 10/15	2	Active	5

Total permitted use would remain 5 AUM's.

The following term and condition would be incorporated into the grazing lease:

The Lower Spring Creek AMP Allotment #09673 is contained within a larger USFS/deeded grazing management system permitted by Lewis and Clark National Forest. Pastures containing BLM lands are to be used in a modified, three-pasture, deferred grazing system as outlined in

the Lower Spring Creek Allotment Management Plan (1987).

The base property associated with the Lower Spring Creek Allotment #09673 has changed ownership. Upon approval of the transfer by the authorized officer, BLM would transfer 5 AUM's of grazing preference to the current owners of the associated base property. The proposed action includes issuing a grazing lease to the new owner. Transfer of the grazing preference constitutes a name change only. Management activities would continue to be consistent with the existing grazing management system. The grazing applications would be consistent with all mandatory terms and conditions of the lease analyzed in this document.

The North Fork Musselshell Allotment #09674 is also contained within this grazing lease. See (20) listed under Meagher County for provisions specific to this allotment.

MIDDLE CREEK #09704

See Cascade County.

(20) N. FORK MUSSELSHELL #09674

Public acres – 245
 AUMs - 133
 Public land – 100%
 Livestock No. – 11 Cattle
 Season of Use – 3/1 to 2/28
 Type Use - Active

Meeting Upland Standard:

- Yes

Upland Objectives:

- Maintain native vegetation in a late seral to Potential Natural Community (PNC) ecological condition rating.

- Reduce timothy and smooth brome in T9N, R10E Sec.3 (W1/2, SW1/4)
- Reduce coverage of clubmoss in Section 2 (NWNW), Section 3 (NENE), Section 20 (SWSW) and Section 8 (NENW).
- Reduce bare ground in Section 2 (SWSW).
- Prevent expansion of houndstongue throughout the allotment.

Meeting Riparian Health Standard:

- No riparian habitat on public land within the allotment.

Meeting Water Quality Standard:

- N/A

Meeting Biodiversity Standard:

- Yes

Biodiversity Objectives:

- Maintain abundance and diversity of native grasses, forbs and shrubs.
- Maintain residual forage and cover.
- Reduce and prevent expansion of non-native invasive species.

Conforms with Guidelines for Livestock Grazing Management:

- Yes

Proposed Action: The current permitted use would be modified as follows:

Livestock # and kind	Season	Public land	Type use	AUM
11 Cattle	3/1 to 2/28	100	Custodial	133

Total permitted use would remain 133 AUM's.

An unauthorized overland pipeline exists on Section 20 (SWSW) spanning from the southwest corner of the parcel to the northeast corner. Continued use would be permitted only through cooperative agreement. Authorization would include specific management of the project that would meet resource objectives outlined for Section 2. Management of the project would be stipulated by cooperative agreement. Installation would be according to BLM specifications. If these conditions are not met, or if resource objectives are not being met, the project would be removed.

The base property associated with the North Fork of the Musselshell Allotment #09674 has changed ownership. Upon approval of the transfer by the authorized officer, BLM would transfer 133 AUM's of grazing preference to the current owners of the associated base property. The proposed action includes issuing a grazing lease to the new owner. Transfer of the grazing preference constitutes a name change only. Management activities would continue to be consistent with the existing grazing management system. The grazing applications would be consistent with all mandatory terms and conditions of the lease analyzed in this document.

The Lower Spring Creek AMP Allotment #009673 is also contained within this grazing lease. See (19) listed under Meagher County for provisions specific to this allotment.

Meeting Water Quality Standard:

- N/A

Meeting Biodiversity Standard:

- No
- Due to causes other than current livestock management.

Biodiversity Objectives:

- Reduce and prevent further expansion of spotted knapweed.

Conforms with Guidelines for Livestock Grazing Management:

- No
- The allotment does not conform with Lewistown Guideline #9 due to the presence of noxious weeds primarily related to the highway with associated disturbances and perpetual seed sources.

Proposed Action: The western portion of this allotment has not been grazed since 1951. There is insufficient forage and water to use this parcel separately from the east side. Records would be adjusted to account for non-use of BLM lands west of Montana State Highway 234. The current permitted use would be modified as follows:

Livestock # and kind	Season	Public land	Type use	AUM
2 Cattle	3/1 to 2/28	100	Custodial	20

Total permitted use would be reduced to 20 AUM's.

The cooperative agreement to control noxious weeds would be revised to provide more aggressive control of spotted knapweed on this parcel.

(21) RHYNARD IND. #09801

Public acres – 80
 AUMs - 24
 Public land – 100
 Livestock No. – 2 Cattle
 Season of Use – 3/1 to 2/28
 Type Use - Active

Meeting Upland Standard:

- No
- Due to causes other than livestock management.

Upland Objectives:

- Maintain native vegetation in a late seral to Potential Natural Community (PNC) ecological condition rating.
- Increase abundance and diversity of bunchgrass species.
- Prevent and reduce expansion of spotted knapweed and woolly mullein.

Meeting Riparian Health Standard:

- No riparian habitat on public land within the allotment.

(22) SIXTEEN #09690

Public acres – 40
 AUMs - 12
 Public land – 100%
 Livestock No. – 4 cattle
 Season of Use – 7/10 to 10/09
 Type Use - Custodial

Meeting Upland Standard:

- No
- Livestock is considered to be a significant factor in this rating.

Upland Objectives:

- Increase production and diversity of decreaser forbs and native bunchgrass species.
- Increase residual forage.
- Reduce amounts and dominance of invasive and increaser species such as bluegrasses and bromes.
- Reduce coverage of clubmoss to improve infiltration and overall site production.
- Improve reproductive capability of desirable species by allowing maturation of seed heads on individual plants of those species, particularly bluebunch wheatgrass, rough fescue and needlegrass species where still present.

Meeting Riparian Health Standard:

- No riparian habitat on public land within the allotment.

Meeting Water Quality Standard:

- N/A

Meeting Biodiversity Standard:

- No
- Current livestock is considered to be a significant factor in this rating.

Biodiversity Objectives:

- Improve habitat structure by restoring bunchgrass component.
- Increase residual forage.
- Reduce clubmoss coverage.

Conforms with Guidelines for Livestock Grazing Management:

- No
- The allotment does not conform to Lewistown Guidelines #5 and #12. Plant community composition has shifted away from expected conditions. Annual production is lower than expected. The site lacked the presence of decreaser forb and bunchgrass species. Increaser species, such as threadleaf sedge, Kentucky bluegrass, prairie junegrass,

western wheatgrass and western yarrow dominate the site.

Proposed Action: Historical livestock trespass from the north has been occurring annually from horses. In 2009, lessee replaced a cattle guard and has maintained the boundary fence. Lessee would continue to maintain boundary fence and repair points of future trespass. The current permitted use and terms and conditions would be modified to achieve significant progress toward meeting standards and guidelines for rangeland health.

Livestock # and kind	Season	Public land	Type use	AUM
3 Cattle	6/10 to 10/20	100	Custodial	12

Total permitted use would remain 12 AUM's.

The following term and condition would be incorporated into the lease:

**Custodial grazing is authorized during the listed season. Pastures will be used in a three-pasture, deferred rotation system in conjunction with the Wall Mountain and Sixteenmile Creek Pastures. Grazing use of BLM parcel will alternate between spring and fall use and will not exceed 30 days or the recognized carrying capacity of the public land. BLM pastures may be used in conjunction with your normal operation as long as standards for rangeland health are met or significant progress is being made toward achieving standards and grazing use is in conformance with guidelines (43 CFR 4180).*

This parcel, along with the majority of the Sixteen Allotment #09690 was inventoried in 2000 and considered for disposal under the 107th Crow Boundary Settlement. While the parcel in T5N, R6E Section 8 was removed from the public domain, this parcel was retained despite being identified for disposal in the Headwaters RMP (1984). Due to topography, location within the pasture and lack of access, management opportunities are limited. If significant progress is not made toward achieving upland standards for rangeland health within three years, BLM and lessee would pursue land tenure adjustments which could involve a land sale or exchange.

Control of listed base property associated with the Sixteen Allotment #09690 has changed since the lease was issued in 1979. If land tenure adjustments are not made, BLM would transfer 12 AUM's of permitted use to Wall Mountain

Ranch LLC or retain the lease with the current leaseholder provided documentation of control of base properties is submitted to BLM through a valid base property lease. The proposed action would include issuing a revised lease to Wall Mountain Ranch LLC or renewing the lease with the current leaseholder. If permitted use is transferred, the transfer would constitute a name change only. Management of the allotment would remain within the family of the current lease holder. Management activities would continue to be consistent with the existing grazing lease. The grazing applications would be consistent with all mandatory terms and conditions of the lease analyzed in this document.

- Continue to support designated and existing beneficial uses of the North Fork of the Smith River, including cold water fishery.
- Continue to support healthy upland and riparian vegetative communities to aid in maintaining stream channel and watershed function.

Meeting Biodiversity Standard:

- Yes

Biodiversity Objectives:

- Maintain abundance and diversity of native grasses, forbs and shrubs.
- Maintain residual forage and cover.

Conforms with Guidelines for Livestock Grazing Management:

- Yes

Proposed Action: The current permitted use would be modified as follows:

Livestock and kind	Season	Public land	Type use	AUM
165 Cattle	6/15 to 9/15	10	Active	50

Total permitted use would remain 50 AUM's.

(23) SMITH CREEK #09698

Public acres – 600
 AUMs - 50
 Public land – 10%
 Livestock No. – 200 cattle
 Season of Use – 6/15 to 9/15
 Type Use - Custodial

Meeting Upland Standard:

- Yes

Upland Objectives:

- Maintain native vegetation in a late seral to Potential Natural Community (PNC) ecological condition rating.

Meeting Riparian Health Standard:

- Yes

Riparian Objectives:

- Maintain riparian area on the North Fork of the Smith River in PFC or above.
- Maintain woody communities of red-osier dogwood, willow, current, and quaking aspen.
- Maintain streambank vegetation of sedges and rushes.

Meeting Water Quality Standard:

- Yes

Water Quality Objectives:

(24) SPRING CREEK PASTURE #09758

Public acres – 440
 AUMs - 80
 Public land – 100%
 Livestock No. – 32 Cattle
 Season of Use – 7/1 to 9/15
 Type Use - Active

Meeting Upland Standard:

- Yes

Upland Objectives:

- Maintain native vegetation in a late seral to Potential Natural Community (PNC) ecological condition rating.

Meeting Riparian Health Standard:

- No riparian habitat on public land within the allotment.

Meeting Water Quality Standard:

- N/A

Meeting Biodiversity Standard:

- Yes

Biodiversity Objectives:

- Maintain abundance and diversity of native grasses, forbs and shrubs.
- Maintain residual forage and cover.

Conforms with Guidelines for Livestock Grazing Management:

- Yes

Proposed Action: The current permitted use would continue as follows:

Livestock # and kind	Season	Public land	Type use	AUM
32 Cattle	7/1 to 9/15	100	Active	81

Total permitted use would remain 80 AUM's.

Control of listed base property associated with the Spring Creek Pasture Allotment #09758 has changed. Upon approval of the transfer by the authorized officer, BLM would transfer 80 AUM's of grazing preference to Ray Creek Ranch LLC who control the associated base property. The proposed action includes the transfer of permitted use and issuing a new, revised grazing lease to the current lessee. Transfer of the grazing preference constitutes a name change only. Management of the allotment would remain within the family of the current lease holder. Management activities would continue to be consistent with the existing grazing lease. The grazing applications would be consistent with all mandatory terms and conditions of the lease analyzed in this document.

(25) W. FORK MUD CREEK #09697

Public acres – 160

AUMs - 40

Public land – 100%

Livestock No. – 3 Cattle

Season of Use – 3/1 to 2/28

Type Use - Custodial

Meeting Upland Standard:

- Yes

Upland Objectives:

- Maintain or improve native vegetation in a late seral to Potential Natural Community (PNC) ecological condition rating.
- Reduce coverage of clubmoss to improve infiltration and overall site production.
- Reduce abundance and prevent further expansion of cheatgrass.

Meeting Riparian Health Standard:

- No riparian habitat on public land within the allotment.

Meeting Water Quality Standard:

- N/A

Meeting Biodiversity Standard:

- Yes

Biodiversity Objectives:

- Maintain ground litter and residual forage for ground nesting birds, game and non-game wildlife species.
- Maintain diversity and abundance of desirable native plants.

Conforms with Guidelines for Livestock Grazing Management:

- Yes

Proposed Action: The current permitted use would continue as follows:

Livestock # and kind	Season	Public land	Type use	AUM
3 Cattle	3/1 to 2/28	100	Custodial	40

Total permitted use would remain 40 AUM's.

Control of listed base property associated with West Fork Mud Creek Allotment #09697 Allotment has changed since the lease was issued in 1996. Upon approval of the transfer by the authorized officer, BLM would transfer 40 AUM's of permitted use to Raschke Limited Partnership or retain the lease with the current leaseholder provided documentation of control

of base properties is submitted to BLM through a valid base property lease. The proposed action would include issuing a revised lease to Raschke Limited Partnership or renewing the lease with the current leaseholder. If permitted use is transferred, the transfer would constitute a name change only. Management of the allotment would remain within the family of the current lease holder. Management activities would continue to be consistent with the existing grazing lease. The grazing applications would be consistent with all mandatory terms and conditions of the lease analyzed in this document.

2.3.12 Proposed Action for Individual Allotments in Pondera County

(1) EAST BIRCH CREEK #06322

Public acres – 577
 AUMs - 102
 Public land – 100%
 Livestock No. – 9 Cattle
 Season of Use – 3/1 to 2/28
 Type Use - Custodial

Meeting Upland Standard:

- Yes

Upland Objectives:

- Maintain or improve overall native vegetation in a late seral to Potential Natural Community (PNC) ecological condition rating.
- Reduce coverage of clubmoss to improve infiltration and overall site production.
- Increase abundance and cover of bunchgrasses and residual vegetation in S09, T28 N, R09 W, lot 7.

Meeting Riparian Health Standard:

- No

Riparian Objectives:

- Manage the riparian area on Birch Creek for its capability given the Swift Dam failure and subsequent reconstruction.

- Decrease the cover and abundance of spotted knapweed in streamside zones.
- Continue to support the regeneration of preferred woody species such as cottonwood/willow.

Meeting Water Quality Standard:

- Yes

Water Quality Objectives:

- Maintain streambank vegetative cover to mitigate non-point source pollution from entering Birch Creek.

Meeting Biodiversity Standard:

- No

Biodiversity Objectives:

- Reduce cover and abundance of spotted knapweed.
- Prevent further expansion of spotted knapweed and other noxious weed species such as leafy spurge.

Conforms with Guidelines for Livestock

Grazing Management:

- No
- The allotment does not conform to Lewistown Guideline # 9. However progress is being made due to continued implementation of cooperative weed control efforts.

Proposed Action: The current permitted use would continue as follows:

Livestock # and kind	Season	Public land	Type use	AUM
9 Cattle	3/1 to 2/28	100	Custodial	102

Total permitted use would remain 102 AUM's.

A hay yard with associated fence is located on a BLM 40 acre parcel (SENE Sec.9; T28N, R9W). Aerial photography also indicates that historical cultivation has occurred on this parcel (approximately 5-8 acres from ocular estimates). No agricultural permit or range improvement permit was issued for these activities. Continued use would not be authorized. Any unauthorized structure would be removed from BLM lands and any on-going agricultural activities would

be discontinued and the site would be replanted with native seed.

(2) HOMESITE #06324

Public acres – 26
AUMs - 9
Public land – 100%
Livestock No. – 1 Horse
Season of Use – 3/1 to 2/28
Type Use - Custodial

Meeting Upland Standard:

- No
- Current livestock is considered to be a significant factor in this rating.

Upland Objectives:

- Increase production and diversity of decreaser forbs and native bunchgrass species.
- Increase residual forage.
- Reduce amounts and dominance of invasive and increaser species, particularly Kentucky bluegrass.
- Improve reproductive capability of desirable species by allowing maturation of seed heads on individual plants of those species, particularly bluebunch wheatgrass, and rough fescue where still present.

Meeting Riparian Health Standard:

- No

Riparian Objectives:

- Manage the riparian area on Birch Creek for its capability given the Swift Dam failure and subsequent reconstruction.
- Decrease the cover and abundance of spotted knapweed in streamside zones.
- Improve the regeneration of preferred woody species such as cottonwood/willow.

Meeting Water Quality Standard:

- No

Water Quality Objectives:

- Improve upland and riparian vegetative covers in order to mitigate non-point source pollution from entering Birch Creek.

Meeting Biodiversity Standard:

- No
- Current livestock management is considered to be a significant factor in upland areas; however, riparian conditions are directly related to the catastrophic failure of Swift Dam in 1964. Upon failure of the dam, an estimated 880,000 cubic feet/second cascaded downstream in a massive wall of water. As a result, affected lands were scoured and depleted of topsoil. The dam has since been reconstructed. Regulated flow and reduced sedimentation is currently limiting floodplain rehabilitation. Spotted knapweed has been especially successful in colonizing these areas which is the principle causal factor for not meeting biodiversity standards.

Biodiversity Objectives:

- Increase ground litter and residual forage for ground nesting birds, game and non-game wildlife species.
- Increase diversity and abundance of desirable native plants.

Conforms with Guidelines for Livestock

Grazing Management:

- No.
- The allotment does not conform to Lewistown Guidelines #1, #9, #10, and #11; The allotment is dominated by non-native grasses and undesirable forbs. Spotted knapweed, a noxious weed, is present in the riparian area. Vegetative conditions are beginning to impact the hydrologic function and soil stability. Nearly no herbaceous vegetation exists within the riparian zones.

Proposed Action: Historical lease agreements indicate the allotment has had yearlong grazing of up to 15 animal units which has resulted in a shift in the vegetative community. Lessee would

restrict the number of animal units to three or less and limit the season of use in the south pasture which contains the majority of BLM lands. The current permitted use would be modified to achieve significant progress toward meeting standards and guidelines for rangeland health.

River Pasture

Livestock and kind	#	Season	Public land	Type use	AUM
1 horse		7/1 to 8/31	100	Custodial	6

South Pasture

Livestock and kind	#	Season	Public land	Type use	AUM
1 horse		9/1 to 2/28 3/1 to 6/30	100	Custodial	3

Total permitted use would remain 9 AUM's.

The following term and condition would be incorporated into the lease:

**Utilization by livestock will not exceed 50% of the forage production for any given year. Livestock will be removed, or supplemental forage will be provided on deeded lands when AUM's are consumed.*

(3) SWIFT DAM #06321

Public acres – 40
 AUMs - 9
 Public land – 100%
 Livestock No. – 2 cattle
 Season of Use – 5/15 to 12/14
 Type Use - Custodial

Meeting Upland Standard:

- Yes

Upland Objectives:

- Maintain or improve native vegetation in a late seral to Potential Natural Community (PNC) ecological condition rating.

Meeting Riparian Health Standard:

- No riparian habitat on public land within the allotment.

Meeting Water Quality Standard:

- N/A

Meeting Biodiversity Standard:

- Yes

Biodiversity Objectives:

- Maintain ground litter and residual forage for ground nesting birds, game and non-game wildlife species.
- Maintain diversity and abundance of desirable native plants.

Conforms with Guidelines for Livestock Grazing Management:

- Yes

Proposed Action: The current permitted use would continue as follows:

Livestock and kind	#	Season	Public land	Type use	AUM
2 Cattle		5/15 to 12/14	100	Custodial	9

Total permitted use would remain 9 AUM's.

(4) WADDEL LAKES #06320

Public acres – 309
 AUMs - 25
 Public land – 100%
 Livestock No. – 2 Cattle
 Season of Use – 3/1 to 2/28
 Type Use - Active

Meeting Upland Standard:

- No
- Due to causes other than current livestock management.

Upland Objectives:

- Decrease amounts of bare ground, invasive species and noxious weeds. Spotted knapweed is estimated to account for 35% of the annual plant production on this site.

- Increase abundance and cover of desirable bunchgrass species such as bluebunch wheatgrass and rough fescue.
- Increase litter amount, annual production of desirable grasses and forbs.

Meeting Riparian Health Standard:

- No

Riparian Objectives:

- Manage the riparian area on Birch Creek for its capability given the Swift Dam failure and subsequent reconstruction.
- Decrease the cover and abundance of spotted knapweed in streamside zones.
- Continue to support the regeneration of preferred woody species such as cottonwood/willow.

Meeting Water Quality Standard:

- Yes

Water Quality Objectives:

- Maintain streambank vegetative cover to mitigate non-point source pollution from entering Birch Creek.

Meeting Biodiversity Standard:

- No
- Due to causes other than current livestock management.

Biodiversity Objectives:

- Reduce abundance and cover of spotted knapweed.
- Increase diversity and production of native grasses and forbs.

Conforms with Guidelines for Livestock Grazing Management:

- No.
- The allotment does not conform with Lewistown Guideline #9, however riparian and upland conditions are directly related to the catastrophic failure of Swift Dam in 1964. As a result, affected lands were scoured and depleted of topsoil. When the dam was reconstructed, flows were regulated and suspended sediments deposited in the reservoir which severely limits the areas ability to rehabilitate itself. Spotted knapweed has been especially

successful in colonizing these areas. Weed control efforts are currently in place. Species such as western wheatgrass are becoming more predominate which indicates the site is making gradual progress towards rebuilding the soil and vegetative components.

Proposed Action: The current permitted use would be modified as follows:

Livestock and kind	Season	Public land	Type use	AUM
2 Cattle	3/1 to 2/28	100	Custodial	25

Total permitted use would remain 25 AUM's.

(5) WEST BIRCH CREEK #06323

Public acres – 42

AUMs - 11

Public land – 100

Livestock # and type– 1 horse

Season of Use – 3/1 to 2/28

Type Use - Custodial

Meeting Upland Standard:

- Yes

Upland Objectives:

- Maintain or improve native vegetation in a late seral to Potential Natural Community (PNC) ecological condition rating.

Meeting Riparian Health Standard:

- No

Riparian Objectives:

- Manage the riparian area on Birch Creek for its capability given the Swift Dam failure and subsequent reconstruction.
- Decrease the cover and abundance of spotted knapweed in streamside zones.
- Continue to support the regeneration of preferred woody species such as cottonwood/willow.

Meeting Water Quality Standard:

- Yes

Water Quality Objectives:

- Maintain streambank vegetative cover to mitigate non-point source pollution from entering Birch Creek.

Meeting Biodiversity Standard:

- No
- Due to causes other than current livestock management.

Biodiversity Objectives:

- Reduce abundance and cover of spotted knapweed in riparian areas.
- Increase diversity and production of understory native vegetation.

Conforms with Guidelines for Livestock Grazing Management:

- No.
- The allotment does not conform with Lewistown Guideline #9, however riparian and upland conditions are directly related to the catastrophic failure of Swift Dam in 1964. As a result, affected lands were scoured and depleted of topsoil. When the dam was reconstructed, flows were regulated and suspended sediments deposited in the reservoir which severely limits the areas ability to rehabilitate itself. Spotted knapweed has been especially successful in colonizing these areas. Weed control efforts are currently in place.

Proposed Action: The current permitted use would continue as follows:

Livestock # and kind	Season	Public land	Type use	AUM
1 horse	3/1 to 2/28	100	Custodial	11

Total permitted use would remain 11 AUM's.

2.3.13 Proposed Action for Individual Allotments in Powell County

Lewistown Field Office administers grazing on one allotment in Powell County through agreement with Missoula Field Office. This is due to a single operator controlling base property attached to multiple allotments occurring on Grazing Record #2507829.

(1) DOG CREEK #07825

Public acres – 206

AUMs - 51

Public land – 100%

Livestock No. – 13 Cattle

Season of Use – 6/01 to 09/30

Type Use - Custodial

Meeting Upland Standard:

- Yes, there are limited uplands that support livestock grazing on this allotment. Uplands are primarily closed canopy forests with limited understory.

Meeting Riparian Health Standard:

- Yes

Riparian Objectives:

- Decrease streambank composition of Kentucky bluegrass.
- Decrease streambank alteration levels, particularly in loafing areas.
- Decrease browse level on preferred woody species.

Meeting Water Quality Standard:

- Yes

Water Quality Objectives:

- Decrease streambank alteration levels, particularly in loafing areas.
- Improve vegetative cover of streambanks.

Meeting Biodiversity Standard:

- No
- Current livestock grazing is not considered to be a significant factor in this rating.

Biodiversity Objectives:

- Improve structure by increasing cover and abundance of desirable bunchgrass species.

- Increase residual forage for game and non-game wildlife species.

Conforms with Guidelines for Livestock Grazing Management:

- No.
- Guidelines not conformed to: 1,2,4,5,12,13. Non-conformance to these guidelines is due to the following factors:

*Vegetation within this allotment is predominately made up of increaser grasses such as cheatgrass, Kentucky bluegrass and annual invasive forbs due to historical practices.

*Bare ground is excessive for this ecological site and the exhibits pedestals and flow patterns. (Study site #2)

*The site lacked diversity and production of decreaser forbs and bunchgrass species.

Proposed Action: The current permitted use would continue as follows:

Livestock and kind	#	Season	Public land	Type use	AUM
13 Cattle		6/1 to 9/30	100	Custodial	51

Total permitted use would remain 51 AUM's.

Monitoring intensity would be increased to five year intervals to ensure conditions are not related to the current management.

The Windy Hollow Allotment #09818 is also contained within this grazing lease. See (36) listed under Cascade County for provisions specific to this allotment.

2.3.14 Proposed Action for Individual Allotments in Teton County

ALKALI FLAT #07615

(See Lewis and Clark County)

(1) BATTLE CREEK #06307

Public acres – 1597

AUMs - 62

Public land – 100%

Livestock No. – 11 Cattle

Season of Use – 5/15 to 10/31

Type Use - Custodial

Meeting Upland Standard:

- Yes

Upland Objectives:

- Maintain or improve native vegetation in a late seral to Potential Natural Community (PNC) ecological condition rating.
- Decrease abundance of Kentucky bluegrass in Sections 30 and 31.

Meeting Riparian Health Standard:

- Yes

Riparian Objectives:

- Maintain the riparian areas on North and South Forks of Battle Creek in PFC or above.
- Continue to support regeneration of preferred trees and shrubs.

Meeting Water Quality Standard:

- Yes

Water Quality Objectives:

- Continue to support existing beneficial uses of North and South Forks of Battle Creek.

Meeting Biodiversity Standard:

- Yes

Biodiversity Objectives:

- Maintain rough fescue and bluebunch wheatgrass stands.
- Prevent expansion of non-native, invasive species such as Kentucky bluegrass and timothy.
- Maintain health of aspen groves.
- Maintain diversity and quality of woody browse species in North Fork and South Fork of Battle Creek.

Conforms with Guidelines for Livestock Grazing Management:

- Yes

Proposed Action: The current permitted use would continue as follows:

Livestock # and kind	Season	Public land	Type use	AUM
11 Cattle	5/15 to 10/31	100	Custodial	62

Total permitted use would remain 62 AUM's.

The name of this allotment would be modified from Battle Creek to Battle Creek ONA to prevent confusion with the Battle Creek Allotment #09814.

(2) BLACK COULEE #06313

Public acres – 40
 AUMs - 14
 Public land – 100%
 Livestock No. – 3 Cattle
 Season of Use – 6/1 to 9/30
 Type Use - Active

Meeting Upland Standard:

- Yes

Upland Objectives:

- Maintain or improve native vegetation in a late seral to Potential Natural Community (PNC) ecological condition rating.
- Maintain or increase residual forage.

Meeting Riparian Health Standard:

- No riparian habitat on public land within the allotment.

Meeting Water Quality Standard:

- N/A

Meeting Biodiversity Standard:

- Yes

Biodiversity Objectives:

- Maintain ground litter and residual forage for ground nesting birds, game and non-game wildlife species.

- Maintain diversity and abundance of desirable native plants.

Conforms with Guidelines for Livestock Grazing Management:

- Yes

Proposed Action: The current permitted use would be modified as follows:

Livestock # and kind	Season	Public land	Type use	AUM
3 Cattle	6/1 to 9/30	100	Custodial	14

Total permitted use would remain 14 AUM's.

(3) BLACKFEET GULCH #06335

Public acres – 60
 AUMs - 6
 Public land – 100%
 Livestock No. – 3 horses
 Season of Use – 7/1 to 9/1
 Type Use - Active

Meeting Upland Standard:

- Yes

Upland Objectives:

- Maintain or improve native vegetation in a late seral to Potential Natural Community (PNC) ecological condition rating.
- Maintain or increase residual forage.

Meeting Riparian Health Standard:

- No riparian habitat on public land within the allotment.

Meeting Water Quality Standard:

- N/A

Meeting Biodiversity Standard:

- Yes

Biodiversity Objectives:

- Maintain ground litter and residual forage for ground nesting birds, game and non-game wildlife species.

- Maintain diversity and abundance of desirable native plants, particularly rough fescue, needlegrass and other bunchgrass species.

Conforms with Guidelines for Livestock Grazing Management:

- Yes

Proposed Action: The current permitted use would be modified as follows:

Livestock and kind	Season	Public land	Type use	AUM
3 Horses	7/1 to 9/1	100	Custodial	6

Total permitted use would remain 6 AUM's.

(4) CASTLE REEF #07613

Public acres – 196

AUMs - 63

Public land – 100%

Livestock No. – 9 Hoses
10 Horses

Season. – 3/1 to 6/15
12/1 to 2/28

Type Use - Custodial

Meeting Upland Standard:

- Yes

Upland Objectives:

- Maintain or improve native vegetation in a late seral to Potential Natural Community (PNC) ecological condition rating.
- Increase abundance of desirable forage species such as rough fescue and needlegrasses.
- Prevent expansion of non-native invasives such as Kentucky bluegrass, timothy and cheatgrass.

Meeting Riparian Health Standard:

- No known or inventoried riparian habitat on public land within the allotment.

Meeting Water Quality Standard:

- N/A

Meeting Biodiversity Standard:

- Yes

Biodiversity Objectives:

- Maintain ground litter and residual forage for ground nesting birds, game and non-game wildlife species.
- Maintain diversity and abundance of desirable native plants, particularly rough fescue, needlegrass and other bunchgrass species.

Conforms with Guidelines for Livestock Grazing Management:

- Yes

Proposed Action: The current permitted use would continue as follows:

Livestock and kind	Season	Public land	Type use	AUM
10 Horses	12/1 to 2/28	100	Custodial	30
9 Horses	3/1 to 6/15	100	Custodial	33

Total permitted use would remain 63 AUM's.

(5) CHICKEN COULEE #06303

Public acres – 3340

AUMs - 279

Public land – 44%

Livestock No. – 210 cattle

Season of Use – 7/1 to 9/30

Type Use – Active

Meeting Upland Standard:

- Yes

Upland Objectives:

- Maintain or improve native vegetation in a late seral to Potential Natural Community (PNC) ecological condition rating.
- Maintain residual forage.

Meeting Riparian Health Standard:

- Yes

Riparian Objectives:

- Maintain the riparian areas on Blindhorse Creek, Frenchy Coulee, and Pamburn in PFC or above.

- Continue to support the regeneration of preferred trees and shrubs.
- Maintain the functionality and water storage capabilities of the lentic wetlands within the allotment.

Meeting Water Quality Standard:

- Yes

Water Quality Objectives:

- Maintain the vegetative buffers surrounding the lentic wetlands.
- Continue to support existing and designated beneficial uses of Pamburn Creek and its immediate receiving water North Fork of the Teton River, including cold-water fishery.
- Maintain stream channel function and vegetative buffers on Blindhorse Creek and Frenchy Coulee to mitigate non-point source pollution from entering Muddy Creek.

Meeting Biodiversity Standard:

- Yes

Biodiversity Objectives:

- Maintain ground litter and residual forage for ground nesting birds, game and non-game wildlife species.
- Maintain diversity and abundance of desirable native plants, particularly rough fescue, needlegrass and other bunchgrass species.

Conforms with Guidelines for Livestock Grazing Management:

- Yes

Proposed Action: The current permitted use would continue as follows:

Livestock and kind	Season	Public land	Type use	AUM
210 Cattle	7/1 to 9/30	44	Active	279

Total permitted use would remain 279 AUM's.

Control of listed base property associated with the Chicken Coulee Allotment #06303 and Choteau Mountain Allotment #06304 has changed since the lease was issued to Montana Spirit Organic Ranch LLC (MSOR) in 2000. The proposed action would renew the grazing

lease with MSOR based on a private property lease with MSMT LLC. If ownership of the listed base property is transferred to a third party within the term of the grazing lease, BLM would transfer 279 AUM's of permitted use to the new owners provided applications are consistent with all mandatory terms and conditions analyzed in this document and applicants meet all other qualifications to hold the grazing lease.

The Choteau Mountain Allotment #06304 is also contained within this grazing lease. See (6) listed under Teton County for provisions specific to this allotment.

(6) CHOTEAU MOUNTAIN #06304

Public acres – 240

AUMs - 12

Public land – 100%

Livestock No. – 1 Cattle

Season of Use – 3/1 to 2/28

Type Use - Custodial

Meeting Upland Standard:

- Yes

Upland Objectives:

- Maintain or improve native vegetation in a late seral to Potential Natural Community (PNC) ecological condition rating.
- Maintain residual forage.

Meeting Riparian Health Standard:

- No riparian habitat on public land within the allotment.

Meeting Water Quality Standard:

- N/A

Meeting Biodiversity Standard:

- Yes

Biodiversity Objectives:

- Maintain ground litter and residual forage for ground nesting birds, game and non-game wildlife species.
- Maintain diversity and abundance of desirable native plants.

Conforms with Guidelines for Livestock Grazing Management:

- Yes

Proposed Action: The current permitted use would be modified as follows:

Livestock # and kind	Season	Public land	Type use	AUM
1 Cattle	3/1 to 2/28	100	Custodial	12

Total permitted use would remain 12 AUM's.

Control of listed base property associated with the Chicken Coulee Allotment #06303 and Choteau Mountain Allotment #06304 has changed since the lease was issued to Montana Spirit Organic Ranch LLC (MSOR) in 2000. The proposed action would renew the grazing lease with MSOR based on a private property lease with MSMT LLC. If ownership of the listed base property is transferred to a third party within the term of the grazing lease, BLM would transfer 12 AUM's of grazing preference to the new owners provided applications are consistent with all mandatory terms and conditions analyzed in this document and applicants meet all other qualifications to hold the grazing lease.

The Chicken Coulee Allotment #06303 is also contained within this grazing lease. See (5) listed under Teton County for provisions specific to this allotment.

- Maintain residual forage.
- Prevent expansion of non-native invasive species such as timothy and Kentucky bluegrass.

Meeting Riparian Health Standard:

- No riparian habitat on public land within the allotment.

Meeting Water Quality Standard:

- N/A

Meeting Biodiversity Standard:

- Yes

Biodiversity Objectives:

- Maintain ground litter and residual forage for ground nesting birds, game and non-game wildlife species.
- Maintain diversity and abundance of desirable native plants.

Conforms with Guidelines for Livestock Grazing Management:

- Yes

Proposed Action: The current permitted use would be modified as follows:

Livestock # and kind	Season	Public land	Type use	AUM
10 Horses	6/15 to 9/30	100	Custodial	36

Total permitted use would remain 36 AUM's.

(7) COWTRACT #06306

Public acres – 360

AUMs - 36

Public land – 100%

Livestock No. – 10 Horses

Season of Use – 6/15 to 9/30

Type Use - Active

Meeting Upland Standard:

- Yes

Upland Objectives:

- Maintain native vegetation in a late seral to Potential Natural Community (PNC) ecological condition rating.

(8) DEEP CREEK #06310

Public acres – 3000

AUMs – Deep Creek Pasture: 144

Willow Creek Pasture: 139

Total Permitted Use: 285

Public land –

Deep Creek Pasture: 100%

Willow Creek Pasture: 13%

Livestock No. –

Deep Creek Pasture: 12 cattle

Willow Creek Pasture: 211 cattle

Season of Use –

Deep Creek Pasture: 3/1 to 2/28
 Willow Creek Pasture: 5/15 to 10/15

Type Use –

Deep Creek Pasture: Custodial
 Willow Creek Pasture: Custodial

Meeting Upland Standard:

- Yes

Upland Objectives:

- Maintain native vegetation in a Potential Natural Community (PNC) ecological condition rating to prevent establishment of non-native invasive species.
- Maintain residual forage.

Meeting Riparian Health Standard:

- Yes

Riparian Objectives:

- Maintain the riparian areas on Edwards Creek and North and South forks of Deep Creek in PFC or above.
- Continue to support regeneration of preferred tree and shrub species such as cottonwood, willow, alder, birch, and silverberry.

Meeting Water Quality Standard:

- Yes

Water Quality Objectives:

- Continue to support existing beneficial uses on Edwards Creek and North and South Forks of Deep Creek, including cold-water fishery.

Meeting Biodiversity Standard:

- Yes

Biodiversity Objectives:

- Maintain ground litter and residual forage for ground nesting birds, game and non-game wildlife species.
- Maintain diversity and abundance of desirable native bunchgrasses in the uplands and woody browse species such as alder, birch, willow and silverberry in the riparian zones along Deep Creek.
- Maintain health and regeneration of aspen stands.

Conforms with Guidelines for Livestock Grazing Management:

- Yes

Proposed Action: The current permitted use would be modified as follows:

Deep Creek Pasture

Livestock # and kind	Season	Public land	Type use	AUM
12 Cattle	3/1 to 2/28	100	Custodial	144

Willow Creek Pasture

Livestock # and kind	Season	Public land	Type use	AUM
27 Cattle	5/15 to 10/15	100	Custodial	139

Total permitted use would remain 285 AUM's.

The Saypo Cattle Company/BLM Grazing Allotment Plan(1990) implemented a three pasture rest-rotation grazing system. The Deep Creek and Willow Creek pastures are now contained within the Deep Creek Allotment #6310 while the Ear Mountain Pasture became the Salmond Ranch Company Allotment #06342 which was retained under a separate grazing lease. BLM, in conjunction with lessee and the state of Montana would revise the 1990 Saypo Cattle Company/BLM Grazing Allotment Plan to incorporate changes in land tenure.

(9) EAR MOUNTAIN INDIV. #09835

Public acres – 884
 AUMs - 53
 Public land – 100%
 Livestock No. – 15 Horses
 Season of Use – 7/1 to 9/30
 Type Use - Active

Meeting Upland Standard:

- Yes

Upland Objectives:

- Maintain native vegetation in a Potential Natural Community (PNC) ecological condition rating to prevent establishment of non-native invasive species.

- Maintain residual forage.

Meeting Riparian Health Standard:

- No riparian habitat on public land within the allotment.

Meeting Water Quality Standard:

- N/A

Meeting Biodiversity Standard:

- Yes

Biodiversity Objectives:

- Maintain ground litter and residual forage for ground nesting birds, game and non-game wildlife species.
- Maintain diversity and abundance of desirable native bunchgrasses in the uplands.
- Maintain health and regeneration of aspen stands.

Conforms with Guidelines for Livestock Grazing Management:

- Yes

Proposed Action: The current permitted use would continue as follows:

Livestock and kind	Season	Public land	Type use	AUM
15 Horses	7/1 to 9/30	100	Active	45

Total permitted use would remain 53 AUM's.

(10) EAST FARMERS RESERVOIR #6316

Public acres – 40

AUMs - 13

Public land – 100%

Livestock No. – 3 Cattle

Season of Use – 8/15 to 1/15

Type Use - Custodial

Meeting Upland Standard:

- Yes

Upland Objectives:

- Maintain native vegetation in a late seral to Potential Natural Community (PNC) ecological condition rating.

- Maintain residual forage.

- Prevent establishment of non-native invasive species.

Meeting Riparian Health Standard:

- No riparian habitat on public land within the allotment.

Meeting Water Quality Standard:

- N/A

Meeting Biodiversity Standard:

- Yes

Biodiversity Objectives:

- Maintain ground litter and residual forage for ground nesting birds, game and non-game wildlife species.
- Maintain diversity and abundance of desirable native plants.

Conforms with Guidelines for Livestock Grazing Management:

- Yes

Proposed Action: The lessee manages this allotment in a controlled grazing system in conjunction with state and deeded pastures. Multiple pastures receive varying seasons of treatment, rest, deferment and duration of use. Due to the scheduling, the current permitted use would be modified to accommodate a controlled grazing system:

Livestock and kind	Season	Public land	Type use	AUM
2 Cattle	6/1 to 12/31	100	Custodial	13

Total permitted use would remain 13 AUM's.

(11) FREEZEOUT WEST #06317

Public acres – 200

AUMs - 30

Public land – 100

Livestock No. – 8 Cattle

Season of Use – 6/1 to 9/30

Type Use - Custodial

Meeting Upland Standard:

- Yes

Upland Objectives:

- Increase production and diversity of decreaser forbs and native bunchgrass species, particularly bluebunch wheatgrass and needlegrass species.
- Increase residual forage.
- Reduce relative abundance of increaser species, particularly needlandthread and Sandberg’s bluegrass and prevent further spread of invasives such as cheatgrass.
- Improve reproductive capability of desirable species by allowing maturation of seed heads on individual plants of those species, particularly bluebunch wheatgrass, and needlegrass species where present.

Meeting Riparian Health Standard:

- No riparian habitat on public land within the allotment.

Meeting Water Quality Standard:

- N/A

Meeting Biodiversity Standard:

- Yes

Biodiversity Objectives:

- Increase ground litter and residual forage for ground nesting birds, game and non-game wildlife species.
- Increase diversity and abundance of desirable native plants.

Conforms with Guidelines for Livestock Grazing Management:

- Yes

Proposed Action: The current permitted use would continue as follows:

Livestock and kind	#	Season	Public land	Type use	AUM
8 Cattle		6/1 to 9/30	100	Custodial	30

Total permitted use would remain 30 AUM’s.

(12) GREEN TIMBER GULCH #06308

Public acres – 728

AUMs - 35

Public land – 18%

Livestock No. – 50 Cattle

Season of Use – 6/15 to 10/15

Type Use - Custodial

Meeting Upland Standard:

- Yes

Upland Objectives:

- Maintain native vegetation in a late seral to Potential Natural Community (PNC) ecological condition rating.
- Maintain residual forage and increase abundance and cover of desirable bunchgrasses such as rough fescue and bluebunch wheatgrass.
- Prevent expansion of non-native invasive species such as timothy and Kentucky bluegrass.

Meeting Riparian Health Standard:

- Yes

Riparian Objectives:

- Maintain the riparian area on Green Timber Gulch in PFC or above.
- Continue to support woody species communities of aspen, red-osier dogwood and willow.

Meeting Water Quality Standard:

- Yes

Water Quality Objectives

- Continue to support stream channel function, vegetative conditions and recruitment of woody species in order to mitigate non-point source pollutants from entering Green Timber Gulch.

Meeting Biodiversity Standard:

- Yes

Biodiversity Objectives:

- Maintain ground litter and residual forage for ground nesting birds, game and non-game wildlife species.
- Maintain diversity and abundance of desirable native bunchgrasses in the

uplands and woody browse species such as red-osier dogwood, alder, birch, willow and silverberry in the riparian zones along Green Timber Gulch.

- Maintain health and regeneration of aspen stands.

Conforms with Guidelines for Livestock Grazing Management:

- Yes

Proposed Action: The current permitted use would be modified as follows:

Livestock # and kind	Season	Public land	Type use	AUM
50 Cattle	6/15 to 10/15	18%	Active	35

Total permitted use would remain 35 AUM's.

(13) INDIAN HEAD ROCK #07659

Public acres – 78
 AUMs - 4
 Public land – 100%
 Livestock No. – 2 Horses
 Season of Use – 7/1 to 8/31
 Type Use - Custodial

Meeting Upland Standard:

- Yes

Upland Objectives:

- Maintain native vegetation in a late seral to Potential Natural Community (PNC) ecological condition rating.

Meeting Riparian Health Standard:

- Yes

Riparian Objectives:

- Maintain riparian area on North Fork of the Teton River in PFC or above.

Meeting Water Quality Standard:

- Yes

Water Quality Objectives:

- Continue to support designated beneficial uses on North Fork of the

Teton River, including cold-water fishery.

Meeting Biodiversity Standard:

- Yes

Biodiversity Objectives:

- Maintain condition and cover of native upland vegetation.
- Maintain diversity, abundance and recruitment of woody browse species such as red-osier dogwood alder, birch, willow and silverberry in the riparian zones along Teton River.

Conforms with Guidelines for Livestock Grazing Management:

- Yes

Proposed Action: The current permitted use would continue as follows:

Livestock # and kind	Season	Public land	Type use	AUM
2 Horses	7/1 to 8/31	100	Custodial	4

Total permitted use would remain 4 AUM's.

Base property associated with this allotment was controlled through a 1979 pasture lease agreement with the Nature Conservancy. After dissolution of the pasture lease, the current lessee's maintained permitted use associated with the Indian Head Rock Allotment. No revised designation of base property was offered to BLM. Lessees would submit grazing applications 4130-1, 4130-1a and 4130-1b. During the comment period for this EA, BLM would accept grazing applications from adjacent property owners and other qualified applicants. Conflicting applications will be considered based on criteria outlined in 43 CFR 4130.1-2.

(14) PISHKUN #06311

Public acres – 93
 AUMs - 27
 Public land – 100%
 Livestock No. – 2 Cattle
 Season of Use – 3/1 to 2/28

Type Use - Custodial

Meeting Upland Standard:

- Yes

Upland Objectives:

- Maintain native vegetation in a Potential Natural Community (PNC) ecological condition rating.
- Maintain residual forage.
- Prevent establishment of non-native invasive species.

Meeting Riparian Health Standard:

- No riparian habitat on public land within the allotment.

Meeting Water Quality Standard:

- N/A

Meeting Biodiversity Standard:

- Yes

Biodiversity Objectives:

- Maintain ground litter and residual forage for ground nesting birds, game and non-game wildlife species.
- Maintain diversity and abundance of desirable native bunchgrasses such as bluebunch wheatgrass and needlegrass species.

Conforms with Guidelines for Livestock Grazing Management:

- Yes

Proposed Action: The current permitted use would continue as follows:

Livestock # and kind	Season	Public land	Type use	AUM
2 Cattle	3/1 to 2/28	100	Custodial	27

Total permitted use would remain 27 AUM's.

Control of listed base property associated with Pishkun Allotment #06311 has changed. The proposed action would include issuing a revised lease reflecting the transfer of 27 AUM's permitted use to Stephens Ranch LLC. The transfer would constitute a name change only. Management of the allotment would remain within the family of the current lease holder. The grazing applications received were consistent

with the previous lease and all mandatory terms and conditions analyzed in this document. The transfer was approved the Lewistown Field Manager on February 9, 2010.

(15) PISHKUN RESERVOIR #06315

Public acres – 78

AUMs - 26

Public land – 100%

Livestock No. – 6 Cattle

Season of Use – 6/15 to 10/15

Type Use - Custodial

Meeting Upland Standard:

- Yes

Upland Objectives:

- Maintain or improve native vegetation in a late seral to Potential Natural Community (PNC) ecological condition rating.
- Maintain residual forage.
- Prevent establishment of non-native invasive species.

Meeting Riparian Health Standard:

- No known or inventoried riparian habitat on public land within the allotment. Two ephemeral potholes may exist.

Meeting Water Quality Standard:

- N/A

Meeting Biodiversity Standard:

- Yes

Biodiversity Objectives:

- Maintain ground litter and residual forage for ground nesting birds, game and non-game wildlife species.
- Increase diversity and abundance of desirable native bunchgrasses such as bluebunch wheatgrass, rough fescue and needlegrass species.

Conforms with Guidelines for Livestock Grazing Management:

- Yes

Proposed Action: The current permitted use would continue as follows:

Livestock # and kind	Season	Public land	Type use	AUM
6 Cattle	6/1 to 10/15	100	Custodial	26

Total permitted use would remain 26 AUM's.

Grazing Record #2507650 is issued under a lease agreement between Fairfield Cattlemen's Association and Greenfields Irrigation District. This agreement will terminate December 31, 2015. The proposed action includes the lease renewal agreement and annual grazing lease extension. If a new agreement is signed with the same mandatory terms and conditions as analyzed above, a subsequent grazing lease would be generated for the term of the new agreement, but not to exceed the 10 year term of the BLM grazing lease.

Willow Creek Pasture Allotment #06314 is also listed under Grazing Record #2507650. See Willow Creek Pasture #15 listed under Lewis and Clark County for the proposed action specific to this allotment.

(16) SALMOND RANCH CO . #06342

Public acres – 1242
 AUMs - 95
 Public land – 7%
 Livestock No. – 267 Cattle
 Season of Use – 5/15 to 10/15
 Type Use - Custodial

Meeting Upland Standard:

- Yes

Upland Objectives:

- Maintain native vegetation in a late seral to Potential Natural Community (PNC) ecological condition rating.
- Maintain residual forage.
- Prevent establishment of non-native invasive species.

Meeting Riparian Health Standard:

- Yes

Riparian Objectives:

- Maintain riparian area on Edwards Creek in PFC or above.

Meeting Water Quality Standard:

- Yes

Water Quality Objectives:

- Maintain upland and riparian vegetative conditions within the allotment to mitigate non-point source pollution from entering Edwards Creek.
- Continue to support existing beneficial uses within Edwards Creek.

Meeting Biodiversity Standard:

- Yes

Biodiversity Objectives:

- Maintain diversity, abundance and recruitment of woody browse species such as red-osier dogwood, birch, willow in the riparian zones along Edwards Creek.
- Maintain health and regeneration of aspen stands.

Conforms with Guidelines for Livestock Grazing Management:

- Yes

Proposed Action: The Saypo Cattle Company/BLM Grazing Allotment Plan (1990) implemented a three pasture rest-rotation grazing system. Two of the pastures (Deep Creek and Willow Creek) used in that rotation were split into separate allotments under control of a new operator. The Ear Mountain Pasture became the Salmond Ranch Company Allotment #06342 and was retained under this grazing lease. BLM lands contained within this lease would now be used in conjunction with deeded lands and Ear Mountain Wildlife Management Area rest-rotation grazing plan outlined by Montana Department of Fish Wildlife and Parks. Permitted use would be modified as follows:

Livestock # and kind	Season	Public land	Type use	AUM
267 Cattle	5/15 to 10/15	7	Active	95

Total permitted use would remain 95 AUM's.

(17) THE FLAT #06319

Public acres – 157

AUMs - 49

Public land – 100%

Livestock No. – 4 Cattle

Season of Use – 3/1 to 2/28

Type Use - Custodial

Meeting Upland Standard:

- No.
- Current livestock management is considered to be a significant factor.

Upland Objectives:

- Increase production and diversity of decreaser forbs and native grass species such as basin wildrye, alkali sacaton and alkali cordgrass.
- Increase residual forage.
- Reduce amounts and abundance of invasive species such as Japanese brome and cheatgrass.
- Improve reproductive capability of desirable species by allowing maturation of seed heads on individual plants of those species.

Meeting Riparian Health Standard:

- No riparian habitat on public land within the allotment.

Meeting Water Quality Standard:

- N/A

Meeting Biodiversity Standard:

- No.
- Current livestock management is considered to be a significant factor.

Biodiversity Objectives:

- Increase ground litter and residual forage for ground nesting birds, game and non-game wildlife species.
- Increase diversity and abundance of desirable native plants.

Conforms with Guidelines for Livestock Grazing Management:

- No.

- The allotment does not conform to Lewistown Guidelines #4, #5, #10 and #12. Grazing is not being managed to maintain watershed vegetation, species richness and floodplain function. Long-term resource capabilities may not be sustainable. Grazing is not being managed to promote desired plants and plant communities. Livestock Management is not utilizing practices, such as those referenced by NRCS published prescribed grazing technical guide to maintain, restore or enhance water quality. Guidelines are not in conformance due to livestock use resulting in a shift of plant communities.

Proposed Action: The current permitted use would be modified as follows to achieve significant progress toward meeting standards and guidelines for rangeland health.

Livestock # and kind	Season	Public land	Type use	AUM
100 Cattle	9/1 to 12/1	16	Active	48

Total permitted use would remain 49 AUM's.

Period of use would depend on the number of livestock and availability of forage. Up to 200 animal units may be used if the season of use does not exceed October 17.

If no significant progress is made within five years, BLM would construct a fence beginning at the half section line of Sections 34 and 35. (T22N, R4W). The fence would extend north approximately 1.25 miles terminating at an existing fence ¼ mile directly south of Eastham Junction. The fence would be three-wire standard fence. Wire would be spaced 16-18", 26"-28" and 38-40". The bottom strand would be smooth. Wood end posts would be used and a gate would be installed at each end. BLM would consider alternative fence methods provided fence specifications are met. The BLM, lessee and the state of Montana would enter into cooperative agreement for the project prior to construction.

Permitted use would be placed in suspension for the remainder of the term of the lease to allow for recovery.

(18) TUNNEL LAKE #06312

Public acres – 2960
AUMs – 329 (active)
156 (suspended)
Public land – 68%
Livestock No. – 158
Season of Use – 6/15 to 9/15
Type Use – Active

Meeting Upland Standard:

- Yes

Upland Objectives:

- Maintain native vegetation in a late seral to Potential Natural Community (PNC) ecological condition rating.
- Maintain residual forage, particularly bunchgrasses such as rough fescue and needlegrass species.
- Prevent establishment of non-native invasive species.

Meeting Riparian Health Standard:

- Yes

Riparian Objectives:

- Maintain functionality of the three lentic wetland sites within the allotment.

Meeting Water Quality Standard:

- Yes

Water Quality Objectives:

- Maintain vegetative buffer on the three lentic wetland sites within the allotment.

Meeting Biodiversity Standard:

- Yes

Biodiversity Objectives:

- Maintain or increase ground litter and residual forage for ground nesting birds, game and non-game wildlife species.
- Maintain or increase diversity and abundance of desirable native bunchgrasses such as rough fescue and needlegrass species.

Conforms with Guidelines for Livestock Grazing Management:

- Yes

Proposed Action: The current permitted use would continue as follows:

Livestock # and kind	Season	Public land	Type use	AUM
158 Cattle	6/15 to 9/15	68	Active Suspended	329 156

Total permitted use would remain 485 AUM's.

Historical base property associated with this allotment has undergone a change in tenureship. The current lessees have maintained permitted use associated with the Tunnel Lake Allotment through ownership of private lands within the allotment and control of the associated state lease. No revised designation of base property were offered to BLM prior to loss of control of other listed base property. Lessees have submitted grazing applications 4130-1, 4130-1a and 4130-1b. During the comment period for this EA, BLM would accept grazing applications from adjacent property owners and any other qualified applicants. Conflicting applications will be considered based on criteria outlined in 43 CFR 4130.1-2.

WILLOW CREEK CANAL #07612

(See Lewis and Clark County)

Chapter 3

Affected Environment

This chapter describes the environmental resources related to the issues in Chapters 1 and 2. The resources include the physical, biological, and socio-economic conditions that could be affected by the implementation of one of the alternatives.

The information in this chapter is organized into the following headings:

- 3.1 Rangelands/Livestock Grazing/Sensitive Plants
- 3.2 Upland Range Health
- 3.3 Riparian Health
- 3.4 Noxious Weeds
- 3.5 Coniferous Forest
- 3.6 Fire/Fuels Management
- 3.7 Recreation/Visual Resources
- 3.8 Wildlife
 - 3.8.1 Threatened and Endangered
 - 3.8.2 Mammals
 - 3.8.3 Birds
 - 3.8.4 Fish
 - 3.8.5 Reptiles and Amphibians
- 3.9 Cultural Resources
- 3.10 Surface Water
- 3.11 Soils
- 3.12 Air Quality
- 3.13 Climate
- 3.14 Economics/Sociology
- 3.15 Special Management Areas

3.1 Rangeland /Livestock Grazing/Sensitive Plants

Rangeland vegetation consists of grasslands and forestlands. Mixed shrub communities are common in coulees and benches throughout all of these vegetation types. Common grasses and grasslike species include bluebunch wheatgrass, green/Richardson's needlegrass, rough fescue, needleandthread, western wheatgrass, prairie junegrass, Sandberg bluegrass, and threadleaf sedge. Introduced grasses are found in some areas, either in pure stands or intermingled with native species.

Timothy, Kentucky bluegrass and smooth brome are the most prevalent introduced perennial grasses in the area with stands occurring in several allotments. Introduced annual grasses include cheatgrass and Japanese brome. Common shrubs include silver sagebrush, shrubby cinquefoil, wild rose, saltbush spp., and greasewood. Other common vegetation includes western yarrow, wild onion, pussytoes, heartleaf arnica, cudweed sagewort, milkvetch spp., arrowleaf balsamroot, hairy goldenaster, purple prairie clover, low larkspur, black sampson, sticky geranium, curlycup gumweed, Rocky Mountain iris, lupine, prickly pear cactus, yellow sweetclover, woolly Indian wheat, Hood's phlox, and salsify among others.

There are 14 BLM sensitive plant species documented within the planning area. These include: Crawe's sedge, dwarf woolly-heads, little indian breadroot, Missoula phlox, Schweinitz' flatsedge, square-stem monkey flower, Austin's knotweed, beaked spikerush, lesser rushy milkvetch, linear leaf fleabane, mealy primrose, peculiar moonwort, Rolland's bulrush, and simple kobresia. Of these species, Crawe's sedge, square-stem monkey flower and Austin's knotweed are documented on BLM lands. However, due to the scattered, intermixed land ownership patterns, much of the BLM lands have not been surveyed for special status plant species. The BLM lands do contain potential habitat for many of these species.

A total of 100 grazing allotments with 92 lessees are included in the planning area. The majority of leases authorize cattle grazing; however, nine are authorized for horses or include a combination of cattle and horses. Throughout the planning area there is a total of 211 AUM's allocated for horse use. There are no sheep or alternative classes of livestock permitted. Total permitted use in the planning area is 5602 AUMs.

3.2 Upland Range Health

Allotments were assessed for upland range health during the summers of 2007 to 2010.

Rangeland health is defined as the degree to which the integrity of the soil, vegetation, water and air as well as the ecological process of the rangeland system are balanced and maintained (BLM Tech. Ref. 1734-6).

Upland health was determined using representative study areas. These study areas were evaluated for ecological site index, upland range health indicators, and soil surface factors. Seventy-nine of the 100 allotments are meeting the upland health standard. Twenty allotments are not meeting the upland standard; current livestock management is a significant factor on 11 of these allotments. Appendix F displays a list of study results by allotment.

Drought has influenced the condition of vegetation in some areas. To separate the impacts of drought from livestock use, the evaluation team looked at community composition in contrast to production. Other indicators such as fence line contrasts and comparisons with similar sites under different management were observed to discern the amount of impact caused by livestock management versus impacts of drought.

Seral stages and ecological site index scores were determined on upland sites using the Natural Resource Conservation Service (NRCS) ecological site index technical guides for each ecological site. This method assesses the seral stage of an ecological site and provides a scoring system. The higher the score, the higher the plant seral stage. Changes in plant communities are characterized by different types of plant communities replacing other types of plant communities. A plant community reaches climax or Potential Natural Community (PNC) when it reaches a point that the community maintains itself and is relatively stable. The amount and type of disturbance, the site, and the amount of rest following disturbance often dictate the seral stage of the plant community. In prairie grassland ecosystems, areas that have prolonged disturbance with little rest have a high abundance of annual forbs and weeds, some annual grasses, and shallow rooted perennial grasses of short stature. These conditions would indicate a low seral stage. With the NRCS

ecological site index system, the higher the score, the higher the seral stage.

Areas without recent disturbance or light disturbance followed by periods of rest usually reflect late seral or potential natural community. This stage is characterized by tall, deep rooted grasses, fewer forbs and weeds, and in some cases a shrub overstory. Ecosystems within the planning area evolved with periodic disturbance in the form of fire, grazing, hail, and drought followed by periods of favorable growing conditions. In some cases a lack of some type of disturbance over a period of decades can cause succession to reverse toward lower or early seral conditions. Conversely, prolonged disturbance without adequate rest for plant recovery can also lead to early seral conditions. Proper livestock grazing management allows some disturbance followed by periods of rest during the growing season resulting in healthy, productive upland range sites.

On a site-specific scale, late seral or PNC conditions are associated with healthy rangelands and early (low) seral conditions are often associated with unhealthy rangelands. On a larger scale, however, a mix of seral stages provides habitat diversity. Healthy upland range sites generally maintain a high percentage of the plant community in late seral or PNC conditions, although a small percentage of the total acreage may be in early seral stages. Examples of acceptable early seral conditions would be livestock watering points, prairie dog towns and recently burned areas.

The BLM also assesses upland health relative to the physical environment and site stability. These factors include observations of rills, waterflow patterns, pedestals and/or terracettes, bare ground, gullies, wind scoured blowouts or deposition areas, litter movement, soil surface resistance to erosion, soil loss and compaction. These criteria are indicative of the amount of erosion that is occurring on an allotment relative to expected amount of erosion for the site based on existing soil types.

The biotic and physical indicators evaluated for each individual allotment include:

Biotic

- plant community diversity
- plant community structure
- photosynthesis activity
- plant status
- presence of exotic plants (weeds)
- seed production
- nutrient cycling

Physical

- flow patterns
- soil movement by wind or water
- soil crusting and surface sealing
- soil compaction
- rills
- gullies
- amount of ground cover
- cover distribution

Rangeland health evaluations were made based on historical monitoring data, where available, and upland health assessments comprised of the ecological site index, soil surface factors, and range health indicators. Grazing allotments were placed in one of three categories: meeting the upland health standard, not meeting the standard but livestock grazing is not a significant factor (or the allotment is making significant progress toward meeting the standard), and not meeting the standard due to current livestock management. Significant progress is determined when an allotment with degraded conditions is showing a strong upward trend.

3.3 Riparian Health

Riparian areas are defined as the green zones associated with lakes, reservoirs, estuaries, potholes, springs, bogs, wet meadows, and streams (intermittent or perennial by Lewistown Field Office definitions). Riparian areas are characterized by water tables at or near the soil surface, and by vegetation requiring high water tables. Riparian areas are characterized by one or more of the following features: 1) *wetland hydrology*, the driving force creating all riparian

areas, 2) *hydric soils*, an indicator of the absence of oxygen, and 3) *hydrophytic vegetation*, an indicator reflecting riparian site conditions.

Most of the riparian areas on BLM land within the planning area were assessed for health. Riparian health ratings consist of three categories: proper functioning condition (PFC), functional at risk (FAR), and nonfunctional (NF). Riparian-wetland areas are functioning properly when adequate vegetation, landform, or large woody debris is present to:

- dissipate stream energy associated with high waterflows, thereby reducing erosion and improving water quality;
- filter sediment, capture bedload, and aid floodplain development;
- improve flood-water retention and groundwater recharge;
- develop root masses that stabilize streambanks against cutting action;
- develop diverse ponding and channel characteristics to provide the habitat and the water depth, duration, and temperature necessary for fish production, waterfowl breeding, and other uses; and
- support greater biodiversity (United States Department of the Interior, 1998).

The riparian-wetland areas within this planning area are as diverse as the landscape. They range from steep gradient, mountain streams that support Rocky Mountain maple, quaking aspen, water birch, red-osier dogwood and narrowleaf cottonwood to broad, meandering, prairie streams with plains cottonwood, sandbar willow, peachleaf willow and a variety of herbaceous *Scirpus*, *Carex*, and *Juncus* spp. Large, lentic wetland areas are also common in the foothills and plains east of the Rocky Mountain Front.

The lentic wetlands located in the Sun River area east of the Rocky Mountain Front exhibit seasonal conditions. These sites are infrequently inundated, mainly during low frequency, high precipitation years. For example, during the years that the assessments were conducted (2007/2008), the sites had not received water in

several years. Furthermore, soils are gravelly and have high hydraulic conductivity, thereby decreasing the length of inundated periods. Sites that receive seepage or water from Pishkun Canal display more permanent wetland conditions. However, even the seasonal wetlands provide important values in the years that water is available. Livestock grazing is having limited effect on the functionality or species composition of the aforementioned sites.

The health and functionality of streams within the planning area were assessed with the PFC checklist (USDI, 1998). The following streams were assessed on BLM land within the planning area: Birch Creek, East Fork of Hound Creek, Missouri River, North and South Forks of Sheep Creek, South Fork of Stickney Creek, Tyrell, Wegner, Clemons, Middle Fork of the Dearborn, North and South Forks of Blindhorse, Edwards, Green Timber Gulch, North and South Forks of Deep Creek, North and South Forks of Battle Creek, and the Sun and Teton Rivers. Numerous unnamed and smaller tributary streams were also evaluated.

A majority of allotments within the planning area are meeting Lewistown Standard 2, which requires riparian areas to be in proper functioning condition or making significant progress towards that condition. In fact, many riparian areas exhibit ecological conditions in higher seral states than what is usually associated with PFC. Thirty-nine allotments had riparian areas evaluated. Of these, 29 allotments are meeting the riparian standard, and 10 allotments are not meeting. Six allotments are not meeting the riparian standard because of livestock grazing.

The allotments not meeting the riparian standard because of other reasons than livestock are primarily on Birch Creek in Pondera County. In 1964, Swift Dam failed causing ecological devastation on Birch Creek. The dam was reconstructed, so since that time, the flow and sediment regimes have been inadequate to restore channel formation processes. Channel conditions deviate in sinuosity, width/depth ratios, particle size distribution, and flood-prone area from expected conditions. Vegetative

species are limited primarily to woody species capable of growing in coarse substrate and spotted knapweed. Spotted knapweed makes up a majority of the herbaceous vegetation.

Six grazing allotments were not meeting the riparian standard because of current livestock management. These sites generally exhibit altered channel morphology. For example, they were usually wider and shallower than streams with functioning riparian areas. Often times, streambank vegetation composition consisted of higher percentages of disturbance species, such as Kentucky bluegrass. Furthermore, although most of the riparian areas were not dependent upon woody species for functionality, they usually had intense browse on preferred woody species and displayed altered growth forms.

As mentioned above, 29 of 39 grazing allotments were meeting the riparian standard. Most of these riparian areas are on the Rocky Mountain Front and in the Devil's Kitchen area. For the most part, these streams are relatively steep gradient, coarse substrate, less dependent upon streamside vegetation for stability, and are located in remote, rugged country. Given the characteristics of these streams and their site potential, many of them support multiple woody species such as red-osier dogwood, cottonwood, willow, alder, birch, Rocky Mountain maple, and silverberry. A large number of these streams also support cold-water fisheries.

3.4 Noxious Weeds

Noxious weeds are a serious threat to the State of Montana and biological communities within the Great Falls planning area. Infestations of noxious weeds are present throughout the planning area, with higher concentrations along the major drainages and their tributaries, including Birch Creek and the Sun, Teton and Missouri Rivers.

Montana noxious weeds are categorized according to the following prioritization:

Priority 1a - These weeds are not present in Montana. Management criteria will require

eradication if detected; education; and prevention (yellow starthistle).

Priority 1b – These weeds have limited presence in Montana. Management criteria will require eradication or containment and education (dyer's woad, flowering rush, Japanese knotweed complex, purple loosestrife, rush skeletonweed, Eurasian watermilfoil, Scotch brome, curlyleaf pondweed).

Priority 2a - These weeds are common in isolated areas of Montana. Management criteria will require eradication or containment where less abundant. Management will be prioritized by local weed districts (tansy ragwort, meadow hawkweed complex, orange hawkweed, tall buttercup, perennial pepperweed, yellowflag iris, blueweed, hoary alyssum).

Priority 2b – These weeds are abundant in Montana and widespread in many counties. Management criteria will require eradication or containment where less abundant. Management will be prioritized by local weed districts (Canada thistle, field bindweed, leafy spurge, whitetop, Russian knapweed, spotted knapweed, diffuse knapweed, Dalmatian toadflax, St. Johnswort, sulfur cinquefoil, common tansy, oxeye daisy, houndstongue, yellow toadflax, saltcedar).

Priority 3 – Are regulated plants that have the potential to have significant negative impacts. These plants may not be intentionally spread or sold other than as a contaminant in agricultural products. The state recommends research, education and prevention to minimize the spread of the regulated plant (cheatgrass, hydrilla).

Several weed species have been identified within the planning area; the largest areas of infestation are occupied by:

- Canada thistle
- Spotted knapweed
- Leafy spurge
- Houndstongue
- Dalmation toadflax

The BLM has been actively involved in an integrated weed control program within the planning area for several years. Weed infestations have grown appreciably during the past two decades. Spotted knapweed, leafy spurge and Dalmation toadflax biological control agents have been released on a limited basis within the planning area. Effective biological control agents are currently not available for Canada thistle or houndstongue.

3.5 Coniferous Forest

Forested vegetation types on BLM lands within the planning area primarily include mixed lodgepole, ponderosa pine and Douglas-fir. Ponderosa pine is predominant on lower elevation south slopes with Douglas fir and lodgepole pine becoming increasingly common on steep north facing slopes. Ponderosa pine and mixed ponderosa pine/Douglas fir are common on parcels in Cascade, Lewis and Clark and Meagher Counties. Limber pine is abundant in krummholz habitats notable along the Rocky Mountain Front. Whitebark pine and subalpine fir may also be present in these areas at higher elevations generally greater than 6000' which is also generally restricted to parcels located along the Rocky Mountain Front. Along with lodgepole pine, Douglas-fir and ponderosa pine, Engelmann spruce and aspen groves are also present throughout the planning area in lesser amounts generally restricted to localized wet draws and moist microsites.

Conifer densities have been increasing in some forested areas. Pine seedlings and saplings have been documented expanding into rangeland areas on forest margins. Heavy stand densities cause competition among conifers, with associated declines in forest health and decreased productivity of understory vegetation such as grasses, forbs, and shrubs. Drought has exacerbated the condition. Understory conifers contribute to fuel loadings that create a continuous fuel bed from the ground to the canopy. Wildland fire can be severe in these areas.

The encroachment of conifers into open parks reduces biodiversity, crowds out sagebrush/grassland habitat and creates an increased threat of severe fires due to an accumulation in the continuity of fuels. Portions of Cascade, Meagher and Lewis and Clark counties are of particular concern.

3.6 Fire/Fuels Management

The majority of the planning area is located in the LFO Range/Grasslands Fire Management Unit (FMU). This FMU has been designated as Management Category B2 in the Fire/Fuels Management Plan Environmental Assessment Amendment for Montana and the Dakotas (July 2003). The B2 designation identifies areas where unplanned fire is likely to cause negative effects. Emphasis in B Category areas are prevention/education and suppression. Most BLM lands immediately adjacent to the Rocky Mountain Front have been designated in the C2 category. Under this management direction, fire has been identified as a desired ecosystem management tool. Fire could be a positive influence in much of this area and restoration of natural fire regimes would be encouraged where practical. However, each fire occurrence would have special consideration and be managed in accordance with the Central Montana Fire Management Plan for the Lewistown Field Office (2004). Obvious concerns focus on structural developments and human safety. Social, environmental and political considerations would dictate management of each fire occurrence. An appropriate management response is initiated for each incident based on current fire danger, resource availability, and predicted weather which would ensure safety of fire personnel, reduce cost of suppression and provide an opportunity to return fire to its natural place in the ecology of the area.

3.7 Recreation/Visual Resources

Dispersed recreation opportunities exist over a broad range of the planning area and include activities such as hunting, fishing, hiking, horseback riding, wildlife photography/viewing, and sightseeing. The majority of use occurs

during the summer and the fall seasons particularly during hunting season.

Hunting opportunities and access for the general public in the planning area are limited due to scattered land patterns. However, there are opportunities on parcels with legal access and lands that are adjacent to other accessible state and federal lands. Four outfitters are licensed to provide big game hunting opportunities for clients on BLM-administered lands. In addition to guide services, guest ranch services are also provided on some special recreation permits. Additionally, a number of dispersed campsites along the travel routes are used by hunters. These campsites are used most weekends in the fall and sometimes for several weeks by different parties of hunters from September through November. A fee is not required for the general public, but camping is limited to 14 days. Camps must be moved at least five miles following the 14-day limit.

Areas along the Rocky Mountain Front have outstanding scenic values and provide near wilderness characteristics. These areas are remote, nearly roadless, provide rugged topography, are relatively free of human influence and present good opportunities for solitude and primitive experiences.

Public land within the planning area has not been formally assigned a visual resource management (VRM) class. The Headwaters RMP classified BLM lands into three visual management classes. Class A, contains lands that have high scenic values and typically have a landscape character of high, rugged, forested mountains, major lakes, river gorges or tree-lined river bottoms. Class A lands occur on BLM parcels located along the Rocky Mountain Front and in the Devil's Kitchen vicinity near Cascade, Montana. The remainder of the planning area contains B and C designations. Class C lands have a landscape character ranging from broad, flat or round valley bottoms, foothills and plains with few or no trees and few water features. Lands that fall between Class A and Class C characteristics are considered to have moderate scenic values and are classified as Class B.

A subsequent activity plan environmental assessment for Blind Horse, Ear Mountain, Chute Mountain and Deep Creek-Battle Creek outstanding natural areas (ONA's) was approved in March 1989. The visual resource management rating for these areas was upgraded to Class I except for trailhead sites which were designated Class II. The four VRM classes are numbered I to IV (Visual Resource Management Program, Bureau of Land Management, 1980); the lower the number the more sensitive and scenic the area. Each class has a management objective that prescribes the level of acceptable change in the landscape. The visual management objective of VRM Class I is to preserve the existing landscape while VRM Class II emphasizes retention of the existing character of the landscape. The objective of scenic classes B and C would generally correlate with VRM Classes III and IV. Class III designation allows for moderate contrasts to the environment, but impacts should be subordinate to the existing landscape. Under Class IV designation, the level of contrast to the landscape from authorized projects could be evident, but should be moderated by using the basic elements of form, line, texture, and color.

3.8 Wildlife

Each county contains a variety of upland and riparian vegetation that provides habitat for a diverse wildlife population. Habitat may include deciduous tree stands with other associated riparian species, coniferous forest, shrublands and grasslands intermixed with agricultural land. Over 80 mammals, 360 species of birds and 20 species of amphibians and reptiles inhabit these areas potentially affected by the proposed action.

3.8.1 Threatened and Endangered

Wildlife species on the threatened and endangered (T&E) list documented in the allotment area include black-footed ferret (endangered), whooping crane (endangered), Canada lynx (threatened), grizzly Bear (threatened), piping plover (threatened), and bull trout (threatened).

Black-footed ferret

The black-footed ferret was last observed in 1920 near Great Falls. There are no known populations currently documented within the planning area.

Whooping Crane

One historical sighting was published in 1985 between Martinsdale and Checkerboard. The sighting could be much older than the published date. There is no evidence whooping cranes are currently using north-central Montana and no critical habitat is designated within the planning area.

Canada lynx

Canada lynx were first observed in 1981 in the southeast portion of Cascade County in the Lewis and Clark National Forest. Observations for Canada lynx have been reported near allotments in the southwest portion of Cascade County which borders Meagher County along the Missouri River and near allotments along the Rocky Mountain Front in Lewis and Clark and Teton counties. Potential habitat is located on BLM lands in limited areas, primarily at elevations above 4000' along the Continental Divide and Big Belt Mountains where sub-alpine forests are located. The far western portions of the planning area along the Rocky Mountain Front are adjacent to Unit 3 of Critical Habitat designated by the U.S. Fish and Wildlife Service.

Grizzly bear

Observations for grizzly bears have been reported on and near allotments in Lewis and Clark, Pondera and Teton counties primarily along the Rocky Mountain Front and adjacent riparian corridors and prairies. Grizzly bears use habitats that are variable between geographical area, seasons, local populations, and individual bears. The BLM lands along the Front contain habitat typically used for spring range by grizzly bears while the majority of denning habitat occurs to the west on Forest Service and National Park Service lands. Management activities affecting bears on BLM lands are directed by the Rocky Mountain Front Guidelines pursuant to the Interagency Grizzly Bear Guidelines. Specific guidance for livestock

grazing is found on page 11 of the Rocky Mountain Front Management Guidelines. Grazing allotments located along the Rocky Mountain Front and associated plains and foothills are within the Northern Continental Divide Recovery Zone for grizzly bears.

Piping plover

Piping plovers usually arrive in Montana in early May and leave the state by late August. During this period, piping plovers have been documented on shorelines or islands in freshwater and saline wetlands of glaciated plains potholes and reservoirs within the planning area. Locations within the boundaries of the planning area where piping plovers have been documented are not designated as critical habitat by the U.S. Fish and Wildlife Service (USFWS).

Bull trout

The Lewistown Field Office administers the Dog Creek Allotment #07825 for the Missoula Field Office. The allotment is located on Rich Spur, a perennial tributary to Dog Creek which is on the west slope of Mullan Pass. The allotment is located in the upper reaches of Little Blackfoot drainage which is included in the Upper Clark Fork Recovery Unit for bull trout. The Department of Montana Fish, Wildlife and Parks (MDFWP) has not documented bull trout occurring in the Clark Fork River east of Gold Creek which includes the Little Blackfoot River drainage; however, the Little Blackfoot River is locally known as an important stream for spawning and rearing of native westslope cutthroat and bull trout. There are no known occurrences of bull trout in Dog Creek, and westslope cutthroat are rare inhabitants.

Other species

Several other species of wildlife that have been recently delisted, have been proposed for listing, or are currently under review for listing also occur in the affected area.

Sage grouse

The USFWS issued a non-warranted finding for sage grouse that was published January 2005. In December 2007, the finding was remanded back to USFWS and was determined to be warranted

but precluded from listing. There are 23 sage grouse leks documented in Meagher County. These leks occur primarily in the sagebrush steppe within the Smith River drainage. Several occur in the Eightmile drainage north of Checkerboard and one is known in the Mud Creek drainage north of Martinsdale. All known leks are located on state or private lands. None are known to occur on BLM lands or within grazing allotments containing BLM lands; however, these lands likely contain other seasonal habitats used by sage grouse.

Sprague's pipit

In December 2009, USFWS issued a finding that Sprague's pipits may warrant federal protection as a threatened or endangered species. Status of this species is currently under review. Sprague's pipits are endemic grassland ground nesting birds that prefer native, medium to intermediate height prairie which is found throughout the planning area. They arrive in Montana in early May and begin migration southward around the end of August. This species is documented in Lewis and Clark, Pondera, Teton, Cascade and Meagher counties.

Fluvial Arctic grayling

In April 2007, the USFWS published a finding that listing the fluvial Arctic grayling of the upper Missouri River system was not warranted because the population did not constitute a species, subspecies, or a distinct population segment under the Endangered Species Act. However, this ruling was challenged and, as a result USFWS agreed to initiate a new status review that is scheduled to be published August 2010. Populations of fluvial Arctic grayling occur within the planning area mostly as a result of restoration efforts currently underway by MDFWP. Arctic grayling were reintroduced in the North and South Forks of the Sun River above Gibson Reservoir, but are also known to occur downstream of the reservoir adjacent to BLM lands in the planning area. Another distinct population of Arctic grayling was located in the Sun River Slope Canal system which is located near BLM grazing allotments. This population has been sustaining itself in a series of man-made canals and reservoirs for decades.

Westslope cutthroat trout

In April 2000, The USFWS determined that the westslope cutthroat trout do not warrant listing as a threatened species under the Endangered Species Act because of well-distributed, stable, and reproducing populations. The USFWS based its finding on information contained in a 1999 status report prepared by affected state fish and game departments. Westslope cutthroat trout occupy numerous, coldwater streams throughout the planning area. Most occur in mountainous areas such as the Little Belt, Big Belt, Highwood, Castle Mountains and along the Rocky Mountain Front. Several streams in the Devil’s Kitchen area are also believed to contain low numbers of westslope cutthroat trout.

Bald eagle

The bald eagle was delisted from the threatened and endangered species list in 2007. Nesting and foraging habitat is available for bald eagles along the Missouri River and other major river corridors. There are numerous observations of bald eagles nesting and foraging along these sites.

Gray wolf

Montana gray wolves were removed from the federal Endangered Species list, as of May 4, 2009. Gray wolves are now protected and managed as a Montana species in need of management. Montana’s state laws, state regulations, and management plan have replaced federal regulations. MDFWP estimated there were 497 wolves with 34 breeding pairs active in Montana at the end of 2008. There are at least five resident wolf packs within the analysis area. Monitoring flights during 2009 documented the Monitor Mountain Pack ranging in the Bedrock and Little Skunk drainages near Rogers Pass. The Mitchell Mountain Pack is also using this area but usually uses territories in the Dearborn River drainage. The Benchmark Pack is known in the Benchmark area but has not been located on recent flights. The Red Shale Pack was last located April 8, 2009 in Sheep Creek. Four wolves, three grays and one black wolf were observed with this pack. The Bennie Hill Pack is frequenting Blind Horse, the Walling Reef and Crazy Creek areas.

Peregrine falcon

The peregrine falcon was removed from the endangered list in 1999. Potential cliff nest sites for peregrine falcons are available along the precipices of the Rocky Mountain Front, scattered buttes and other vertical cliff sites throughout the planning area. There are abundant mid-sized passerines and waterfowl production areas to provide foraging opportunities for peregrines. This species has also been documented overwintering within the planning area. There is abundant evidence of raptor use throughout the planning area but most is thought to be from prairie falcon and golden eagles.

Mountain plover

The mountain plover was proposed for listing as threatened in 1999 but withdrawn in 2003. Plovers have not been documented on BLM allotments within the planning area, but potential habitat does exist for the species. The mountain plover may be considered a disturbed-prairie species preferring arid flats with very short grass and a high proportion of bare ground. Short grass-dominated sites within the planning area provide potential habitat for the mountain plover.

3.8.2 Mammals

Elk, mule deer, bighorn sheep, mountain goats, black bear, whitetail deer, and pronghorn antelope are major components of the wildlife community. Table 3.1 is a list of mammal species known to occur within or near the planning area.

Table 3.1 Mammal Species Within or Near the Planning Area
Badger (<i>Taxidea taxus</i>)
Beaver (<i>Castor canadensis</i>)
Big brown bat (<i>Eptesicus fuscus</i>)
Bighorn sheep (<i>Ovis canadensis</i>)*
Black bear (<i>Ursus americanus</i>)
Black-footed ferret (<i>Mustela nigripes</i>)*
Black-tailed prairie dog (<i>Cynomys</i>

Table 3.1 Mammal Species Within or Near the Planning Area
<i>ludovicianus</i> *)*
Bobcat (<i>Lynx rufus</i>)
Bushy-tailed woodrat (<i>Neotoma cinerea</i>)
Canada lynx (<i>Lynx canadensis</i>)
Columbian ground squirrel (<i>Spermophilus columbianus</i>)
Coyote (<i>Canis latrans</i>)
Deer mouse (<i>Peromyscus maniculatus</i>)
Desert cottontail (<i>Sylvilagus audubonii</i>)
Dusky or montane shrew (<i>Sorex monticolus</i>)
Dwarf shrew (<i>Sorex nanus</i>)*)*
Eastern fox squirrel (<i>Sciurus niger</i>)*)*
Eastern gray squirrel (<i>Sciurus carolinensis</i>)*)*
Elk or wapiti (<i>Cervus canadensis</i>)
Fisher (<i>Martes pennanti</i>)
Fringed myotis (<i>Myotis thysanodes</i>)
Golden-mantled ground squirrel (<i>Spermophilus lateralis</i>)
Gray wolf (<i>Canis lupus</i>)
Grizzly bear (<i>Ursus arctos</i>)
Hayden's shrew (<i>Sorex haydeni</i>)*)*
Heather vole (<i>Phenacomys intermedius</i>)
Hoary bat (<i>Lasiurus cinereus</i>)
Hoary marmot (<i>Marmota caligata</i>)
House mouse (<i>Mus musculus</i>)*)*
Least chipmunk (<i>Tamias minimus</i>)*)*
Least weasel (<i>Mustela nivalis</i>)*)*
Little brown myotis (<i>Myotis lucifugus</i>)
Long-eared myotis (<i>Myotis evotis</i>)
Long-legged myotis (<i>Myotis volans</i>)
Long-tailed vole (<i>Microtus longicaudus</i>)
Long-tailed weasel (<i>Mustela frenata</i>)*)*
Marten (<i>Martes americana</i>)
Masked shrew (<i>Sorex cinereus</i>)
Meadow vole (<i>Microtus pennsylvanicus</i>)
Merriam's shrew (<i>Sorex merriami</i>)
Mink (<i>Mustela vison</i>)

Table 3.1 Mammal Species Within or Near the Planning Area
Montane vole (<i>Microtus montanus</i>)
Moose (<i>Alces alces</i>)
Mountain cottontail (<i>Sylvilagus nuttallii</i>)
Mountain goat (<i>Oreamnos americanus</i>)
Mountain lion (<i>Puma concolor</i>)
Mule deer (<i>Odocoileus hemionus</i>)
Muskrat (<i>Ondatra zibethicus</i>)*)*
Northern bog lemming (<i>Synaptomys borealis</i>)*)*
Northern flying squirrel (<i>Glaucomys sabrinus</i>)*)*
Northern grasshopper mouse (<i>Onychomys leucogaster</i>)*)*
Northern pocket gopher (<i>Thomomys talpoides</i>)
Northern river otter (<i>Lontra canadensis</i>)
Pika (<i>Ochotona princeps</i>)
Porcupine (<i>Erethizon dorsatum</i>)
Prairie vole (<i>Microtus ochrogaster</i>)
Preble's shrew (<i>Sorex hoyi</i>)
Pronghorn (<i>Antilocapra americana</i>)
Pygmy shrew (<i>Procyon lotor</i>)
Raccoon (<i>Procyon lotor</i>)
Red fox (<i>Vulpes vulpes</i>)
Red squirrel (<i>Tamiasciurus hudsonicus</i>)
Red-tailed chipmunk (<i>Tamias ruficaudus</i>)
Richardson's ground squirrel (<i>Spermophilus richardsonii</i>)
Sagebrush vole (<i>Lemmiscus curtatus</i>)
Short-tailed weasel (<i>Mustela erminea</i>)
Silver-haired bat (<i>Lasionycteris noctivagans</i>)
Snowshoe hare (<i>Lepus americanus</i>)*)*
Southern red-backed vole (<i>Clethrionomys gapperi</i>)
Spotted bat (<i>Euderma maculatum</i>)
Striped skunk (<i>Mephitis mephitis</i>)
Swift fox (<i>Vulpes velox</i>)
Thirteen-lined ground squirrel (<i>Spermophilus</i>

Table 3.1 Mammal Species Within or Near the Planning Area
<i>tridecemlineatus</i>)
Townsend's big-eared bat (<i>Corynorhinus townsendii</i>)
Vagrant shrew (<i>Sorex vagrans</i>)
Water shrew (<i>Sorex palustris</i>)
Western jumping mouse (<i>Zapus princeps</i>)
Western small-footed myotis (<i>Myotis ciliolabrum</i>)
White-footed mouse (<i>Peromyscus leucopus</i>)*
White-tailed deer (<i>Odocoileus virginianus</i>)
White-tailed jack rabbit (<i>Lepus townsendii</i>)
Wolverine (<i>Gulo gulo</i>)
Yellow-bellied marmot (<i>Marmota flaviventris</i>)
Yellow-pine chipmunk (<i>Tamias amoenus</i>)

*Species not documented within the immediate area, however potential habitat exists and is within range of these species.

BLM sensitive mammal species currently known to occur on or within the range of affected allotments included black-tailed prairie dog, fisher, fringed myotis, gray wolf, long-eared myotis, Long-legged myotis, spotted bat, swift fox, Townsend's big-eared bat, and wolverine.

Black-tailed prairie dogs were first observed in 1889 with the most recent observation in 2007. The most recent observation is within 4 miles east of an allotment in Cascade County and 10 miles southwest of an allotment in Lewis and Clark counties. Black-tailed prairie dogs have been known to disperse up to 6 miles in search of a new colony. There are other observations in Teton County and Pondera County; however, these observations are not near any allotments.

Fisher is a BLM sensitive species that was believed to be extinct in Montana in the 1930's. Reintroduction efforts were started in 1959 and after populations were established, reintroduction efforts were performed in other areas of the state. The last observation was in

1990, 7 miles west of an allotment in Lewis and Clark County.

Limited information is available regarding bat species that may occur within the planning area: fringed myotis, long-eared myotis, long-legged myotis, spotted bat and Townsend's big-eared bat. Roost sites have been observed near allotments in Lewis and Clark and Teton counties. While inventory of potential habitat is not available specifically for BLM lands, forage habitat is likely on public lands within the planning area.

Swift fox were thought to be extinct in 1969; however, reintroduction efforts have produced sightings throughout north-central Montana. Recent observations of swift fox were reported in 2004 near an allotment in Teton County and one observation in 2006 near an allotment in Lewis and Clark County.

Wolverines have been documented since 1982. All observations were in the Lewis and Clark National Forest. The most recent observation was within 2 miles of an allotment in southeast Cascade County.

Elk occur throughout the planning area but are usually restricted to areas with adequate cover and forage principally found along the Continental Divide regions, Big and Little Belt Mountains and Castle and Highwood Mountains. These areas lie within the Bob Marshall Wilderness Complex, West/East Big Belt, Little Belt, Highwood and Castle Mountain Elk Management Units (EMU). Most of these EMUs have demonstrated stable elk populations over the last ten years. However, some areas, such as the East Big Belt EMU, have experienced dramatic increases in numbers of elk due to limited opportunities for public harvest (MTFWP 2004).

Mule deer are common throughout the planning area in all seasons. Specific BLM parcels are known to occupy important primary, secondary and transitional winter ranges for mule deer throughout the planning area.

Portions of the affected environment lie within the Southern Rocky Mountain Bighorn Sheep Complex which contains hunting districts 421, 422 423, 424, and 441. These areas are typically known for highly productive, robust and healthy bighorn sheep populations. Herd sizes commonly exceed objectives and are often used to supplement other bighorn sheep herds throughout Montana and the western United States.

Mountain goats are also common in the western portion of the planning area along the Rocky Mountain Front. The majority of yearlong habitat is located on lands north of the Sun River. There are numerous breeding areas, mineral licks and kidding areas located throughout the vicinity. In 2008, continuing through 2009, a total of 25 goats were transplanted to the Ear Mountain Wildlife Management Area to augment existing populations. Livestock management guidelines related to mountain goats is addressed on page 16 of the Interagency Rocky Mountain Front Management Guidelines for Selected Species.

3.8.3 Birds

The planning area provides habitat for numerous species of birds. Within the planning area there are over 360 species of resident, migratory and game birds including abundant waterfowl, grouse, turkeys, diving birds, pelicans, herons, birds of prey, shorebirds, gulls, terns, doves, owls, nightjars, kingfishers, hummingbirds, woodpeckers, flycatchers, shrike, vireos, jays, crows, larks, swallows, chickadees, nuthatches, wrens, bluebirds, thrushes, waxwings, warblers, tanagers, sparrows, buntings, blackbirds, orioles and finches.

Table 3.2 is a list of BLM sensitive bird species known to occur within or near the planning area:

Table 3.2 BLM Sensitive Species Within or Near the Planning Area
American three-toed woodpecker (<i>Picoides dorsalis</i>)
Baird's sparrow (<i>Ammodramus bairdii</i>)

Bald eagle (<i>Haliaeetus leucocephalus</i>)
Black tern (<i>Chlidonias niger</i>)
Black-backed woodpecker (<i>Picoides arcticus</i>)
Black-crowned night-heron (<i>Nycticorax nycticorax</i>)
Bobolink (<i>Dolichonyx oryzivorus</i>)
Brewer's sparrow (<i>Spizella breweri</i>)
Burrowing owl (<i>Athene cunicularia</i>)
Chestnut-collared longspur (<i>Calcarius ornatus</i>)
Common loon (<i>Gavia immer</i>)
Ferruginous hawk (<i>Buteo regalis</i>)
Flammulated owl (<i>Otus flammeolus</i>)
Franklin's gull (<i>Leucophaeus pipixcan</i>)
Golden eagle (<i>Aquila chrysaetos</i>)
Great gray owl (<i>Strix nebulosa</i>)
Greater sage grouse (<i>Centrocercus urophasianus</i>)
Harlequin duck (<i>Histrionicus histrionicus</i>)
Le Conte's sparrow (<i>Ammodramus leconteii</i>)
Least tern (<i>Sterna antillarum</i>)
Loggerhead shrike (<i>Lanius ludovicianus</i>)
Long-billed curlew (<i>Numenius americanus</i>)
Marbled godwit (<i>Limosa fedoa</i>)
McCown's longspur (<i>Calcarius mccownii</i>)
Mountain plover (<i>Charadrius montanus</i>)
Northern goshawk (<i>Accipiter gentilis</i>)
Peregrine falcon (<i>Falco peregrinus</i>)
Piping plover (<i>Charadrius melodus</i>)
Red-headed woodpecker (<i>Melanerpes erythrocephalus</i>)
Sage sparrow (<i>Amphispiza belli</i>)
Sage thrasher (<i>Oreoscoptes montanus</i>)
Sedge wren (<i>Cistothorus platensis</i>)
Sprague's pipit (<i>Anthus spragueii</i>)
Swainson's hawk (<i>Buteo swainsoni</i>)
Trumpeter swan (<i>Cygnus buccinator</i>)
White-faced ibis (<i>Plegadis chihi</i>)
Whooping crane (<i>Grus americana</i>)

Tree nesting raptors such as Swainson's hawk, red-tailed hawk and great-horned owl are known to be present in cottonwood stands and isolated

conifers in the planning area. Ground nesting raptors including ferruginous hawks, burrowing owls and northern harriers are also present. Ferruginous hawks have been documented throughout the mixed-grass prairie, shrub-grasslands, grasslands, grass-sagebrush complex, and sagebrush steppe habitats within the planning area.

Seven species of upland game birds are present in the planning area: Hungarian partridge, sharp-tailed grouse, sage grouse, blue grouse, ruffed grouse, Merriam's turkeys and ring-necked pheasant. Partridge are commonly associated with private cropland; sharp-tails are primarily located in the heads of brushy coulees and grasslands. The mountain grouse species inhabit the forested parcels along the Continental Divide and other ranges such as the Belt and Highwood Mountains. The ruffed grouse prefer deciduous habitats while the blue grouse occupy forest edges in the spring, summer and fall and the high elevation Douglas fir in the winter.

Pheasants are primarily found near farmland but also occupy well-vegetated riparian areas. Merriam's turkeys can be found in most of the ponderosa pine habitats and along river corridors.

The cottonwood and willow habitats along the stream corridors provide nesting and brooding habitat for many neo-tropical migrant species during the summer. Deciduous trees along the river's edge are unique in this area of predominant prairie grasslands, breaks and coniferous forested coulees and ridges; they provide valuable habitat for the majority of bird species. This deciduous forest habitat type occupies a small percentage of the overall land area within the watershed area, and most is located on private lands.

3.8.4 Fish

There are over 30 species of fish that have been observed within the planning area. The Missouri River, Smith River, Dearborn River, Sun River, Teton River, Musselshell River, Belt Creek, Muddy Creek and Deep Creek maintain

significant fisheries. There are also numerous small streams, canals, reservoirs, and lakes that support fisheries within the planning area.

There are several species of fish that are listed on the BLM's sensitive species list. Arctic grayling, westslope cutthroat trout and bull trout are discussed in section 3.8.1. Northern redbelly x finescale dace are a BLM sensitive species documented in Sheep Creek near Dupuyer. Northern redbelly x finescale dace are a hybrid species that prefer clear waters and commonly co-occur with the northern redbelly. No BLM-administered lands are located in the Sheep Creek watershed or downstream to its confluence with Dupuyer Creek.

Most reaches of streams located within the affected area are designated as moderate/substantial fisheries to high value/outstanding fisheries. However, many reaches are impacted by chronic and periodic dewatering. Species typically occurring in mountainous stream segments commonly include brook trout, rainbow and westslope cutthroat trout, rainbow/cutthroat hybrids, brown trout, mottled sculpin, mountain whitefish and mountain suckers. As these streams move into prairie reaches, these species decline and diversity increases trending toward species such as common carp, fathead minnows, fathead chubs, lake chubs, drum, stone cat, northern pike, channel catfish, brassy minnows, emerald shiner, goldeneye and numerous other species. Species such as longnose suckers and longnose dace are common throughout the planning area.

3.8.5 Reptiles and Amphibians

Reptiles occurring within or near the allotments include: common gartersnake, terrestrial gartersnake, eastern racer, gophersnake, painted turtle, plains gartersnake, prairie rattlesnake, and rubber boa. Reptiles listed on the BLM Sensitive species list include: Greater short-horned lizard, western hog-nosed snake and spiny softshell. All of these species are associated with prairie uplands or prairie rivers. Potential habitat on BLM allotments for these species is limited since the planning area is on

the extreme western edge of the range for all three of these species.

Amphibians occurring within or near the allotments include: boreal chorus frog, northern leopard frog and tiger salamander. Columbia spotted frog, long-toed salamander, western toad and Rocky Mountain tailed frog are known primarily west of the Continental Divide, but could also be present along the Rocky Mountain Front and other mountain outliers. Great Plains toad and plains spadefoot are primarily prairie associates but the western portion of their ranges also include the planning area. American bullfrog, an exotic species, has also been documented within the planning area. Amphibians listed on the BLM sensitive species list include: Great Plains toad, northern leopard frog, plains spadefoot, and western toad. Populations of many amphibian species appear to be in a sharp decline throughout Montana which relates to larger, global declines of amphibians worldwide.

Information regarding BLM sensitive species and distribution and occurrences and other non-game data was derived from the Montana Natural Heritage Program. For more information on wildlife and BLM sensitive species, this database is located on the internet at: <http://nhp.nris.mt.gov/>.

3.9 Cultural Resources

The BLM broadly defines cultural resources as any traditional lifeway belief or cultural property. Cultural properties are defined as distinct evidence in areas of past human occupation, activity, and use. Traditional lifeway beliefs are defined as traditional value systems of religious beliefs, cultural practices, or social exchange that are not closely and tangibly defined or identified with definite locations (Judith-Valley-Phillips Resource Management Plan, 1992).

Early peoples in the study area were mobile hunters and gatherers throughout and up until the historic period. The following brief overview explains changes through time as

summarized by other archaeologists (Frison 1978; Ruebelmann 1983).

The Early Prehistoric Period (roughly 10,000 – 5,700 B.C.) is characterized by a tool assemblage consisting of large, lanceolate and/or fluted spear points, and multipurpose tools made of stone or ivory. Subsistence strategies specialized in hunting megafauna but smaller game and plant foods were utilized as well. Typical site types include kill and butchering sites, open air camp sites, and limited activity sites.

The Middle Prehistoric Period (roughly 5,000 B.C. – A.D. 400), is characterized by a shift in tool types from thrusting spears with lanceolate spear heads to spear throwers and darts with diagnostic spear points. Groundstone tools also begin to show up in the assemblages. Subsistence strategies shift from more specialized hunting of megafauna to a broader spectrum strategy which becomes focused on bison by the end of this period. Plant procurement and use also occurs. Evidence of storage in the form of storage pits begins to show up during this period as do large cooking pits. Site types typical of this period include kill and butcher sites, camp sites, and rock shelters.

The Late Prehistoric Period (roughly A.D. 500 – 1800), is characterized by a technological shift from spear throwers and darts to bow and arrows. Tool assemblages consist of small side, corner, or tri-notched points. Some ceramics become evident in the record in limited number on the Northwest Plains at this time. Grooved mauls, bone fleshers, and shell beads are common. Subsistence strategies continue to focus on bison procurement. Large communal bison kill/jump sites, rock shelters, wind breaks, and caves are the site types typically found in this area.

More recently, settlers by the thousands came into the area to live on homesteads. Germans and Scandinavians came from the Midwest, as did eastern European immigrants like Bohemians and Yugoslavs (JVP, 1992).

Cultural sites can be considered significant for several reasons; some because information about

the past can be learned through methodical study of the sites, while other sites communicate a sense of a particular time period they represent in history. Finally, sites can be considered to be important because of the current use or values associated with the location.

An important consideration for management actions in this area is preserving the values of the cultural properties contained within. In order to preserve the integrity of a cultural property, it is sometimes necessary to preserve the location in which the cultural property is found. This is an important consideration when the management actions have the potential to affect the location of a cultural property, thus affecting the overall integrity of the cultural property.

In April 2010, the Lewistown Field Office finalized an overview of historic, prehistoric, and paleontological resources. This overview compiles data from databases maintained by the Montana State Historic Preservation Office and the BLM. Information on the five counties included in this analysis has been excerpted from that overview.

Recorded Sites, by County

County	Prehistoric	Historic	Total
Cascade	224	821	1045
Lewis & Clark	401	227	628
Meagher	173	103	276
Pondera	34	92	126
Teton	128	198	326
TOTALS	960	1441	2401

The numbers for some counties are noticeably higher than others. Cascade and Lewis and Clark counties include data from within city limits; every documented historic home in Great Falls shows up in the historic sites count.

The area along the Rocky Mountain Front has a higher density of rock alignments, cairns, and stone circles than other portions of the analysis area. Elders in the Blackfeet Tribe have noted the importance of the Sun River Valley, from the Front to the river’s confluence with the

Missouri, as playing an integral role in their culture.

The Smith River drainage, particularly in Meagher County, contains several chert quarry sites. A number of known archaeological sites occur in the Dry Range and adjacent areas. Several significant sites in the Dry Range have been excavated and cultural components ranging in age from the Late Paleoindian Period through the Middle and Late Prehistoric Periods have been documented (Aaberg et al. 2007). A number of documented chert quarries occur in the Dry Range and adjacent areas and one of those quarries, the Camp Baker Chert Quarry (24ME467) is situated on public land within the analysis area. Some of the parcels contain relatively steep terrain, including parts of the cliff-forming Jefferson Dolomite where potentially occupied rockshelters could occur.

Pictographs and petroglyphs have been documented in rockshelters and on rock faces in the analysis area. This area generally falls within the Central Montana Rock Art Tradition, occupying a transitional zone between the Northwestern Plains Tradition and the Columbia Plateau Tradition. Within this zone there is a higher density of sites with finger line and hand images than is found in the rest of the state (Greer 1999).

The following table displays the acres of cultural resource inventory in the analysis area.

Acres Surveyed, by County

County	BLM	Other	Total
Cascade	640	20815	21455
Lewis & Clark	28770	28575	57345
Meagher	1086	10964	12050
Pondera	311	4188	4499
Teton	576	22729	23305
TOTALS	31383	87271	118654

Lewis and Clark County has numbers significantly higher than the other counties. Larger blocks of land associated with timber

sales, land exchanges, and proactive inventory have been identified in this county.

The following table shows the breakdown of those sites on BLM lands and their eligibility for inclusion on the National Register of Historic Places.

National Register Status of BLM Sites

	E	I	U	TOTAL
Historic	1	4	10	15
Prehistoric	4	5	41	50
TOTAL	5	9	51	65

E=Eligible, I=Ineligible, U=Unevaluated

The prehistoric sites within the planning area include areas of lithic scatter, camp sites, fire hearths/roasting pits, quarries, rock art, rock cairns and alignments, and stone circles.

The historic sites relate to homesteading, early agriculture, irrigation, dumps, railroad, and transportation.

The majority of the sites have not had their eligibility evaluated. Until a determination is made sites are managed as if they were eligible.

3.10 Surface Water

The major watersheds within the planning area include: Teton, Sun, Dearborn, Missouri Cascade, Belt Creek, Smith, and Upper Musselshell. The BLM land ownership within the basins is small, consisting of less than 1 percent.

One particular issue shared amongst all the watersheds is low-flow alterations because of irrigation withdrawals. This effect is pronounced in all of the basins listed above and leads to problems with water temperature, sediment transport capability, total dissolved solids, and aquatic habitat.

Water quality problems are substantial east of the Rocky Mountain Front. Large irrigation withdrawals and subsequent return flows have created water quantity problems as well as issues with nitrogen, phosphorous, salinity, sulfates,

water temperature, total dissolved solids, and erosion problems (sedimentation/siltation).

The BLM lands in the planning area are located primarily within the upper reaches of these watersheds and are having minimal effect on the large water quantity/quality issues. Therefore, the following discussion is directed towards water quality impaired streams where BLM is a significant land owner or where BLM lands may be contributing to the impairment of a stream based on the likely sources or causes.

The BLM uses a combination of Montana Department of Environmental Quality (MDEQ) and internal information in making the water quality standard determination on grazing allotments. If MDEQ has determined that a waterbody is meeting water quality standards, the waterbody would also meet BLM standards. If the state determination concedes water quality does not meet standards or there is no determination for the waterbody in question, which is often the case, BLM collects information to determine if BLM lands are contributing to impairment based upon likely sources/causes. If conditions are declining, the BLM standard would not be met, and BLM would take action to improve water quality.

In Cascade County, 10 allotments were evaluated for water quality conditions. Three were not meeting, and BLM lands may be contributing to impairment based upon likely sources/causes. The Missouri River from Sheep Creek to the Sun River is water quality impaired because of sedimentation/siltation. One allotment on the Missouri River displayed large percentages of altered streambanks and disturbance increaser plant species, which could be contributing to impairment. On the other two allotments not meeting water quality standards, degraded riparian conditions on Wegner Creek and South Canal Ditch were attributed to declining conditions.

Seven allotments were evaluated for water quality conditions in Teton County, and all seven are meeting standards. Muddy Creek, Sun River and Teton River are water quality impaired streams. The causes and sources on

these streams are numerous, but they do include alteration in stream-side or littoral vegetative covers and sedimentation. The BLM lands were evaluated on the Sun River, Green Timber Gulch, North and South Forks of Battle Creek and Deep Creek, Edwards Creek, North Fork of the Teton River, and Blindhorse Creek. Riparian and upland conditions in these areas are meeting standards, are at least functioning, and in many cases exhibit late-seral or potential natural community. It is unlikely that BLM lands are likely contributors of the sources and causes of impairment on these waterbodies. North Fork of the Teton River is fully supporting designated beneficial uses.

In Lewis and Clark County, the Middle Fork of the Dearborn, the Missouri River (Little Prickly Pear Creek to Sheep Creek and Sheep Creek to the Sun River), and Sun River are water quality impaired streams with adjacent BLM lands or BLM lands within the watershed. South Fork of Stickney Creek is fully supporting designated beneficial uses. Seven of eight allotments evaluated for sources of impairment on streams were meeting standards. One allotment was not because of livestock grazing. Degraded riparian conditions on Bedrock Creek were attributed to declining conditions on that stream although there is no state determination for the waterbody in question.

Listed streams in Meagher County where BLM land is significant or borders the water body include Elk Creek and North Fork of the Musselshell River. North Fork of the Smith River is fully supporting designated beneficial uses. Livestock grazing is listed as a probable source of phosphorus, sedimentation/siltation, total Kjeldahl Nitrogen (Elk Creek), and chlorophyll-a (North Fork of the Musselshell River). The BLM lands on both of these streams were evaluated, and upland and riparian areas were properly functioning. This implies that grazing best management practices (BMPs) are being followed, and non-point source pollution is being at least partially mitigated by buffers that trap and filter sediment and decrease the amount of fecal coliform and nitrates entering the waterbody. Out of nine allotments in Meagher County, seven were meeting the water

quality standard and two were not because of livestock grazing. Riparian conditions on Mud Creek and an unnamed tributary of South Fork of the Musselshell River were in declining or static conditions and did not meet the BLM water quality standard.

Birch Creek, from Swift Dam to Blacktail Creek, was listed in water quality category 3, which means that there were insufficient data to assess any use. From Blacktail Creek to the mouth of the Two Medicine River, Birch Creek is impaired because of low flow alterations and nitrate/nitrite from irrigated crop production. Activities on BLM land are not likely contributing to impairment based on likely sources or causes. As mentioned in the riparian section, the reach of Birch Creek through the BLM lands is ecologically and physically altered because of the Swift Dam failure and reconstruction. It is unlikely that beneficial uses such as cold-water fisheries and aquatic life are supported to their full extent. However, activities on the BLM land are unlikely causal of these issues.

A majority of the planning area is located within Teton, Sun, and Dearborn subbasins, which have approved total maximum daily loads (TMDL) or watershed plans. The Missouri-Cascade and Belt subbasins have TMDLs in progress. There is no significant TMDL activity in the Cut Bank-Two Medicine, Missouri-Choteau, or Smith River subbasins. Prior to the adoption of a water quality restoration/TMDL plan, the BLM, through a memorandum of understanding (MOU) with MDEQ, agrees to use “reasonable land, soil and water conservation practices” to prevent harm to public health, recreation, safety, welfare, livestock, wild animals, birds, fish, or other wildlife.

3.11 Soils

Soils within the eastern portion of the planning area are developed primarily from sedimentary rock (shales, siltstone, and sandstone) of Lower and Upper Cretaceous Age, and from lesser amounts of slope and recent alluvium. Soil patterns are complex and vary in physical and

chemical properties, productivity, and erodibility. Soluble salts and sodium are present in most soils of the area. Vegetation composition and production are affected where soils have high concentrations of salts.

Most of the gently sloping to steep uplands and escarpments are comprised of either clayey soils weathered from fissile shales or sandy soils weathered from sandstone. These sedimentary soils are usually vulnerable to degradation and highly erosive because of extreme physical properties such as high clay content, slow permeability, very high surface runoff, relatively shallow to moderate depth (less than 40 inches) to bedrock, droughty, and sparse vegetative ground cover. Active geologic erosion is observed on these landscapes. Erosion can be accelerated by surface disturbance, especially on steep and very steep slopes when the protective vegetative cover is removed.

Western portions of the planning area along the Rocky Mountain Front consist of a series of generally parallel north-south trending ridges and valleys. The ridges are mostly formed of limestone and the valleys are underlain by sandstone and shales.

Common ecological sites found in the western mountainous portions of the affected area include silty 13-19", shallow 20-24", shallow 11-14", and loamy 20-24". In the eastern portions of the planning area, common ecological sites include Silty 15-19" Shallow 15-19" silty-droughty 15-19" and stoney 15-19". Complete descriptions for the listed soil series and ecological sites for individual sites are available on the following internet sites:

<http://soils.usda.gov/technical/classification/osd/index.html> (soil series)

and

<http://efotg.nrcs.usda.gov/treemenuFS.aspx?Fips=30071&MenuName=menuMT.zip> (ecological sites).

Included in the series descriptions are taxonomy, horizon descriptions, characteristic vegetation and other pertinent information.

3.12 Air Quality

Air quality in the Great Falls planning area is generally considered good to excellent most of the year and meets air quality standards set forth by the National Clean Air Act (U.S. Congress, 1967, amended 1972, 1977). The planning area lacks major pollutant sources and much of the area receives prevailing winds originating in Class I airsheds over Glacier National Park and the Bob Marshall Wilderness. Lands within the planning area are in a Class II airshed as designated by the 1977 Clean Air Act.

A planning and management process, "Prevention of Significant Deterioration" (PSD), was introduced as part of the 1977 Amendment to the Clean Air Act. These PSD requirements set limits for increases in ambient pollution levels and established a system for preconstruction review of new, major pollution sources. Three PSD classes have been established. Class I allows very small increases in pollution; Class II allows somewhat larger increases; and Class III allows the air quality to deteriorate considerably. In general, Class I is designed for pristine areas where almost any deterioration would be significant. Class II allows for moderate, well-controlled growth and Class III allows pollutant levels to increase considerably.

The high and low pressure weather systems that move through central MT strongly influence local climates and occasionally affect air quality within the planning area. These weather patterns may affect the air quality by moving suspended pollutants into the local airshed. During the summer and winter months, atmospheric conditions tend to be more stable, reducing particulate dispersal which may negatively affect air quality. Spring and fall typically have atmospheric conditions that favor smoke/particulate dispersal.

Major air pollutants include dust generated by naturally dry, windy conditions, smoke from wildland fires, and smoke and dust created by agricultural operations. Minor pollutants could include farm machinery exhaust, crop harvest

dust, recreational vehicle and equipment exhaust, and road maintenance operations.

Topography within the watershed consists of flat to rolling uplands and mountains broken with steep canyons. Inversions may develop and trap suspended particulate matter for longer durations within these drainages.

3.13 Climate

The climate in the affected area is a modified continental type which is affected by invasions of Pacific Ocean air masses, drainage of cool air into the valleys from mountain slopes and deflections of storms to the south or east by the mountains. The planning area is mostly within the “Chinook Belt” where warm, dry winds drop down from the continental divide and can raise temperatures twenty to thirty degrees in several hours.

Regional analysis of trends in western Montana temperatures indicates a rise in extreme temperatures and seasonal averages. (Pederson et.al. 2009) These factors are likely to result in an overall increase in drought stress of vegetative communities, less snowpack with earlier snowmelt and longer growing seasons (Running 2010).

The Montana Greenhouse Gas Inventory and Reference Case Projections Report (2007) developed by the Center for Climate Strategies, in conjunction with the Montana Department of Environmental Quality, estimates that on a per capita basis, Montanans emit about twice the national average of carbon dioxide equivalent. This is primarily due to intensive fossil fuel production, large agricultural industry, transportation distances and low population base. The principal sources of Montana’s greenhouse gas emissions are electricity use and agriculture, each accounting for about 27% of Montana’s gross greenhouse gas emissions. Livestock grazing accounts for approximately 9% of gross greenhouse gas emissions. Gross consumption-based carbon dioxide equivalent emissions in Montana for 2005 were equal to 0.6% of total U.S. gross greenhouse gas emissions. This represents an increase of 14% in

Montana which is similar to the national average from 1990 to 2005. Projected agricultural emissions through 2020 are anticipated to remain stable relative to projected increases in other areas.

3.14 Economics/Sociology

The planning area consists of numerous parcels of public land situated within Meagher, Cascade, Lewis and Clark, Pondera and Teton counties in west-central Montana. The broad geographic spectrum of the planning area includes demographics ranging from heavily urbanized population centers surrounding the city of Great Falls to sparsely populated counties such as Meagher County. In urbanized areas, agriculture and related industries account for a small portion of employment while agriculture and agricultural processing including small grain and cattle production is the major producing segment of the rural portions of the planning area where the majority of the affected environments are located. Many farm/ranches are controlled by individuals, families and partnerships; some are under corporate, cooperative or trust control. Crops grown on non-federal lands typically include wheat, barley, and hay. In recent years, there have been increases in spring and winter wheat production with overall decreases in barley, oats, hay, haylage and grass silage. Alternative crops such as oilseeds, legumes, and medicinal herbs, as well as certified organic pork and beef have increased.

Forage derived from BLM lands contributes to the area’s overall livestock receipts. Many of these ranches have grazing leases on state lands that are intermingled with private and public land. Depending on the percentage of public land contained within a particular allotment, the amount of forage BLM land contributes to an individual producers’ operation varies significantly.

The BLM land allocated for livestock grazing comprises 48,361 acres within the planning area. This acreage constitutes less than 1 percent of the total land acreage within the planning unit. There are 92 lessees that are authorized to graze

livestock on public land administered by the BLM. All of the lessees have cattle operations and many lessees have farm operations in conjunction with livestock production. A total of 5602 AUMs are permitted in 100 allotments.

Recreational opportunities and associated services rely on resources values provided by BLM, state and other federal lands occurring in the area. Receipts from recreation and secondary services are also major contributors to the overall economy in the region.

Rural portions of the planning area, encompassing Meagher, Pondera and Teton Counties have undergone declines in population while Great Falls and Helena have seen significant increases. This is likely due, in part, to age demographics and an overall decline in agricultural employment. Other issues currently affecting many of these farm/ranches include increasing recreation pressures, increasing land values, and an influx of absentee and/or corporate ownership.

3.15 Special Management Areas

The planning area contains four Outstanding Natural Areas (ONAs) located approximately 20 miles west of Choteau, Montana. The ONAs adjoin the eastern edge of the Lewis and Clark National Forest near the Bob Marshall Wilderness. The designated areas include:

- 1) Blind Horse: 4,927 acres
- 2) Ear Mountain: 1,869 acres
- 3) Chute Mountain: 3,205 acres
- 4) Deep Creek/Battle Creek: 3,086 acres

The ONAs are characterized by massive limestone formations rising precipitously from the prairie below. Steep, rocky cliffs are intersected by narrow, deep canyons with numerous perennial and ephemeral streams and springs. Talus slopes, open meadows, riparian zones and shrub-grasslands are interspersed with dense conifer forests, krummholz formations and aspen groves. The Headwaters Resource Management Plan establishes these areas be managed to: “protect the wildlife habitat,

scenery and other surface resources from disturbance..” and to ensure that the ONAs be “managed essentially as wilderness.” (Alternative A, Preferred, p.iii, final Headwaters RMP Environmental Impact Statement)

Livestock grazing and administration of ONAs is restricted to specific classes of livestock, seasons of use, forage consumption and limitations of range improvement projects, and access to maintain existing developments.

Chapter 4 Environmental Effects

This chapter is the scientific and analytic basis for the comparison of the alternatives outlined in Chapter 2. The potential environmental impacts of each alternative in relation to the issues and concerns identified in Chapter 1 are described.

The information in this chapter is organized into the following headings:

- 4.1 No Action Alternative: Continuation of Current Management
 - 4.1.1 Rangelands/Livestock Grazing
 - 4.1.2 Upland Range Health
 - 4.1.3 Riparian Health
 - 4.1.4 Noxious Weeds
 - 4.1.5 Recreation/Visual Resource Management
 - 4.1.6 Wildlife
 - 4.1.7 Fire Management
 - 4.1.8 Cultural Resources
 - 4.1.9 Surface Water
 - 4.1.10 Soils
 - 4.1.11 Air Quality
 - 4.1.12 Climate
 - 4.1.13 Economics/Sociology
 - 4.1.14 Special Designation Areas
- 4.2 Proposed Action Alternative
 - 4.2.1 Rangelands/Livestock Grazing
 - 4.2.2 Upland Range Health
 - 4.2.3 Riparian Health
 - 4.2.4 Noxious Weeds
 - 4.2.5 Recreation/Visual Resource Management
 - 4.2.6 Wildlife
 - 4.2.7 Fire Management
 - 4.2.8 Cultural Resources
 - 4.2.9 Surface Water
 - 4.2.10 Soils
 - 4.2.11 Air Quality
 - 4.2.12 Climate
 - 4.2.13 Economics/Sociology
 - 4.2.14 Special Designation Areas
 - 4.2.15 Cumulative Impacts

The following critical elements of the human environment were considered but not analyzed. These elements would not be affected by the

proposed action or current management and will not be discussed further.

- Environmental Justice
- Farmlands (Prime or Unique)
- Wastes (Hazardous/Solid)
- National Energy Policy (Executive Order 13212)
- Wild & Scenic Rivers (none present in the planning area)

4.1 No Action Alternative: Continuation of Current Management

This section discusses the impacts of renewing grazing leases with current terms and conditions and no management changes to environmental elements in the planning area.

4.1.1 Rangelands/Livestock Grazing

Implementation of the No Action Alternative would not impact livestock grazing because no changes to current operations would be proposed. Impacts to rangeland resources will be discussed below in the upland and riparian health sections.

4.1.2 Upland Range Health

Under current grazing management, upland sites that are meeting standards would slowly improve or remain stable (Appendices E and F). All available information indicates a maintenance of rangeland health or slight to strongly upward trend on upland sites meeting standards.

Upland sites not meeting standards as a result of livestock grazing would continue to decline in productivity and upland health. Without periodic rest or deferment from grazing during the growing season, perennial grasses in these degraded areas would continue to have low vigor and density with limited reproduction of desirable grasses occurring. Annual plants and non-native, shallow-rooted perennial grasses would continue to dominate, and likely increase,

especially in times of drought.

Under current management, some allotments are not meeting the upland standard due to:

- Poor livestock distribution
- Lack of grazing rotation schedule
- Continual season-long grazing
- Large acreages of nonnative species

Plants on these allotments are not vigorous and lack sufficient root reserves and root mass to adequately cope with drought. These allotments are at high risk of continued deterioration and may eventually lose existing plant diversity, topsoil, productivity, and ability for recovery.

There are no known impacts to BLM sensitive plant species.

4.1.3 Riparian Health

Under current grazing management, riparian sites that are meeting standards (Appendix G) would improve or remain stable. All available information indicates a static or upward trend on riparian sites meeting standards.

Riparian sites not meeting standards as a result of livestock grazing (Appendices E and G) would remain static or continue in a downward trend since no changes in livestock grazing would occur. Without periodic rest from grazing during the growing season, perennial grasses, forbs and woody species in these degraded areas would continue to have low vigor and density with limited reproduction. Riparian plant community succession and streambank stabilization would be interrupted or impeded leading to degradation and potential loss of functioning riparian areas.

4.1.4 Noxious Weeds

Under current management, noxious weed control within the planning area is somewhat inconsistent. Some lessees have signed cooperative weed control agreements and are actively involved in weed control on their allotments; others have no agreements and are

not involved in weed control. The present level of weed control could lead to an increase in noxious weeds in the planning area, especially on grazing allotments lacking cooperative weed control agreements. The No Action Alternative would not require noxious weed control cooperative agreements as a term and condition of the grazing lease.

4.1.5 Recreation/Visual Resource Management

No impacts to recreation would occur under this alternative.

No impacts (direct or cumulative) would occur to visual resources under this alternative.

4.1.6 Wildlife

Under current management, the riparian health, upland health and noxious weed infestation issues that have been identified would not be improved. Upland sites not meeting standards, as a result of livestock grazing, would continue to decline in productivity and upland health. Browse availability for big game species would continue to deteriorate. Forage and cover for birds and other small mammals would also decline. Over time, the reduction in wildlife forage and increased levels of invasive species and noxious weeds would cause a cumulative loss in the value of these isolated unhealthy areas as wildlife habitat.

Improvement of non-functioning riparian areas would not occur and the trends would remain static or continue to degrade. Unhealthy riparian areas would create a negative impact to most wildlife species. Vegetative diversity and structure that are associated with healthy riparian areas would not be available for cover, foraging and nesting areas for many species.

Most proper functioning riparian systems should continue to regenerate woody browse species and provide quality habitat for a wide variety of wildlife species. Healthy riparian vegetative

communities with diverse herbaceous understory would continue to be a benefit to neotropical birds.

Noxious weeds would continue to spread because the present weed control program has not kept pace with infestation growth. The diversity of native plant species, particularly along the smaller riparian systems, would eventually decline to the point that the habitat would be of minimal value for cover and forage to wildlife.

4.1.7 Fire Management

Regardless of the alternative chosen, wildland fire suppression would be in accordance with the Fire/Fuels Management Plan Environmental Assessment/Plan Amendment for Montana and the Dakotas (September 2003), and the Central Montana Fire Zone, Lewistown Field Office (LFO), Fire Management Plan (September 2004). Prescriptive fire proposals would be evaluated separately.

4.1.8 Cultural Resources

Under current management, cultural sites would remain static to slightly deteriorating. Direct impacts to specific sites from BLM approved actions would be reduced or eliminated where possible. Visual impacts to cultural resources from BLM actions would be mitigated or eliminated where setting contributes to significance. Less specific impacts such as the gradual loss or deterioration through erosion or weathering would continue. Loss and damage would also continue to occur as a result of unauthorized and unlawful collection and/or vandalism.

Significant cultural sites would be identified for stabilization or mitigation of deterioration as time and funding allow.

4.1.9 Surface Water

Water quantity and quality affected by flow diversion, impoundments, and stream channel modifications would not change. Where

infiltration and evaporation rates are altered because of changes in plant cover, the time of concentration, water quality, and water storage within the planning area would remain altered from natural levels.

This alternative would not address the water quality impaired streams within the planning area or comply with the TMDL process, Clean Water Act, or the memorandum of understanding with MDEQ since no improvements would be made to upland or riparian vegetation. Those public lands in the planning area that are in less than Proper Functioning Condition would continue to possibly contribute pollutants such as sediment, nitrates, fecal coliform, and warmer water to streams.

4.1.10 Soils

This alternative would generate the highest level of soil loss from wind and water erosion. In some cases, accelerated erosion is occurring on allotments not meeting the upland standard. If no management changes are made, soils in these allotments would continue to lack sufficient ground cover and root density to resist erosion and would continue to erode at levels higher than expected for the site. Infiltration of precipitation into soils of these sites would be reduced by soil compaction, lack of plant and ground cover to intercept overland flow and lack of organic matter near the soil surface. Accelerated erosion would not occur on allotments that are meeting the upland standard as plant cover and type on these allotments would remain adequate to resist erosion.

4.1.11 Air Quality

Continuation of current management would not impact air quality.

4.1.12 Climate

Selection of the No Action Alternative would not affect climate since no changes to the existing condition would be proposed.

4.1.13 Economics/Sociology

Continuation of current management could create negative economic impacts to lessees with allotments not meeting health standards and in a downward trend. Continued degradation of public rangelands would result in decreased production which would eventually lead to lower carrying capacities, reduced livestock numbers and decreased resistance to drought. Allotments meeting health standards would not be impacted by this alternative.

Under current management there would be no immediate impacts to lessees or the local communities in the planning area.

4.1.14 Special Designation Areas

The No Action Alternative would not impact special designation areas, specifically Outstanding Natural Areas directly or cumulatively since allotments in those areas are considered to be in conformance with standards and guidelines for rangeland health and no changes are proposed. Livestock grazing in those areas would continue to be in conformance with the Final Rocky Mountain Front Outstanding Natural Area Activity Plan/Environmental Assessment (March 1989).

4.2 Proposed Action Alternative

The 27 allotments listed in Table 4.1 have no administrative changes or proposed modifications to the lease.

<i>Allotment Name</i>	<i>Allotment No.</i>
Alkali Flat (East)	07615
Battle Creek	09814
Bird Creek (upper)	09812
Black Butte	09723
Castle Reef	07613
Crooked Creek	09688
Dog Creek	07825
Dry Beaver Creek	06294
Eagle Creek	09672
Ear Mountain Individual	09835
Elk Creek	09800
Florence Canal	07614
Freezeout West	06317
Hardy	06336

<i>Allotment Name</i>	<i>Allotment No.</i>
Hardy Creek	06334
Indian Creek	07617
Little Elk Creek	09708
Little Sulphur Creek	09732
Lower Flat Creek	06331
North Antelope Mountain	06338
Paul Creek	07618
River BLM	06325
Sand Coulee	09820
Sugarloaf	11186
Swift Dam	06321
Tunnel Lake	06312
West Birch Creek	06323

The following 22 allotments listed in Table 4.2 are also meeting (or making significant progress toward meeting) standards and guidelines for rangeland health or were determined to be not meeting due to a cause other than current livestock grazing. These allotments are undergoing a change of ranch management and associated preference transfer or base property lease renewal. Other than terms and conditions listed in the Rangeland Administration section located in Chapter 2.3.1 and the Noxious Weed section located in Chapter 2.3.4, there will be no modifications to the existing seasons, numbers, class of livestock, percent public land or type use. In the case of base property transfers, only the listed name of the lessee would change. In the case of base property lease renewals, only the term of the BLM grazing lease would be extended to coincide with the termination date of the new base property lease.

<i>Allotment Name</i>	<i>Allotment No.</i>
Alkali Flat (West)	06295
Bird Creek (Lower)	11190
Blackfeet Gulch	06329
Chicken Coulee	06303
Choteau Mountain	06304
Ford Coulee	07831
Gipsy Creek	09671
Holliday Land & Livestock	09735
Lower Spring Creek AMP	09673
Middle Fork Dearborn	07603
North Fork Musselshell	09674
Pishkin	06311
Pishkin Reservoir	06315
South Fork	06443
Spring Creek Pasture	09758
Tiger Butte	07832
Tintinger Slough	06337
Water Tank Smith River	09806
West Fork Hound Creek	09780
West Fork Mud Creek	09697

Willow Creek	07608
Willow Creek Pasture	06314

Twenty-four allotments listed below in Table 4.3 currently have a type use listed as active. These allotments would be changed from active type use to custodial type use. This change is administrative in nature and does not impact AUM's or mandatory terms and conditions. The term and condition associated with custodial allotments described in Chapter 2.3.1 would be incorporated into the following leases.

<i>Allotment Name</i>	<i>Allotment No.</i>
Battle Creek	06307
Bean Lake	07605
Belt Creek	09710
Black Coulee	06313
Blackfeet Gulch	06335
Cowtract	06306
Deer Creek	09728
Devil Canyon	09709
Gipsy Creek	09671
Hound	09747
Indian Head Rock	07659
Lower Sand Coulee	09836
Middle Creek	09704
Middle Fork	07604
Ming Coulee	09715
Monarch	09722
North Fork Musselshell	09674
North Fork Sheep Creek	09726
South Fork Sheep Creek	09655
Tiger Butte	07832
Tom's Gulch	07762
Waddel Lakes	06320
Water Tank Smith River	09806
Willow Creek	07608

Conversely, four allotments listed in Table 4.4 are currently designated as custodial allotments but have known pasture boundaries and forage calculations for lands within those pastures. Stocking rates have been established on these allotments. Type use would be changed from custodial to active. No other actions are proposed on these allotments that would affect mandatory terms and conditions of the leases.

<i>Allotment Name</i>	<i>Allotment No.</i>
Green Timber Gulch	06308
Salmond Ranch Company	06342
Smith Creek	09698
Willow Creek	07775

On the allotments listed in Tables 4.1, 4.2, 4.3 and 4.4, there are no changes in the proposed

action for individual allotments that would result in impacts to upland/riparian health, noxious weeds, livestock grazing/rangelands, recreation/VRM, wildlife, fire management, cultural resources, surface/groundwater, soils, air quality, economics/sociology or ACECs.

These allotments are either 1) in conformance with standards and guidelines for rangeland health; 2) making significant progress toward achieving standards and guidelines for rangeland health; or 3) not in compliance with standards and guidelines for rangeland health due to reasons other than current livestock management practices.

There have been no impacts which would occur from renewing grazing leases with the existing mandatory terms and conditions when current livestock grazing is in conformance with standards and guidelines for rangeland health.

The remaining 31 allotments listed in Table 4.5 below have changes proposed that may result in impacts to resources within the planning area. These impacts may include ground disturbance or wildlife displacement due to the construction of range improvement projects or impacts to vegetation and other resources due to a change in seasons of use and/or numbers of livestock. Impacts will be analyzed by issue for these allotments.

<i>Allotment Name</i>	<i>Allotment No.</i>
Bedrock Creek	06347
Berg Lease	07601
Big Eddy	06332
Black Canyon	09849
Black Reef	07609
Calvert	01166
Cottonwood Creek	07716
Coyote Creek	09663
Choteau Mountain	06304
Daisy Dean Creek	09675
Deep Creek	06310
Divide Creek	19660
Dry Hills	09743
East Birch Creek	06322
East Farmer's Reservoir	06316
East Loco Creek	07611
Homesite	06324
Lower Spring Creek AMP	09673
Rhynard Individual	09801
River Tract	09691
Roost Hill	07607

Ryan Coulee	06330
Simms Creek	06328
Sixteen	09690
South Canal Ditch	06326
Sun River Ditch	06327
The Flat	06319
Upper Pasture	02558
Willow Creek	07775
Willow Creek Canal	07612
Windy Hollow	09818

4.2.1 Rangelands/Livestock Grazing

The proposed action would improve conditions on allotments not meeting standards through various types of rotational grazing systems or limited seasons of use. Water developments, additional fencing, salting, mineral placement, and changes in season of use would better distribute livestock and improve overall rangeland conditions. If monitoring indicates significant progress toward meeting standards is not occurring, management adjustments or corrective actions would be initiated as described in the Management Common to All Allotments section found in Chapter 2.3.9.

The proposed action would have no impacts on livestock grazing on the allotments listed in Tables 4.1, 4.2 and 4.3. Livestock grazing would continue as currently permitted. Changes on these allotments are administrative in nature and impacts are limited to continuation of current management which has been determined to be in conformance with standards for rangeland health and guidelines for livestock management. Proposed changes on these allotments would improve orderly management of the grazing program which would be beneficial to rangeland resources. Grazing allotments listed in Table 4.5 with proposed changes to the grazing season, livestock numbers, or percent public land may be impacted by the proposed action. Impacts would be limited to construction of range improvement projects, timing of grazing use and number of livestock.

Range improvement projects and lease modifications are designed to improve resource conditions which would facilitate significant progress toward meeting rangeland health standards or provide maintenance of conditions

on allotments where the standards are being met. Grazing allotments that meet rangeland health standards would have increased productivity, resistance to drought and improved flexibility which would positively benefit rangeland resources.

4.2.2 Upland Range Health

The upland health standard would continue to be met on allotments already in conformance with this standard (Appendix E). Trends on these allotments would remain static or improve. No range improvements are proposed on any of these allotments other than Black Canyon #09849. The development proposed on this allotment would not concentrate, or redistribute livestock in a way that would negatively impact upland range health.

The following allotments have proposed changes that could potentially impact upland health:

Bedrock Creek #06347

Spur fences would provide exclusion of livestock on approximately 15 to 20 acres of uplands occurring on this 40 acre parcel. The southwest and northeast portions of the parcel consist of approximately 20 acres which are largely ungrazeable due to closed canopy forests and steep shale slopes that do not support forage production. Approximately 5 to 10 acres of uplands on the south side of Bedrock Creek would still be available to livestock grazing. Due to the restriction of adjacent water sources, livestock concentration would be expected to be reduced in these areas, particularly if the “toe” of the enclosure is extended which would further reduce availability of easily accessible livestock watering along Bedrock Creek. The proposed action is expected to have overall positive impacts on upland health by allowing rest from livestock within the enclosure area and may provide modest improvements to upland health on other areas outside the enclosure by restricting easy access to water.

Berg Lease #07601

Construction of the drift fence in Section 24, as proposed, would provide significant reductions of livestock use on approximately 15 to 20 acres

of uplands on the 80-acre parcel. These lands occur along the southern boundary of the parcel in loafing areas where the upland health standard was not being met. The proposed action would have positive impacts to rangeland health in these areas. The northern half and eastern aspects of TV Hill are considered to be in conformance with the upland health standard and would not be significantly impacted by the proposed action.

Big Eddy #06332

This parcel consists of 120 acres that are fenced with 500-700 acres of deeded croplands. The proposed modification to the lease would authorize livestock grazing in August after the crop has been removed from private lands. This would not have a significant impact on upland health since the adjusted turnout date would still allow for a complete growth cycle of desirable forbs and bunchgrass species to occur. Livestock would still typically use the allotment through October and use levels would not be expected to change. Current and historical use levels have been within Lewistown guidelines and have been documented to be yielding achievement and maintenance of upland health standards.

Black Canyon #09849

Construction of a turkey guzzler in the NW1/4SE1/4NW1/4 of Section 2 for wildlife and occasional livestock use would not impact upland health. The development would not result in enough water yield to concentrate livestock or alter distribution patterns.

Black Reef #07609

Incorporation of a term and condition specifying the grazing system would positively benefit upland health. Allowing for deferment and rest of pastures would continue to improve the capability of plants to accumulate root mass, carbohydrate reserves and achieve seed set which will provide for maintenance of upland health standards and achievement of rangeland objectives.

Calvert #01166

The season of use would be modified from 6/1-11/01 to 7/1-10/15. Using tame pastures for early season use would allow for deferring

grazing in the growing season which would have positive impacts on upland health by allowing for plant reproduction, restoration of existing plants, and establishment of new plants. Reduction in the fall season of use would have further benefits to upland health by increasing residual vegetation which promotes inputs of organic material and nutrient cycling, maintains soil structure and increases soil moisture and improves long-term productivity of the site.

Choteau Mountain #06304

Modification of the percent public land would not impact upland health because no changes in management are prescribed. Pasture boundaries and capacities of deeded lands are not known to the extent required to establish livestock numbers. Current management has resulted in maintenance of the late seral to PNC upland conditions within the allotment.

Cottonwood Creek #07716

Incorporation of a term and condition specifying the grazing system would positively benefit upland health. Allowing for deferment of pastures would continue to improve the capability of plants to accumulate root mass, carbohydrate reserves and achieve seed set which would provide for maintenance of upland health standards and achievement of rangeland objectives.

Coyote Creek #09663

Including additional terms and conditions into the grazing lease specifying a three-pasture, deferred rotation system and associated salt block placement would positively benefit upland health. Allowing for deferment of pastures would improve the capability of plants to accumulate root mass, carbohydrate reserves and achieve seed set which would provide for maintenance of upland health standards and achievement of rangeland objectives. Removal of salt blocks and other nutritional supplements from BLM lands would reduce livestock concentrations on areas considered not to be in

conformance with standards for rangeland health and guidelines for livestock management.

Daisy Dean Creek #09675

Although the majority of uplands on this allotment are closed-canopy lodgepole pine forest, which does not provide understory forage growth, the proposed action would have positive impacts to accessible uplands immediately adjacent to Mud Creek by reducing livestock numbers from previous levels, restricting livestock trespass and horse use, and implementing a five-pasture deferred rotation grazing system. Incorporation of a term and condition specifying the grazing system would positively benefit upland health. Allowing for deferment of pastures would improve the capability of plants to accumulate root mass, carbohydrate reserves and achieve seed set which would provide for maintenance of upland health standards and achievement of rangeland objectives. If required, construction of the proposed fence would provide similar benefits to upland resources by excluding livestock use from these areas. Resting a portion of the pasture for a period of time would increase litter, residual forage and provide benefits to nutrient cycling, soil structure and improve the water holding capabilities of the site.

Deep Creek #06310

Modification to the number of livestock in the Willow Creek Pasture portion of the grazing lease would not impact upland health because no changes in management are prescribed. Historical changes in land tenureship have dissolved the Saypo/BLM Allotment Management Plan (1990) which regulated carrying capacities. Removal of the Ear Mountain Pasture from the Allotment Management Plan resulted in a change in the seasons and numbers used within the Deep Creek Allotment. No updated information is available. Pasture boundaries and capacities of deeded lands are not known to the extent required to establish livestock numbers.

Divide Creek #19660

Including an additional term and condition specifying a rest-rotation grazing system would positively benefit upland health. Allowing for deferment and rest of pastures would improve the capability of plants to accumulate root mass, carbohydrate reserves and achieve seed set which would provide for maintenance of upland

health standards and achievement of rangeland health objectives. Since changing the class of livestock to include sheep would authorize an existing use, no additional impacts would be expected. Periodic, controlled use of sheep has maintained uplands in late seral to PNC and provided control of spotted knapweed and prevented further expansion of this species. The term and condition would limit sheep use to periodic grazing focused on noxious weed control.

Dry Hills #09743

Implementation of a multiple-pasture deferred/rest rotational grazing system would positively benefit upland health. Allowing for deferment and rest of pastures would improve the capability of plants to accumulate root mass, carbohydrate reserves and achieve seed set which would provide for achievement of upland health standards and meet resource objectives. Early spring use of private lands that contain crested wheatgrass would delay turnout to pastures containing BLM lands which would allow for increased maturation of cool season, native species. Restriction of salt block placement would improve livestock distribution and concentrate livestock away from open areas where historical concentrations have typically occurred. The proposed pipeline would further improve livestock distribution and move stock away from areas that aren't in conformance with rangeland health standards. Changes in distribution patterns would not negatively impact areas that are previously unwatered, since the project would be accompanied by implementation of the proposed grazing system. However, negative impacts to upland vegetation affecting less than five acres immediately adjacent to the tank site would be expected.

East Birch Creek #06322

Restoration of portions of an agricultural field would have positive impacts on upland health by allowing native vegetation to be re-established on the site which would be representative of the natural vegetative community expected for the area. Removal of an unauthorized hay structure would also have positive impacts to upland health by reducing vehicular travel on the site which damages vegetation and creates areas of

bare ground which are typically colonized by noxious weeds or annual invasive grasses and forbs. Proximity of hay yards is also a potential source for non-native seed introduction.

East Farmer's Reservoir #06316

Modification of the grazing lease to facilitate multiple pastures being used in a controlled grazing system in conjunction with state and deeded pastures would allow for the BLM parcel to receive various seasons of treatment, rest, deferment and duration of use. This grazing system would continue to positively benefit upland health by improving the capability of plants to accumulate root mass, carbohydrate reserves and achieve seed set which would provide for maintenance of upland health standards and achievement of rangeland health objectives.

East Loco Creek #07611

Incorporation of a term and condition specifying the grazing system would positively benefit upland health by providing consistent management between agencies by allowing for deferment of pastures would improve the capability of plants to accumulate root mass, carbohydrate reserves and achieve seed set which would provide for maintenance of upland health standards and achievement of rangeland objectives.

Homesite #06324

Modification of the lease restricting use of horses in the River Pasture would provide deferment during the growing season which would improve the capability of plants to accumulate root mass, carbohydrate reserves and achieve seed set which would provide for achievement of upland health standards and meet rangeland objectives. Incorporation of a term and condition into the grazing lease would limit utilization in the event of drought or other events which may decrease annual production on the site.

Lower Spring Creek AMP # 09673

Incorporation of a term and condition specifying the grazing system would positively benefit upland health. Allowing for deferment of pastures would continue to improve the

capability of plants to accumulate root mass, carbohydrate reserves and achieve seed set which would provide for maintenance of upland health standards and achievement of rangeland objectives.

Rhynard Individual #09801

Reduction of the permitted use associated with the western portion of the allotment would not significantly impact upland health. However, the proposed action would provide an accurate account of carrying capacity which would allow for improved administration of the allotment. Increased efforts to control spotted knapweed would improve upland health by reducing competition and limiting expansion of noxious weeds.

River Tract #09691

The proposed action specifying rest of the pasture would have positive effects on upland health of the allotment by improving the capability of plants to accumulate root mass, carbohydrate reserves and achieve seed set. Rest would increase residual forage and terminal leader growth of shrubs which would promote inputs of organic material and nutrient cycling, maintain soil structure, increase soil moisture and long-term productivity of the site.

Modification of the grazing lease would allow for long-term, hot season deferment of the pasture which would maintain gains initiated by rest while providing a mechanism for removal of non-native grasses and weed species which could eventually lead to declines in productivity, particularly among native plants.

Roost Hill #07607

Increasing the permitted use associated with the allocated portion of the allotment would not significantly impact upland health. The proposed action would provide an accurate account of carrying capacity occurring on the BLM which would allow for improved administration of the allotment. The BLM lands are intermixed with adjacent private and Forest Service lands. Pasture boundaries and associated forage calculations for non-BLM lands are not known. Therefore, a carrying capacity for pastures containing BLM has not been established.

Increase of permitted use would not be directly related to forage consumption on BLM lands which would result in no impacts to upland health. Standards for rangeland health and guidelines for livestock management would continue to be met.

Incorporation of a term and condition specifying the grazing system would positively benefit upland health. Allowing for a variable season, rest-rotation would continue to improve the capability of plants to accumulate root mass, carbohydrate reserves and achieve seed set which would provide for maintenance of upland health standards and achievement of rangeland objectives.

Ryan Coulee #06330

This parcel consists of 251 acres of BLM that are fenced with deeded croplands. The proposed modification to the lease would authorize livestock grazing during a later season to coincide with grazing of residual crops on private lands. This would not have a significant impact on upland health since an adjusted turnout date would still allow for a complete growth cycle of desirable forbs and bunchgrass species to occur. Livestock would still typically use the allotment during the core months of December and January. Use levels would not be expected to change. Current and historical use levels have been within Lewistown guidelines and have been documented to be yielding achievement and maintenance of upland health standards.

Simms Creek #06328

Changing the season of use from 12/15-4/15 to 8/1-10/31 would not have a significant impact to upland health since the cross-fence located on the boundary of Sections 19 and 20 extending southward into Section 29 is not functional. This has resulted in season-long grazing in conjunction with adjacent, deeded pastures. Repair of the fence would improve management and allow for a season of use to be established. Mandatory terms and conditions would require modification since there is no water availability in the winter for this pasture. Direct impacts of the proposed action would implement a deferred season of use until fall which would allow for a

complete growth cycle of desirable forbs and bunchgrass species to occur. This would result in significant progress toward achievement of upland health standards and rangeland objectives.

Sixteen #09690

Modification of the mandatory terms and conditions would allow for a three-pasture, deferred rotation system to be used, in conjunction with the Wall Mountain and Sixteenmile Creek Pastures. The expanded season would be required to accommodate alternating spring and fall use of the pasture containing the BLM parcel. Incorporation of a term and condition specifying this grazing system would positively benefit upland health. Allowing for a three pasture, deferred-rotation would continue to improve the capability of plants to accumulate root mass, carbohydrate reserves and achieve seed set which would provide for significant progress to be made toward achieving upland health standards and rangeland objectives. Maintenance of the fence would eliminate trespass use from adjacent landowners which would have positive benefits to upland health by reducing an additional source of livestock use.

These measures would provide interim conformance with provisions of standards for rangeland health and guidelines for livestock management. Disposal, potentially through direct sale, would eliminate the requirements of subpart 4180 since these lands would no longer be regulated as federal lands. Actual resource conditions would not be affected because the parcel represents a small percentage of the overall ranch property. Ownership of this parcel would not affect livestock management. Further cultural and wildlife inventories, realty appraisals and additional planning may be required prior to changes in land tenure.

South Canal Ditch #06326

Modification of the mandatory and additional terms and conditions of the grazing lease would have positive effects on upland health by implementing rest and deferment of the pasture containing BLM lands. Deferment would improve the capability of plants to accumulate

root mass, carbohydrate reserves and achieve seed set. Rest would increase residual forage and terminal leader growth of shrubs which would promote inputs of organic material and nutrient cycling, maintain soil structure and increase soil moisture and improve long-term productivity of the site.

Modification of the grazing lease would allow for long-term, hot season deferment of the pasture which would maintain gains initiated by rest while providing a mechanism for removal of non-native grasses and weed species which could eventually lead to declines in productivity, particularly among native plants.

While these modifications would lead to significant progress towards achievement of standards for rangeland health, implementation of the proposed water gap would further facilitate the opportunity for integrated management of riparian/upland habitats occurring on the BLM parcel, in conjunction with other pastures containing Bureau of Reclamation lands.

Sun River Ditch #06327

Restoration of 23 acres of an agricultural field would have a positive impact on upland health by allowing native vegetation to be re-established on the site which would be representative of the natural vegetative community expected for the area.

The Flat #06319

Modification of the mandatory terms and conditions of the grazing lease would implement a carrying capacity representative of forage conditions currently existing on the allotment. Deferring early and mid-season use would allow plants to complete a full growth cycle and achieve seed set.

While these modifications would lead to improvement of upland health, implementation of the proposed fence, if required, would further facilitate the opportunity for integrated management of the BLM parcel, in conjunction with adjacent state and private lands.

Upper Pasture #02558

Changing the class of livestock to include horses would authorize an existing, historical use which was determined to be in conformance with standards for rangeland health and guidelines for livestock management. Maintenance of a desirable, bunchgrass community in PNC would be expected to continue.

Willow Creek #07775

Including a term and condition into the grazing lease specifying a three-pasture, deferred rotation system would positively benefit upland health. Allowing for deferment of pastures by using private, non-native pastures in the spring and allowing native species to complete growth would improve the capability of plants to accumulate root mass, carbohydrate reserves and achieve seed set which would provide for maintenance of upland health standards and achievement of rangeland objectives. Removal of livestock prior to fall would allow accumulation of residual forage which would increase residual forage and terminal leader growth of shrubs which would promote inputs of organic material and nutrient cycling, maintain soil structure and increase soil moisture and improve long-term productivity of the site.

Willow Creek Canal #07612

Modification of the mandatory terms and conditions of the grazing lease would implement a carrying capacity that accurately represents forage conditions that occur on the allotment. Due to changes in land tenure, the previous lease contained mandatory terms and conditions based on incorrect public land percentages. The proposed action would have positive effects on upland health by providing an accurate account of the forage production occurring on BLM, state and private lands fenced within the allotment. The shift in grazing season would accommodate a grazing rotation system which would provide for maintenance of upland health standards and achievement of rangeland objectives.

Windy Hollow #09818

Construction of the proposed cross fence from Baldy to the NE1/4NE1/4 of Section 5 would facilitate implementation of a three-pasture,

deferred rotation grazing system that would include lands in Wegner and Stickney Creek being used in conjunction with the Cottonwood Creek Allotment #07716. Currently, there is some attempt at using these pastures as a three-pasture, deferred system, but since there is no cross-fence, livestock commonly breach the divide and re-enter Wegner Creek to access a perennial water source. Construction of the cross fence would prevent season-long access of any pasture which would have positive benefits to uplands by allowing growing season deferment of one pasture annually. Modification of the season of use would further accommodate implementation of this system.

Modification of the class of livestock from cattle to horses in the East Fork of Hound Creek would authorize an existing, historical use which was determined to be in conformance with the standards for rangeland health and guidelines for livestock management. Maintenance of a desirable, bunchgrass community in PNC would be expected to continue under this use.

The remaining parcels in the Windy Hollow Allotment occur within numerous pastures with intermixed deeded, state and federal lands. The BLM parcels located in the upper reaches of Spring, Pole and Tyrell Creeks along with those parcels located in the far west and southern portions of the allotment are managed under a short-duration, high-intensity grazing system. Modification to the season of use is required since any of these pastures may be scheduled for use anytime throughout the calendar year. This system was determined to be yielding maintenance of the standards for rangeland health. Maintenance of desirable rangeland conditions would be expected under continuation of this system. Incorporation of a term and condition specifying the grazing system would positively benefit upland health. Allowing for a variable season grazing system would continue to improve the capability of plants to accumulate root mass, carbohydrate reserves and achieve seed set which would provide for maintenance of upland health standards and achievement of rangeland objectives.

4.2.3 Riparian Health

Noxious weeds are a large component affecting riparian health. Development and implementation of weed cooperative agreements could potentially have a positive impact on the riparian health on all affected allotments. The proposed action would increase Integrated Pest Management (IPM) efforts within the riparian zone including biological control, selective, localized herbicide control and the possibility of sheep grazing. Weed control efforts would emphasize prevention of spread into the uplands and containment and control of existing weed populations within the riparian zone. A combination of these weed control methods would have a positive effect on riparian area health by reducing the existing noxious weed infestations.

The riparian health standard would continue to be met on allotments already in conformance with this standard (Appendix E). Trends on these allotments would remain static or improve. No range improvements are proposed on any of these allotments.

The following allotments have proposed changes that could potentially impact riparian health:

Bedrock Creek #06347

Two spur fences would prevent livestock grazing from occurring on a majority of the BLM portion of Bedrock Creek. Exclusion from livestock grazing would allow recovery of riparian trees, shrubs, and streamside vegetation. Increased vigor of riparian plant species would allow for the potential recovery of stream channel function with associated decreases in width/depth ratios and floodplain development. However, the portion of the BLM land may be too small to facilitate channel recovery as channel instability is widespread over a much larger area than just the BLM-managed lands.

Berg Lease #07601

Livestock would be excluded from their loafing areas in the bottom of an unnamed tributary of the South Fork of the Musselshell River by an electric fence. Improved vigor of riparian trees, shrubs, and streamside vegetation would be

expected. As vegetation improves, stream channel width/depth ratios would be anticipated to decrease.

Black Reef #07609

Grazing use would occur in a three-pasture, deferred, rest-rotation system between 5/15 and 9/30, which would be authorization of the existing use. Maintenance of lentic riparian function and riparian-wetland vegetation on the unnamed wetland would continue.

Daisy Dean Creek #09675

Under the proposed action, the allotment season of use would be changed from 3/1-2/28 to 6/1-12/31. Boundary fences would be reconstructed and grazing use would occur in a 5-pasture, deferred rotation grazing system. This would decrease the amount of time livestock spend in the riparian area on Mud Creek. Decreases in the utilization of willow species and red-osier dogwood and increases in the canopy cover of the fore mentioned species would be expected. Stream channel function would also improve with an associated improvement in streamside vegetation.

Divide Creek #19660

Grazing use would occur in a rest-rotation system, and sheep use would be authorized for up to 10 days in each pasture. This would facilitate noxious weed control and would be authorization of historic use. Maintenance of riparian condition on North Fork of the Musselshell River would continue.

East Loco Creek #07611

Alternating seasons of use between 7/01 to 8/06 and 8/07 to 9/15 would facilitate improvement in riparian conditions by decreasing the amount of time livestock spend in streamside zones. This would allow for decreased use levels on woody vegetation such as cottonwoods.

Homesite #06324

Season of use would be changed from yearlong to 7/1 to 8/31 in the River Pasture. This would facilitate improvements in the health, vigor, and recruitment of riparian vegetation. However, poor physical channel conditions associated with the Swift Dam failure would remain.

River Tract #09691

River Tract would be rested from livestock grazing in 2010 and 2011 to facilitate improvement in the vigor of riparian trees, shrubs, and streambank species. Following the rest, spring or fall use would be allowed. Although fall grazing would lead to the possibility of utilization on preferred riparian trees and shrubs, grazing use for limited amounts of time during cooler seasons would facilitate continued improvement in riparian condition.

Roost Hill #07607

Animal unit months would be increased from 1 to 14 and would be authorization of existing use and forage availability. Pastures would still be used in a variable season, rest-rotation grazing system. Cutrock Creek would be anticipated to remain in proper functioning condition or above.

Ryan Coulee #06330

Grazing use would be shifted from 11/10-2/12 to 12/1-2/28. Under current management, the condition rating of the spring within the allotment is proper functioning condition. The minor shift in season of use would be unlikely to affect conditions because both sets of dates fall within winter time grazing.

South Canal Ditch #06326

Under the proposed action, the BLM land would be rested in 2010/2011, thereby providing two years of rest. Following the rest, the BLM land would be rested every other year and deferred during the hot season. The health and vigor of riparian vegetation would be expected to improve. As the condition of the vegetation improves, riparian community types would have the opportunity to expand. As root masses stabilize the banks, sediment would be captured and a decrease in stream channel width/depth

ratios and percent fines in the channel would be expected.

Windy Hollow #09818

Construction of the proposed cross fence from Baldy to the NE1/4NE1/4 of Section 5 would facilitate implementation of a three-pasture deferred rotation grazing system that would

include lands in Wegner and Stickney Creek being used in conjunction with the Cottonwood Creek Allotment #7716. Currently, there is some attempt at using these pastures as a three-pasture deferred system, but since there is no cross-fence, livestock commonly breach the divide and re-enter Wegner Creek to access a perennial water source. Once back in Wegner Creek, even small numbers of livestock can prevent recovery of riparian vegetation and streambanks by remaining in the bottom. Implementation of the proposed action would facilitate the “clean-up” of pastures. Improvements in the health and vigor of riparian vegetation, decreases in Kentucky bluegrass, decreased utilization on trees and shrubs, and increased stream channel stability would be expected.

Modification of the class of livestock from cattle to horses in the East Fork of Hound Creek would authorize an existing, historical use which was determined to be in conformance with standards for rangeland health and guidelines for livestock management. The riparian condition on the East Fork of Hound Creek would be maintained in proper functioning condition or above.

4.2.4 Noxious Weeds

Implementation of the proposed action would initiate a comprehensive, cooperative weed control effort to systematically treat noxious weeds in the planning area. Priorities would be established utilizing the weed categories outlined in Chapter 3. Infested acres of noxious weeds would decrease through an aggressive, concentrated effort involving all facets of an integrated weed management program.

Wildfire could lead to a temporary increase in post-burn noxious weed infestations. Canada thistle and houndstongue are particularly

problematic noxious weeds following a fire event.

Variable conditions influencing noxious weeds include:

- burn severity
- survival of desired plants

- pre-burn noxious weed cover
- survival of weeds
- reproductive capability of noxious weed species
- pre-burn and post-burn soil moisture
- revegetation

Existing infestations of Priority 2b noxious weeds would be contained and suppressed utilizing herbicides and biological control. Biological control of leafy spurge has produced very favorable results within the watershed; continual monitoring, dissemination, and new releases of biocontrol agents in addition to continued herbicide control would perpetuate a steady downward trend in leafy spurge acreage. Assertive monitoring would assist in the prevention of new infestations of Priority 2b weeds through early detection and control.

Existing infestations of Priority 2a noxious weeds would be contained and suppressed or eradicated utilizing herbicides and biological control. Small, relatively new infestations would be eradicated with herbicides. Established, larger infestations of Category 2 weeds would be contained and suppressed with herbicides and applicable biocontrol agents. Assertive monitoring and public awareness/outreach would assist in the prevention of new infestations of Priority 2b weeds through early detection and eradication.

Priority 1b noxious weeds have not been detected in the watershed area or may be found only in small, scattered, localized infestations. Assertive monitoring and public awareness/outreach would assist in the prevention of new infestations of Priority 1b weeds through early detection and eradication.

4.2.5 Recreation/Visual Resource Management

Impacts to the visual resources under this alternative would include livestock developments such as stock tanks and fences. Livestock developments would be sited away from hilltops and ridges, preferably where vegetation or topography could screen the

structures. Stock tanks located in highly visible areas would be painted using approved BLM earth tone colors.

4.2.6 Wildlife

The proposed action would have no impacts to wildlife resources on the allotments listed in Tables 4.1, 4.2, 4.3 and 4.4. The majority of these allotments are meeting the biodiversity standard. Some are not meeting the biodiversity standard due to causes other than livestock. For instance, five allotments are not meeting due to the abundance of naturalized, invasive grasses associated with logging practices. Five are due to the presence of noxious weeds. One is caused by an agricultural trespass and one is due to historical grazing where the allotment is making significant progress towards meeting standards. In these specific allotments, the factors are either historical and/or beyond the control of the current livestock grazing lessees. No specific grazing management changes or range improvements are proposed to remedy issues not related to current livestock management.

There are no changes proposed for these allotments other than the addition of the terms and conditions listed in the Rangeland Administration section located in Chapter 2.3.1 and the Noxious Weed section located in Chapter 2.3.4.

There are no impacts which would occur from renewing grazing leases with the existing mandatory terms and conditions when current livestock grazing is in conformance, making significant progress, or where impacts are caused by factors not related to current livestock management.

On allotments where noxious weeds are prevalent, the BLM would incorporate cooperative weed control agreements into the terms and conditions of the 10-year grazing leases. As cooperative agreements for weed control are implemented, vegetative diversity would increase and wildlife habitat conditions would improve.

On the remaining allotments (Table 4.5) that are not meeting standards due to livestock grazing

or require lease modifications, proposals would include one or more of the following:

- The BLM and lessees would develop new upland water sources.
- New fence construction.
- The BLM and lessees would collaborate on new grazing systems to provide for the needs of vegetation, wildlife and the individual ranching operation.
- Seasons of use and/or livestock numbers would be modified to mitigate impacts to wildlife.

These methods would generally have a positive effect on wildlife in the planning area. The proposed actions have been developed specific to each allotment and are designed to maintain conformance with standards and guidelines for rangeland health. As such, allotments already meeting the biodiversity standard would maintain late seral to PNC conditions that already exhibit diverse, native plant communities with forage production, structure and residual vegetation necessary to support a broad array of wildlife species. On allotments not currently in conformance with the biodiversity standards, actions have been proposed specifically to improve the condition of forage, browse and cover.

Fences would be constructed using specifications designed for easy passage for mammals and sited to prevent bird collisions and reduce predation. Water developments would be designed to facilitate grazing management systems that would relieve grazing pressure on areas near existing water sources without negatively impacting areas already in late seral or PNC condition. Any new tanks or existing tanks on BLM would be fitted with bird ladders to prevent incidental take of non-game species.

Rest or deferred rotation grazing management would be incorporated into these allotments. Alteration of the scheduled dates or implementation of deferred rotation systems was proposed if rest rotation was not feasible. Allotments not meeting standards in the planning area would be monitored according to

the schedules outlined in appendices F and G.

The proposed action would not negatively affect any threatened, endangered or sensitive species or their associated habitat.

Canada lynx

All proposed actions occur outside of designated critical habitat for Canada lynx. Although lynx may use portions of the affected areas, there are no proposed actions that would negatively impact habitat for Canada lynx. Risk factors from livestock grazing include direct competition with snow shoe hares, a primary prey base, for herbivory and winter browse, particularly aspen and high elevation willow. Conflicts with livestock can occur when grazing results in the decline and degradation of riparian willow communities and aspen stands which relates to the loss of habitat structure and browse. Proposed actions on allotments adjacent to critical habitat have been developed to maintain or improve vegetative conditions and riparian habitats which would be favorable to lynx and prey species.

Grizzly bear

The following allotments (Table 4.6) occur in the Northern Continental Divide Ecosystem (NCDE) recovery zone for grizzly bears:

Allotment Name	Allotment Number
West Birch Creek	06323
East Birch Creek	06322
Homesite	06324
Swift Dam	06321
Waddell Lakes	06320
Chicken Coulee	06303
Choteau Mountain	06304
Cowtract	06306
Indian Head Rock	07659
Blackfeet Gulch	06335
Ear Mountain Individual	09835
Salmond Ranch Company	06342
Deep Creek	06310
Battle Creek	06307
Green Timber Gulch	06308
Tunnel Lake	06312
Castle Reef	07613
Willow Creek Canal	07612
Alkali Flat (West)	06295
Roost Hill	07607
Bean Lake	07605
Bedrock Creek	06347
Middle Fork	07604
Middle Fork Dearborn	07603

The proposed actions specific to these allotments would not adversely impact grizzly bear populations or their habitat. Guidelines recommended by the Interagency Grizzly Bear Committee would be implemented on an allotment-specific basis that may include but are not limited to, incorporation of rotational grazing, deferring livestock turnout dates, maintaining or improving riparian areas to PFC or above and maintaining and improving mesic stands of aspen. Proposed actions are designed to maintain and improve habitat, minimize grizzly-human conflicts and resolve conflicts when they arise.

The term and condition described in 2.3.1 would have positive effects on grizzly bear by identifying grizzly bear/livestock conflicts so that specific measures can be adopted to prevent and resolve situations, particularly livestock deprecations that could habituate and result in behaviors harmful to bears. The provision for livestock carcass removal would also have positive effects on grizzly bears by removing attractants which increase bear vulnerability to man-caused mortality as they become habituated to livestock.

If potential impacts to grizzly bears exist, analysis and associated mitigation measures will be discussed specific to each allotment.

Piping plovers

The proposed action would have no effects to piping plovers. There is no critical habitat within the planning area. Direct evidence of breeding is documented on Alkali Lake in Pondera County; however no suitable nesting or foraging habitat exists with allotments located along Birch Creek. There is also an observation of piping plovers on Freezeout Lake. The Flat Allotment #06319 contains potential nesting and foraging habitat. The proposed action would not result in direct or indirect impacts to piping plovers since livestock grazing would be deferred until after nesting and brooding is completed. Spring and summer livestock deferment would eliminate the possibility of indirect nest abandonment or direct impacts due to trampling and chick mortality. Expected increases in residual vegetation, due to the proposed action would not

negatively impact piping plovers because portions of the allotment are high in alkalinity where soil conditions severely limit herbaceous production regardless of livestock management.

Sage grouse

The proposed action would have no effects to sage grouse on allotments outside of Meagher County. Within Meagher County impacts would be positive. Although, the affected area is outside of core sage grouse areas identified by MDFWP and no leks are located on or near BLM allotments, the proposed action would still result in maintenance or improvement of nesting, brooding and winter habitats within sagebrush-steppe habitats. Residual forage and forb growth would be improved or maintained under this alternative which addresses the long term needs of sage grouse and other sagebrush associated species.

The following allotments have actions proposed that could impact wildlife resources:

Bedrock Creek #06347

Two spur fences would prevent livestock grazing from occurring on a majority of the BLM portion of Bedrock Creek. Exclusion from livestock grazing would allow recovery of riparian trees, shrubs, and streamside vegetation. Improved growth and vigor of riparian plant species such as cottonwood and willow would increase available browse and cover for wildlife. Fences would be constructed using specifications designed for easy passage for mammals and sited to prevent bird collisions and to reduce predation. Construction activities would not take place prior to June 1 to mitigate potential impacts to grizzly bears. Other mitigation measures related to food storage and other construction activities would be incorporated into the cooperative agreement for the project.

Berg Lease #07601

Livestock would be excluded from their loafing areas in the bottom of an unnamed tributary of the South Fork of the Musselshell River. Improved growth and vigor of riparian trees, shrubs, and streamside vegetation would be expected. Improved growth and vigor of

riparian plant species such as cottonwood and willow would increase available browse and cover for wildlife. Fences would be constructed using specifications designed for easy passage for mammals and sited to prevent bird collisions and reduce predation.

Big Eddy #06332

The proposed modification to the lease would authorize livestock grazing in August after the crop is removed from private lands. This would not have a significant impact on wildlife since the adjusted turnout date would still allow for a complete growth cycle of desirable forbs and bunchgrass species. Livestock would still typically use the allotment through October and use levels would not be expected to change. Current and historical use levels have been within Lewistown guidelines and are yielding achievement and maintenance of biodiversity standards.

Black Canyon #09849

Construction of a turkey guzzler in the NW1/4SE1/4NW1/4 of Section 2 for wildlife and occasional livestock use would positively benefit wildlife, especially elk, deer and turkeys. The development would not result in enough water yield to concentrate livestock or alter distribution patterns which would cause any negative impacts to wildlife.

Black Reef #07609

Incorporation of a term and condition specifying the grazing system would positively benefit wildlife species within the allotment. Allowing for deferment and rest of pastures would continue to increase forage, structure and standing residual within the allotment which would provide for maintenance of health standards and achievement of biodiversity objectives. No construction of infrastructure would be required that could result in incidental take, fragmentation, restriction of movement, or other potentially negative impacts to wildlife.

Calvert #01166

Using tame pastures for early season use would allow for deferring grazing in the growing season which would have positive impacts on wildlife and biodiversity by allowing for plant

reproduction, restoration of existing plants, and establishment of new plants. Reduction in the fall season of use would have further benefits to upland health by increasing residual vegetation which improves forage, cover and structure for wildlife and benefits long-term productivity of the site.

Choteau Mountain #06304

Modification of the percent public land would not impact wildlife or biodiversity because no changes in management are prescribed. Pasture boundaries and capacities of deeded lands are not known to the extent required to establish livestock numbers. Acknowledging that there is no information available regarding the carrying capacity of deeded lands fenced in with this allotment, would allow current management to continue. Current management has maintained the biodiversity standard and has resulted in late seral to PNC habitat conditions which directly relate to quality forage, cover and vegetative structure.

Cottonwood Creek #07716

Incorporation of a term and condition specifying the grazing system would positively benefit wildlife species. Allowing for deferment of pastures would continue to improve the productivity, structure and residual growth of diverse, native plant species which directly relates to the maintenance of land health standards and achievement of biodiversity objectives. No construction of infrastructure would be required that could result in incidental take, fragmentation, restriction of movement or other potentially negative impacts to wildlife.

Coyote Creek #09663

Including additional terms and conditions into the grazing lease specifying a three-pasture, deferred rotation system and associated salt block placement would positively benefit wildlife species. Allowing for deferment of pastures would continue to improve the productivity, structure and residual growth of diverse, native plant species which directly relates to the maintenance of land health standards and achievement of biodiversity objectives. Removal of salt blocks and other nutritional supplements from BLM lands would

increase winter forage by reducing livestock concentrations on elk wintering areas considered not to be in conformance with standards for rangeland health and guidelines for livestock management.

Deep Creek #06310

Modification to the number of livestock in the Willow Creek Pasture portion of the grazing lease would not impact wildlife because no changes in management are prescribed. The modification is primarily administrative and has no implications to conditions found on the ground. Current management has sustained a variety of habitats favorable to wildlife and is resulting in maintenance of the biodiversity standard. The modification would provide continued authorization for management already demonstrating desired results.

Divide Creek #19660

Including an additional term and condition specifying a rest-rotation grazing system would positively benefit wildlife species by allowing for deferment and rest of pastures which would continue to improve the productivity, structure and residual growth of diverse, native plant species which directly relates to the maintenance of land health standards and achievement of biodiversity objectives. No construction of infrastructure would be required that could result in incidental take, fragmentation, restriction of movement, or other potentially negative impacts to wildlife. Since changing the class of livestock to include sheep is authorizing an existing use, no additional impacts would be expected. Periodic, controlled use of sheep has maintained uplands in late seral to PNC and provided control of spotted knapweed and prevented further expansion of this species. The term and condition would limit sheep use to periodic grazing focused on noxious weed control. There would be no impacts to threatened and endangered species since this allotment is outside the expected ranges for these species.

Dry Hills #09743

Implementation of a multiple-pasture, deferred/rest rotational grazing system would positively benefit wildlife by allowing for deferment and rest of pastures that would

improve the productivity, structure and residual growth of native bunchgrasses which directly relates to the achievement of land health standards and meeting biodiversity objectives. Placement of salt blocks away from BLM lands would increase residual forage in meadow areas frequented by wildlife. The proposed pipeline would further improve vegetative conditions of areas lacking residual forage and habitat structure. Changes in distribution patterns would not negatively impact areas previously unwatered, since the project would be accompanied by implementation of the proposed grazing system. However, negative impacts to upland habitats affecting less than 5 acres immediately adjacent to the tank site would be expected. Construction of the pipeline project may result in temporary displacement of some wildlife species and could result in incidental take of ground nesting birds and small mammals.

East Birch Creek #06322

Restoration of portions of an agricultural field would have positive impacts for wildlife species by allowing native vegetation to be re-established on the site which would improve biodiversity and cover throughout the year. Removal of an unauthorized hay structure would also have positive impacts to wildlife by reducing vehicular travel on the site which could displace wildlife and may increase the likelihood of landowner/wildlife conflicts. Hay yards are also a potential source for non-native seed and noxious weed introduction which could have detrimental impacts to the biodiversity standard.

East Farmer's Reservoir #06316

The proposed action would allow for the BLM parcel to receive various seasons of treatment, rest, deferment and duration of use. This grazing system would continue to positively benefit wildlife species by maintaining and improving site productivity, structure and residual growth of diverse, native plant species which directly relates to the maintenance of land health standards and achievement of biodiversity objectives. No construction of infrastructure would be required that could result in incidental take, fragmentation, restriction of movement, or other potentially negative impacts to wildlife.

East Loco Creek#07611

Incorporation of a term and condition specifying the grazing system would provide neutral or positive benefits to wildlife species by providing consistent management between agencies and allowing for deferment of pastures which would allow for decreased use levels on woody vegetation such as cottonwoods.

Homesite #06322

Modification of the lease restricting use of horses in the River Pasture would implement deferment during the growing season which would improve the productivity, structure and residual growth of native bunchgrasses which directly relates to the achievement of land health standards and meeting biodiversity objectives. Incorporation of a term and condition into the grazing lease would limit utilization in the event of drought or other events which would result in increased forage availability for wildlife.

Lower Spring Creek AMP #09673

Incorporation of a term and condition specifying the grazing system would positively benefit wildlife by allowing for deferment of pastures which would continue to improve site productivity, structure and residual growth of diverse, native plant species which directly relates to the maintenance of land health standards and achievement of biodiversity objectives. No construction of infrastructure would be required that could result in incidental take, fragmentation, restriction of movement or other potentially negative impacts to wildlife.

Rhynard Individual #09801

Reduction of the permitted use associated with the western portion of the allotment would not impact wildlife. Increased efforts to control spotted knapweed would improve biodiversity by reducing competition and limiting expansion of noxious weeds that limit diversity and production of native species.

River Tract #09691

The proposed action specifying rest of the pasture would have positive effects on wildlife by improving vigor of riparian trees, shrubs and streambank species which directly relates to meeting health standards and achieving biodiversity objectives for the allotment. Rest

would increase residual forage and terminal leader growth of shrubs which would increase browse availability, cover, structure and long-term productivity of the site.

Modification of the grazing lease would allow for long-term, hot season deferment of the pasture which would maintain gains initiated by rest while providing a mechanism for removal of non-native grasses and weed species which could eventually lead to declines in biodiversity and productivity, particularly among native plants. No construction of infrastructure would be required that could result in incidental take, fragmentation, restriction of movement, or other potentially negative impacts to wildlife.

Roost Hill #07607

Increasing the permitted use associated with the allocated portion of the allotment would not significantly impact wildlife species because the action would not result in impacts to habitat conditions found within the allotment. Increase of permitted use would not be directly related to forage consumption on BLM lands which would result in reductions of forage currently available for wildlife. Biodiversity standards would continue to be met.

Incorporation of a term and condition specifying the grazing system would positively benefit wildlife by maintaining and improving site productivity, structure and residual growth of diverse, native plant species which directly relates to the maintenance of land health standards and achievement of biodiversity objectives. No construction of infrastructure would be required that could result in incidental take, fragmentation, restriction of movement, or other potentially negative impacts to wildlife.

Ryan Coulee #06330

The proposed modification to the lease would authorize livestock grazing during a later season to coincide with grazing of residual crops on private lands. This would not have a significant impact on wildlife or the biodiversity standard. The adjusted turnout date would still allow for a complete growth cycle of desirable forbs and bunchgrass species to occur. Livestock would still typically use the allotment during the core

months of December and January. Use levels would not be expected to change. Current and historical use levels have been yielding abundant residual forage and a vegetative component consisting of a diverse mix of native plants which is directly related to the achievement of objectives and maintenance of the biodiversity standard.

Simms Creek #06328

Changing the season of use from 12/15-4/15 to 8/1-10/31 would not have significant impacts to wildlife since the cross fence located on the boundary of Sections 19 and 20 extending southward into Section 29 is currently not functional. Direct impacts of the proposed action would implement a deferred season of use until late summer/early fall. This would result in significant progress toward achievement of health standards and biodiversity objectives by increasing residual forage and improving habitat diversity and structure. No new construction of infrastructure would be required that could result in incidental take, fragmentation, restriction of movement, or other potentially negative impacts to wildlife. Maintenance of the existing fence and associated proposed action would also have positive impacts to riparian habitats occurring on adjacent private lands.

Sixteen #09690

Incorporation of a term and condition specifying the proposed grazing system would positively benefit wildlife by allowing for a three pasture, deferred-rotation system that would improve site productivity, habitat structure and residual growth of diverse, native plant species which directly relates to the maintenance of land health standards and achievement of biodiversity objectives. No new construction of infrastructure would be required that could result in incidental take, fragmentation, restriction of movement, or other potentially negative impacts to wildlife.

South Canal Ditch #06326

Modification of the mandatory and additional terms and conditions of the grazing lease would have positive effects for wildlife species by implementing rest and deferment of the pasture containing BLM lands. Deferment would improve site productivity, habitat structure and

residual growth of diverse, native plant species which directly relates to the achievement of biodiversity standards and objectives. Rest would increase residual forage and terminal leader growth of shrubs which would increase browse availability, cover, structure and long-term productivity of the site.

Modification of the grazing lease would allow for long-term, hot season deferment of the pasture which would maintain gains initiated by rest while providing a mechanism for removal of non-native grasses and weed species which could eventually lead to declines in biodiversity and productivity of native bunchgrasses.

While these modifications would lead to significant progress towards achievement of standards for rangeland health, implementation of the proposed water gap would further facilitate the opportunity for integrated management of riparian/upland habitats occurring on the BLM parcel, in conjunction with other pastures containing Bureau of Reclamation lands. The water gap fences, if required, would be constructed using specifications designed for easy passage for mammals and sited to prevent bird collisions and reduce predation, where needed.

Sun River Ditch #06327

Restoration of portions of an agricultural field would have positive impacts for wildlife species by allowing native vegetation to become re-established on the site which would promote biodiversity and cover throughout the year.

The Flat #06319

Modification of the mandatory terms and conditions of the grazing lease would implement a carrying capacity representative of forage conditions currently existing on the allotment. Deferring early and mid-season use would allow maturation and seed set of native bunchgrasses which would increase forage availability and improve nesting cover and habitat structure.

While these modifications would lead to habitat improvement of increases in biodiversity, implementation of the proposed fence, if required, would further facilitate the opportunity

for integrated management of the BLM parcel, in conjunction with adjacent state and private lands. Fence construction may result in temporary displacement and possibly incidental take of small, non-game species. Wildlife-friendly specifications would be used to provide easy passage.

Upper Pasture #02558

Changing the class of livestock to include horses is authorizing an existing, historical use. This use, while not explicitly listed on the previous lease was determined to be yielding resource conditions that are in conformance with standards for rangeland health and guidelines for livestock management. Maintenance of a desirable, bunchgrass community in PNC would be expected to continue. Current vegetative conditions are directly related to abundant nesting cover, habitat structure, and forage production beneficial to wildlife species.

Willow Creek #07775

Including a term and condition into the grazing lease specifying a three-pasture, deferred rotation system would positively benefit wildlife by allowing for deferment of native pastures which would continue to improve site productivity, structure and residual growth of native plant communities which directly relates to the maintenance of land health standards and biodiversity objectives. No construction of infrastructure would be required that could result in incidental take, fragmentation, restriction of movement or other potentially negative impacts to wildlife.

Willow Creek Canal #07612

The proposed action would have no effects or slightly positive effects to wildlife by providing an accurate account of forage production occurring on BLM, state and private lands fenced within the allotment. This would allow for an improved accounting of forage production and consumption. The shift in grazing season would accommodate a grazing rotation system that would continue to provide for maintenance of conditions which are in conformance with the biodiversity standard.

Windy Hollow #09818

Implementation of a three-pasture, deferred rotation grazing system and construction of the cross fence would prevent season-long use which would have positive benefits to riparian habitat and associated wildlife species by allowing growing season deferment of one pasture annually. Deferment would result in improved growth and reproduction of the woody vegetation which would provide more hiding and thermal cover for big game and many other species of small animals and migratory birds. The changes would also improve fisheries habitat by increasing stream bank vegetation of sedges and willows thereby providing greater amounts of shade and cover. Modification of the season of use would further accommodate implementation of this system. The cross fence would be constructed using specifications designed for easy passage for mammals and would remain charged only while allotment is in use.

Modification of the class of livestock from cattle to horses in the East Fork of Hound Creek is authorizing an existing, historical use which was determined to be in conformance with standards for rangeland health and guidelines for livestock management. This use, while not explicitly listed on the previous lease was determined to be yielding resource conditions that are in conformance with the biodiversity standard. Maintenance of a desirable, bunchgrass community in PNC would be expected to continue. Current vegetative conditions are directly related to abundant nesting cover, habitat structure and forage production beneficial to wildlife species.

The remaining parcels in the Windy Hollow Allotment occur within numerous pastures with intermixed deeded, state and federal lands. BLM parcels located in the upper reaches of Spring, Pole and Tyrell Creeks along with those parcels located in the far west and southern portions of the allotment are managed under a short-duration, high-intensity grazing system. Modification to the season of use is required since any of these pastures may be scheduled for use anytime throughout the calendar year. This system was determined to be yielding

maintenance of standards for rangeland health. Maintenance of desirable habitat conditions would be expected under continuation of this system. Incorporation of a term and condition specifying this grazing system would positively benefit wildlife by allowing for a variable season grazing system that would continue to improve site productivity, structure and residual growth of native plant communities. Maintenance of these conditions directly relates to land health standards and achieving biodiversity objectives.

4.2.7 Fire Management

Implementation of the proposed action would not alter current wildland fire suppression management. Fire suppression would be in accordance with the Fire/Fuels Management Plan Environmental Assessment/ Plan Amendment for Montana and the Dakotas (September 2003) and the Central Montana Fire Zone, Lewistown Field Office (LFO) Fire Management Plan (September 2004).

This planning area lies mostly within the LFO Breaks Fire Management Unit (FMU). Implementation of the proposed action would result in the continuation of current wildland fire suppression policy for this FMU to utilize appropriate fire suppression strategies based on safety, current fire danger, values at risk, cost, suppression resource availability and predicted weather. Each fire occurrence would be evaluated on these elements and a determination made as to the most appropriate course of action. Under certain circumstances, appropriate strategies may include using indirect suppression tactics and utilization of natural fuel breaks to return fire to its natural role in the ecology of the area.

Implementation of the proposed action may result in a potential increase in fine fuel loads in allotments that would incorporate a grazing system. This increase in fine fuel loads would increase a wildland fire's resistance to control efforts and slightly increased smoke emissions.

Prescribed burning is not proposed, however, the use of prescribed fire as a land management tool in this area may be considered in future

analyses/planning efforts. Fire Regime Condition Class (FRCC) would be considered in conjunction with rangeland health standards.

4.2.8 Cultural Resources

Effects from grazing practices would be the same as identified in the No Action Alternative for the allotments with no proposed changes. Season of use changes in other analysis areas in the Lewistown Field Office have not been shown to affect cultural resources.

Some minor beneficial impacts could result from management actions that reduce erosion. Proposed surface disturbing activities, especially water developments at springs and other water sources, could create negative impacts if mitigation were not incorporated into project designs. A file search and/or Class III cultural resource inventory would be conducted prior to all surface disturbance actions proposed in this watershed plan to determine the presence of historic properties within the proposed areas of potential effects. Possible benefits could include identification of additional resources during inventories.

Proposed actions in four allotments have the potential to affect cultural resources; three of those however (Black Canyon #9849, Gipsy Creek #9671, Sixteen #9690) have had cultural resource inventories completed resulting in “No Historic Properties Affected” determinations. Black Canyon #9849 has a proposed turkey guzzler; that area was surveyed in 1997 (BLM Report #97-MT-067-011) with no historic properties identified. Gipsy Creek #9671 has proposed mining reclamation and debris removal. This area was surveyed in 2000 (BLM Report #01-MT-067-001). The mining was documented at that time and not determined to be eligible for the National Register of Historic Places. The 40-acre parcel included in the Sixteen #09690 Allotment was identified as a disposal tract, and is considered the same in this analysis. It also was surveyed in 2000 (BLM Report #01-MT-067-001). One lithic site was documented (24ME1049), but was determined ineligible for listing in the National Register. Two recorded prehistoric quarry sites

(24ME0467, 24ME0232), 11 quarry site leads, lithic scatter/camp sites, and tipi rings have been identified either within the area of potential effect (APE) or in close proximity to the proposed stockwater pipeline in the Dry Hills #9743 Allotment. The site, known as the Camp Baker Quarry (24ME0467) is outside the area of potential effect, but its close proximity to the proposed pipeline identifies a potential resource conflict. Quarry sites this extensive tend to have associated sites, such as short-term habitation sites, in the general area. Pipeline construction could affect the integrity of these sites, as could increased livestock use, depending on the final location of the pipeline and tank. Artifact breakage and dispersal, trampling, and vertical mixing of assemblages could occur if the tank were placed in an area with surface and subsurface artifacts.

Cattle loafing can affect rock art sites (i.e. pictographs, petroglyphs). A potential conflict exists in the Monarch #9722 Allotment. Since the site was not documented prior to this analysis, changes in condition are unknown, as are the effects of livestock on the site. In discrete areas where cattle impacts could destroy or damage rock art sites, barriers or fences could be placed to mitigate the potential for damage.

If a conflict were to exist between the proposed action and the presence of cultural resources, mitigation measures would be factored into the project’s design. Such measures could include complete documentation of the site to exhaust its information potential, evaluating the site and making a determination that the site is not eligible for inclusion on the National Register of Historic Places, avoiding the site through project redesign or implementing protective measures to prevent impacts to the characteristics of the site that make the site eligible. Such measures could include installing fences or barriers to protect sites, placing mats or other pads to prevent erosion or soil compaction if a site needed to be crossed, or installing sections of jack-leg fence in areas where subsurface disturbance would be a concern.

4.2.9 Surface Water

The water quality standard would continue to be met on allotments already in conformance with this standard (Appendix E). Trends on these allotments would remain static or improve. No range improvements are proposed on any of these allotments. Those riparian and upland areas in proper functioning condition would continue to mitigate non-point source pollutants from entering streams and is supported by the Montana Nonpoint Source Management Plan developed by Montana Department of Environmental Quality. MDEQ's goal for sustainable range land management is to support the long term ecological health of grazing resources and meet water body beneficial uses. Their objective 6.1 is to "support PFC, as a first tier assessment approach for riparian grazing management and monitoring, on private, state, and federal riparian areas in Montana."

This alternative would improve plant cover and increase infiltration rates in riparian and upland zones, thereby increasing the time of concentration and the quantity of water stored on the BLM lands within the planning area.

Water quantity and quality affected by flow diversion, impoundments, irrigation return flows and stream channel modifications would not change.

The water quality impaired streams in the planning area would be addressed by improving riparian and upland condition adjacent to impaired streams and decreasing the amount of sediment, fecal coliform, nutrients, etc. being contributed to waterbodies. Under this alternative, livestock would spend less time on water quality impaired streams.

Any impacts to surface water from the range improvement projects would be immeasurable.

The following allotments have proposed changes that could potentially improve water quality:

Bedrock Creek #06347

Although no State determination exists for Bedrock Creek, degraded riparian conditions were attributed to declining conditions. Two

spur fences would prevent livestock grazing from occurring on a majority of the BLM portion of Bedrock Creek. Exclusion from livestock grazing would allow recovery riparian trees, shrubs, and streamside vegetation. Increased vigor of riparian plant species would allow for the potential recovery of stream channel function with associated decreases in width/depth ratios and floodplain development. However, the small portion of the BLM land may be too small to facilitate channel recovery as channel instability is widespread over a much larger area than just the BLM managed lands.

Berg Lease #07601

Livestock would be excluded from their loafing areas by an electric fence in the bottom of an unnamed tributary of the South Fork of the Musselshell River, which did not meet the BLM water quality standard although no State determination exists. Improved vigor of riparian trees, shrubs, and streamside vegetation would be expected. As vegetation improves, stream channel width/depth ratios would be anticipated to decrease.

Daisy Dean Creek #09675

Declining riparian conditions on Mud Creek were attributed to livestock. Under the proposed action, the allotment season of use would be changed from 3/1 to 2/28 to 6/1 to 12/31. Boundary fences would be reconstructed and grazing use would occur in a 5-pasture, deferred rotation grazing system. This would decrease the amount of time livestock spend in the riparian area on Mud Creek. Decreases in the utilization of willow species and red-osier dogwood and increases in the canopy cover of the fore mentioned species would be expected. Stream channel function would also improve with an associated improvement in streamside vegetation.

River Tract #09691

The Missouri River from Sheep Creek to the Sun River is water quality impaired because of sedimentation/siltation. River Tract would be rested from livestock grazing in 2010 and 2011 to facilitate improvement in the vigor of riparian trees, shrubs, and streambank species. Following the rest, spring or fall use would be

allowed. Although fall grazing would lead to the possibility of utilization on preferred riparian trees and shrubs, grazing use for limited amounts of time during cooler seasons would facilitate continued improvement in riparian condition.

South Canal Ditch #06326

Degraded riparian conditions on an unnamed tributary of Muddy Creek were attributed to declining conditions. Under the proposed action, the BLM land would be rested again in 2010, thereby providing two years of rest. Following the rest, the BLM land would be rested every other year and deferred during the hot season. The health and vigor of riparian vegetation would be expected to improve. As the condition of the vegetation improves, riparian community types would have the opportunity to expand. As root masses stabilize the banks, sediment would be captured and a decrease in stream channel width/depth ratios and percent fines in the channel would be expected.

Windy Hollow #09818

Construction of the proposed cross fence from Baldy to the NE1/4NE1/4 of Section 5 would facilitate implementation of a three pasture deferred rotation grazing system that would include lands in Wegner and Stickney Creek being used in conjunction with the Cottonwood Creek Allotment #7716. Currently, there is some attempt at using these pastures as a three-pasture deferred system, but since there is no cross-fence, livestock commonly breach the divide and re-enter Wegner Creek to access a perennial water source. Once back in Wegner Creek, even small numbers of livestock can prevent recovery of riparian vegetation and streambanks by remaining in the bottom. Implementation of the proposed action would facilitate the “clean up” of pastures. Improvements in the health and vigor of riparian vegetation, decreases in Kentucky blue grass, decreased utilization on trees and shrubs, and increased stream channel stability would be expected.

Modification of the class of livestock from cattle to horses in the East Fork of Hound Creek is authorizing an existing, historical use which was determined to be in conformance with standards

for rangeland health and guidelines for livestock management. The riparian condition on the East Fork of Hound Creek would be maintained in proper functioning condition or above.

4.2.10 Soils

Grazing management changes which result in allotments making significant progress toward meeting rangeland health standards would create a positive impact to soils in the planning area. Rangelands meeting or exceeding health standards exhibit a higher percentage of increaser forage species, fewer annual grasses and forbs, increased plant vigor and root mass, a decrease in the percentage of bare ground and an increase in available water holding capacity and infiltration. These characteristics greatly benefit rangeland soils.

The cumulative impact of these proposed projects would have an effect on the soil resource, though it would be minimal. The vast area encompassed by the watershed and mitigation measures associated with each of the projects would minimize or eliminate negative impacts. The proposed projects are spread among the 100 allotments and over 8 million total acres within the planning area.

Soil could be affected by implementation of proposed range improvement projects in two ways: surface disturbances and compaction. Spillage of equipment lubricants, fluids and fuels could also adversely impact soils associated with the range improvement projects.

Construction equipment and vehicular traffic associated with the proposed projects would cause soil compaction; severity would be directly related to soil type, frequency, and weight (lbs./sq. inch) of equipment. Compaction alters soil structure – decreasing porosity, infiltration rate, air space, and available water holding capacity. A combination of these factors would decrease the vegetative capacity and increase the potential for water and wind erosion of affected areas. Mitigation would include limitation of unnecessary traffic associated with the projects and limitation of traffic during wet periods. Excessively wet soils

would be defined as soil moisture high enough to:

- fowl blades, augers or equipment
- create 3" deep ruts
- conglomerate mud on tires and tracks

Construction and farm equipment and vehicular traffic associated with the proposed projects would also create surface disturbances which could lead to accelerated wind and/or water erosion. Mitigation would include timely rehabilitation of all project-induced surface disturbances as directed by the authorized officer. All seed mixes would be recommended and approved by the authorized officer. Seed would be State of Montana certified or registered seed (or certified/registered by the state of origin); certification tags would be made available to the authorized officer for inspection before the seed is planted. Seed would be planted using a disc drill equipped with depth bands (or a suitable depth regulator to ensure proper depth of planting) and packer wheels. Seed would be drilled between one-half inch (1/2") and three-quarters inches (3/4") deep. Where drilling is not possible, seed would be broadcasted and the area would be harrowed or raked to cover the seed. Care would be exercised to prevent burying the seed deeper than one inch (1"). If seed must be broadcasted, the drill seeding rate provided by the authorized officer would be doubled. The seeding would be repeated until a satisfactory stand is established as determined by the authorized officer. Evaluation of growth would not be made before completion of the first growing season following seeding. Seeding would be completed in the late fall/early winter or early spring between the dates of 10/15 and 05/15. Seedings would not be made when the soil is frozen or snow covered. If moisture conditions are favorable in late summer, seeding may be completed between 08/15 and 09/15, allowing a minimum of 45 days for germination and seedling development before the seedlings go dormant. Late summer plantings should be attempted only when soil moisture is adequate at or very near the surface and to a substantial depth in the profile. Silt fence would be properly installed to control offsite movement of any required soil stockpiles

in areas with slopes greater than 15 percent, and adjacent to waterways and stream channels. Topsoil would not be used as padding in trenches or for any other use as a construction material. Standard erosion control practices would be employed to minimize erosion during construction operations. If a high groundwater table is encountered requiring dewatering, water would be pumped and discharged in a manner that would minimize sedimentation and prevent off-site erosion and bottom scour in adjacent waterways. Discharge to the surface would be allowable if vegetation is adequate to effectively function as a filter medium. If vegetation is inadequate, bale filters or other appropriate measures would be used to limit siltation.

Soils could also be impacted by fluid spills including engine oil, hydraulic oil, gear lube, anti-freeze and fuel. These spills could severely affect soil in localized areas; concentrations may be capable of soil sterilization. Mitigation would include removal and approved disposal of soil from localized spill areas followed by replacement with clean soil and rehabilitation as directed by the authorized officer. Equipment leaks and drips would be fixed immediately upon discovery by the contractor, lessee or BLM personnel.

All barbed wire fence construction would utilize steel T posts and wooden set posts at corners, stress panels and fence breaks. Wheeled equipment may be used to install the posts and wire creating a short-term impact on vegetation and soils adjacent to the fence alignment. New roads or trails would not be initiated along proposed fence routes, though lessees would be authorized to travel adjacent to fences for maintenance purposes. New fences would alter traditional livestock movement patterns and could create trailing along alignments. Minimal impacts to soils if trailing occurs would be concentrated to the linear fence routes.

Proposed stock water pipelines would be installed utilizing rotary chain trenchers or using the "rip" method. Rotary trenchers create a surface disturbance 6-12" wide, minimizing soil disturbance and potential negative impacts. Trenches would be backfilled immediately upon

pipe installation and pressure test completion. Reseeding of the backfilled trenches is generally not required due to the low level of surface disturbance and natural encroachment of adjacent vegetation. The “rip” method typically involves two D-9 Caterpillars pulling pipe through the ground. The lead machine plows an 8-inch seam to a suitable depth. The pipeline is then pulled through the seam. Once the pipe is laid, the rear machine compacts the seam back into place. This method results in significantly less surface disturbance than traditional trenching methods. Disturbance would be limited to heavy equipment tracks and vehicle disturbance along the line. The “rip line” is visible but will heal nearly completely in one to two growing seasons. Most vegetation will be held in place so that bare soil is minimized reducing the likelihood of weed infestation and erosion.

Stock tank installation associated with proposed pipeline construction projects would impact soils. The small footprint required during the construction phase (20' x 20') would minimize short-term impacts. Long-term impacts would result from concentrated livestock use around the stocktanks and associated trailing to and from the water source. Stock tanks would not be placed on narrow ridges, in confined spaces or corridors, in riparian areas, or on slopes greater than 5 percent.

The farming operations associated with these projects would compact soils, creating the possibility for accelerated wind and water erosion. Mitigation would include prompt completion of all initiated projects and adherence to seeding requirements discussed above. Long-term impacts would be positive as native vegetation establishes a natural, effective soil protective mechanism.

4.2.11 Air Quality

The proposed action would not impact air quality.

4.2.12 Climate

The proposed action would not significantly impact climate. Emissions resulting in an accumulation of greenhouse gases would be so small that its incremental contribution to global and national emissions would not be measureable at the level of precision existing on a watershed area scale. This emission would not merit reporting under the EPA rule on mandatory reporting of greenhouse gases, which presents a reporting threshold of 25,000 metric tons of carbon dioxide equivalent for industrial and agricultural sectors (40 CFR 98.2). Estimates for grazing cattle typically assume a methane emission rate of .168 metric tons of carbon dioxide equivalent per AUM (EPA 2009). Continuing to lease this area for grazing use at the proposed level of 5,602 AUM's would represent approximately .000007% of livestock emissions in the United States. Emissions from other sources of greenhouse gases associated with livestock grazing would not be different than the No Action Alternative. The majority of allotments are intermixed with non-federal lands which would require an equivalent amount of emissions to administer these areas regardless of public land leases. Alternatively, some emissions from livestock grazing and associated management practices may be offset by an increase in carbon storage due to increased plant turnover and changes in plant species composition (Follett et al. 2001).

4.2.13 Economics/Sociology

The proposed action would create a short-term economic impact on lessees with allotments not meeting rangeland health standards. The BLM would require grazing management changes or range improvements to meet upland and/or riparian health standards. The lessees would be responsible for a portion of most proposed projects. In the long term, however, proposed changes would lead to healthy rangelands and sustainable livestock grazing. There would be no impacts to lessees whose allotments are meeting rangeland health standards.

The management actions and range improvements included in the proposed action would generally improve the efficiency of livestock grazing on public lands and the condition of those lands. Lease renewals would allow for continuation of public lands ranching within the planning area.

4.2.14 Special Designation Areas

Implementation of the proposed action would not result in impacts beyond those described for livestock grazing in the Rocky Mountain/Outstanding Natural Area Activity Plan Final Environmental Assessment (March 1989)

4.2.15 Cumulative Impacts

This section discusses the cumulative impacts of both alternatives. Federal agencies are required to analyze and disclose effects that result from the incremental impact of an action “when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or nonfederal) or person undertakes such other actions.” (40 CFR 1508.7).

A detailed discussion of cumulative impacts specific to BLM’s range program can be found on pages 27 and 28 of the Standards for Rangeland Health and Guidelines for Livestock Grazing Management EIS completed in May of 1997.

Proposed Action: Specific to the Great Falls planning area, on allotments not meeting Standards and Guidelines, selection of the proposed action would ensure significant progress is being made toward achieving Standards while ensuring long-term stability to the livestock industry. Allotments that are currently meeting, or are making significant progress towards meeting standards, are currently mitigating the impacts of livestock grazing on upland/riparian health, wildlife, and other resources.

Under the proposed action, vegetation within rested pastures would accumulate root mass, carbohydrate reserves and set seed. Grazing

during the winter season would have positive impacts on upland health by eliminating much of the hot season use on native plants.

The proposed action would provide more growing season deferment for many cool season species and reduce impacts to streambeds and banks while soils are saturated.

The proposed action would also allow a larger percentage of desirable, native vegetation to complete annual growth and develop seed which would allow for an increase in reproduction and result in improvements to upland health.

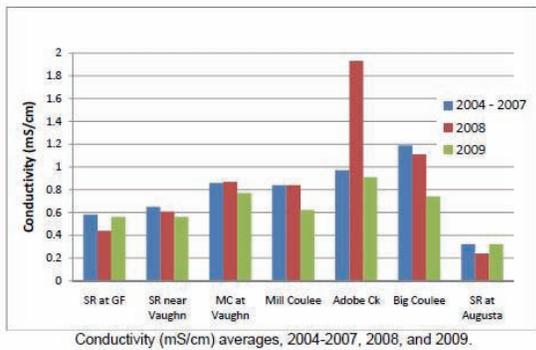
Improved native vegetation would provide increased forage for big game and nesting cover for sharp-tail, sage grouse and other ground nesting birds. Improved growth and reproduction of the woody vegetation would provide more hiding and thermal cover for big game and many other species of small animals and migratory birds.

For riparian areas and water quality within the planning area, the proposed action is more environmentally friendly than the no action alternative. In general, those areas that were not meeting riparian or water quality standards would receive shorter seasons of use and rest, which would allow for recovery of streambank stabilizer plant species, decrease alteration levels, and promote functional riparian areas. Furthermore, reducing the existing noxious weed infestations would minimize streambank alteration and allow recovery of streambank stabilizing herbaceous species.

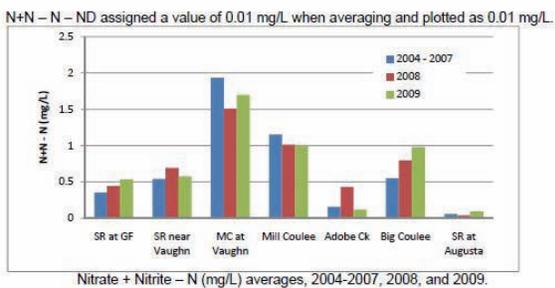
Those areas currently meeting standards would continue to promote healthy riparian areas and comply with the Clean Water Act and water quality impaired streams by mitigating non-point source pollution.

In general, water quality decreases downstream in the watersheds within the planning area as irrigation withdrawals and returns, erosion, and development cumulatively begin to affect water quality. In the Sun River watershed, the biggest influence on water quality is irrigation return flows and agricultural runoff (Alan Rollo, Sun

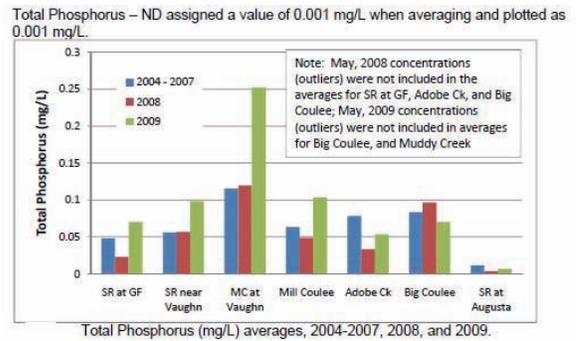
River Watershed Group Coordinator, personal communication 2010). For example, water quality data collected by the Sun River Watershed Group indicates decreasing water quality from the Sun River at Augusta to the Sun River at Fort Shaw. A portion of the water quality data from the 2009 Sun River Watershed Water Quality Monitoring Project 2009 Report (Hershberger and Bauder, 2009) is shown below.



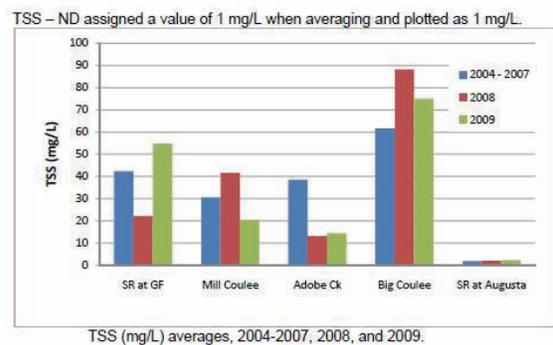
The Sun River at Augusta was chosen because it is located in the upper portion of the watershed and allows for characterization of water quality entering the watershed, and the Sun River at Great Falls is located near the mouth. According to Hershberger and Bauder (2009), salinity clearly increases as you move from Augusta to Great Falls and is likely sourced from Sun River tributaries.



Nutrient loading of nitrogen and phosphorus follows similar patterns of increases between Augusta and Great Falls.



Total suspended sediment also increases significantly.



Although minimal, improving conditions on the BLM lands not meeting land health standards would cumulatively improve water quality. However, BLM lands account for less than 1% of the total land areas within the watersheds and have not been identified as probable sources of pollutants on most water quality impaired streams. Those lands identified as potential contributors of non-point source pollutants would receive actions under the proposed action that would decrease water quality cumulative effects.

No Action: Selection of the No Action Alternative would result in continuation of current management that has led to conditions that are not in conformance with regulations. This could result in cumulative degradation to watersheds especially where similar conditions exist on adjoining lands.

Upland sites not meeting standards, as a result of current livestock grazing, would continue to cause a decline in productivity and upland health. Annual grasses, shallow-rooted perennial

grasses, forbs, and non-native invasive species would continue to dominate, and likely increase, especially in times of drought. Riparian sites not meeting standards, due to current livestock management, would remain static or continue in a downward trend. Riparian plant community succession and streambank stabilization would be interrupted or impeded leading to degradation and potential loss of functioning riparian areas.

The present level of weed control could lead to an increase in noxious weeds in the planning area. Browse, forbs and grass availability for elk, deer, antelope and mountain goats would continue to decline. Over time, the reduction in wildlife forage and increased levels of noxious weeds would cause a cumulative loss in the wildlife value of these areas. Those public lands in the planning area that are in less than proper functioning condition would continue to contribute pollutants such as sediment, nitrates, fecal coliform, and warmer water to streams.

In some cases, accelerated erosion is occurring on allotments not meeting the upland standard. Soils in these allotments would continue to lack sufficient ground cover and root density to resist erosion and would continue to erode at levels higher than naturally expected for the sites.

The BLM lands account for less than 1 percent of the total land area within the affected watersheds. The remaining areas are private and state lands that are primarily used for livestock grazing and agriculture. Private lands account for most of the total land area within the planning unit. On those lands, the Natural Resources and Conservation Service (NRCS) reported the following actions for the Two Medicine River, Belt Creek, Smith River, Upper Missouri, Upper Missouri-Dearborn, Teton River, Sun River and Upper Musselshell from 1980 to 2009.

287,688 ac.	Conservation cover
154,640 ac.	Conservation crop rotation
51, 325 ac.	No-till direct seedings
16 miles	Shelterbelt est. and recovery
308 miles	fence
289 miles	Pipeline

1,185	Watering facilities
131	Spring developments
61	Wells
112,892 ac	Use exclusion
343,520 ac	Prescribed grazing
76,314 ac.	Range, hay plantings
326,244 ac.	Upland wildlife habitat mgt.
5,455 ac.	Restoration of rare and declining habitats.

Implementation of projects and land management practices are likely to continue at current levels into the foreseeable future. Similar activities may be occurring simultaneously on private or other lands within the planning area that are not reported by NRCS.

Reasonably Foreseeable Future Actions

- The risk of wildfire on all ownerships will continue to increase, particularly in areas where mountain pine beetle outbreaks have resulted in large portions of stand mortality. Fire suppression efforts, utilizing appropriate management response criteria, will continue on federally-administered lands in the watershed.
- Recreation is expected to increase in the Great Falls planning area in the future. Impacts expected from this increased use are new camp sites, OHV use, spreading of weed seed, more use of roads and increased wildlife disturbance.
- Sub-dividing and development of private land within the planning area is currently occurring on a large scale. Subdivision is expected to expand in the foreseeable future. Sub-dividing and development causes habitat fragmentation, increases traffic, soil and vegetation disturbance, spread of noxious and invasive species, and other human disturbances.
- Timber harvest and vegetative treatments are expected to increase on private, state and federal lands due to outbreaks of mountain pine beetle. BLM currently has plans for two timber harvest projects. The Strawberry Gulch

Project located in Meagher County (T13N, R4E S14) is approximately 120 acres. The Pinnacle Salvage is located in the south Devil's Kitchen area (T15N, R1W S14) would affect approximately 165 acres of timber.

- The BLM currently holds oil and gas leases within the planning area. Much of the leases along the Rocky Mountain Front have been withdrawn. It is likely that the remainder of the active leases would not be developed within the time span of this document.
- Gibson Dam Hydroelectric transmission line FERC No.P-12478-003 is proposed which would consist of buried transmission line along the Sun River to a BLM substation (T22N, R8W S35). Above-ground transmission line would continue due west to Jackson Corner along Highway 287.
- Crop conversion of native rangelands is expected to continue at levels related to current grain markets.
- Fencing on other land ownerships and on BLM boundaries may lessen the benefit of fence modification efforts on public lands to improve wildlife movements.

Chapter 5 Consultation and Coordination

The Great Falls Area Grazing Lease Renewal EA was prepared by a BLM interdisciplinary team including:

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Other BLM personnel who provided assistance and review:

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- Willy Frank, Field Manager
- Adam Carr, Supervisory NRS
- Craig Flentie, Public Affairs Specialist
- Bruce Reid, Forester
- Rod Sanders, Outdoor Rec. Specialist
- Lowell Hassler, NRS

Other agency personnel involved during the planning process:

- Mike Madel, Brent Lonner, Anne Tews, Cory Loecker, Mark Schlepp/ Montana Department of Fish Wildlife and Parks
- Lou Haneberry, Katrina Dixon/ U.S. Fish & Wildlife Service
- Erik Eneboe/ Montana Department of Natural Resource and Conservation
- Erin Fryer, Jason Oltrogge/U.S. Forest Service, Lewis and Clark National Forest.
- Jennifer Woodward/ Natural Resource Conservation Service

All interested parties, grazing lessees and base property owners were contacted during the planning process. The BLM met with all lessees whose allotments were not meeting one or more of the rangeland health standards due to livestock grazing. Five open-house meetings were held throughout the planning area as follows:

January 28, 2010: Martinsdale, MT
February 2, 2010: Augusta, MT
February 4, 2010: White Sulphur Springs, MT
February 9, 2010: Great Falls, MT
February 11, 2010: Cascade, MT

Appendix A

Land Use Plan Guidance

- **Soils:** Soils will be managed to maintain productivity and to minimize erosion. (Headwaters Final EIS 1983 p.12).
- **Water Resource Management:** Water quality will be maintained or improved in accordance with State and Federal standards, including consultation with State agencies on proposed projects that may significantly affect water quality. Management actions on public land within municipal watersheds will be designed to protect water quality and quantity. Management activities in riparian zones will be designed to maintain or, where possible, improve riparian habitat condition. (Headwaters Final EIS 1983 p. 12).
- **Range Program** (Headwaters Final EIS p.18-22) : All grazing allotments in the resource area have been assigned to one of three management categories based on present resource conditions and the potential for improvement.

Multiple-use management objectives have been developed for each allotment in the I category. Future management actions will be tailored to meet those objectives.

Monitoring will also be used to measure the changes brought about by new livestock management practices and to evaluate the effectiveness of management changes in meeting stated objectives.

Range Improvements and Treatments: The extent, location and timing of such actions will be based on the allotment-specific management objectives adopted through the resource management planning process; interdisciplinary development and review of proposed actions; operator contributions; and BLM funding capability

Grazing Systems: The type of system to be implemented will be based on consideration of the following factors: Allotment specific management objectives; resource characteristics including vegetation potential and water availability; operator needs; and implementation costs.

Unleased Tracts: Unleased tracts generally will remain available for further consideration for authorized grazing. However certain tracts not currently authorized for grazing use will remain unleased.

- **Wildlife and Fisheries Management** (Headwaters Final EIS p.23-24):

Fish and wildlife habitat will continue to be evaluated on a case-by-case basis as a part of project level planning.

Seasonal restrictions will continue to be applied where they are needed to mitigate the impacts of human activities on important seasonal wildlife habitat.

Whenever possible, management activities in habitat for threatened, endangered or sensitive species will be designed to benefit those species through habitat improvement.

Sufficient forage and cover will be provided for wildlife on seasonal habitat. Forage and cover requirements will be incorporated into allotment management plans and will be specific to areas of primary wildlife use.

Range improvements generally will be designed to achieve both wildlife and range objectives.

- **Recreation:** Recreation resources will continue to be evaluated on a case-by-case basis as a part of project level planning. Such evaluation will consider the significance of the proposed project and sensitivity of recreation resources in the affected area. (Headwaters Final EIS p.15)
- **Visual Resource Management:** Visual resources will continue to be evaluated as a part of activity and project planning. (Headwaters Final EIS 1983 p.16).
- **Forest Management:** Major forest activity plans generally will be required prior to initiating forest management activities in such areas Exceptions will be allowed for small sawlog, or commercial thinning sales. Exceptions will also be allowed for post and pole sales sold on a public demand basis and for emergency salvage sales of insect, weather, or fire killed timber of less than 250,000 board feet. (Headwaters Final EIS p.17).
- **Lands:** Public land within retention areas generally will remain in public ownership and be managed by the BLM. Transfers to other public agencies will be considered where improved management efficiency would result. Minor adjustments involving sales or exchanges or both may be permitted based on site specific application of the land ownership adjustment criteria. (Headwaters Final EIS 1983 p. 14)

Appendix B

Standards for Rangeland Health

Standards are statements of physical and biological condition or degree of function required for health sustainable rangelands. Achieving or making significant and measurable progress towards these functions and conditions is required of all uses of public rangelands. Historical data, when available, should be used when assessing progress towards these standards.

Standard #1: Uplands Are In Proper Functioning Condition

This means that soils are stable and provide for capture, storage and safe release of water appropriate to soil type, climate and landform. The amount and distribution of ground cover (i.e., litter, live and standing dead vegetation, microbotic crusts, and rock/gravel) for identified ecological site(s) or soil-plant associations are appropriate for soil stability.

Evidence of accelerated erosion in the form of rills and/or gullies, erosional pedestals, flow patterns, physical soil crusts/surface scaling and compaction layers below the soil surface is minimal. Ecological processes including hydrologic cycle, nutrient cycle and energy flow are maintained and support healthy biotic populations. Plants are vigorous, biomass production is near potential and there is a diversity of species characteristic of and appropriate to the site. Assessing proper functioning conditions will consider use of historical data.

As indicated by:

Physical Environment

- erosional flow patterns
- surface litter
- soil movement by water and wind
- soil crusting and surface sealing
- compaction layer
- rills
- gullies

Biotic Environment

- cover distribution
- community richness
- community structure
- exotic plants
- plant status
- seed production
- recruitment
- nutrient cycle

Standard #2: Riparian and Wetland Areas Are In Proper Functioning Condition

This means that the functioning condition of riparian-wetland areas is a result of the interaction among geology, soil, water and vegetation.

Riparian-wetland areas are functioning properly when adequate vegetation, landform or large woody debris is present to dissipate stream energy associated with high water flows, thereby reducing erosion and improving water quality; filter sediment, capture bedload, and aid floodplain development; improve flood water retention and groundwater recharge; develop root masses that stabilize streambanks against cutting action; develop diverse ponding and channel characteristics to provide the habitat and the water depth, duration, and temperature necessary for native fish production, waterfowl breeding, and other uses appropriate for the area that will support greater species richness.

The riparian-wetland vegetation is a mosaic of species richness and community structure serving to control erosion, shade water, provide thermal protection, filter sediment, aid floodplain development, dissipate energy, delay flood water, and increase recharge of groundwater where appropriate to landform.

The stream channels and flood plain dissipate energy of high water flows and transport sediment appropriate for the geomorphology (e.g., gradient, size, shape, roughness, confinement, and sinuosity), climate, and landform.

Soils support appropriate riparian-wetland vegetation, allowing water movement, filtering sediment, and slowing ground water movement for later release. Stream channels are not entrenching beyond natural climatic variations and water levels maintain appropriate riparian-wetland species.

Riparian areas are defined as land directly influenced by permanent water. It has visible vegetation or physical characteristics reflective of permanent water influence. Lake shores and streambanks are typical riparian areas. Excluded are such sites as ephemeral streams or washes that do not exhibit the presence of vegetation dependent upon free water in the soil. Assessing proper functioning conditions will consider use of historical data.

As indicated by:

Hydrologic

- floodplain inundated in relatively frequent events (1-3 years)
- amount of altered streambanks
- sinuosity, width/depth ratio, and gradient are in balance with the landscape setting (i.e., landform, geology, and bioclimatic region); and upland watershed not contributing to riparian degradation.

Erosion/Deposition

- plain and channel characteristics; i.e., rocks, coarse and/or woody debris adequate to dissipate energy
- point bars are being created and older point bars are being vegetated
- lateral stream movement is associated with natural sinuosity
- system is vertically stable
- stream is in balance with water and sediment being supplied by the watershed (i.e., no excessive erosion or deposition)

Vegetation

- reproductive and diverse age class of vegetation
- diverse composition of vegetation
- species present indicate maintenance of riparian soil moisture characteristics
- streambank vegetation is comprised of those plants or plant communities that have deep binding root masses capable of withstanding high streamflow events
- utilization of trees and shrubs
- riparian plants exhibit high vigor
- adequate vegetative cover present to protect banks and dissipate energy during high flows
- where appropriate, plant communities in the riparian area are an adequate source of woody debris

Standard #3: Water Quality Meets Montana State Standards

This means that surface and ground water on public lands fully support designated beneficial uses described in the Montana Water Quality Standards. Assessing proper functioning conditions will consider use of historical data.

As indicated by:

- dissolved oxygen concentration
- pH
- turbidity
- temperature
- fecal coliform
- sediment
- color
- toxins

- others: ammonia, barium, boron, chlorides, chromium, cyanide, endosulfan, lindane, nitrates, phenols, phosphorus, sodium, sulfates, etc.

Standard #4: Air Quality Meets Montana State Standards

This means that air quality on public lands helps meet the goals set out in the State of Montana Air Quality Implementation Plan. Efforts will be made to limit unnecessary emissions from existing and new point or non-point sources.

The BLM management actions or use authorizations do not contribute to air pollution that violates the quantitative or narrative Montana Air Quality Standards or contributes to deterioration of air quality in selected class area.

As indicated by:

Section 176(c) Clean Air Act which states that activities of all federal agencies must conform to the intent of the appropriate State Air Quality Implementation Plan and not:

- cause or contribute to any violations of ambient air quality standards
- increase the frequency of any existing violations
- impede the State's progress in meeting their air quality goals

Standard #5: Habitats are provided to maintain healthy, productive and diverse populations of native plant and animal species, including special status species (federally threatened, endangered, candidate or Montana species of special concern as defined in BLM Manual 6840, Special Status Species Management)

This means that native plant and animal communities will be maintained or improved to ensure the proper functioning of ecological processes and continued productivity and diversity of native plant lifeforms. Where native communities exist, the conversion to exotic communities after disturbance will be minimized. Management for indigenous vegetation and animals is a priority. Ecological processes including hydrologic cycle, and energy flow, and plant succession are maintained and support healthy biotic populations. Plants are vigorous, biomass production is near potential, and there is a diversity of plant and animal species characteristic of and appropriate to the site. The environment contains components necessary to support viable populations of a sensitive/threatened and endangered species in a given area relative to site potential. Viable populations are wildlife or plant populations that contain an adequate number of reproductive individuals distributed on the landscape to ensure the long-term existence of the species. Assessing proper functioning conditions will consider use of historical data.

As indicated by:

- plants and animals are diverse, vigorous and reproducing satisfactorily noxious weeds are absent or insignificant in the overall plant community
- spatial distribution of species is suitable to ensure reproductive capability and recovery
- a variety of age classes are present
- connectivity of habitat or presence of corridors prevents habitat fragmentation
- species richness (including plants, animals, insects and microbes) are represented
- plant communities in a variety of successional stages are represented across the landscape.

Appendix C

Guidelines for Livestock Grazing Management

Guidelines for management of herbivory (including domestic animals and wildlife) are preferred or advisable approaches to ensure that standards can be met or that significant progress can be made toward meeting the standard(s). Responsible state and Federal wildlife agencies must be involved in this management if standards are to be achieved.

Guidelines are provided to maintain or improve resource conditions in upland and riparian habitats. In both riparian and upland habitats, these guidelines focus on establishing and maintaining proper functioning conditions. The application of these guidelines is dependent on individual management objectives. Desired future conditions in plant communities and streambank characteristics will be determined on a case-by-case basis.

Lewistown GUIDELINE #1:

Grazing will be managed in a manner that will maintain the proper balance between soils, water, and vegetation over time. This balance varies with location and management objectives, historic use, and natural fluctuations, but acceptable levels of use can be developed that are compatible with resource objectives.

Lewistown GUIDELINE #2:

Manage grazing to maintain watershed vegetation, species richness, and flood plain function. Maintain riparian vegetative cover and structure to trap and hold sediments during run-off events to build streambanks, recharge aquifers, and dissipate flood energy. Grazing management should promote deep-rooted herbaceous vegetation to enhance streambank stability. Where non-native species are contributing to proper functioning conditions, they are acceptable. Where potential for palatable woody shrub species (willows, dogwood, etc.) exists, promote their growth and expansion within riparian zones.

Lewistown GUIDELINE #3:

Pastures and allotments will be managed based on their sensitivity and suitability for livestock grazing. Where determinations have not been previously documented, suitability for grazing will be determined by: topography, slope, distance from water, vegetation habitat types, and soil types must be considered when determining grazing suitability. Unsuitable areas should be excluded from grazing.

Lewistown GUIDELINE #4:

Management strategies for livestock grazing will ensure that long-term resource capabilities can be sustained. End of season stubble heights, streambank moisture content, and utilization of herbaceous and woody vegetation are critical factors which must be evaluated in any grazing strategy. These considerations are essential to achieving long-term vegetation or stream channel objectives and should be identified on a site-specific basis and used as terms and conditions.

Lewistown GUIDELINE #5:

Grazing will be managed to promote desired plants and plant communities of various age classes, based on the rate and physiological conditions of plant growth. Management approaches will be identified on a site-specific basis and implemented through terms and conditions. Caution should be used to avoid early spring grazing use when soils and streambanks are wet and susceptible to compaction and physical damage that occurs with animal trampling. Likewise, late summer and fall treatments in woody shrub communities should be monitored closely to avoid excessive utilization.

Lewistown GUIDELINE #6:

The development of springs and seeps or other projects affecting water and associated resources shall be designed to protect the ecological functions and processes of those sites.

Lewistown GUIDELINE #7:

Locate facilities (e.g., corrals, water developments) away from riparian-wetland areas.

Lewistown GUIDELINE #8:

When provided, supplemental salt and minerals should not be placed adjacent to watering locations or in riparian-wetland areas so not to adversely impact streambank stability, riparian vegetation, water quality, or other sensitive areas (i.e., key wildlife wintering areas). Salt and minerals should be placed in upland sites to draw livestock away from watering areas or other sensitive areas and to contribute to more uniform grazing distribution.

Lewistown GUIDELINE #9:

Noxious weed control is essential and should include: cooperative agreements, public education, and integrated pest management (mechanical, biological, chemical).

Lewistown GUIDELINE #10:

Livestock management should utilize practices such as those referenced by the NRCS published prescribed grazing technical guide to maintain, restore or enhance water quality.

Lewistown GUIDELINE #11:

Grazing management should maintain or improve habitat for federally listed threatened, endangered, and sensitive plant and animals.

Lewistown GUIDELINE #12:

Grazing management should maintain or promote the physical and biological conditions to sustain native populations and communities.

Lewistown GUIDELINE #13:

Grazing management should give priority to native species. Non-native plant species should only be used in those situations where native seed is not readily available in sufficient quantities, where native plant species cannot maintain or achieve the standards, or where non-native plant species provide an alternative for the management and protection of native rangelands.

Lewistown GUIDELINE #14:

Allotment monitoring determines how on-going management practices are affecting the rangeland. To do so, the evaluations should be based on: measurable management objectives; permanent and/or repeatable monitoring locations; and short-term and long-term data.

Appendix D Drought Policy

Bureau of Land Management Policy for Administering Public Land Grazing In Montana, North and South Dakota During Periods of Drought

Introduction

Livestock grazing is but one of the activities that BLM manages on the public lands. Drought stresses all resources: vegetation, wildlife, soils, watershed, and timber as well as livestock. Unfortunately, only livestock and human activity can be readily controlled or restricted from access to public lands. The other resources are either immobile or not readily controlled. This policy deals with livestock use and implements provisions of existing laws and regulations. Other uses that may require special consideration during severe drought may be addressed in separate policy statements or actions.

Vegetation cover is one part of productive rangelands because it strongly affects soil moisture. When drought reduces the total forage produced and the normal residual vegetation (standing and down plant material) is used by livestock, insects, and other grazing animals; soil moisture and temperature are affected. Soil temperatures are lowered by the residual cover during warm periods and are raised by the residual cover during cold periods. Moisture intake and penetration into soils is keyed to the amount and type of residual cover found on a soil/ecological site. In fact, with little or no residual cover on rangelands, moisture events will likely produce little effective penetration into the soil. Residual cover provides protection for soils, vegetation, wildlife, watersheds, and for the many other resources dependent upon good vegetation and livestock management.

Authority

This document implements provisions of:

- Taylor Grazing Act of June 28, 1934, as amended;
- Federal Land Policy and Management Act of 1976, as amended;
- Public Rangelands Improvement Act of 1978;
- Regulations in 43 code of Federal Regulations, Group 4100(43 CFR 4100).

Policy

It is the policy and objective of the BLM to: manage the public lands and authorize livestock grazing under the principles of multiple use and sustained yield; provide for the orderly administration of grazing by domestic livestock on the public lands; and provide for the conservation and protection of soil and vegetation resources.

Accomplishment of these objectives becomes more difficult during periods of range depletion caused by drought. Normal grazing schedules and livestock management practices may have to be modified. Additional coordination, consultation, and data exchange between livestock operators and Bureau personnel will be required, over and above

that level normally practiced. Appropriate state agencies and other interested parties will have to be involved at appropriate times and kept informed at all time.

The principal thrust of the policy and procedures in this document, and other regulatory and procedural requirements not repeated here, will be for the livestock operator and BLM to jointly develop strategies for livestock use on public land during and following drought. Strategies selected should be those that best protect rangeland resources while minimizing impacts on the operator to the extent possible. To that end, every degree of flexibility provided by the laws and implementing regulations will be available to authorized officers of the Bureau.

Voluntary adjustments in livestock use of public lands should be sought at the earliest date it becomes apparent that "normal" grazing schedules cannot be followed; or, if followed, would result in degradation of long-term resource productivity. The earlier an agreement can be reached or a decision is made that "normal" grazing schedules cannot be followed; the more opportunities livestock operators will have to consider alternatives to minimize impacts on his or her operation. Waiting until the last minute before scheduled turnout to make a determination or decision will reduce the options available to both the operator and the Bureau.

In keeping with established Bureau policies and priorities, efforts to manage public rangeland under drought conditions will be directed first to allotments with resource concerns such as "I" category allotments. Specific allotments in the "M" and "C" categories can also be considered high priority when resource values or conditions so require. Regardless of the category assigned to an allotment, operators should be aware of the procedures and flexibilities available for dealing with drought condition.

BLM fully expects that the vast majority of livestock operators will recognize the need for and voluntarily make adjustments in livestock use of public lands if the extended drought continues. These adjustments will be recognized during the permitting process and grazing bills will be adjusted accordingly. In those situations where agreement cannot be reached, authorized officers of the Bureau have the final responsibility and accountability for ensuring that public lands are not permanently damaged by improper use.

If issuance of a decision concerning livestock use becomes necessary, the procedure specified in 43 CFR 4160 will be followed. Briefly, this procedure calls for a proposed decision, setting forth the proposed action.

Proposed decisions are issued by the Field Office Manager. The permittee then has 15 days in which to protest the proposed decision and set forth reasons why he or she believes the proposed decision is in error. The authorized officer then reviews the proposed decision in light of the protestant's statement of reasons and any other information that may bear on the case. At the conclusion of the review, a final decision is prepared and served on appropriate parties. Any person whose interest is adversely affected by a final decision may appeal the decision for the purpose of a hearing before an Administrative Law Judge.

It should be further understood that final decisions can be modified or rescinded, if the conditions that existed when the decision was issued no longer exist. If significant amounts of precipitation occur during the growing season, producing significant changes in the amount of moisture available to plants, this may cause decisions to be reconsidered. The consultation and coordination process will be used to obtain livestock operator involvement in such cases.

If a proposed decision is not protested, during the 15-day period, it becomes the final decision of the authorized officer without further action.

In cases such as the need for temporary changes caused by conditions such as drought, final decisions may become effective upon issuance (43 CFR 4160.3(f) 4110.3-2(a)).

Procedures

The following guidelines and procedures are intended to provide the data, flexibility and direction for public land managers and livestock operators to develop strategies and make decisions during drought conditions. Consultation and coordination with livestock operators and other interested parties will be carried out during all procedural steps.

I. Winter Assessment (Mid-November - January)

A. Analysis

1. Review past season's monitoring results. Analyze plant growth, actual use, occurrence of insect infestations, and especially the use of "rest" pastures.
2. Analyze precipitation records and distribution patterns from the National Weather Service, local cooperators, BLM, and other agencies. Tabulate moisture departures from normal levels and timing of precipitation in relation to past years' growing season.
3. In "I" allotments where there is concern because there is less residual cover, effective precipitation well below normal, rest pastures already used, etc., measure soil moisture in representative areas. Where available, use RAWS/OMNI sites, existing soil moisture stations, etc. Additional soil moisture samples are to be taken at the rooting depth of major forage species in representative areas using techniques found in agency manuals/handbooks and professional literature and experienced personnel.

B. Action

1. Where it is apparent resource degradation might occur if drought continues, begin to notify operators through letters and news releases that the coming year's livestock grazing might be affected.
2. Set up range user meetings in affected communities to discuss available information and possible actions to prevent range resource damage.
3. Encourage operators to make needed changes in their grazing schedules, including applying for non-use. If non-use is taken then activated, BLM will waive the \$10 service fee in accordance with 43 CFR 4130.8.3. Authorized officers may issue refund or credit of grazing fees under 43 CFR 4130.8-2(b).
4. Meet with individual operators when available information indicates a particular allotment is affected by severe drought condition. Attempt to reach agreement on alternative grazing strategies if conditions do not change.

II. Late Winter and Spring Assessment (February - April)

A. Analysis

1. Review precipitation and soil moisture data for winter and early spring.
2. Review the effects of winter grazing use; snow pack influence for stock water, soil temperatures, etc-
3. Continue soil moisture measurements where problems are apparent or in areas of concern. Measurements at rooting depth to measure available water for plants will be especially important during this period.
4. Assess availability of livestock water, in consultation with permittees.

B. Action

1. If drought conditions are continuing, or becoming more severe, follow up winter letters and news releases with more releases and letters that update the situation. Conduct meetings with Grazing and District Advisory Boards. Meetings are encouraged with other concerned individuals and agencies as a part of the grazing management strategy.
2. Contact remaining operators who have not voluntarily made needed changes. Where you believe you have enough information to indicate an allotment is in severe drought condition, meet with the operator to review and explain the information you have and attempt to reach agreement on a grazing strategy. If an agreement cannot be reached and, especially if the allotment has a relatively early turnout date, issue a proposed decision. The extent of

use adjustment contained in this decision (delayed turnout, reduction in numbers or duration, total exclusion, etc.) will depend on your assessment of all the factors involved. These include past grazing use, range condition, residual cover, precipitation, soil moisture and the land use objectives for the allotment.

3. If soil moisture is below the middle line on Figure 1, delay turnout until key forage plants have grown to approximately one-half their normal height (for most of our native grass species about 6 inches).

III. Continuing Assessment (throughout grazing season)

A. Analysis

1. Continue to closely monitor precipitation in "I" allotments and areas of concern. Attention is directed to determining effective (soil moisture) growing season precipitation.
2. Closely monitor utilization of key plant species and key areas. Remember to consider management objectives when selecting key species and areas.
3. Continue to measure soil moisture in "I" allotments and areas of concern.
4. Monitor factors other than livestock grazing, such as insect infestations, congregations of wildlife, availability of livestock water, etc.

B. Action

1. If soil moisture drops below the middle line on Figure 1 and utilization has reached objective levels or a maximum of 30 percent utilization has occurred, livestock are to be removed.
2. If soil moisture remains unacceptable (below the bottom line in Figure 1) during most of the spring and early summer with little or no growth in primary forage species for livestock (i.e., range readiness has not been reached), advise affected permittees that fall and winter ranges may not be available for use during the current year. Also advise that production in subsequent years may be affected if plant basal areas and density have been severely reduced.
3. For those permittees in "I", allotments with AMPs having available standing forage in rest pastures or fall or winter use pastures, advise the permittees that livestock must be removed from public lands; when consumption of standing forage has reached objective levels or a maximum of 50 percent.
4. Adjust monitoring plans to collect data concerning plant death, loss of basal area, density, and yield for analysis and use in later years.

IV. Other Considerations

1. The use of salt, mineral, and certain mineral supplements as necessary to overcome natural shortages of minerals in rangeland forage may be authorized as necessary to provide for proper range management(4130.3-2(c)).
2. Maintenance feeding on public lands is not authorized except under very unusual short-term conditions and by permit only. Maintenance feeding during drought conditions is specifically excluded.
3. Applications for a maintenance feeding permit due to poor forage conditions associated with drought should be denied and livestock removed or not allowed.

Definitions

Available water. That portion of water in a soil that plants can extract from the soil. Generally measured per unit volume of soil.

Basal area (range). The area of ground surface covered by the stem or stems of a range plant, usually measured 1 inch above the soil in contrast to the full spread of the foliage.

Density. (1) The number of individual plants per unit area; (2) Refers to the relative closeness of plants to one another.

Flexibility. The ability to alter the grazing management plan to meet changing conditions.

Flushing. Feeding female animals a concentrated feed shortly before and during the breeding period for the purpose of stimulating ovulation.

Growing season. In temperate climates, that portion of the year when temperature and moisture are usually most favorable for plant growth.

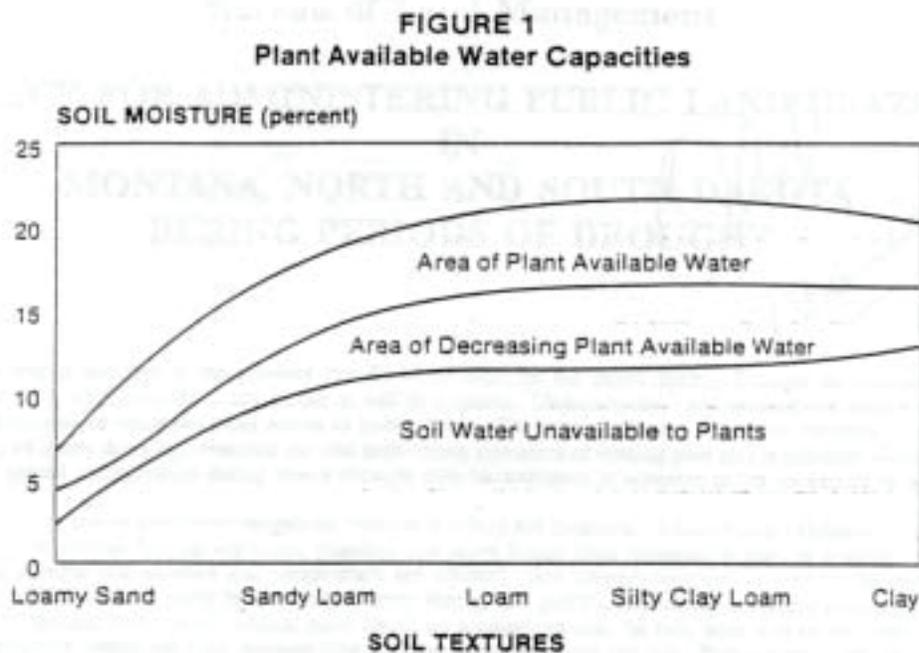
Key species. (1) Forage species whose use serves as our indicator to the use of associated species; (2) Those species which must, because of their importance, be considered in the management program.

Maintenance feeding. Supplying feed to range animals when available forage is too limited to meet their minimum daily requirement (examples are cubes, pellets, baled or loose hay).

Phenology. The study of periodic biological phenomenon such as flowering, seeding, etc., especially as related to climate.

Range readiness. The defined stage of plant growth at which grazing may begin under a specific management plan without permanent damage to vegetation or soil.

Supplemental feed. A feed which supplements the forage available from the public lands and is provided to improve livestock nutrition and good animal husbandry and rangeland management practices. An example is salt or mineral block. Creep feeders to supplement feed for calves and supplemental feeding to "flush" cattle and sheep for breeding may be authorized on public lands when compatible with the resource management objectives.



When using Figure 1, the following information should be kept in mind.

- a. Soil moisture is measured the depth of plant roots or to a root limiting layer. It will vary by plant(s) and soil type.
- b. Soluble salts, gravel and heavy clay will decrease plant available water capacity.
- c. Organic matter, good soil structure will increase plant available water capacity (The capacity increases about 1 percent for each 1 percent of organic matter).
- d. Soils with water restricting layers like naturally compact subsoil, shallow bedrock or stratification can increase plant available water capacity of the overlying soil layers.
- e. Soils that are deep, medium textured and uniform can have decreased plant available water but allow for deeper rooting.

Figure 1 was developed from research done in the 1980s in northern and eastern Montana. Published research was reviewed by soil scientists, range scientists and plant physiologists. These data are currently found in USDA, NRCS soil survey manuals, engineering manuals, irrigation guides, ARS and University research. It is tested and well accepted information.

The lines on the graph represent the relationship of various soil texture and soil water available to plants common to the Northern Gt. Plains and nearby Rocky Mountains.

For site specific application the lines should be adjusted to reflect the needs of key forage species on a given soil in area of interest. For example, a western wheat plant is capable of extracting more soil moisture from a silty clay soil than is a bluegrass plant.

The area above the top line is the amount of soil water in excess of what a given soil type can hold. This soil water will likely move down, through and out of the soil root zone and possibly become ground water.

The area between the middle and top lines represents the soil moisture contents which most plants need for normal growth.

The area below the bottom line indicates soil moisture that is not available to the plant; e.g., if there is less than 4 percent moisture in a loamy sand soil within the root depth of the plant, it will not grow.

The area between the bottom and middle lines indicates a moisture level that is marginal to plant growth. The plant is becoming stressed at this point and, if further stressed by removal or damage to the top growth, it will begin to lose vigor, roots and thus its ability to grow. It is not unusual to reach this moisture level during late summer in much of Montana and other semi-arid areas.

Appendix E

Standards for Rangeland Heath Evaluations

Allotment Name	Allotment No.	Standard 1 (Uplands)	Standard 2 (Riparian)	Standard 3 (Water Qlt)	Standard 5 (Biodiversity)	Cause (by Standard)
CASCADE COUNTY (35)						
BELT CREEK	09710	No	n/a	n/a	No	Due to past logging practices/non-native species
BIG EDDY	06332	Yes	n/a	n/a	Yes	
BIRD CREEK (Lower)	11190	Yes	n/a	n/a	Yes	
BIRD CREEK (Upper)	09812	Yes	n/a	n/a	Yes	
BLACK BUTTE	09723	No	n/a	n/a	No	Due to past logging practices/non-native species
BLACKFEET GULCH	06329	Yes	n/a	n/a	Yes	
CALVERT	01166	No	n/a	n/a	No	Livestock is considered to be a significant factor
DEVIL CANYON	09709	Yes	n/a	n/a	Yes	
FORD COULEE	07831	Yes	Yes	Yes	Yes	
HARDY	06336	No	n/a	n/a	No	Significant progress is being made
HARDY CREEK	06334	Yes	n/a	n/a	Yes	
HOUND	09747	Yes	n/a	n/a	Yes	
LOWER FLAT CREEK	06331	Yes	n/a	n/a	Yes	
LOWER SAND COULEE	09836	Yes	n/a	n/a	Yes	
MIDDLE CREEK	09704	Yes	n/a	n/a	Yes	
MING COULEE	09715	Yes	n/a	n/a	Yes	
MONARCH	09722	Yes	Yes	Yes	Yes	
N. ANTELOPE MTN.	06338	Yes	n/a	n/a	Yes	
NORTH FORK SHEEP CR	09726	Yes	Yes	Yes	Yes	
PAUL CREEK	07618	Yes	Yes	Yes	Yes	
RIVER TRACT	09691	No	No	No	No	Livestock is considered to be a significant factor
RYAN COULEE	06330	Yes	Yes	Yes	Yes	
SAND COULEE	09820	Yes	n/a	n/a	Yes	
SIMMS CREEK	06328	No	n/a	n/a	No	Livestock is considered to be a significant factor
SOUTH CANAL DITCH	06326	No	No	No	No	Livestock is considered to be a significant factor
SOUTH FORK SHEEP CR	09655	Yes	Yes	Yes	Yes	
SUGARLOAF	11186	Yes	n/a	n/a	Yes	
SUN RIVER DITCH	06327	No	n/a	n/a	No	Due to agricultural trespass

Allotment Name	Allotment No.	Standard 1 (Uplands)	Standard 2 (Riparian)	Standard 3 (Water Qlt)	Standard 5 (Biodiversity)	Cause (by Standard)
TIGER BUTTE	07832	Yes	n/a	n/a	Yes	
TINTINGER SLOUGH	06337	No	Yes	Yes	No	Due to the presence of naturalized invasive species
TOMS GULCH	07762	Yes	n/a	n/a	Yes	
WATER TANK SMITH R.	09806	Yes	n/a	n/a	Yes	
UPPER PASTURE	02558	Yes	n/a	n/a	Yes	
WEST FORK HOUND CR	09780	Yes	n/a	n/a	Yes	
WILLOW CREEK	07775	No	n/a	n/a	No	Due to the presence of naturalized invasive species
WINDY HOLLOW	09818	Yes	No	No	No	Livestock is considered to be a significant factor
LEWIS AND CLARK CO. (15)						
ALKALI FLAT (East)	07615	Yes	Yes	Yes	Yes	
ALKALI FLAT (West)	06295	Yes	n/a	n/a	Yes	
BEAN LAKE	07605	Yes	Yes	Yes	Yes	
BEDROCK CREEK	06347	No	No	No	No	Livestock is considered to be a significant factor
BLACK REEF	07609	Yes	Yes	Yes	Yes	
COTTONWOOD CREEK	07716	Yes	n/a	n/a	Yes	
FLORENCE CANAL	07614	Yes	n/a	n/a	Yes	
MIDDLE FORK	07604	Yes	Yes	Yes	Yes	
MIDDLE FORK DEARBORN	07603	No	n/a	n/a	No	Due to past logging practices
RIVER BLM	06325	Yes	n/a	n/a	Yes	
ROOST HILL	07607	Yes	Yes	Yes	Yes	
SOUTH FORK	06443	Yes	Yes	Yes	Yes	
WILLOW CR. PASTURE	06314	Yes	n/a	n/a	Yes	
WILLOW CREEK	07608	Yes	n/a	n/a	Yes	
WILLOW CREEK CANAL	07612	Yes	Yes	Yes	Yes	
MEAGHER COUNTY (25)						
BERG LEASE	07601	No	No	No	No	Livestock is considered to be a significant factor
BATTLE CREEK	09814	Yes	Yes	Yes	Yes	
BLACK CANYON	09849	Yes	n/a	n/a	Yes	
COYOTE CREEK	09663	No	n/a	n/a	No	Livestock is considered to be a significant factor
CROOKED CREEK	09688	Yes	n/a	n/a	Yes	
DAISY DEAN CREEK	09675	Yes	No	No	No	Livestock is considered to be a significant factor
DEER CREEK	09728	Yes	n/a	n/a	Yes	

Allotment Name	Allotment No.	Standard 1 (Uplands)	Standard 2 (Riparian)	Standard 3 (Water Qlt)	Standard 5 (Biodiversity)	Cause (by Standard)
DIVIDE CREEK	19660	Yes	Yes	Yes	No	Due to the presence of spotted knapweed
DRY BEAVER CREEK	06294	Yes	n/a	n/a	Yes	
DRY HILLS	09743	No	n/a	n/a	No	Livestock is considered to be a significant factor
EAGLE CREEK	09672	Yes	Yes	Yes	Yes	
EAST LOCO CR.	07611	Yes	Yes	Yes	Yes	
ELK CREEK	09800	Yes	Yes	Yes	Yes	
GIPSY CREEK	09671	Yes	n/a	n/a	Yes	
HOLLIDAY L.&L IND	09735	Yes	n/a	n/a	Yes	
INDIAN CREEK	07617	Yes	n/a	n/a	Yes	
LITTLE ELK CREEK	09708	Yes	Yes	Yes	Yes	
LITTLE SULPHUR CREEK	09732	Yes	n/a	n/a	Yes	
LOWER SPRING CR AMP	09673	Yes	n/a	n/a	Yes	
N FORK MUSSELSHELL	09674	Yes	n/a	n/a	Yes	
RHYNARD IND	09801	No	n/a	n/a	No	Due to the presence of spotted knapweed
SIXTEEN	09690	No	n/a	n/a	No	Livestock is considered to be a significant factor
SMITH CREEK	09698	Yes	Yes	Yes	Yes	
SPRING CREEK PASTURE	09758	Yes	n/a	n/a	Yes	
WEST FORK MUD CREEK	09697	Yes	n/a	n/a	Yes	
PONDERA COUNTY (5)						
E. BIRCH CREEK	06322	Yes	No	Yes	No	Due to the presence of spotted knapweed
HOMESITE	06324	No	No	Yes	No	spotted knapweed and current livestock mgt
SWIFT DAM	06321	Yes	n/a	n/a	Yes	
WADDEL LAKES	06320	No	No	Yes	No	Due to the presence of spotted knapweed
WEST BIRCH CREEK	06323	Yes	No	Yes	No	Due to the presence of spotted knapweed
POWELL COUNTY (1)						
DOG CREEK	07825	Yes	Yes	Yes	Yes	Powell Co.- Managed by Lew.FO for Msla. FO
TETON COUNTY (19)						
BATTLE CREEK	06307	Yes	Yes	Yes	Yes	
BLACK COULEE	06313	Yes	n/a	n/a	Yes	
BLACKFEET GULCH	06335	Yes	n/a	n/a	Yes	
CASTLE REEF	07613	Yes	n/a	n/a	Yes	

Allotment Name	Allotment No.	Standard 1 (Uplands)	Standard 2 (Riparian)	Standard 3 (Water Qlt)	Standard 5 (Biodiversity)	Cause (by Standard)
CHICKEN COULEE	06303	Yes	Yes	Yes	Yes	
CHOTEAU MTN	06304	Yes	n/a	n/a	Yea	
COWTRACK	06306	Yes	n/a	n/a	Yes	
DEEP CREEK	06310	Yes	Yes	Yes	Yes	
E FARMERS RESEVOIR	06316	Yes	n/a	n/a	Yes	
EAR MOUNTAIN INDIV.	09835	Yes	n/a	n/a	Yes	
FREEZEOUT WEST	06317	Yes	n/a	n/a	Yes	
GREEN TIMBER GULCH	06308	Yes	Yes	Yes	Yes	
INDIAN HEAD ROCK	07659	Yes	Yes	Yes	Yes	
PISHKUN RESERVOIR	06315	Yes	n/a	n/a	Yes	
PISHKUN	06311	Yes	n/a	n/a	Yes	
SALMOND RANCH CO.	06342	Yes	Yes	Yes	Yes	
THE FLAT	06319	No	n/a	n/a	No	Livestock is considered to be a significant factor
TUNNEL LAKE	06312	Yes	Yes	Yes	Yes	

Appendix F Upland Health Assessments and Monitoring Schedule

Allotment Name	Allotment Number	Ecol. Site Index Score/seral stage	Trend	Range Health Indicators (departure from expected for the site)	Transect UTM Coordinates	Monitoring Schedule*
ALKALI FLAT (East)	07615	Undet.	5 Upward	none-slight	Z12 E0385185 N5271693	10 years
		35 mid seral	4 Upward	none-slight	Z12 E0384756 N5277338	10 years
ALKALI FLAT (West)	06295	78 PNC	8 Upward	none-slight	Z12 E0373902 N5274511	5 years
		Undet.	Undet.	none-slight	Z12 E0375877 N5274025	5 years
BATTLE CREEK	06307	68 late seral	10 Upward	none-slight	Z12 E0377397 N5274605	5 years
		79 PNC	8 Upward	none-slight	Z12 E0374214 N5285087	10 years
BATTLE CREEK	09814	85 PNC	2 Upward	none-slight	Z12 E0374911 N5285320	10 years
		60 late seral	7 Upward	none-slight	Z12 E0504112 N5128374	10 years
BEAN LAKE	07605	Undet.	Undet.	Undet.	Z12 E0388710 N5238720	10 years
		Undet.	5 Upward	none-slight	Z12 E0384169 N5238645	10 years
		Undet.	Undet.	Undet.	Z12 E0385277 N5242978	10 years
BEDROCK CREEK	06347	Undet.	2 Downward	none-moderate	Z12 E0396542 N5225501	3-5 years
BELT CREEK	09710	Undet.	5 Upward	none-slight	Z12 E0505994 N5220766	10 years
BERG LEASE	07601	97 PNC	5 Upward	none-moderate	Z12 E0544122 N5142639	3-5 years
BIG EDDY	06332	47 mid seral	2 Downward	none-slight	Z12 E0495622 N5273115	5 years
BIRD CREEK (Lower)	11190	50 late seral	8 Upward	none-slight	Z12 E0453508 N5237067	10 years
BIRD CREEK (Upper)	09812	85 PNC	7 Upward	none-moderate	Z12 E0453585 N5218011	10 years
BLACK BUTTE	09723	31 mid seral	5 Upward	none-moderate	Z12 E0485342 N5218914	10 years
		Undet.	2 Upward	none-moderate	Z12 E0486369 N5219630	10 years
BLACK CANYON	09849	Undet.	Undet.	none-slight	Z12 E0000000 N0000000	5 years
BLACK COULEE	06313	72 PNC	6 Upward	none-slight	Z12 E0382520 N5278043	10 years
BLACK REEF	07609	98 PNC	5 Upward	none-slight	Z12 E0380202 N5275632	5 years
		38 mid seral	5 Upward	none-slight	Z12 E0387995 N5268104	10 years
BLACKFEET GULCH	06329	55 late seral	5 Upward	none-slight	Z12 E0496784 N5275346	10 years
BLACKFEET GULCH	06335	Undet.	10 Upward	none-slight	Z12 E0376801 N5302675	10 years
CALVERT	01166	32 mid seral	5 Upward	none-moderate	Z12 E0491424 N5221299	3-5 years
CASTLE REEF	07613	60 late seral	5 Upward	none-slight	Z12 E0373946 N5277519	10 years
CHICKEN COULEE	06303	84 PNC	9 Upward	none-slight	Z12 E0374328 N5310790	5 years
CHOTEAU MTN	06304	Undet.	Undet.	Undet.	Z12 E0375055 N5300753	5 years
COTTONWOOD CREEK	07716	Undet.	7 Upward	none-slight	Z12 E0438150 N5204652	5 years
COWTRACT	06306	82 PNC	8 Upward	none-slight	Z12 E0374303 N5305776	5 years
COYOTE CREEK	09663	27 mid seral	3 Upward	none-moderate	Z12 E0536400 N5148429	3-5 years
CROOKED CREEK	09688	Undet.	6 Upward	none-moderate	Z12 E0459456 N5200818	10 years
DAISY DEAN CREEK	09675	Undet.	Undet.	Undet.	no upland inventory	3-5 years
DEEP CREEK	06310	Undet.	Undet.	Undet.	Z12 E0373776 N5291392	5 years
DEER CREEK	09728	90 PNC	7 Upward	none-slight	Z12 E0375028 N5287951	5 years
DEVIL CANYON	09709	80 PNC	6 Upward	none-moderate	Z12 E0532910 N5137998	10 years
DIVIDE CREEK	19660	43 mid seral	4 Upward	none-slight	Z12 E0490797 N5216479	10 years
		Undet.	5 Upward	none-moderate	Z12 E0528684 N517519	5 years
		68 late seral	3 Upward	none-moderate	Z12 E0528049 N5168608	5 years
		74 late seral	2 Upward	none-moderate	Z12 E0526598 N5169048	5 years
		Undet.	8 Upward	none-slight	Z12 E0527937 N5169911	5 years
		73 late seral	3 Upward	none-slight	Z12 E0531312 N5167774	5 years
		Undet.	4 Upward	none-moderate	Z12 E0530642 N5169534	5 years
		81 PNC	2 Upward	slight - moderate	Z12 E0527821 N5172500	5 years
		Undet.	Undet.	none-slight	Z12 E0528087 N5170927	5 years

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Allotment Name	Allotment Number	Ecol. Site Index Score/seral stage	Trend	Range Health Indicators (departure from expected for the site)	Transect UTM Coordinates	Monitoring Schedule*
DOG CREEK	07825	Undet.	Undet.	Undet.	no upland inventory	5 years
DRY BEAVER CREEK	06294	Undet.	5 Upward	none-slight	Z12 E0473445 N5178899	10 years
DRY HILLS	09743	43 mid seral	3 Upward	none-moderate	Z12 E0484937 N5182465	3-5 years
		55 mid seral	0 Static	none-moderate	Z12 E0484258 N5181723	3-5 years
E FARMERS RESEVOIR	06316	63 late seral	10 Upward	none-slight	Z12 E0400495 N5308176	5 years
E. BIRCH CREEK	06322	70 late seral	8 Upward	none-moderate	Z12 E0000000 N0000000	5 years
		89 PNC	7 Upward	none-moderate	Z12 E0000000 N0000000	5 years
EAGLE CREEK	09672	Undet.	4 Upward	none-moderate	Z12 E0493560 N519062	5 years
		Undet.	4 Upward	none-slight	Z12 E0493039 N5187961	10 years
		Undet.	5 Upward	none-slight	Z12 E0494258 N5187409	10 years
EAR MOUNTAIN INDIV.	09835	87 PNC	10 Upward	none-slight	Z12 E0374883 N5301658	10 years
EAST LOCO CR.	07611	Undet.	8 Upward	none-moderate	Z12 E0548623 N5126366	10 years
ELK CREEK	09800	71 late seral	0 Static	none-moderate	Z12 E0479541 N5165424	10 years
		75 PNC	7 Upward	none-slight	Z12 E0478094 N5164429	10 years
FLORENCE CANAL	07614	50 late seral	2 Upward	none-moderate	Z12 E0403725 N5255598	10 years
FORD COULEE	07831	75 PNC	8 Upward	none-slight	Z12 E0510226 N5229582	10 years
		62 late seral	8 Upward	none-slight	Z12 E0511213 N5231517	10 years
FREZEOUT WEST	06317	31 mid seral	1 Upward	none-moderate	Z12 E0418728 N5278493	10 years
GIPSY CREEK	09671	46 mid seral	7 Upward	none-slight	Z12 E0486980 N5152277	10 years
GREEN TIMBER GULCH	06308	60 late seral	1 Upward	none-moderate	Z12 E0373371 N5280122	5 years
		65 late seral	10 Upward	none-slight	Z12 E0373920 N5281833	5 years
HARDY	06336	44 mid seral	2 Upward	none-moderate	Z12 E0437937 N5224665	10 years
HARDY CREEK	06334	53 late seral	5 Upward	none-slight	Z12 E0437064 N5229572	10 years
		73 late seral	8 Upward	none-slight	Z12 E0437082 N5244209	10 years
HOLLIDAY L&L IND	09735	68 late seral	9 Upward	none-slight	Z12 E0543057 N5157363	10 years
HOMESITE	06324	12 early seral	2 Downward	slight - moderate	Z12 E0000000 N0000000	3-5 years
HOUND	09747	73 late seral	9 Upward	none-slight	Z12 E0467434 N5209478	10 years
INDIAN CREEK	07617	Undet.	4 Upward	none-slight	Z12 E0464806 N5189696	10 years
INDIAN HEAD ROCK	07659	Undet.	Undet.	Undet.	Z12 E0373530 N5304505	10 years
LITTLE ELK CREEK	09708	Undet.	4 Upward	none-moderate	Z12 E0553306 N5155265	10 years
LITTLE SULPHUR CREEK	09732	81 PNC	3 Upward	none-moderate	Z12 E0497813 N5167119	10 years
LOWER FLAT CREEK	06331	63 late seral	0 Static	none-moderate	Z12 E0423281 N5229760	10 years
LOWER SAND COULEE	09836	Undet.	2 Upward	none-slight	Z12 E0493389 N521809	10 years
LOWER SPRING CR AMP	09673	82 PNC	4 Upward	none-moderate	Z12 E0538856 N5156415	5 years
MIDDLE CREEK	09704	67 late seral	10 Upward	slight - moderate	Z12 E0541397 N5157363	5 years
		95 PNC	9 Upward	none-moderate	Z12 E0452332 N5203614	10 years
		55 late seral	1 Upward	none-moderate	Z12 E0452798 N5198234	10 years
MIDDLE FORK	07604	94 PNC	7 Upward	none-slight	Z12 E0397082 N5220388	10 years
MIDDLE FORK DEARBORN	07603	Undet.	1 Upward	none-moderate	Z12 E0395333 N5220026	10 years
MING COULEE	09715	Undet.	5 Upward	none-slight	Z12 E0490910 N5219527	10 years
MONARCH	09722	35 mid seral	7 Upward	none-slight	Z12 E0511363 N5218830	10 years
		65 late seral	8 Upward	none-slight	Z12 E0539753 N5152831	5 years
N FORK MUSSELSHELL	09674	68 late seral	2 Upward	slight - moderate	Z12 E0538349 N5152073	5 years
		95 PNC	5 Upward	none-moderate	Z12 E0538453 N5156571	5 years
		65 late seral	5 Upward	none-moderate	Z12 E0538170 N5155745	5 years

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Allotment Name	Allotment Number	Ecol. Site Index Score/seral stage	Trend	Range Health Indicators (departure from expected for the site)	Transect UTM Coordinates	Monitoring Schedule*
		28 mid seral	5 Upward	none - moderate	Z12 E0541455 N5157457	5 years
		53 late seral	6 Upward	none - moderate	Z12 E0542539 N5158178	5 years
		63 late seral	5 Upward	none - moderate	Z12 E0542769 N5157906	5 years
N. ANTELOPE MTN.	06338	88 PNC	9 Upward	none - slight	Z12 E0440249 N5233768	10 years
NORTH FORK SHEEP CR	09726	Undet.	Undet.	none - slight	Z12 E0447008 N5223658	10 years
		Undet.	Undet.	none - slight	Z12 E0448279 N5223068	10 years
		Undet.	Undet.	none - slight	Z12 E0445860 N5219221	10 years
		Undet.	Undet.	none - slight	Z12 E0448271 N5219751	10 years
PAUL CREEK	07618	67 late seral	5 Upward	none - slight	Z12 E0449614 N5220865	10 years
PISHKIN RESERVOIR	06315	68 late seral	10 Upward	none - slight	Z12 E0430446 N5223521	10 years
PISHKUN	06311	87 PNC	9 Upward	none - slight	Z12 E0387749 N5283223	10 years
		79 PNC	9 Upward	none - moderate	Z12 E0392500 N5283701	10 years
RHYNARD IND	09801	50 mid seral	0 Static	slight - moderate	Z12 E0521409 N5133696	5 years
RIVER BLM	06325	75 PNC	1 Upward	none - moderate	Z12 E0399789 N5233984	10 years
RIVER TRACT	09691	24 early seral	3 Upward	none - moderate	Z12 E0448093 N5236281	3-5 years
ROOST HILL	07607	Undet.	4 Upward	none - slight	Z12 E0448093 N5236281	5 years
RYAN COULEE	06330	37 mid seral	5 Upward	none - slight	Z12 E0448093 N5236281	5 years
SALMOND RANCH CO.	06342	Undet.	Undet.	none - slight	Z12 E0374350 N5298802	5 years
SAND COULEE	09820	59 late seral	4 Upward	none - slight	Z12 E0374697 N5293790	10 years
SIMMS CREEK	06328	48 mid seral	0 Static	slight - moderate	Z12 E0374697 N5293790	3-5 years
SIXTEEN	09690	40 mid seral	0 Static	none - moderate	Z12 E0527645 N5171257	3-5 years
SMITH CREEK	09698	75 PNC	1 Downward	slight - moderate	Z12 E0374697 N5293790	10 years
		65 late seral	3 Upward	slight - moderate	Z12 E0527118 N5170088	10 years
SOUTH CANAL DITCH	06326	30 mid seral	0 Static	none - moderate	Z12 E0527118 N5170088	3-5 years
SOUTH FORK	06443	Undet.	Undet.	none - slight	Z12 E0000000 N0000000	10 years
SOUTH FORK SHEEP CR	09655	Undet.	Undet.	Undet.	no upland inventory	10 years
		Undet.	Undet.	Undet.	Z12 E0442198 N5218973	10 years
		Undet.	Undet.	Undet.	Z12 E0445115 N5219190	10 years
SPRING CREEK PASTURE	09758	Undet.	6 Upward	none - slight	Z12 E0485632 N5192135	10 years
SUGARLOAF	11186	65 late seral	9 Upward	none - slight	Z12 E0484920 N5192121	10 years
SUN RIVER DITCH	06327	46 mid seral	5 Upward	none - slight	Z12 E0431069 N5224098	10 years
		67 late seral	8 Upward	none - slight	Z12 E0449984 N5257335	5 years
SWIFT DAM	06321	81 PNC	6 Upward	none - slight	Z12 E0449241 N5257475	10 years
THE FLAT	06319	25-45 mid ser.	10 Upward	none - slight	Z12 E0365693 N5336909	10 years
TIGER BUTTE	07832	Undet.	3 Downward	none - moderate	Z12 E0417841 N5282820	3-5 years
TINTINGER SLOUGH	06337	47 mid seral	4 Upward	none - slight	Z12 E0499364 N5222215	10 years
TOMS GULCH	07762	Undet.	5 Upward	none - slight	Z12 E0444458 N5231660	10 years
		47 mid seral	4 Upward	none - slight	Z12 E0497069 N5219176	10 years
TUNNEL LAKE	06312	92 PNC	0 Static	none - slight	Z12 E0496552 N5220369	10 years
UPPER PASTURE	02558	95 PNC	6 Upward	none - slight	Z12 E0379790 N5280011	5 years
WADDELL LAKES	06320	Undet.	1 Downward	none - slight	Z12 E0510171 N5230921	5 years
		Undet.	Undet.	Undet.	Z12 E0362238 N5337195	10 years
		Undet.	Undet.	Undet.	no upland inventory	10 years
		Undet.	Undet.	Undet.	no upland inventory	10 years
WATER TANK SMITH RIVER	09806	Undet.	Undet.	Undet.	Z12 E0482340 N5217214	5 years

Appendix F Upland Health Assessments and Monitoring Schedule

Allotment Name	Allotment Number	Ecol. Site Index Score/seral stage	Trend	Range Health Indicators (departure from expected for the site)	Transect UTM Coordinates	Monitoring Schedule*
WEST BIRCH CREEK	06323	90 PNC	9 Upward	none-slight	Z12 E0000000 N0000000	5 years
WEST FORK HOUND CR	09780	Undet.	Undet.	Undet.	Z12 E0447318 N5214350	10 years
WEST FORK MUD CREEK	09697	Undet.	9 Upward	none-moderate	Z12 E0543522 N5157651	10 years
WILLOW CR. PASTURE	06314	55 late seral	7 Upward	none-slight	Z12 E0389684 N5270942	10 years
WILLOW CREEK	07608	81 PNC	9 Upward	none-slight	Z12 E0397074 N5266617	10 years
WILLOW CREEK	07775	32 mid seral	1 Upward	none-slight	Z12 E0520796 N5252941	5 years
WILLOW CREEK CANAL	07612	73 late seral	4 Upward	none-slight	Z12 E0376672 N5276277	5 years
		72 late seral	8 Upward	none-slight	Z12 E0373286 N5275103	5 years
		79 late seral	2 Upward	none-slight	Z12 E0373286 N5275103	5 years
		89 PNC	10 Upward	none-slight	Z12 E0377479 N5274780	5 years
WINDY HOLLOW	09818	Undet.	Undet.	Undet.	Z12 E0442809 N5215961	10 years
		Undet.	Undet.	no upland inventory	no upland inventory	10 years
		Undet.	Undet.	Undet.	no upland inventory	10 years
		Undet.	Undet.	Undet.	no upland inventory	10 years
		Undet.	Undet.	Undet.	Z12 E0445723 N5212583	10 years
		Undet.	Undet.	Undet.	no upland inventory	10 years
		50 late seral	5 Upward	none-slight	Z12 E0446854 N5211371	10 years
		51 late seral	5 Upward	none-slight	Z12 E0442570 N5209734	10 years
		79 PNCI	10 Upward	none-slight	Z12 E0445367 N5209938	10 years
		86 PNCI	10 Upward	none-slight	Z12 E0440239 N5207956	10 years
		77 PNC	Undet.	none-slight	Z12 E0442272 N5206000	10 years
		67 late seral	10 Upward	none-slight	Z12 E0443075 N5204440	10 years
		53 late seral	6 Upward	none-moderate	Z12 E0441904 N5203085	10 years
		65 late seral	10 Upward	none-slight	Z12 E0445369 N5202917	10 years
		44 mid seral	9 Upward	none-slight	Z12 E0453846 N5204560	10 years
		96 PNCI	3 Upward	none-moderate	Z12 E0452011 N5212170	10 years
		62 late seral	0 Static	slight - moderate	Z12 E0451462 N5212209	10 years
		79 PNCI	9 Upward	none-slight	Z12 E0454434 N5210106	10 years
		Undet.	Undet.	Undet.	Z12 E0447570 N5195244	10 years
		68 late seral	2 Upward	none-slight	Z12 E0448254 N5194103	10 years
		50 late seral	1 Upward	none-slight	Z12 E0447544 N5193159	10 years

Wegner, SF Stickney Cr Pastures will be monitoring 3-5 years. East Fork Hound will be monitored every 5 years.

***Bolded fields denote UTM's collected in NAD27**

¹The monitoring schedule was established based on current resource conditions and the need to assess impacts of proposed changes. Permanent transects will be established on allotments not meeting standards due to livestock. On other allotments with proposed changes, these sites will be visited as outlined above to proposed ensure changes are not resulting in deterioration of range condition.

Appendix G

Riparian Health Assessments and Monitoring Schedule

Allotment Name	Allotment No.	Stream Name	Health Rating	Distance (miles)	Meeting Standards?	Reason Not Meeting Standards	Monitoring Schedule
Ford Coulee	07831	Ford Coulee	PFC	0.5	Yes		10 years
Monarch	09722	Unnamed Tributary of Belt Creek	PFC		Yes		10 years
North Fork Sheep Creek	09726	North Fork of Sheep Creek	PFC	0.76	Yes		10 years
Paul Creek	07618	Paul Creek	PFC	0.31	Yes		10 years
River Tract	09691	Missouri River	FAR(d)	0.28	No	Livestock	5 years
Ryan Coulee	06330	small spring	PFC		Yes		10 years
South Fork Sheep Creek	09655	South Fork of Sheep Creek	PFC	1.48	Yes		10 years
South Canal Ditch	06326	Unnamed Tributary of Muddy Creek	NF	0.28	No	Livestock	5 years
Timtinger Slough	06337	Missouri River	PFC	0.1	Yes		10 years
Windy Hollow	09818	South Fork of Stickney Creek	PFC	0.97	Yes		10 years
Windy Hollow	09818	Wegner Creek	NF	0.58	No	Livestock	5 years
Windy Hollow	09818	Tyrell Creek	PFC	0.25	Yes		10 years
Windy Hollow	09818	East Fork of Hound Creek	PFC	0.42	Yes		10 years
Dog Creek	07825	Rich Spur	FAR(d)	1	Yes		10 years
Alkali Flat North	07615	Sun River	PFC	0.09	Yes		10 years
Alkali Flat North	07615	Unnamed Seasonal Wetland	PFC	44 acres	Yes		10 years
Bean Lake	07605	Clemons Creek	PFC	0.34	Yes		10 years
Bedrock Creek	06347	Bedrock Creek	FAR(d)	0.3	No	Livestock	5 years
Black Reef	07609	Sun River	PFC		Yes		10 years
Black Reef	07609	Unnamed Seasonal Wetland	PFC	112 acres	Yes		10 years
Middle Fork	07604	Unnamed Tributary of Middle Fork of the Dearborn	PFC	0.6	Yes		10 years
Roost Hill	07607	Cutrock Creek	PFC	1.2	Yes		10 years
South Fork	06443	South Fork Stickney Creek	PFC	1.16	Yes		10 years
Willow Creek Canal	07612	Sun River	PFC	1.86	Yes		10 years
Battle Creek	09814	Battle Creek	FAR(U)	0.4	Yes		10 years
Berg Lease	07601	Unknown Tributary of South Fork Musselshell River	FAR(d)	0.29	No	Livestock	5 years

Appendix H

Proposed Range Improvement Projects

Allotment Name	Allotment No.	Proposed Range Improvement Projects	Project Area
Bedrock Creek	06347	Two spur fences	.1 miles
Berg lease	07601	fence	.2 miles
Black Canyon	09849	guzzler	1 tank
Daisy Dean	09675	fence	.2 miles
Dry Hills	09743	pipeline	.7 miles
Simms Creek	06328	fence repair (deeded land only)	2.5 miles
South Canal Ditch	06326	fence	.25 miles
The Flat	06319	fence	1.25 miles
Windy Hollow	09818	electric fence	.75 miles

Appendix H2: Proposed Range Improvement Projects

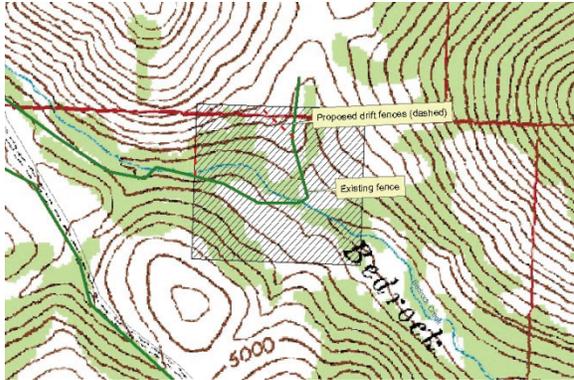


Diagram H2a: Bedrock Creek (06347)

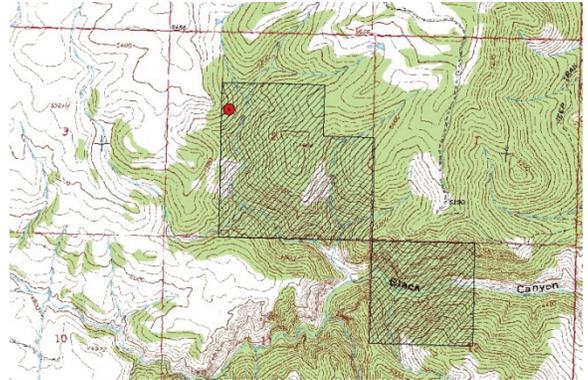


Diagram H2b: Black Canyon (09849)

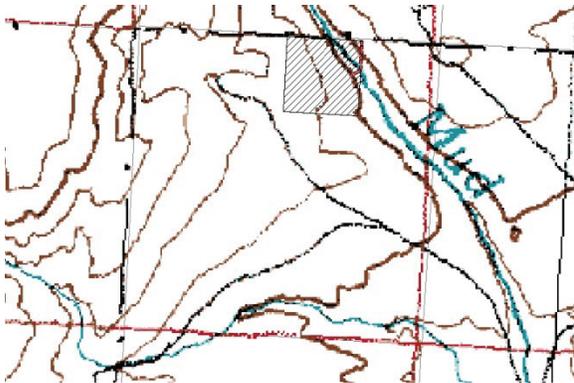


Diagram H2c: Daisy Dean Creek (09675)

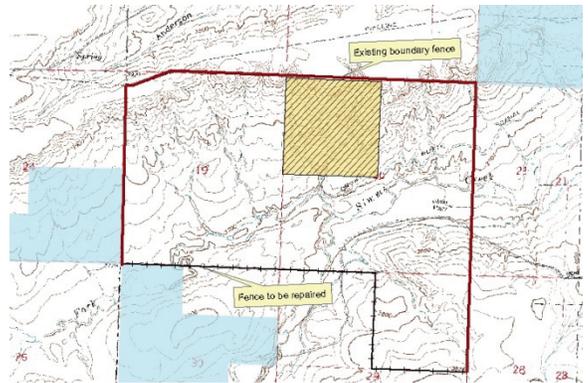


Diagram H2d: Simms Creek (06328)

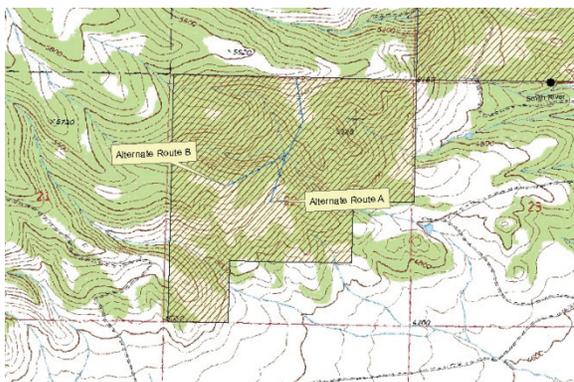


Diagram H2e: Dry Hills (09743)

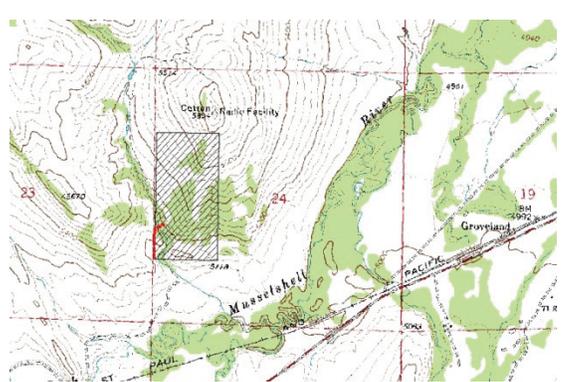


Diagram H2f: Berg Lease (07601)

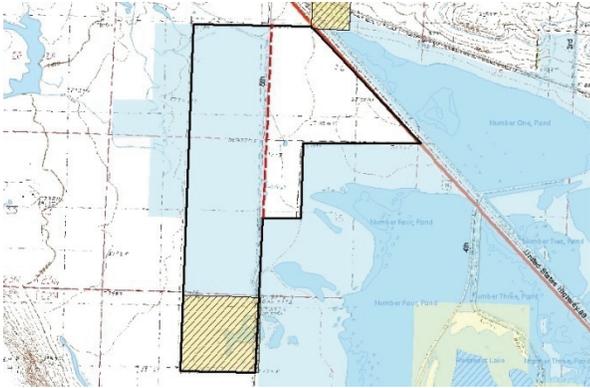


Diagram H2g: The Flat (06319)

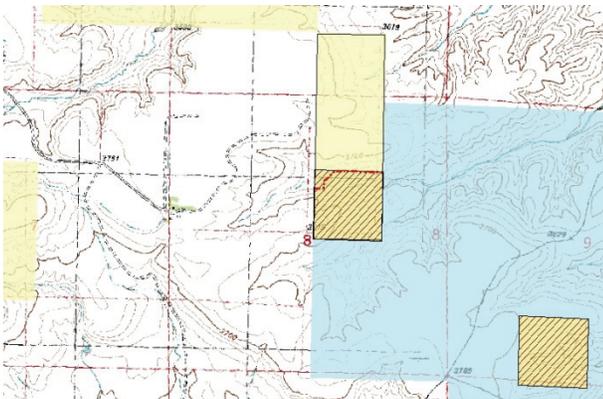


Diagram H2h: South Canal Ditch (07601)



Diagram H2i: Windy Hollow (09818)

Appendix I: Current Allotment Information Summary, Great Falls Administrative Area

Allotment Name	Allotment No.	Public Acres	AUMs	% Public Land	Livestock No.	Season of Use
CASCADE COUNTY						
BELT CREEK	09710	348	20	100	5	6/1-9/30
BIG EDDY	06332	120	17	100	3	9/1 - 2/28
BIRD CREEK (Lower)	11190	40	7	100	11	6/1-9/30
BIRD CREEK (Upper)	09812	480	43	100	20	3/1-2/28
BLACK BUTTE	09723	1362	190	100	38	7/1-11/1
BLACKFEET GULCH	06329	40	14	100	2	5/1-10/31
CALVERT	01166	40	8	100	1	6/1-11/1
DEVIL CANYON	09709	480	48	100	4	3/1-2/28
FORD COULEE	07831	150	30	100	3	6/1-11/15
HARDY	06336	200	54	100	11	5/1-9/30
HARDY CREEK	06334	401	51	100	10	6/1-10/31
HOUND	09747	160	35	100	7	6/1-10/31
LOWER FLAT CREEK	06331	321	62	17	90	6/1-9/30
LOWER SAND COULEE	09836	559	55	100	18	6/15-9/15
MIDDLE CREEK	09704	960	111	100	28	6/1-9/29
MING COULEE	09715	319	15	100	7	7/1-8/31
MONARCH	09722	165	5	100	1	5/20-12/31
N. ANTELOPE MTN.	06338	40	8	100	1	5/1-9/30
NORTH FORK SHEEP CR	09726	2614	158	100	40	6/1-9/30
PAUL CREEK	07618	160	26	100	2	6/1-9/30
RIVER TRACT	09691	38	25	100	6	11/1-2/28
RYAN COULEE	06330	251	51	100	17	11/10-2/12
SAND COULEE	09820	80	3	100	3	6/1-10/31
SIMMS CREEK	06328	160	59	100	15	12/15-4/15
SOUTH CANAL DITCH	06326	40	13	100	2	6/1-10/31
SOUTH FORK SHEEP CR	09655	768	35	100	2, 10	6/1-8/31
SUGARLOAF	11186	120	10	100	2	7/1-10/31
SUN RIVER DITCH	06327	114	30	100	8	8/1-12/31
TIGER BUTTE	07832	520	20	10	40	6/1-10/31
TINTINGER SLOUGH	06337	17	3	2	30	5/15-10/1
TOMS GULCH	07762	700	19	100	2	5/1-11/30
WATER TANK SMITH R.	09806	320	70			6/1-11/30
UPPER PASTURE	02558	50	10	100	1	3/1-2/28
WEST FORK HOUND CR	09780	541	17	100	4	6/1-10/15
WILLOW CREEK	07775	81	12	47	20	7/2-8/10
WINDY HOLLOW	09818	5043	545	100	121	6/1-10/15
LEWIS AND CLARK CO.						
ALKALI FLAT (West)	06295	245	30	50	30	6/1-7/31
BEAN LAKE	07605	1955	112	100	44	7/16-9/30
BEDROCK CREEK	06347	40	4	100	1	3/1-1/24
BLACK REEF	07609	1391	180	23	171	5/15-9/30
COTTONWOOD CREEK	07716	360	145	100	87	6/15-10/14
FLORENCE CANAL	07614	80	16	100	3	5/1-10/31
MIDDLE FORK	07604	160	20	100	5	6/15-10/15
MIDDLE FORK DEARBORN	07603	640	35	100	12	6/15-9/15
RIVER BLM	06325	40	11	100	1	3/1-2/28
ROOST HILL	07607	428	1	100	1	6/1-9/1
SOUTH FORK	06443	640	45	100	15	6/1-9/15
WILLOW CR. PASTURE	06314	80	27	100	6	6/15-10/15
WILLOW CREEK	07608	40	4	100	1	6/1-10/31
WILLOW CREEK CANAL	07612	939	159	100, 42	6, 60	6/1-10/31

Appendix I: Current Allotment Information Summary, Great Falls Administrative Area

Allotment Name	Allotment No.	Public Acres	AUMs	% Public Land	Livestock No.	Season of Use
MEAGHER COUNTY						
BERG LEASE	07601	80	13	100	67	3/1-2/28
BATTLE CREEK	09814	200	57	100	1	10/15-11/14
BLACK CANYON	09849	480	35	100	7	6/1-10/31
COYOTE CREEK	09663	156	27	100	2	3/1-2/28
CROOKED CREEK	09688	81	19	100	4	6/1-10/31
DAISY DEAN CREEK	09675	40	10	100	1	3/1-2/28
DEER CREEK	09728	80	18	100	9	4/1-5/31
DIVIDE CREEK	19660	1082	234	100	42	5/15-10/31
DRY BEAVER CREEK	06294	640	50	100	10	3/1-2/28
DRY HILLS	09743	846	127	37, 75, 100	128, 96, 1	5/10-6/10,5/10-6/10,3/1-2/28
EAGLE CREEK	09672	360	57	100	16	6/1-9/15
EAST LOCO CR.	07611	40	8	2	175	7/1-9/15
ELK CREEK	09800	149	30	100	7	6/1-9/30
GIPSY CREEK	09671	184	59	100	16	7/1-10/20
HOLLIDAY L&L IND	09735	40	13	100	1	3/1-2/28
INDIAN CREEK	07617	240	37	100	6	7/1-11/30
LITTLE ELK CREEK	09708	120	30	100	7	6/1-10/31
LITTLE SULPHUR CREEK	09732	50	16	100	1	3/1-2/28
LOWER SPRING CR AMP	09673	155	5	2	60	6/21-10/15
N FORK MUSSEL SHELL	09674	245	133	100	11	3/1-2/28
RHYNARD IND	09801	80	24	100	2	3/1-2/28
SIXTEEN	09690	40	12	100	4	7/10-10/9
SMITH CREEK	09698	600	69	10	200	6/15-9/15
SPRING CREEK PASTURE	09758	440	80	100	32	7/1-9/15
WEST FORK MUD CREEK	09697	160	40	100	3	3/1-2/28
PONDERA COUNTY						
E. BIRCH CREEK	06322	577	102	100	9	3/1-2/28
HOMESITE	06324	26	9	100	1	3/1-2/28
SWIFT DAM	06321	40	9	100	2	5/15-12/14
WADDEL LAKES	06320	309	25	100	2	3/1-2/28
WEST BIRCH CREEK	06323	42	11	100	1	3/1-2/28
POWELL COUNTY						
DOG CREEK	07825	206	51	100	13	6/1-9/30
TETON COUNTY						
ALKALI FLAT (EAST)	07615	440	100	100	85, 60, 85	3/1-2/28,5/1-9/30,5/15-7/14
BATTLE CREEK	06307	1597	62	100	11	5/15-10/31
BLACK COULEE	06313	40	14	100	3	6/1-9/30
BLACKFEET GULCH	06335	60	6	100	3	7/1-9/1
CASTLE REEF	07613	196	63	100	9, 10	3/1-6/15,12/1-2/28
CHICKEN COULEE	06303	3340	279	44	210	7/1-9/30
CHOTEAU MTN	06304	240	12	100	1	3/1-2/28
COWTRACK	06306	360	36	100	10	6/15-9/30
DEEP CREEK	06310	3000	285	13, 100	211, 12	5/15-10/15,3/1-2/28
E FARMERS RESEVOIR	06316	40	13	100	3	8/15-1/15
EAR MOUNTAIN INDIV.	09835	884	53	100	15	7/1-9/30
FREEZEOUT WEST	06317	200	30	100	8	6/1-9/30
GREEN TIMBER GULCH	06308	728	35	18	50	6/15-10/15
INDIAN HEAD ROCK	07659	78	4	100	2	7/1-8/31
PISHKIN RESERVOIR	06315	78	26	100	6	6/15-10/15
PISHKUN	06311	93	27	100	2	3/1-2/28
SALMOND RANCH CO.	06342	1242	95	7	267	5/15-10/15
THE FLAT	06319	157	49	100	4	3/1-2/28
TUNNEL LAKE	06312	2960	485	68	158	6/15-9/15

Appendix J

Montana Noxious Weed List (effective January 2010)

Priority 1A	<p>These weeds are not present in Montana. Management criteria will require eradication if detected; education; and prevention.</p> <p style="padding-left: 40px;">Yellow starthistle (<i>Centaurea solstitialis</i>)</p>
Priority 1B	<p>These weeds have limited presence in Montana. Management criteria will require eradication or containment and education.</p> <p style="padding-left: 40px;">Dyer's woad (<i>Isatis tinctoria</i>) Flowering rush (<i>Butomus umbellatus</i>) Japanese knotweed complex (<i>Polygonum spp.</i>) Purple loosestrife (<i>Lythrum spp.</i>) Rush skeletonweed (<i>Chondrilla juncea</i>) Eurasian watermilfoil (<i>Myriophyllum spicatum</i>) Scotch broom (<i>Cytisus scoparius</i>) Curlyleaf pondweed (<i>Potamogeton crispus</i>)</p>
Priority 2A	<p>These weeds are common in isolated areas of Montana. Management criteria will require eradication or containment where less abundant. Management shall be prioritized by local weed districts.</p> <p style="padding-left: 40px;">Tansy ragwort (<i>Senecio jacobaea</i>) Meadow hawkweed complex (<i>Hieracium spp.</i>) Orange hawkweed (<i>Hieracium aurantiacum</i>) Tall buttercup (<i>Ranunculus acris</i>) Perennial pepperweed (<i>Lepidium latifolium</i>) Yellowflag iris (<i>Iris pseudacorus</i>) Blueweed (<i>Echium vulgare</i>) Hoary alyssum (<i>Berteroa incana</i>)</p>
Priority 2B	<p>These weeds are abundant in Montana and widespread in many counties. Management criteria will require eradication or containment where less abundant. Management shall be prioritized by local weed districts.</p> <p style="padding-left: 40px;">Canada thistle (<i>Cirsium arvense</i>) Field bindweed (<i>Convolvulus arvensis</i>) Leafy spurge (<i>Euphorbia esula</i>) Whitetop (<i>Cardaria draba</i>) Russian knapweed (<i>Centaurea repens</i>) Spotted knapweed (<i>Centaurea stoebe</i> or <i>maculosa</i>) Diffuse knapweed (<i>Centaurea diffusa</i>) Dalmatian toadflax (<i>Linaria dalmatica</i>) St. Johnswort (<i>Hypericum perforatum</i>) Sulfur cinquefoil (<i>Potentilla recta</i>) Common tansy (<i>Tanacetum vulgare</i>) Oxeye daisy (<i>Chrysanthemum leucanthemum</i> or <i>Leucanthemum vulgare</i>) Houndstongue (<i>Cynoglossum officinale</i>) Yellow toadflax (<i>Linaria vulgaris</i>) Saltcedar (<i>Tamarix spp.</i>)</p>
Priority 3	<p>Regulated Plants: (NOT MONTANA LISTED NOXIOUS WEEDS)</p> <p>These regulated plants have the potential to have significant negative impacts. The plant may not be intentionally spread or sold other than as a contaminant in agricultural products. The state recommends research, education and prevention to minimize the spread of the regulated plant.</p> <p style="padding-left: 40px;">Cheatgrass (<i>Bromus tectorum</i>) Hydrilla (<i>Hydrilla verticillata</i>)</p>

Appendix K

Monitoring and Evaluation

Key areas would be established for upland and riparian utilization. Existing upland study sites would continue to be used where appropriate. Fixed transects and additional sites may be established if necessary. Additional riparian study sites would need to be established. There should be a minimum of one upland and one riparian study site per pasture unless no significant riparian habitat exists in the pasture. Monitoring would be conducted utilizing the key species dominant at each study site. In most cases, key upland species would be western wheat grass, green needle, blue bunch wheat grass, and rough fescue.

Monitoring would be collected by lessees and the BLM. Lessees would be responsible to constantly monitor livestock distribution, utilization levels, and stubble heights on their allotments to ensure that livestock grazing is consistent with established guidelines. Monitoring would be conducted according to site specific goals and objectives for each allotment. Lessees would be encouraged to develop cooperative monitoring efforts with the BLM. Upland study plots are marked by UTM coordinates listed in Appendix F. Riparian reaches are described in Appendix G. BLM would monitor sites (riparian and upland) according to a variety of factors including:

- Proper Functioning Condition
- Functioning At Risk
- Non-Functioning
- Upland trend
- Priority of allotment
- Change of management actions
- Causal factors

BLM personnel will be available to provide monitoring assistance for Lessees.

Review of monitoring data would occur yearly. An evaluation taking into account applicable watershed impacts would need to be completed within 10 years for lease renewal.

The monitoring schedule was established based on current resource conditions and the need to assess impacts of proposed changes. Random visits will also be taken to the allotments listed above to assess overall conditions. The schedule shown above does not include allotment visits for monitoring of restoration or prescribed fire projects, compliance inspections, or project planning and implementation.

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