

Chapter 2

Proposed Action and Alternatives

PROPOSED ACTION AND ALTERNATIVES

INTRODUCTION & ALTERNATIVE FORMULATION

This Environmental Assessment (EA) evaluates two action alternatives and a No Grazing/No Action Alternative identified by the numbers One, Two, and Three. Current or historic management is not fully analyzed as discussed under the Alternatives Considered but Not Analyzed in Detail section below. Current management actions are presented in the EA Table of Management Actions (Table 2-1) as a contrast to the other alternatives. The BLM developed Alternatives One, Two, and Three as a result of public scoping, consultation and coordination with the allotment's grazing permittees, interested publics and the general public. The action alternatives were developed to resolve resource issues and provide for the management of livestock grazing, consistent with BLM policy and applicable laws and regulations. Alternative 3 (the No-Grazing Alternative) was identified in scoping and in response to clarification of the BLM's responsibilities under NEPA to evaluate the impacts associated with removing livestock grazing from the allotment. Since only a resource management plan revision could close the allotment to grazing, the No-Grazing Alternative considers not authorizing livestock grazing during the ten-year period of the permit that is evaluated in the other alternatives.

ALTERNATIVES CONSIDERED BUT NOT ANALYZED IN DETAIL

Alternatives and proposals described in this section were considered but not carried forward for a full, detailed analysis because (1) they did not fulfill requirements of the Federal Land Policy and Management Act (43 United States Code [USC] 1701 et seq.) (FLPMA) or other existing laws and regulations; (2) they did not meet the purpose and need as described in Chapter 1; (3) they were already part of an existing plan, policy, or administrative function; (4) they did not fall within the limits of the planning criteria; (5) they contain components that are part of alternatives that were carried forward; or (6) they were not technically or economically feasible or presented unacceptable impacts to other resource values.

The following is a brief description of these alternatives or proposals and the rationale for why they were not carried forward for detailed analysis. Some of these alternatives were developed during the scoping process for the 2008 EA.

Three Allotments (East, West and Green Mountain): Under this alternative the GMCA would be divided into three grazing allotments. An administrative boundary would be drawn along the Bison Basin Road to divide the main part of the allotment into east and west allotments. The third allotment would be made up of the Green Mountain Use Area. The allotments would not require fencing to separate them. Each allotment would implement a one-herd, deferred grazing system. Low-stress herding would be used manage livestock on the allotments. Limited fencing would be used to control livestock or protect sensitive riparian areas. The grazing season would be shortened to 120 days for all three allotments and the permitted use would be permanently reduced to historic, long-term averages (from 1980 to the present time). This would equate to a 51% reduction in permitted AUMs. Livestock would be moved from one pasture to another and off the allotment based on stubble height in key areas of each allotment. Utilization stubble heights would be similar to those identified under Alternative One.

The grazing components of this alternative are incorporated into Alternatives One and Two. The use of stubble height "triggers" is part of both Alternatives One and Two. A one-herd, deferred grazing system and low stress herding is part of Alternative One. In certain ways, the grazing systems presently used by permittees in the western half of the allotment resemble this proposal. Creating three separate allotments was considered to be more of a management arrangement with no different environmental consequences than those alternatives analyzed in detail.

Prohibit hot-season grazing and reduce seasons of use (eliminate June 15 to September 15 grazing): Under this alternative, livestock would graze in the spring and fall and be removed from the allotment during the hot-season period of the summer. This alternative was considered to address the failing of rangeland health standard numbers 2 and 4.

This alternative would present an economic hardship to the grazing permittees because the costs of transportation and management would increase. It would be difficult for permittees to find summer grazing areas for their

livestock since summer grazing pastures are limited in Fremont County during the summer months. The change in season of use would not have a significant impact on the stability of the local grazing industry; however individual permittees would be significantly impacted if their grazing operations are not adaptable to the split season-of-use.

Change the class of livestock: Under this alternative, the class of livestock would be permanently changed from cow/calf to yearlings.

The rationale for this alternative was that yearlings would be easier to distribute and make more effective use of the allotment's upland forage and be less inclined to linger in riparian areas (BLM Technical Reference, TR1737-14, 1997). Permittees already have this option and, in fact, incorporate a certain percentage of yearlings into their cow/calf operations. However, if required by the BLM, this alternative would result in less flexibility for permittees in cattle purchasing decisions. This would create adverse economic impacts to GMCA permittees by potentially undermining the equity value of their cattle operations. Under certain market conditions, ranches could be affected to a greater degree by market timing and price fluctuations. Because yearlings are not always available for purchase when needed, such operations tend to be economically less stable than cow/calf operations. Although this alternative would not have a disproportionate impact on the Fremont County economy, it would have a direct impact on those permittees affected by this decision.

Boundary Fence Modification: Modify the boundary fence between the Lander and Rawlins Field Offices by converting the existing "let-down" fence to a permanent fence and extend this permanent fence along the currently unfenced Cyclone Rim.

An agreement between the BLM and the Wyoming Game and Fish Department requires a "let-down" fence and an unfenced segment of the southern boundary of the GMCA to facilitate migration of big game, primarily antelope. The proposal would violate this agreement and also present a barrier to migration of antelope and interfere with the movement of wild horses in and out of the allotment.

Existing Situation: Continue to implement the existing management based on the 1999 Decision. Existing terms and conditions would be incorporated into new grazing permits.

Map 2 displays the basic design of the 1999 decision. The GMCA was divided into five use areas to incorporate individual grazing strategies. These use areas were Antelope Hills-Picket Lake, Happy Springs, Alkali Creek Sheep, Arapahoe, and Green Mountain. The map shows the use areas and the pastures within that were expected to provide the basis for deferred rotation-grazing strategies implemented by herding.

The 1999 decision strategy in the three large use areas (Antelope Hills-Picket Lake, Happy Springs, and Arapahoe) was to confine cattle to a single pasture as part of a deferred-rotation grazing system. The strategy failed because the pasture layout was at odds with the way cattle, and to a large extent sheep, graze the allotment. These three use areas are home to a sharp contrast landscape of upland high desert, and high value riparian zones. In the hot season starting approximately mid-June and extending through mid-September, cattle preference for the riparian areas is so pronounced that good distribution on adjacent uplands cannot be achieved. The issue is not limited to the presence of drinking water. Beginning mid-summer, and extending through early fall, the landscape exhibits a contrast of green forage in the riparian zones, with cured yellow forage in the surrounding uplands. The riparian zones are both more palatable and more nutritious, so cattle (and to a lesser extent sheep) preference for the riparian zones is not automatically alleviated by development of water sources in the uplands.

Dotted areas on the map show upland regions in the allotment. Generally, these are areas that do not include sensitive riparian habitats. Areas not dotted include important riparian habitat. While most of the actual acreage in the riparian regions are uplands, it is a given that during the hot season, any free ranging cattle in a riparian region will spend the majority of their time in the riparian habitat. Even a cursory review of Map 2 shows that the pasture configurations are not compatible with the need to apply special management to the riparian habitat. While low-stress herding techniques offer enhanced ability to herd cattle, it is reasonable to suggest that the deferred-rotation systems in the 1999 decision were impossible for the permittees to implement and impossible for the BLM to

administer. The longevity of the 1999 decision and the fact that it has not been replaced is caused by the inability of all involved (BLM, permittees, and interested parties) to identify comprehensive solutions to the complexity of the Green Mountain situation rather than because there is support for that decision from any segment of the public. Ultimately the description of the affected environment is the best measure and description of the impacts associated with managing the allotment according to the 1999 decision. BLM determined that analyzing the 1999 decision management did not meet the requirements of a reasonable alternative as identified in *Oregon Chapter Sierra Club et al.*, 176 IBLA 336, 351, 2009, citing *Headwaters, Inc v. BLM*, 914 F2d 1174, 1180 (9th Cir., 1990):

Appropriate alternatives are those that are reasonable alternatives to the proposed action, **will accomplish its intended purpose, are technically and economically feasible**, and yet have a lesser or no impact [emphasis added].

Moreover, the 1999 decision cannot be analyzed in detail as existing management because it has not been consistently followed and BLM has determined that attempting to do so would continue the downward trends observed following the drought described below.

Unable to implement the 1999 decision as written, in recent years the BLM and the permittees have been pursuing a strategy in which herding efforts are designed to hold cattle in the upland zones, without regard to the specifics of the 1999 deferment systems, except for designed periods when riparian regions were prescribed for use. These alternate approaches were agreed to annually prior to turnout.

In the Antelope Hills-Picket Lake Use Area, the permittees have been turning out in the southernmost pastures (Picket Lake and Daley Lake) and using herding to deny livestock access to the preferred riparian areas in the northwest portion of the area, known as the Granite Creek-Rocks Pasture. This area features an extraordinary riparian meadow complex. Appendix 1 shows recent post grazing photos documenting the relative success in applying this strategy. This strategy revision in conjunction with good precipitation in recent years (2008-2010) has resulted in improvements (in vigor and vegetative expression) in much of this meadow complex. It is widely understood that cattle can be kept out of these preferred areas by herding if this objective is pursued starting at turnout. However, cattle previously allowed to use the riparian meadows of Granite Creek-Rocks Pasture will not remain in an adjacent area given any realistic level of herding. The determination of the cattle to return to those meadows exceeds the permittees' ability to respond effectively. Generally, sheep can be herded as desired in any season. In the last two years, utilization levels in the interior of the Granite Creeks-Rocks meadow complex have been largely acceptable, with areas of heavier use restricted to the riparian areas on the perimeter.

The Coyote Creek (Gulch) drainage has received the heaviest use because this is the route the cattle normally take to the interior of the meadow complex from the upland regions to the southeast. This is the first riparian zone the cattle encounter, and while the permittees have been able to turn back the cattle from this point before they continue on to the interior, this area has continued to be heavily utilized. While this level of success in the interior of the pasture is important, and reflects the effort the permittees have exhibited, the level of success is incomplete, and this approach is not valid for the long term. The key purpose of the Granite Creek-Rocks Fence is to provide the opportunity to use the Granite Creek-Rocks as the turnout pasture, prior to the hot season, and existing management does not provide this critical opportunity. Furthermore, the recent management entails turning out in the southern portion of the allotment every year, which will cause upland rangeland health issues in the long term.

The long term actual use (22,923 AUMs 1980 to present) for the Green Mountain Common Allotment computes to 20.4 acres per AUM, which is a very light stocking rate. At this level, upland use will be consistently light except for localized areas near water, but grazing specific areas every year in the upland during the critical growing season is known to be a detrimental practice. In areas subjected to moderate utilization or more every year in the critical growing season, the desired cool season bunchgrasses such as needle & thread, and bluebunch wheat grass will yield to more grazing adapted species such as Sandberg bluegrass, and threadleaf sedge. This process and the means to

prevent this transition are described in the publication *Grazing Influence, Objective Development, and Management in Wyoming's Greater Sage-grouse Habitat* (Cagney et. al 2010). A transition from the large cool season bunchgrasses to the smaller species Sandberg bluegrass and threadleaf sedge is adverse to sage-grouse management objectives because the latter species are smaller and they offer less hiding cover for nesting and early brood rearing.

The recent improvement in riparian management evident in the Antelope Hills-Picket Lake Use Area has not been realized in the Arapahoe Use Area, despite attempts to employ a similar strategy. Attempts to keep cattle off the riparian zones at Lost Creek, Bare Ring Slough and Crooks Creek have largely failed, and riparian habitat conditions are unacceptable. Temporary fence at the southern end of the Magpie Pasture has limited use of riparian zones on the southeast slope of Crooks Mountain. Upland conditions are largely acceptable due to low actual use stocking rates on an acre-per-AUM basis.

The Warm Springs and Ice Slough Riparian Pastures have provided a realistic opportunity to meet riparian objectives in the Happy Springs Use Area through herding. These two sensitive riparian areas combine with the riparian areas on the north slope of Crooks Mountain in the southeast region of the use area. Given this geography, key riparian habitat was present in all regions of the use area, and there was essentially nowhere to put the cattle, no matter how effective the herding program. It is evident that the Happy Springs Use Area could not sustain more than 90 days per year (30 days for each of the three pastures) even with the light 20.4 acres per AUM stocking level. The 1999 decision allowed for 185 days. However, once the Warm Springs and Ice Slough riparian areas were protected, it became a reasonable proposition to hold cattle on upland range in the northwest portion of the use area with a herding program. This action was further supported by the terrain. The riparian areas in the southeast are uphill from the uplands in the northwest, which reduces the potential for cattle to continuously move there during the hot season. While not all issues are resolved it is reasonable to presume that grazing management similar to that taking place in the Happy Springs Use Area can meet resource objectives. Much of the lessons learned there have been incorporated into the proposed action, and are analyzed there.

The Green Mountain Use Area (referred to as the Mountain Allotment in Alternative Two) differs from the three large use areas (Antelope Hills-Picket Lake, Happy Springs, and Arapahoe) because it does not offer the landscape contrast between high desert uplands and riparian zones. This use area features higher precipitation on the top of Green Mountain itself and the contrast between these habitats is not as pronounced because the upland forage does not cure as readily or as early as it does in the high desert regions of the allotment. While success has been mixed based on the people managing the operation, it is known that the management prescribed in the 1999 decisions can be effective in improving rangeland condition. The pasture moves do require experience; new operators struggle until they learn the terrain and the way cattle behave on the use area. However, this system has been run effectively and it has been incorporated into the proposed action, with minor revisions.

Management of the Alkali Creek Sheep Use Area has been largely effective in accordance with the terms of the 1999 decision. The area is closed to cattle and an average of only 2,302 AUMs has been used in the last five years for the entire GMCA. The area lacks sensitive riparian areas. The use area does include reaches of East Alkali Creek itself but this is an intermittent stream where locations with reliable surface water occur on private and state land that has been fenced out of the allotment. Consequently, the Alkali Creek Sheep Use Area is primarily upland range that has been lightly used. Conditions are acceptable and this part of the management has been incorporated into Alternative Two.

Summary: The existing management articulated by the 1999 decision cannot and should not be analyzed. Much of the specifics of that decision could not be implemented as written, and in recent years the BLM and the permittees have been implementing alternate approaches under the guidelines of the 1999 decision pending a revised decision that articulates a more comprehensive approach. Some lessons have been learned and some successes have been realized in accordance with the 1999 decision. These positives have been incorporated into the proposed action

(Alternative Two) where they are analyzed in detail. The affected environment stands as the best description available regarding the impacts associated with existing management.

Inclusion of the 46 Ranch and Leckinby Allotments:

One grazing permit in the GMCA includes authorized AUMs in the Leckinby and 46 Ranch Allotments which are not part of the GMCA. The BLM attempted to incorporate these allotments into this analysis because management of the Leckinby and 46 Ranch Allotments is integral to the management of the Green Mountain Use Area within the GMCA. Map 35 shows the location of the Leckinby and 46 Ranch allotments adjacent to the area the proposed action designates as the Mountain Allotment. However, during the attempt to develop the analysis of the three allotments in aggregate, the overwhelming difference in scope between the GMCA and the two smaller allotments proved problematic and counter-productive to analyze. It became apparent that tracking issues relating to the two smaller allotments (The Leckinby is a category M allotment and the 46 Ranch is a low priority improve category allotment with a low percentage of public land) had no resemblance to the issues associated with GMCA and developing alternatives relating to the management of these two smaller allotments was becoming a major distraction. Specifically our attempts to “fold in” the two smaller allotments was directing needed focus away from the GMCA issues that are the true purpose of the document. There are few riparian resources in these two allotments on public land, for example, whereas impacts to riparian areas are one of the primary focuses of the GMCA analysis.

The management of the Leckinby and the 46 Ranch Allotments has been merged with the area now identified as the Mountain Allotment in recent years. Alternatives to that arrangement need to be considered in NEPA analysis, and the BLM was unable to do so in the context of the GMCA. It became apparent that doing so in this document would have required the BLM to say over and over again, “except in the Leckinby and 46 Allotments where” Too many statements about the GMCA required a qualifier about the Leckinby and the 46 Ranch Allotments, which in turn shifted the subject away from the core GMCA point being analyzed.

Consequently, the decision was made to analyze issuing permits for the Mountain, Leckinby and 46 Ranch Allotments in a separate document. The BLM considered if separating this analysis was inappropriately separating connected actions and a violation of NEPA and CEQ regulations. However, in the end it was determined that the resulting loss of focus and clarity of combining the two additional allotments distracted from the NEPA analysis of GMCA, rather than assisting in the decision-making process. Furthermore, issues associated with evaluating the Mountain, Leckinby and 46 Ranch Allotments are not accumulating in a manner that precludes separate analysis. They are, in fact separate situations that warrant separate analysis. Development of a NEPA document that addresses the management of the Mountain, Leckinby and 46 Ranch Allotments will begin as soon as the GMCA document is complete.

Proposed Action Variants:

The BLM has long believed that special management of at least two key riparian areas would be necessary to meet SHR unless stocking was reduced to levels described in Alternative One. In considering what fencing would be needed in Alternative Two, multiple variations were considered before the final design was identified. Map 3 shows the variations considered for the Granite Creek-Rocks Pasture Fence. The northwest pasture of the allotment, known as the Granite Creek-Rocks Pasture, features a riparian slough meadow complex of exceptional value. Cattle preference for this area is extreme, to the extent that herding alone is not considered a realistic approach if livestock are to be authorized in numbers that resemble current livestock operations. However, this fence is conflicted by the need to manage wildlife, cross the Seminole Cutoff of the Oregon Trail, and allow for wild horse ingress and egress. The BLM has negotiated with the permittees extensive mitigation measures that include removing nearly half the fence, posts and all, for most of the year. There is little doubt that the meadows this fence is designed to protect historically attracted buffalo too, because there is ample evidence that pre-historic hunters frequented the area. The

region is replete with pre-historic occupation sites. The need to address these resource issues was matched by the need to locate the fence in a manner that captured as much of the meadow complex as possible while including as little adjacent upland range as possible. The objective is to apply special management to the meadow complex and inclusion of more upland than necessary worked against that goal.

The majority of these alternative routes was subject to engineering and cultural resource survey, and systematically rejected, based on resource concerns, until the dotted route was finally established. The green 2007 routes were best for reducing the length of the fence, but they were too visible from the Seminoe Cutoff on the Oregon Trail. In the southeast corner, north of Sulphur Bar Spring, the fence was moved east to assure it was at least .6 miles from two new leks found during the evaluation of the 2007 proposed route. The purple routes explored on the east side proved objectionable to the local tribes, due to the presence of pre-historic features. The western purple route was also too visible from the Seminoe Cutoff. The black 2010 routes included too much upland range on the east side, lengthened the route too much, and this route also encountered too many pre-historic occupation sites.

Only a few of the many variations for PB Spring, Horse Track Spring, and Sulphur Bar Spring are shown on the map. It was important that the water associated with these locations be available to livestock south of the riparian pasture. Fencing these sources into the riparian pasture would cause cattle to congregate on the fence and where they would likely force entry into the riparian pasture. If the cattle had no access to water in these locations, an expanse of upland range to the south would become unavailable. All these areas contain pre-historic occupation sites, and identifying the final route included extensive trial and relocation.

The situation was similar on the Crooks Creek Riparian Fence, if not quite so difficult. Map 3 shows the initial route considered in black compared to the red dotted route in the proposed action. The northern jog on the east side was designed to limit visibility from the historic Lander to Fort Washakie Stage Route Trail. After extensive consideration, it was decided to extend the pasture fence to the west which would allow for the removal of the Bare Ring Slough Enclosure in the long term.

Many locations for water development were considered and eliminated. Two wells in the Alkali Creek Pasture of the proposed Antelope Hills Allotment were specifically eliminated from the proposed action because of sage-grouse habitat considerations.

ALTERNATIVES ANALYZED IN DETAIL

Introduction

This section summarizes the three alternatives analyzed in detail. A brief description of each alternative is provided, followed by Table 2-1 comparing some specific management actions across the alternatives. Existing management is identified to provide a contrast or baseline. Management actions common to all alternatives and actions common to all alternatives except, on occasion, the No-Grazing Alternative are identified at the end of the table. Following the table are narratives giving more detail for each alternative.

Under all alternatives, BLM addresses drought conditions or other types of situations on a case-by-case basis. BLM would meet with grazing permittees or groups of permittees as necessary prior to livestock turn-out to consider proposed grazing plans. The BLM would review range conditions with permittees on the ground, as necessary. During emergency conditions related to drought, insect infestations, or wildfire, the BLM would close pastures, regions, or the entire allotment to livestock grazing after consulting with the grazing permittees. This does not vary by alternative so it is not further analyzed.

Alternative One employs a Low Stocking – Low Infrastructure approach to meeting the Standards for Healthy Rangelands (SHR). AUMs would be adjusted to approximately 25% of existing permitted AUMs (initially, 12,160 AUMs) and management would be based on rigid adherence to stubble heights. Areas inside the GMCA would be closed when stubble heights are reached. There are no pastures or use areas associated with the alternative. The responsibility to meet stubble height requirements would be entirely upon the permittees. There would be no new

range improvement projects proposed for installation. Stubble height violations and trespass would result in reduction in AUMs the following grazing season.

Alternative Two is the BLM's Proposed Action. It authorizes 26,476 AUMs, a reduction of 44% in existing permitted use, and authorizes some new, carefully designed range improvement projects. Until the range improvements needed to achieve SHR are in place, stubble height triggers would be utilized the same as under Alternative One. This alternative would identify grazing systems and implement allotment management plans (AMP) which would require herding to achieve success.

Allotment Management Plans

43 CFR 4120.2 (a), contains the following information about AMPs. "An allotment management plan or other activity plans intended to serve as the functional equivalent of allotment management plans shall be prepared in careful and considered consultation, cooperation, and coordination with affected permittee(s) or lessee(s), landowners involved, the resource advisory council, any State having lands or responsible for managing resources within the area to be covered by such a plan, and the interested public. The plan shall become effective upon approval by the authorized officer. The plans shall --

- (1) Include terms and conditions under §§ 4130.3, 4130.3-1, 4130.3-2, 4130.3-3, and subpart 4180 of this part;
- (2) Prescribe the livestock grazing practices necessary to meet specific resource objectives;
- (3) Specify the limits of flexibility, to be determined and granted on the basis of the operator's demonstrated stewardship, within which the permittee(s) or lessee(s) may adjust operations without prior approval of the authorized officer; and
- (4) Provide for monitoring to evaluate the effectiveness of management actions in achieving the specific resource objectives of the plan."

Alternatives One and Two contain all the required provisions for an allotment management plan and any decision implementing these alternatives incorporate these required provisions as permit terms and conditions. Consequently, these alternatives implement an allotment management plan. A stand alone allotment management plan is not appropriate because an AMP developed in this manner would have to be evaluated with NEPA. This NEPA analysis would be redundant to this document. Alternatives One and Two are designed to meet the letter and spirit of the BLM's commitment to develop an allotment management plan.

Alternative Three is the No Grazing Alternative (No-Action Alternative). This alternative would not renew the livestock grazing permits for at least ten years. It would be a 100% reduction in authorized livestock grazing use. No allotment management plan would be developed.

SUMMARY OF MANAGEMENT ACTIONS

Table 2-1 which follows is a succinct comparison of many of the provisions of the alternatives. The table makes reference to the applicable narrative description of the alternatives where more detail is provided. Management that is common to all alternatives (or all alternatives other than the No-Grazing Alternative) is provided at the end of the table.

Table 2-1. Summary of Management Actions, Assumptions and Mitigation by Alternative

Management Actions, Assumptions and Mitigation	Existing Management	Alternative One Low Stocking – Low Infrastructure	Alternative Two Proposed Action - Implement AMP	Alternative Three No Grazing
<p>Introduction - Management Approach</p>	<p>Progress towards achieving SHR would be achieved through management in accordance with the terms of the 1999 decision issued by the BLM. The system relies on herding to achieve five separate grazing systems in the allotment. Fencing is limited primarily to riparian exclosures designed to restrict or eliminate livestock access to selected riparian zones.</p> <p>Range improvements would be constructed based on a priority list identified in the 1999 Decision.</p> <p>Detailed information regarding the 1999 Decision is not provided because the management approach has not resulted in making satisfactory progress towards rangeland health. See narrative for a more complete explanation. The 1999 management is identified to provide a contrast for the other three alternatives.</p>	<p>Progress towards achieving SHR would be achieved by a strategy wherein regions of the allotment are closed to grazing when prescribed stubble heights are observed. When stubble height targets are reached, the BLM would close portions of the allotment in consultation with the permittees. Continuing use of closed areas would result in an emergency closure of the entire allotment.</p> <p>No new range improvement project infrastructure would be employed. Grazing management would be a function of herding strategies entirely within the discretion of the permittees. Except for the Alkali Creek Sheep Use Area, which is closed to cattle, no specific grazing strategies, pastures or use areas would be prescribed by the BLM</p>	<p>Progress toward achieving SRH would be achieved by dividing the Green Mountain Common into four separate allotments wherein each would have a separate grazing management strategy. Fences would be used to establish three riparian management pastures deemed essential. Otherwise herding would be main tool available to comply with pasture rotation strategies.</p>	<p>Progress towards achieving SHR would be achieved by closing the public lands to grazing. The BLM would issue decisions to cancel all the AUMs of grazing use in the in the allotment. Landowners would be free to use intermingled private lands provided that no animals stray onto the public lands.</p>
<p>Permitted Use Levels</p>	<p>47,361 AUMs 35,910 cattle AUMs 11,451 sheep AUMs.</p> <p>(No reduction in permitted</p>	<p>12,160 AUMs 9,120 cattle AUMs 3,040 sheep AUMs</p> <p>(74% projected reduction in</p>	<p>26,476AUMs 20,178 cattle AUMs 6,298 sheep AUMs</p> <p>(44% reduction in permitted use)</p>	<p>0 AUMs 0 cattle AUMs 0 sheep AUMs</p> <p>(100% reduction in permitted</p>

Management Actions, Assumptions and Mitigation	Existing Management	Alternative One Low Stocking – Low Infrastructure	Alternative Two Proposed Action - Implement AMP	Alternative Three No Grazing
	use)	permitted use) If the entire allotment is closed early in any given year because of a failure to achieve stubble height objectives, the stocking rate for the following year would be reduced by 10% (from the previous year’s actual use) for the next grazing season. Adjustments for the next grazing season taken in numbers or in season.		use)
Allotments, Use Areas and Pastures	One common allotment, five Use Areas and 16 pastures	The Alkali Creek Sheep Use Area would be managed as a separate allotment. The remainder of the allotment would be managed in common.	Three allotments divided into 18 pastures not including the Mountain Allotment which is not analyzed in this document.	No pastures or allotments would be proposed.
Cattle Season of Use	May 1 – 15 to November 1 -15 for 185 days.	Same as Existing Management but adjusted each year based on observations of stubble height.	Season of use varies by pasture <u>Antelope Hills Allotment:</u> 120 days of cattle grazing approximately May 20 to September 20 with the turnout date variable depending on spring growing conditions. Four additional days of trailing are allowed. <u>Arapahoe Creek Allotment:</u> May 1 to October 1 for 154 days <u>Alkali Creek Sheep Allotment:</u> None	No season of use for livestock grazing is proposed.
Sheep Season of Use	Year Long	<u>Green Mountain Common</u> Open : Yearlong outside the Alkali Creek Allotment	<u>Antelope Hills Allotment:</u> No more than five months of use, generally May through September.	No season of use would be proposed.

Management Actions, Assumptions and Mitigation	Existing Management	Alternative One Low Stocking – Low Infrastructure	Alternative Two Proposed Action - Implement AMP	Alternative Three No Grazing
		<p><u>Alkali Creek Sheep Allotment</u> Open : September 16 - June 15 Closed: June 16 - September 15</p>	<p>Sheep use ends concurrent with the end of the cattle grazing season.</p> <p><u>Alkali Creek Sheep Allotment:</u> One month, April 1 to April 30 and one month generally in October starting when cattle use ends in the Antelope Hills Allotment for a total of 61 days.</p> <p><u>Arapahoe Creek Allotment:</u> November 1 to March 31</p>	
<p>Range Improvement</p>	<p>18 springs, pipelines, wells, or reservoirs would be developed.</p> <p>9 miles of riparian fencing</p>	<p>No new water developments</p>	<p>A total of 40.5 miles of new fence would be constructed. Thirty one miles of that would be for the development of pasture-division fencing (See Map 9) to establish the Granite Creek-Rocks and Magpie and Crooks Creek Riparian Management Pastures. See narrative for mitigation measures to protect wildlife habitat, congressionally designated trails, and wild horse movement areas</p> <p>Remove approximately 1.5 miles of existing fencing (Bare Ring Slough Riparian Exclosure)</p> <p>17 cattle guards</p> <p>14 springs, wells and/or reservoirs</p> <p>Whenever practical, range improvements would be located in close proximity to existing disturbances, especially existing</p>	<p>No temporary or permanent pasture division fences would be built.</p> <p>Keep existing spring protection fences.</p> <p>Remove 17 miles of fences (See Map 13) in wildlife migration areas and wild horse movement areas</p> <p>Remove two cattle guards</p> <p>No new water developments</p> <p>Leave existing riparian exclosures in place, for the ten year analysis period but leave gates open and remove sections as necessary to allow for wildlife and wild horse access.</p>

Management Actions, Assumptions and Mitigation	Existing Management	Alternative One Low Stocking – Low Infrastructure	Alternative Two Proposed Action - Implement AMP	Alternative Three No Grazing
Grazing Management	<p><u>Antelope Hills/Picket Lake, Green Mountain and Arapahoe Use Areas</u> Four-pasture deferred rotation grazing systems</p> <p><u>Happy Springs Use Area</u> Three-pasture deferred-rotation grazing</p> <p><u>Alkali Creek Sheep Use Area</u> Spring and fall / winter continuous seasonal grazing; rest summer long June 16 - September 15</p>	<p>Grazing system would be determined by permittees.</p>	<p>roads.</p> <p><u>Antelope Hills Allotment:</u> Four-pasture deferred -rotation grazing</p> <p><u>Arapahoe Creek Allotment:</u> Two three-pasture deferred rotation grazing systems, one north of Crooks Mountain the other south of Crooks Mountain.</p>	<p>No grazing system would be used.</p>
Stubble Height Standards & Monitoring	<p><u>Antelope Hills/Picket Lake Use Area:</u> Graze key riparian sites at a proper use level of 50% on meadow riparian areas early in the summer to allow for re-growth. Graze at 30 to 40% if season will run to September 1. Maintain a stubble height of 4 inches or more on key riparian sites after planned grazing use.</p> <p><u>Green Mountain, Happy Springs, Haypress Use Areas:</u> Graze key riparian sites at a proper use level of 50% on meadow riparian areas early in the summer to allow for re-growth. Graze at 30 to 40% if season will run to September 1</p>	<p>Management would be based on rigid adherence to stubble height standards measured at key areas. (See narrative for details relating to key areas.) Regions of the allotment would be closed when stubble height standards are observed. Regions closed would be identified by the BLM in consultation with the permittees: The following stubble height standards apply:</p> <ul style="list-style-type: none"> On key greenline riparian sites; 6” of stubble height for grasses/sedges in fall. On key upland sites 6” of residual herbaceous cover for cool season bunchgrasses. On key first terrace riparian sites; 4” of stubble height for 	<p>Prior to the implementation of riparian fences, the observation and use of stubble heights would be the same as alternative one.</p> <p>Once the riparian pastures are in place and the grazing strategies are functioning as intended, and barring the need for emergency action as described below, stubble height data would be used as key criteria when the allotments are evaluated. The strategy is to observe stubble height levels over 3-5 years and achieve the stubble height objectives as an average over the analysis period rather than attempt to address every pasture - every year - while the cattle are still present. Stubble height would be measured annually after the</p>	<p>Observation of stubble heights would be continued to address wild horse and wildlife use. However, this action is beyond the scope of this environmental assessment.</p>

Management Actions, Assumptions and Mitigation	Existing Management	Alternative One Low Stocking – Low Infrastructure	Alternative Two Proposed Action - Implement AMP	Alternative Three No Grazing
	<p>to 15. Maintain a stubble height of 3 to 4 inches on key riparian sites after planned grazing use.</p> <p><u>Arapahoe:</u> Graze key riparian sites at a proper use level of 50% on meadow riparian areas early in the summer to allow for re-growth. Graze at 30 to 40% if season will run to September 1 to 15. Maintain a stubble height of 3 to 4 inches on key riparian sites after planned grazing use.</p>	<p>grasses/sedges in fall.</p> <p>The entire allotment would be closed if subsequent inspections identify the continued use of closed regions.</p>	<p>grazing period for each pasture.</p> <p>If use levels are heavy and there is no longer reason to believe that stubble heights objectives will be achieved over the analysis period, the BLM authorized officer will pursue one of the following alternatives, or both in combination.</p> <ul style="list-style-type: none"> • Close regions or the entire allotment in accordance with alternative 1. • Accelerate the evaluation schedule to revise the long term management. 	
Salt and Mineral Placement	<p>Salt and mineral supplements would be placed at least 0.50 mile from water sources.</p>	<p>Supplements potentially toxic to cattle, wildlife, sheep or wild horses are prohibited. Placing supplements of unknown content on the allotment is prohibited.</p> <p>Prohibit placement of salt, mineral, or forage supplements, such as low moisture block supplements in the following areas:</p> <ul style="list-style-type: none"> • Within ½ mile of water and riparian-wetland areas and NHT, regional historic trails and early highways or as needed to protect setting, so long as impacts are not visible. 	<p>Same as Alternative One</p>	<p>Salt and mineral supplements would not be used.</p>

Management Actions, Assumptions and Mitigation	Existing Management	Alternative One Low Stocking – Low Infrastructure	Alternative Two Proposed Action - Implement AMP	Alternative Three No Grazing
		<p>Within .6 mile of the perimeter of greater sage-grouse leks On areas being reclaimed.</p> <p>Avoid concentrations of livestock in areas of known eligible and unevaluated cultural sites.</p>		
Supplemental Feeding	<p>Storing or feeding supplemental forage would be prohibited on public land. Emergency winter feeding would only be allowed with prior approval.</p>	<p>Same as Existing Management except emergency winter feeding may occur as needed to prevent mortality of livestock. The permittee must report, to the BLM, locations of emergency feeding within five days of the action.</p> <p>Emergency feeding must terminate as soon as the danger of mortality ends, and the permittee must remove the livestock from the public lands as soon as possible in lieu of continuing emergency feeding.</p> <p>Except for emergency feeding to prevent livestock mortality, animals being fed supplemental forage on private land may not be allowed to use adjacent public lands.</p> <p>If emergency feeding occurs, the permittee must submit a plan to the BLM no later than April 1 identifying the actions that will assure that no infestations of noxious weeds will occur from</p>	Same as Alternative One	There would be no supplemental forage.

Management Actions, Assumptions and Mitigation	Existing Management	Alternative One Low Stocking – Low Infrastructure	Alternative Two Proposed Action - Implement AMP	Alternative Three No Grazing
Off Highway Vehicle Use	No similar action. OHV use was not addressed.	the incident. The use of OHVs, such as ATVs, would be allowed to conduct basic operations such as maintenance of range projects. Off road herding of livestock would be prohibited.	The use of OHVs, such as ATVs, would be allowed to conduct basic operations such as maintenance of range projects. Off road herding of livestock would be prohibited during grouse nesting season ending July 15. After grouse nesting season, this use would be allowed as a necessary action provided that no resource damage is occurring. Appendix 6 identifies the process the BLM would invoke if there is reason to believe that a problem exists.	Same as Alternative 1.
Allotment Evaluation	The allotment would be evaluated at time frames derived by the availability of funding and the apparent need for an evaluation. Permit terms and conditions such as the Permitted AUMs and the season of use would be adjusted based on the results of all available data.	Evaluation schedule and approach would be the same as existing management. However, because the approach is linked to strict adherence to stubble height standards, the evaluation would be essentially continuous, and the response would be immediate. Consequently, it is likely that a formal evaluation of all monitoring data would not be a high priority. If the BLM is making instantaneous management decisions from short term data observations then it is not likely that the BLM will prioritize comprehensive evaluations.	Same as existing management except that the strategy places additional emphasis on the need to periodically conduct formal evaluations. Consequentially evaluations would be scheduled in 3-5 years to assure that the grazing strategy is working. Long term management changes in would be implemented based on the data available when the allotment is evaluated, with changes in season of use considered the most likely factor to be addressed.	There is no specific plan for evaluating the allotment in a manner related to livestock grazing.
Sage-grouse Prescriptions	Instruction Memorandum No.	Instruction Memorandum No.	Same as Alternative One	Same as Alternative One

Management Actions, Assumptions and Mitigation	Existing Management	Alternative One Low Stocking – Low Infrastructure	Alternative Two Proposed Action - Implement AMP	Alternative Three No Grazing
(General)	WY-2010-012 would not be applied.	WY-2010-012, Greater Sage-grouse Habitat Management Policy on Wyoming BLM Administered Public Lands will guide sage-grouse prescriptions.		
Sage-grouse Prescriptions for leks inside Core Area	No similar action	Within Core Area (see Glossary) surface disturbing activity or surface occupancy is prohibited or restricted on or within 0.6 mile radius of the perimeter of occupied or undetermined sage-grouse leks. Disruptive activity is restricted on or within 0.6 mile radius of the perimeter of occupied sage-grouse leks from 6 pm to 8 am from March 1 – July 15th.	Same as Alternative One	Same as Alternative One
Sage-grouse Prescriptions for leks outside Core Area	No similar action	Outside of Core Area, surface disturbing activity or surface occupancy is prohibited or restricted on or within 0.25 mile radius of the perimeter of occupied sage-grouse leks. Disruptive activity is restricted on or within 0.25 mile radius of the perimeter of occupied or undetermined sage-grouse leks from 6 pm to 8 am from March 15 – May 15.	Same as Alternative One	Same as Alternative One
Sage-grouse Prescriptions for suitable nesting/early brood rearing habitat inside Core Areas	No similar action.	Surface disturbing and/or disruptive activities are prohibited or restricted from March 1- July 15. Restriction applies to suitable nesting and early brood-rearing habitat.	Same as Alternative One	Same as Alternative One
Sage-grouse Prescriptions for suitable nesting/early brood	No similar action.	Surface disturbing and/or disruptive activities are prohibited	Same as Alternative One	Same as Alternative One

Management Actions, Assumptions and Mitigation	Existing Management	Alternative One Low Stocking – Low Infrastructure	Alternative Two Proposed Action - Implement AMP	Alternative Three No Grazing
rearing habitat outside Core Areas		or restricted from March 1- July 15. Restriction applies to suitable nesting and early brood-rearing habitat within mapped habitat important for connectivity or within 2 miles of any occupied or undetermined lek.		
Sage-grouse Prescriptions for Winter Concentration Areas	No similar action.	No vegetation manipulation allowed in mapped winter concentration areas – currently, no winter concentration actions have been identified within the allotment. No surface disturbance or disruptive activities from November 15 to March 14.	Same as Alternative One	Same as Alternative One
Management Actions, Assumptions, and Common to All Alternatives (Except the No-Grazing Alternative Where Noted)				
Permitted use could be grazed in any given year, but anticipated actual use would be less than permitted AUMs on average (see narrative). Anticipated livestock use reflects permitted use reductions.	Long term Average Annual Actual Use: 22,923 AUMs with 17,054 used by Cattle and 5,869 used by Sheep.	Projected long term Average Annual Actual Use: 10,736 AUMs with 8,444 used by Cattle and 2,292 AUMs used by Sheep. Because the grazing management strategy is predicated on adherence to stubble height standards, it is expected that the actual use will vary from year to year based on factors such as drought, and the availability of herders.	Projected long term Average Annual Actual Use: 19,485 AUMs, with 15,402 used by cattle and 4, 083 used by Sheep.	No Similar Action
	Permittees would have three days to vacate pasture after determination that pasture must be changed.	Same as Existing Management	Same as Existing Management	No Similar Action.
	Livestock conversions from winter sheep grazing to spring	No Similar Action.	Livestock conversions from winter sheep grazing to spring –summer –	No Similar Action.

Management Actions, Assumptions and Mitigation	Existing Management	Alternative One Low Stocking – Low Infrastructure	Alternative Two Proposed Action - Implement AMP	Alternative Three No Grazing
	–summer –fall cattle grazing would not be authorized.		fall cattle grazing would not be authorized.	
	Routine allotment monitoring, rangeland health, and PFC assessments would be evaluated to supply WDEQ with data for suspect water bodies for inclusion in WDEQ’s monitoring schedule to assess water quality and beneficial uses.			
	Data would be collected by BLM pertaining to range condition and trend, forage utilization, riparian stubble height, actual use, climate and soil quality. BLM would encourage a cooperative monitoring effort with the active participation of the interested public.			
	All management actions would be adequately funded and completed on schedule.			
	Wildlife population management would continue through sport hunting harvest levels authorized by the Wyoming Game and Fish Commission objectives.			
	Wild horse numbers in the GMCA would be managed in accordance with the Lander Herd Management Area Plan (HMAP), the Seven Lakes HMAP, and the State of Wyoming consent decree of 2003. The Green Mountain Herd Management Area (HMA) would have a maximum of 300 horses, a minimum of 170 horses, and an average of 250 horses. The Crooks Mountain HMA would have a maximum of 100 horses, a minimum of 65 horses, and an average of 82 horses. The Cyclone Rim/Antelope Hills HMA would have a maximum of 82 horses, a minimum of 65 horses and an average of 73 horses.			
	Before construction of range improvements or conducting vegetative manipulations, areas of potential effect would be inventoried, cultural resources discovered would be evaluated, and attempts would be made to avoid significant sites and areas of high site density. If this is not possible, the State Historic Preservation Officer would be consulted to develop acceptable mitigation strategies. Locations of cultural sites would not be disclosed to the public. If cultural material or sites or paleontological materials are discovered during project construction, work would cease until a BLM-approved archaeologist evaluated the site and recommended an appropriate course of action.			
	Blading along fence lines would not be permitted. Brush that needs to be cleared along fence lines would be cleared by brush-beating or similar equipment. Vegetation needing to be cleared would be limited to within 10 feet of the fence line.			
	Increased noxious weed monitoring and necessary control would occur in livestock concentration areas (existing or historic), soils disturbed by range improvement projects, roads associated with range improvement projects and project maintenance, and areas of heavy livestock trampling.			
	To protect crucial big game winter habitat, surface-disturbance activity would not be allowed during critical periods such as winter and calving. Time periods when activities would be prohibited could depend on species impacted and winter conditions.			
	To protect important raptor nesting habitat, surface-disturbance activities would not be permitted during nesting periods. Disturbance timing and distance from nests would be determined by the species of raptor.			
	Cattleguards on public land that are within the existing wild horse management areas (including any new cattleguards in Alternative Two) would have rebar welded between the rails to minimize wild horse entrapment as described in Fencing Handbook H-1741-1.			

Management Actions, Assumptions and Mitigation	Existing Management	Alternative One Low Stocking – Low Infrastructure	Alternative Two Proposed Action - Implement AMP	Alternative Three No Grazing
	No similar action			It is likely that some level of fencing would be installed on private or Wyoming State lands. The exact number cannot be known but would not likely exceed 30 miles over time.
	All range projects would be developed with standard stipulations such as small animal escape ramps in water troughs.			No similar action.
	Using the Visual Resource Contrast Rating System, the BLM would develop range improvements in a manner that does not substantively alter the characteristic visual environment and described below.			No similar action.
	BLM would address drought conditions case-by-case. BLM would meet with permittees prior to livestock turn-out to consider proposed grazing plans. BLM would review range conditions with permittees on the ground, as necessary. During emergency conditions related to drought, insect infestations, or wildfire, the BLM would close pastures or the allotment to livestock grazing. (See alternative narrative.)			No similar action.
	Grazing would be excluded or fenced off where significant historic trails/ sites and prehistoric sites near water sources or riparian areas are found to be undergoing adverse effects from livestock trampling and congregating. If it is not feasible to exclude grazing on these sites, other mitigation measures, as negotiated by BLM and SHPO, would be implemented.			No similar action.
	No sheep bedding or livestock concentrations would be allowed with 0.25 mile of a sage-grouse lek.			No similar action.

ALTERNATIVE ONE (Low Stocking – No Infrastructure)

Management Approach – Introduction

Under this alternative, the BLM would reduce livestock grazing from 47,361 AUMs to 12,160 AUMs, a net reduction of 74% of the permitted AUMs under the existing situation. No additional range projects would be developed. Grazing management would be the prerogative of the permittees. BLM initiatives would focus on observing and responding to measurements of stubble height standards. Because this alternative is very basic in its design, Table 2-1 captures the majority of the approach, and little discussion in the narrative below is required.

Grazing Management

Under this alternative, the grazing permittees would have responsibility for meeting stubble heights requirements and would design grazing management they determine would meet stubble height standards. Thus, this alternative does not specify herding requirements or impose a grazing system on the permittees. The permittees would almost certainly base their management strategy on the upland and riparian regions shown in Map 2, but the BLM would not design or enforce any particular approach. While Alternative One does not require active herding, it is likely that without herding, stubble height standards would be reached at riparian key areas early in the grazing season.

Stubble Height Standards & Monitoring

Observing stubble height data at designated key areas (Map 36), and responding to those observations would be the BLM’s emphasis. If stubble height standards are reached or exceeded, the BLM would require the removal of the livestock either from selected regions of the GMCA, and eventually from the allotment as appropriate to meet the stubble height requirement. The BLM would identify the areas of closure on a case by case basis in consultation with the permittees and the interested public, based on the location of key areas where stubble height targets were reached or exceeded. If necessary the entire allotment would be closed. If the entire allotment is closed based on a failure to meet stubble height objectives, a 10% suspension of permitted use would be enforced the following year. The reduction would accrue through reductions in number of livestock or by reducing the number of days in the season of use.

In addition to the stubble height criteria shown in Table 2-1, the use levels on willows and stream bank trampling would also be observed. Regions or the entire allotment would be closed in the same manner as described with regard to stubble heights and the 10% suspension would be applied if the allotment were closed based on willow use or stream bank trampling. Table 2-2 summarizes the monitoring protocol that would be used under this alternative and the required actions if in non-compliance:

Table 2-2. Monitoring Protocol to be used under Alternative One

Key Site	Monitoring Timeframe	Protocol Used	Trigger Point
Willows	Every 15 days	Browse Method	35% use on leader growth
Stream Bank Trampling	Every 15 days	Stream Bank Alteration Method	When stream bank alteration exceeds 15%

In addition to stubble height, willow utilization and stream bank stability the BLM would, in cooperation and consultation with the grazing permittees and interested publics, monitor trend, actual use and precipitation data.

Evaluation

As noted in table 2-1, the alternative is predicated on the BLM responding without delay to measurements of stubble heights. Consequently the need for a comprehensive evaluation of the allotment may be low priority. However periodically, the BLM will conduct an evaluation of all available data, notably the trend information that is not assessed in stubble height observations. This trend information would be considered in conjunction with actual use and precipitation data. Adjustments in management would follow as necessary.

ALTERNATIVE TWO (Proposed Action)

Management Approach - Introduction

Under this alternative, the Green Mountain Common Allotment would be divided into four smaller allotments; totaling 19 pastures (Maps 7 and 8.) Each of the allotments would have their own grazing system and objectives. To implement these grazing systems and riparian restoration treatments, a total of 40.5 miles of new fencing would be constructed. Because only three riparian pastures would be fenced, herding would be essential for compliance with pasture rotation strategies and riparian objectives (stubble height requirements). The livestock season of use would vary by allotment and kind (sheep versus cattle) of livestock to be grazed. Under this alternative, the permitted use levels would be reduced to 26,476 AUMs, a 44% reduction over existing permitted AUMs. This reduction is based on long-term historic authorized/actual use, recent observations, and the need to meet SHR.

Allotments, Use Areas and Pastures

Alternative Two would divide the Green Mountain Common Allotment into four different grazing allotments as described in the table below. The names for each of the use areas would also be the new allotment names (Map 7). In Table 2-3 below each location is referenced on Map 8.

Table 2-3. Allotment and Pasture Names under Alternative Two

Allotment Name	Pasture Name
Antelope Hills	Grazing Rotation Pastures: Granite Creek Rocks [1], Picket Lake [2], Alkali Creek [3], Daley Lake [4] Riparian Pastures: Long Slough Riparian [5], Warm Springs West [6]
Alkali Creek Sheep [7]	No pasture designations
Arapahoe Creek	Happy Springs Use Area Happy Springs Grazing Rotation Pastures: Warm Springs [8], Haypress [9], Crooks Mountain [10] Happy Springs Riparian Pastures: Warm Springs East [11] Ice Slough [12] Lost Creek Use Area Lost Creek Grazing Rotation Pastures: East Alkali [13], Eagles Nest [14] Lost Creek Use Area Riparian Pastures: Magpie Creek [15], West Fork Crooks Creek [16], Crooks Creek [17]
Mountain [19]	No pasture configurations are evaluated in this environmental assessment

Range Improvements

Under this alternative, fencing, water developments and cattle guards would be constructed and installed to implement the various grazing systems. Specialty fencing designed to mitigate impacts to wildlife and wild horses would be constructed north of the Picket and Daley Lake Pastures to form the Granite Creek-Rocks Riparian Pasture (Map 10). This fence is designed to improve riparian habitat in the Granite Creek-Rocks Pasture and keep cattle out of sensitive riparian areas once they have been moved off this pasture.

The construction of the Crooks Creek Riparian Fence would allow for the removal of 1.5 miles of existing fence on Bare Ring Slough. This riparian enclosure was constructed under existing management but would not be needed in the long-term.

This proposal includes the construction of 40.5 total miles of new fence (Maps 10, 11, & 12). Table 2-4 summarizes the number of miles of new fence (temporary and permanent) construction under this alternative.

Table 2-4. Miles of New Fence Construction under Alternative Two

Permanent Fence (Barbed wire)¹	Lay-down Permanent Electric Fence, with Required Removal of the Posts²	Lay-down Permanent Electric Fence³	Temporary Electric Fence across the Seminole Cutoff⁴	Pole Top Fence⁵	Buck-and Pole⁶	Proposed Total Miles of New Fence
25.5 Miles	8.1 Miles	2.2 Miles	1.4 Miles	0.30	3.0	40.5 Miles

¹ Fences would be installed according to spacing, height, and other specifications described in the BLM Handbook H-1741-1 for the control of livestock as well as the protection of wild horses and wildlife. For example, the bottom wire of a three-wire fence would be placed at 16 inches above the ground in pronghorn antelope ranges. Variances from these standards could be approved by the authorized officer after consultation with affected parties.

² The southern boundary of the Granite Creek-Rocks Fence must allow for movement of wild horses that are known to move north and south through the area. Because wild horses sometimes fail to notice that wires have been removed on a standard lay down design, and will not cross between the fence posts, this fence is designed with sleeves that allow for the removal of the posts. Refer to the drawings in Appendix 7. Corners and “H” braces will be permanent, but the posts will be removed when not essential as described below. The wire will be lain down on the ground and consolidated as needed to assure that animals do not become entangled. The fence will be removed when cattle are using the Granite Creek-Rocks, and Alkali Creek Pastures. The fence will be up when cattle are using the Picket Lake Pasture. When cattle are moved to the Daley Lake Pasture from the Picket Lake Pasture the permittees will lay down the wire and remove the posts within 5 days in the section west of PB Spring. Consequently, this portion of the fence will be up for 30 to 35 days per year depending on the annual pasture rotation schedule. The portion of the fence between PB spring and Sulfur Bar Spring will be up when cattle are using the Daley Lake Pasture. The permittees will lay down the wire and remove the posts within three days of leaving the Daley Lake Pasture. Consequently this portion of the fence will be up for 63 days per year.

³ This is the section of fence crosses the Rawlins to Fort Washakie Stage Route. The south boundary of the Crooks Creek Riparian Pasture Fence is primarily permanent barb wire, but this section is electric to reduce visibility from the historic trail. On this 1.4 mile electric section the wire will be lain down on the ground and consolidated as needed to assure that animals do not become entangled. Another .8 segment of lay down electric fence will be installed on the north end of the Magpie Riparian Pasture.

⁴ This section of the fence addresses the eastern crossing of the Seminole Cutoff of the Granite Creeks-Rocks Fence. This segment requires that the entire fence be completely removed except for a period of less than 35 days. The fence would be removed when cattle are in the Granite Creeks-Rocks Pasture except for a period of less than 5 days when the northeast corner of the pasture and utilizing the windmill near the Seminole Cutoff crossing. The fence would be removed when cattle are using the Picket and Daley Lake Pastures. The fence would be in place during the 30 day period when cattle are using the Alkali Creek Pasture.

⁵ Selected segments shown on Map 9 have been identified for inclusion of a top pole to mitigate the potential for impacts to big game movement.

⁶ Buck and pole fence would be used for riparian enclosures.

A total of nine water developments and five spring protection fences would be constructed. Map 9 shows the location of these proposed projects. The purpose of these water developments is to improve livestock distribution by having cattle and sheep use more of the upland range land and take grazing pressure off of sensitive riparian areas. These projects are needed to assure that the designated pastures are able to support the approved livestock use for the number of days designated in the grazing management strategy. Table 2-5 below identifies the name and type of project to be developed, constructed or reconstructed under this alternative. Reconstructed means the project is in place but the project needs more work than maintenance to be functional.

Table 2-5. Proposed Water Developments under Alternative Two

Project Name	Type of Improvement	New Development or Reconstruction
Pappy Draw Well	Water Well	Existing Well - Equip
Cameco Well	Water Well	Existing Well - Equip
Bare Ring Butte Well	Water Well	Existing Well - Equip
Circle Bar Well	Water Well	New Construction
North Horse Track Well	Water Well	New Construction
Monument Well	Water Well	New Construction
Smiley Well	Water Well	New Construction
Granite Spring	Spring Protection Fence	New Construction
Upper Ladysmith Spring	Spring Protection Fence	New Construction
Lower Wager Meadows Spring	Spring Protection Fence	New Construction
Twin Springs	Spring Protection Fence	New Construction
Mud Spring	Spring Protection Fence	New Construction
Fuzzy Reservoir	Livestock Reservoir	Existing Reservoir - Reconstruction
Eagles Nest Draw Reservoir	Livestock Reservoir	Existing Reservoir - Reconstruction

In accordance with BLM policy, cooperative range improvement agreements would be developed. Maintenance, operation and cost sharing requirements would be outlined in these cooperative agreements and would be assigned to the grazing permittees or other primary beneficiary.

Grazing Management

The grazing treatment detail the alternative would apply to the various pastures are summarized and described in Appendix 5. Table 2-6 below articulates the basic strategy and the underlying reasons for the strategy. The grazing systems applied to the allotments are summarized in the table below.

Table 2-6. Grazing Management under Alternative Two

Allotment Name	Grazing Management
Alkali Creek Sheep	Sheep would be grazed in the spring and fall, generally in April and October. This use period does not include the hot season where riparian issues are important. It does include use in late April where, in some years, the critical growing season for cool season bunchgrasses such as needle & thread begins. Health of the large cool season bunchgrasses is the primary goal in upland environments. However, in most cases this critical season is only beginning in this allotment by the end of April, and the cool season bunchgrasses will be able to complete their growth cycle in the absence of livestock grazing beginning May 1. The majority of livestock use will occur on grass species such as Sandberg bluegrass that green up prior to the cool season bunchgrasses. Early season forbs will also be utilized.
Antelope Hills	A four pasture deferred-rotation would be implemented for cattle. Each of the four pastures would be used for 30 days, for a total of 120 days, with 4 additional days of trailing added to each permit. The 120 day season will be the same for all grazing permittees. Except when changing pastures, all cattle will be confined to a single pasture. The permittees would be given wide latitude regarding the turnout date based on spring conditions, but it is anticipated that in most years the season would be approximately May 20 to September 20. Earlier turnout would be advantageous for riparian management because a 30 day treatment from early May to early June would occur prior to the hot season. Consequently, riparian utilization in the turnout pasture would be low. This is particularly important in the Granite Creek-Rocks Pasture, and it is anticipated that cattle would be turned out in that pasture more often than one in four years particularly in the short term. The Granite Creek-Rocks Pasture Fence makes it possible to capitalize on this key opportunity. Late turnout would be good for uplands, because most of the critical growing

	<p>season for cool season bunchgrasses would be complete prior to turnout. If turnout occurred in late May very little use of cool season bunchgrasses would occur in the critical growing season, and in any scenario it is virtually certain that only one of the four pastures would be used in this critical season. Given these tradeoffs, the turnout date is not considered a key variable and the BLM would prefer that turnout would vary from year to year.</p> <p>The 30 day per pasture rotation is designed to limit the grazing on any riparian zone in the allotment to a total of 30 days per year.</p> <p>Sheep use would occur for a five month period which must end concurrent with the season of use for cattle. Consequently sheep use will precede cattle by a month, approximately May 1. Lambing will occur primarily along Alkali Creek including the East and West Forks, but this use will end prior to the hot season. It is required that herding of sheep would be employed to keep utilization levels low, so stubble height objectives would not be exceeded. The sheep would have the same pasture rotation as the cattle; except that sheep are not authorized in the Granite Creek-Rocks Pasture. In the short term, when the Granite Creek-Rocks Pasture is the turnout pasture, the sheep would be coming off their lambing areas in the other three pastures.</p>
Arapahoe Creek	<p>The allotment would be managed in two use areas called Happy Springs, and Lost Creek. Both use areas would employ a deferred-rotation grazing strategy.</p> <p>The Happy Springs Use Area would be authorized for four cattle grazing permits (GR No. 0240, 3713, 3792 and 3795) and one sheep permit (GR No. 3771). See Figure 3-2 for historic grazing numbers.</p> <p>The Lost Creek Use Area would be authorized for nine cattle grazing permits (GR No. 0264, 3092, 3713, 3792, 3791, 3795, 3841, 3851 and 3854) and one sheep permit (GR No. 3771). See Figure 3-2 for grazing record numbers.</p> <p>In the Happy Springs Use Area three pastures would be used for the 154 day season. Because this entails 51 days of use, moderate utilization or less will be required. Except when changing pastures, all cattle will be confined to a single pasture. This approach is carried over from the 1999 decision because it was reasonably successful. Now that the Warm Springs and Ice Slough Riparian Areas are enclosed, this approach is fully implementable by the permittees and enforceable by the BLM. It is expected that stubble height objectives would be achieved.</p> <p>In the Lost Creek Use Area two large pastures, East Alkali and Eagles Nest Draw, would be used for the 154 day season. The Magpie Creek Riparian Management Pasture would be used initially in the spring to shorten this season. However, because this grazing treatment could approach 70 days of use, moderate utilization or less would be required and the stubble height standards would be strictly implemented. Except when changing pastures, all cattle will be confined to a single pasture. The five water developments proposed for this use area would be essential in assisting the permittees in their herding efforts and keeping their livestock properly distributed. The Crooks Creek Pasture would be brought into this rotation as shown in Table 2-7, after the phase-in rest period.</p>
Mountain	Grazing management is not evaluated in this environmental assessment for the Mountain Allotment.

The BLM and permittees would meet prior to the start of the grazing season to determine if a delay in turn-out dates is needed based on spring growing conditions. The pasture rotation sequence would be identified based on up-to-date information. When the allotments experience a “dry season”, the BLM would coordinate with grazing permittees and interested publics to modify the season of use, if necessary to prevent over use of vegetation. Permittee flexibility needs would be considered in developing annual operating plans; however it will not supersede

progress towards meeting rangeland health objectives.

Livestock herding (both cattle and sheep) is an essential part of the management prescription and must be a part of the annual operating plan. Several of the allotments would require moving cattle or sheep from one pasture to the next. Range improvements would be installed to make the herding program more manageable. Pasture moves would be a phased movement of livestock from one pasture to the next occurring over a three day period. Herding would be needed to move cattle into the upland pastures and riparian management pastures at the beginning of the prescribed season of use. Most importantly, herding would keep livestock, particularly cattle, properly distributed during the hot grazing season (June 15 to September 15). It is during this portion of the grazing season, that cattle most concentrate their grazing use on riparian areas. Herding would also be essential to completely remove cattle and sheep from upland pastures and riparian pastures at the end of the prescribed season of use.

Under this alternative, three riparian management pastures would be constructed to provide rest or deferment from livestock and wild horse use. These three riparian pastures include the Granite Creek-Rocks, Magpie and Crooks Creek Pastures. The table below describes the management actions to be implemented in these pastures.

Table 2-7. Riparian Management Pastures under Alternative Two

Riparian Pasture Name	Management Actions to be Implemented
Granite Creek-Rocks	Early season grazing (turnout pasture) first three years, followed by deferred use with a limit on the number of grazing days to 30 days or less per pasture. Monitor annually.
Magpie Creek	Graze in the spring the first three years of implementation. In year four graze in fall. After that, graze once in the spring or fall on a rotating basis. Monitor annually.
Crooks Creek	Complete rest for three years, graze once in spring or fall on an annual rotating basis. Monitor annually.

Stubble Height Standards & Monitoring & Evaluation

Stubble height, willow utilization and Streambank alteration standards would be the same as described for Alternative One. Prior to the installation of the riparian fences, deemed critical to this alternative, the standards would also be implemented in a manner identical to Alternative One.

However once the fences are in place, and it is possible to implement the grazing management strategies as prescribed, the BLM would alter the way adherence to the standards are administered. The targets would be the same, but the BLM would record the status with regard to stubble heights, willow utilization and streambank alteration at the end of the grazing period. This information would be considered in conjunction with all available information to evaluate the overall success of the management. The previous year’s data would be discussed prior to turnout with the intent to correct any failures to meet targets the upcoming year. The approach puts the emphasis on the evaluation process rather than strict adherence to the stubble heights, and a move-on-use mode of operation. If stubble height targets are achieved on the whole over the analysis period, the BLM would assume that the management is functioning as planned. Because the approach puts the emphasis on the evaluation, the evaluation would be required on a fixed schedule established at 3-5 years. Permits would be adjusted as necessary based on the findings of the evaluation.

Rationale: Through the evaluation approach the BLM would observe the stubble height targets over the evaluation period and make permanent changes to the underlying permits if the targets are not achieved over the evaluation period. The objective is to make long term decisions to permits as needed rather than respond during the grazing season. The approach puts more responsibility on the permittees to achieve the targets, rather than on the BLM to observe and respond. This is a far more cost effective means to achieve the same goal related to stubble height standards.

The evaluation process requires an exception. If use levels are heavy – well beyond acceptable levels more immediate action is required, emergency action would be appropriate. If the annual data indicates that it is no longer

practical to assume that use levels will average out at objective levels over the analysis period, the evaluation would be undertaken prior to the next grazing period, and the permits would be adjusted to reduce season of use, numbers of livestock or the grazing management.

ALTERNATIVE THREE – NO GRAZING ALTERNATIVE

Under the No Grazing Alternative, the existing grazing permits would be cancelled and livestock grazing would not be authorized by the BLM on the GMCA. None of the available forage on BLM lands would be allocated to livestock and all cooperative agreements would also be cancelled. Livestock operators with investments in range improvements on public land would be entitled to appropriate project salvage rights. In this alternative, most fences, water developments, cattle guards and other livestock management infrastructure would be permanently removed to eliminate barriers to wildlife and wild horse migration. A detailed analysis would be completed within three years from the time the grazing permits are cancelled to determine which, if any, livestock management infrastructure would be left on public lands.

For the purpose of this analysis, it is assumed that very little livestock grazing would take place on private and state lands because of the small percentage of state (seven percent) and private land (four percent) occur within the GMCA boundary. Additionally, if livestock grazing were attempted, fencing would be required around each block of state or private land to be grazed to avoid trespass on federal lands. The cost of fencing all non-public lands would be cost prohibited but it is assumed for the sake of analysis that some fencing would be built but probably less than thirty miles.

Limited trailing through the GMCA by sheep could occur, depending on whether the U.S. Forest Service authorizes sheep grazing on the Shoshone National Forest that year. The GMCA is a natural transition route from the lower elevation lands to the higher elevation lands managed by the U.S. Forest Service. A trailing permit would be issued for approximately 1,000-2,000 head of sheep for 10 days, totaling no more than 133 AUMs (2,000 head of sheep for 10 days). No forage allocation or term grazing permit would be issued for trailing use.

The purpose of this alternative would be to reserve all available forage for resource values other than livestock grazing and to solve rangeland health issues without fencing or other infrastructure development. Additionally, the implementation of the No Grazing Alternative would allow those resources, such as riparian areas that are not meeting rangeland health standards, to make quicker progress towards meeting Standards Two and Four of the Wyoming Standards for Healthy Rangelands.

Use Areas / Pastures – Under the No Grazing Alternative, there would be no livestock related use areas or pastures. It is possible that livestock grazing could be authorized in the future if rangeland conditions were improved but this would not be within the ten year period of the permit being evaluated in Alternatives One and Two.

Range Improvements – Under this alternative 17 miles of existing fences and two cattle guards located in wildlife and wild horse movement areas would be removed (Map13). No new water developments would be constructed; all existing riparian protection fences would remain in place. All riparian pasture fencing would be left up for at least a ten year evaluation period. Gates would be left open and sections of the riparian pasture fences would be removed to allow for wildlife and wild horse movement.

Riparian Management Pastures – Under this alternative, riparian management pastures fences would not be removed immediately. All fences would be evaluated over a ten year period. However, all gates and key travel routes for wildlife and wild horses would be opened after the hot season period. This would provide further rest and deferment from grazing animals, primarily wild horses, until restoration is obtain or the ten year evaluation is complete. The table below displays the existing riparian pastures and their status after this alternative is implemented.

Table 2-8. Riparian Pasture Name and Status under Alternative Three

Riparian Pasture	Status
West Fork of Crooks Creek	Riparian fence would be evaluated over 10 year period
Ice Slough	Riparian fence would be evaluated over 10 year period
Warm Springs	Riparian fence would not be removed
Long Slough	Riparian fence would not be removed
Crooks Creek-Bare Ring Slough	Riparian fence would be evaluated over 10 year period

Stubble Height Standards & Monitoring & Evaluation

Under the No Grazing Alternative, there would be no authorized or permitted use level for cattle or sheep. The cancellation of all grazing permits would become effective the next grazing season following the final decision. Under Alternative Three there would be no season of use for livestock. Some monitoring would occur to consider use by wildlife and wild horses, but evaluations would not be conducted unless unforeseen circumstances arise.

MANAGEMENT ACTIONS COMMON TO ALL ALTERNATIVES

IMPLEMENTATION OF MANAGEMENT ACTIONS

Under all alternatives, the existing management situation would continue until the Decision Record (DR) becomes final. Appropriate project clearances would be completed and range improvements would be constructed as identified in the final decision and range improvements would be funded as dollar allocations allow.

If it is determined that adjustment in grazing preference are necessary, the initial adjustment would be made in the next grazing season.

MONITORING

Any monitoring occurring under the alternatives would be conducted in accordance with BLM standard operating procedures and policy. Existing range condition and trend studies would continue to be monitored under all three alternatives. A cooperative effort with the active participation of the grazing permittees and affected interests would be encouraged.

1. The BLM Manual, Wyoming State Office Supplement Handbook H-4423-1, Section 4423.56, Section 4423.56C; Marlow and Clary (1996); and BLM Technical Reference TR 1737-3, Inventory and Monitoring of Riparian Areas would be used as a general guide in developing range condition trend-monitoring procedures. Plant frequency, density, production and utilization, and ground cover would be sampled on key areas (Map 36) to evaluate vegetation and soil erosion trends on an as needed basis. Other parameters, such as canopy cover, seedling or shrub characteristics would be considered as needed on unique areas such as riparian zones, aspen stands, and bitterbrush or other mountain shrub thickets.
2. Rain gauges would be used to measure precipitation to help interpret vegetative production variations resulting from climatic changes.
3. Soil quality monitoring would utilize data that is being collected as part of other monitoring efforts in this allotment. Soil cover will be of primary concern to discern how well the monitored sites would be protected from erosion under the chosen management scenario. This data can then be used to compare existing cover to that expected to be present on a particular range site. The data can also be used as part of an erosion equation to develop erosion rates for each year that monitoring is completed; these annual rates of erosion can then be compared to identify trends in soil and vegetation condition.
4. Actual use information would be required to evaluate the future AMP under Alternatives One and Two. Direct and indirect methods (according to the guidelines in BLM Manual 4400.23A, Wyoming State Office Supplement Handbook H-4423-1, Section 4423.3) would be used to collect this information.

5. The approval and use of rangeland monitoring data collected by non-BLM entities will comply with existing Wyoming State Office policy. The BLM may approve and utilize monitoring data collected on public land by parties other than BLM; however, the acceptance of this data by the BLM is not automatic. The BLM will have the final decision authority concerning the planning, collection, and interpretation of monitoring data that is used to make resource management decisions. The BLM will take advantage of these offers of monitoring data from non-BLM entities to the extent feasible, and will honor the concept of public involvement and stewardship in the management of the public rangelands.

GRAZING ADMINISTRATION

Grazing administration under those alternatives that authorize grazing would be conducted in accordance with the following standard operating procedures. This administration would not apply to Alternative Three.

1. Permits specifying the allotment, season of use, and number and kind of livestock would be issued to each operator. Operators would be required to obtain BLM approval before changing the grazing specifications outlined in their permits.
2. Livestock operators would be required to file actual-use reports showing how many and how long livestock grazed in each allotment and/or pasture. Use on the allotments would be supervised by BLM throughout the grazing year.
3. If necessary, actions to resolve unauthorized use would be initiated as described in 43 CFR 4150. The unauthorized use would be eliminated and payment would be collected from those responsible for damage and consumption of forage.
4. This EA specifies site-specific objectives (see Appendix 2) for maintaining or improving livestock, wild horse, wildlife, and fish habitat within the allotment. The alternatives are designed to achieve those objectives on an overall basis.

RANGE IMPROVEMENTS

General

In Alternative Two, proposed range improvement projects already having cultural resource clearance would be covered by this EA and would need no further National Environmental Policy Act analysis (NEPA). This would also apply to the proposed Granite Creek-Rocks Pasture and Crooks Creek Riparian Fences, which have already been granted conditional concurrence under a Programmatic Agreement with the Wyoming SHPO.

Proposed range improvement projects or vegetative manipulations which do not have cultural resource clearance would be subject to standard cultural resource inventory, evaluation, and mitigation procedures. The degree of impacts to cultural resources would determine the level of supplemental NEPA analysis (CX, DNA, EA, etc.) necessary for these projects, and would be determined after the impacts have been assessed.

Consultations concerning endangered species would be conducted according to Section 7 of the Endangered Species Act if deemed necessary, and appropriate mitigative or avoidance actions would be taken.

In accordance with BLM Manual, Section 8341, visual resource management contrast ratings would be used in the project planning stages of all proposed land-management activities that would disturb the soil, change or remove vegetation, or place a structure on the landscape. These ratings would be used to determine the amount of contrast between a proposed activity and the existing landscape. Assessing the amount of contrast would indicate the severity of impact. This would serve as a guide in determining what would be required to reduce the contrast (visual impact) to the point where it would meet the visual management class requirements for the area.

Construction sites would have soils described and evaluated as provided for in BLM Manual section 7100.3.

Recommendations or conclusions that result from an onsite evaluation would become a part of any environmental analysis document.

The U.S. Army Corps of Engineers (US-ACE) would be contacted for all construction projects involving wetlands/riparian areas. The determination of necessary permit coverage for construction-related activities would be left to US-ACE personnel after project consultation.

Water Developments

Livestock watering developments on public land, if any are authorized by the decision, would be available and safe for wildlife and wild horse use.

The meadow complex around the fire springs would be fenced.

All water troughs would be either circular rings with concrete bases, rubber tires, or metal troughs. Wildlife escape ramps would be installed and maintained on all tanks and open storage tanks to prevent birds and small animals from drowning and to permit escape. The appropriate State Engineer's Office permits would be obtained for each project.

Weed and Pest Control

Presently, the GMCA remains relatively free of Wyoming declared noxious weed species. There are no large infestations of any declared weeds. The Lander Field Office, through a cooperative agreement with the Fremont County Weed and Pest Control District, assists in the inventory, monitoring, and treatment of noxious weeds in Fremont County. The inventory is intended to be completed once every five years to track weed occurrence, spread, and the introduction of new species. When declared weeds, and other of concern like black henbane, are identified the FCW&PCD is notified so that the location can be recorded in their geographic information system for inventory and monitoring purposes and treatment can be prescribed and executed.