



ENVIRONMENTAL ASSESSMENT

GRAZING PERMIT RENEWAL FOR ELBOW and RAMSHORN CANYON ALLOTMENTS

DOI-BLM-ID-I010-2012-0031-EA



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CHAPTER 1 - INTRODUCTION

Background

There are several authorities which mandate or allow the Bureau of Land Management (BLM) to authorize livestock grazing on public lands as part of multiple-use management of natural resources. Livestock grazing is an accepted and valid use of public lands under the Taylor Grazing Act of 1934, the Federal Land Policy and Management Act (FLPMA) of 1976, and the Public Rangelands Improvement Act (PRIA) of 1978. This Environmental Assessment (EA) is prepared, pursuant to the National Environmental Policy Act (NEPA) of 1969, to address the request for continued livestock grazing on public lands in the Upper Snake Field Office.

The Elbow Allotment includes 7,140 acres of public land and 359 acres of private land. There are five authorizations for livestock grazing use within the allotment. The allotment includes three pastures located on the south side of the Lost River Range in the Big Lost River Valley.

The Ramshorn Canyon Allotment includes 4,280 acres of public land and 80 acres of private land. Adjacent United States Forest Service lands (USFS) and State of Idaho lands are used concurrent with the allotment. There are six authorizations for livestock grazing use within the allotment. The allotment includes four pastures located on the south side of the Lost River Range in the Big Lost River Valley.

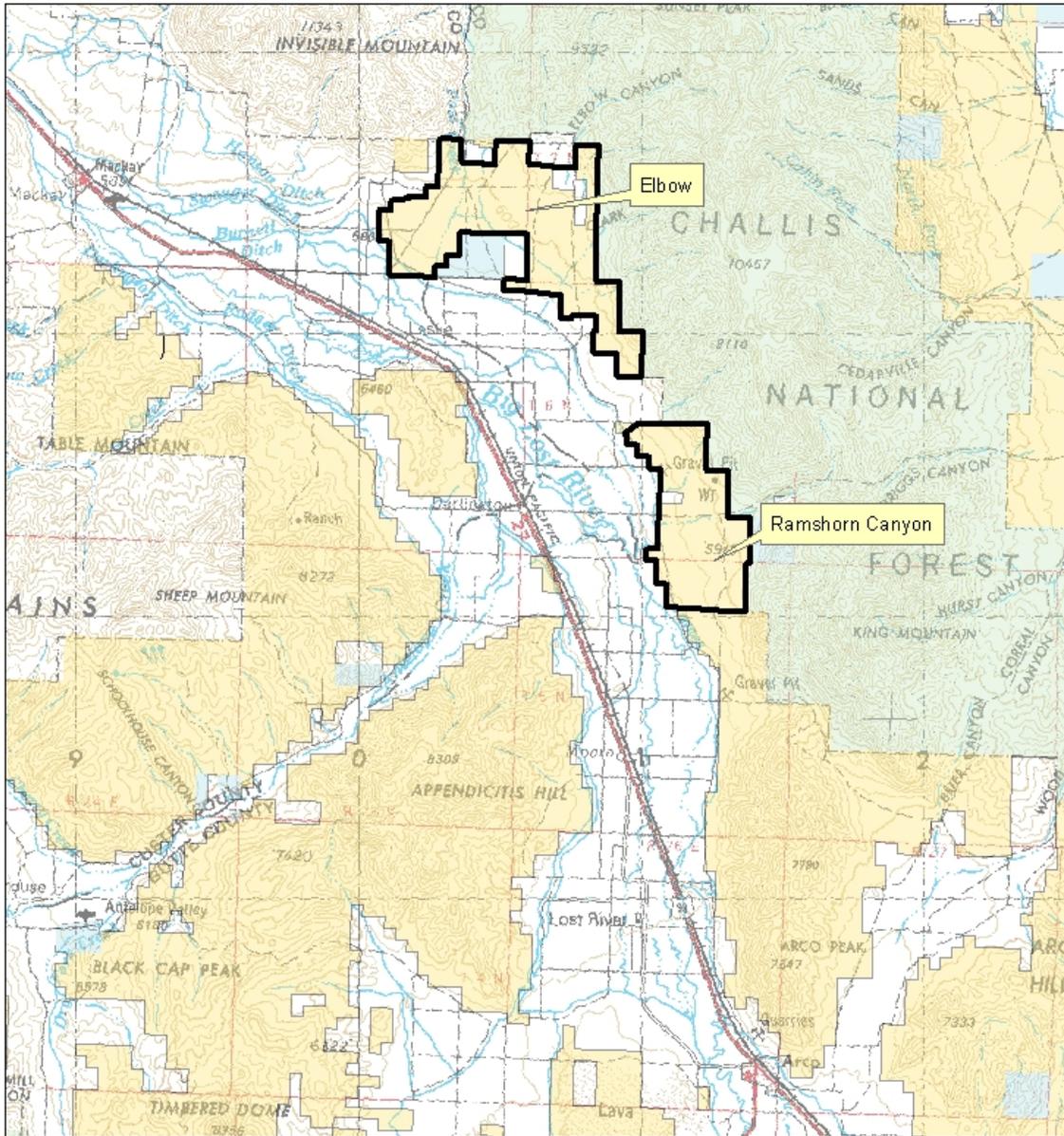
Purpose and Need for Action

The Big Lost Management Framework Plan (MFP) identified the area where the Elbow and Ramshorn Canyon Allotments are located as available for domestic livestock grazing. Where consistent with the goals and objectives of the MFP and the Idaho Standards for Rangeland Health and Guidelines for Livestock Grazing Management (ISRH), the BLM authorizes allocation of forage for livestock grazing to qualified operators. The purpose of the proposed action is to authorize livestock grazing consistent with BLM policy and in a manner that maintains or improves project area resource conditions and achieves the objectives and desired conditions described in the Big Lost MFP. The analysis is needed to address the operators' applications for permit renewal in the Elbow and Ramshorn Canyon Allotments. The analysis is further needed to address the Evaluation Report for Ramshorn Canyon which identified that the allotment was not meeting Standards 4 and 8 of ISRH.

Location

The Elbow Allotment is located in Butte and Custer Counties, Idaho (Figure 1). The allotment is located northeast of Highway 93, approximately six miles east of Mackay, Idaho. The allotment includes three pastures referred to as Pass Creek, Middle, and South (Figure 2)

Figure 1 - General Location of Elbow and Ramshorn Canyon Allotments



0 2.5 5 Miles

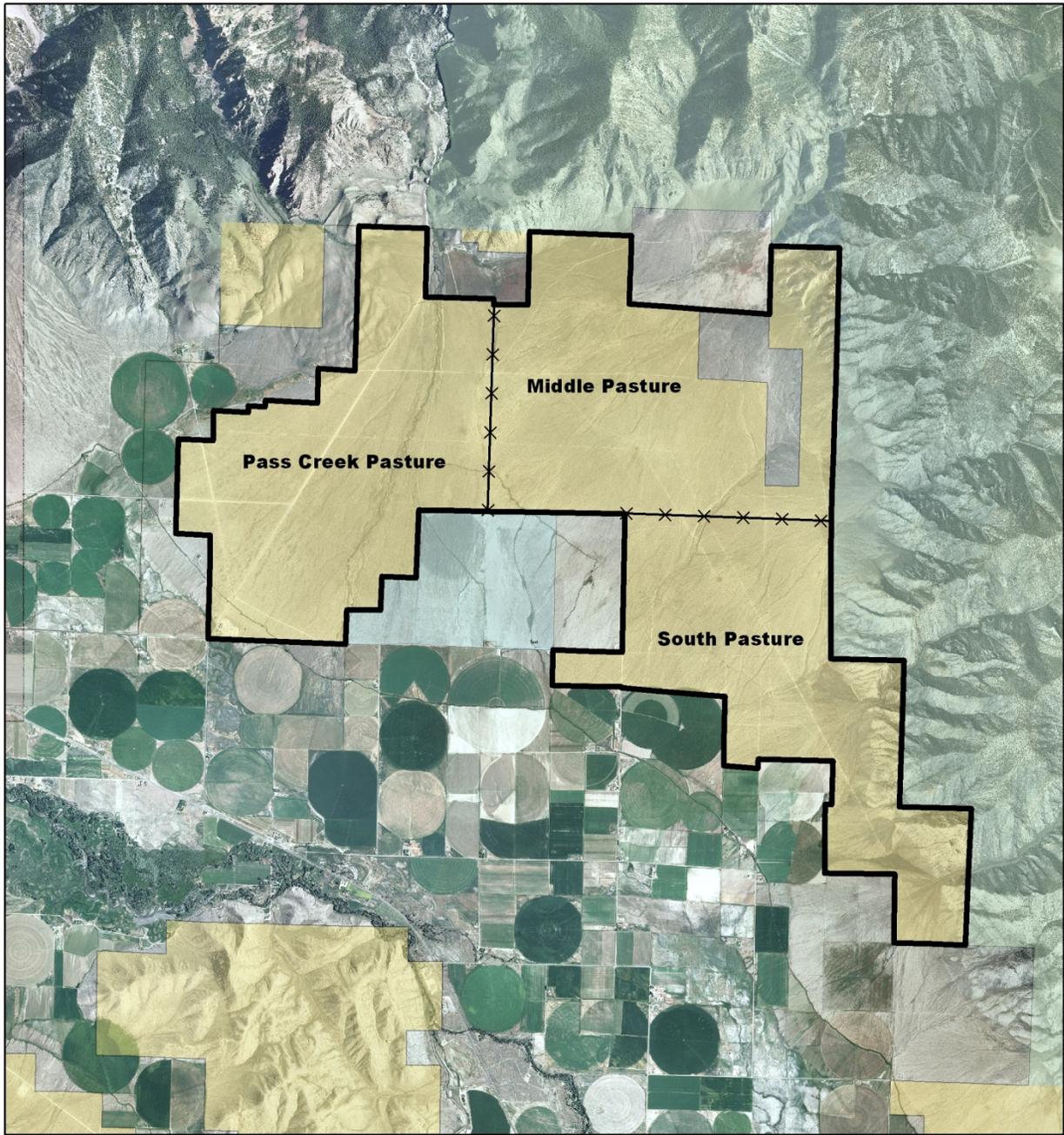


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Figure 2 - Elbow Allotment



0 0.5 1 Miles



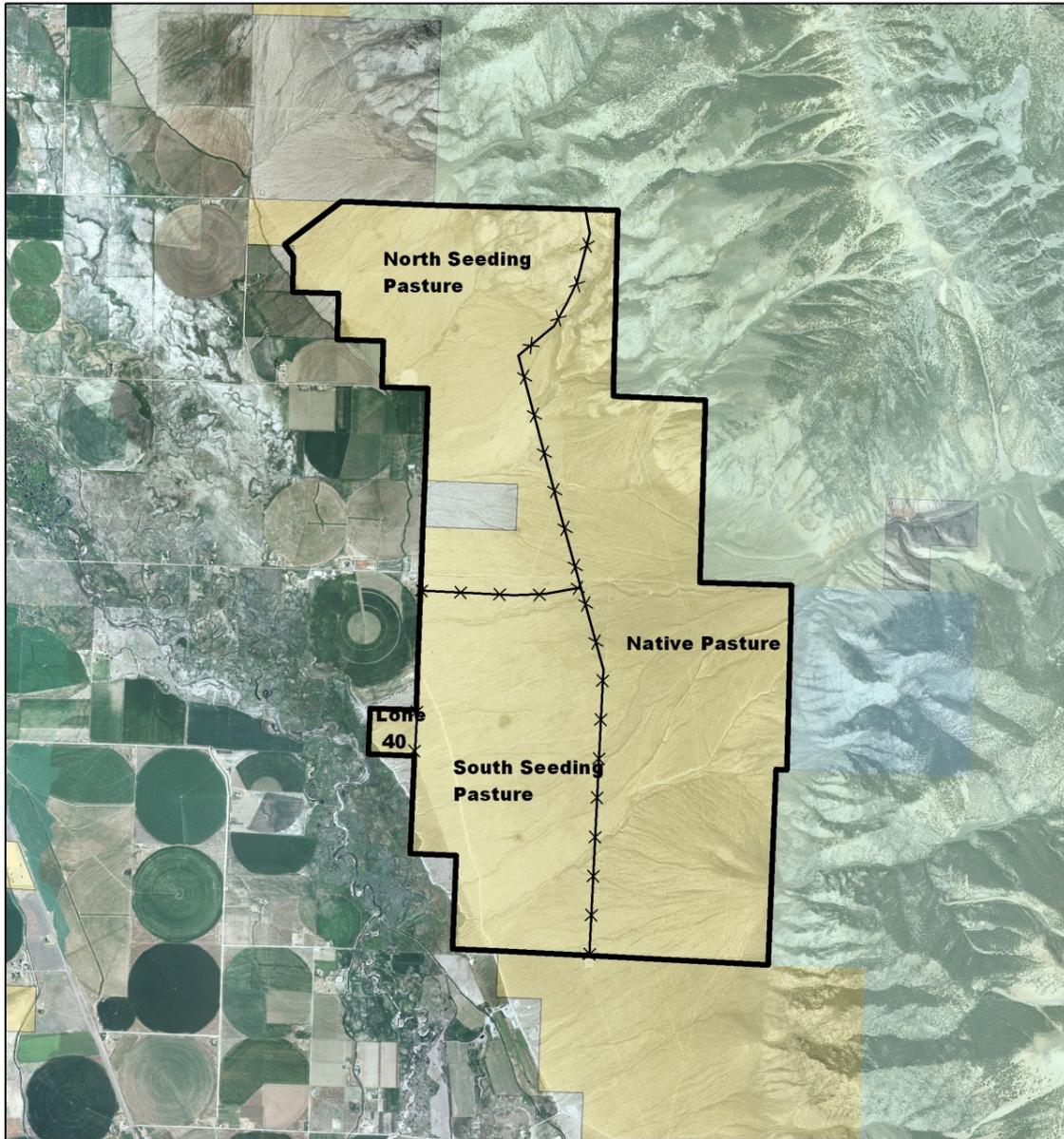
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The Ramshorn Canyon Allotment is located in Butte County (Figure 1). The allotment is located east of Highway 93, approximately 12 miles north of Arco, Idaho. The allotment includes four pastures, referred to as North Seeding, South Seeding, Native, and Lone 40 (Figure 3).

Figure 3 - Ramshorn Canyon Allotment



0 0.5 1 Miles



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Conformance with Land Use Plan

The alternatives for the Elbow and Ramshorn Canyon Allotments have been reviewed for conformance with the Big Lost MFP. The actions for Elbow and Ramshorn Canyon Allotments are in conformance with the MFP decisions:

Decision #1 – Classify allotments into the “improve” category in accordance with criteria. The principle objective is to improve existing unsatisfactory resource conditions.

Relationship to Statutes, Regulations or Other Plans

The 1868 Fort Bridger Treaty, between the United States and the Shoshone and Bannock Tribes, reserves the Tribes right to hunt, fish, gather, and exercise other traditional uses and practices on unoccupied federal lands. Under this treaty the federal government has a unique trust relationship with the Shoshone-Bannock Tribes. BLM has a responsibility and obligation to consider and consult on potential effects to natural resources related to the Tribes treaty rights or cultural use.

Grazing administration exclusive of Alaska is governed under the Federal Code of Regulations 43 CFR 4100 – Grazing Administration. The purpose is to provide uniform guidance for administration of grazing on public lands.

On August 12, 1997, Idaho Standards for Rangeland Health and Guidelines for Livestock Grazing Management (ISRH) were approved by the Secretary of the Interior. Subsequently, livestock management practices must be in conformance with the approved standards and guidelines.

An Evaluation Report of Achieving ISRH was issued for the Elbow Allotment in December of 2011. The report found that Standards 1, 4 and 8 are being met in the allotment. Standards 2, 3, 5, 6, and 7 are not applicable to the allotment.

An Evaluation Report of Achieving ISRH was issued for the Ramshorn Canyon Allotment in December of 2011. The report found that Standard 1 and 5 are being met in the allotment. Standards 4 and 8 are not being met on approximately 1,450 acres or 34% of the allotment. Appendix B, Allotment Determination, describes that current livestock management is a significant factor in the allotment not meeting these standards. Standards 2, 3, 6, and 7 are not applicable in the allotment.

Public Contact and Issue Identification

In the spring of 2011, the Upper Snake Field Office sent a letter to permittees, interested publics, and other agencies inviting them to participate in the allotment assessments planned in 2011. Several of the permittees participated in the field assessment process. In November of 2011, the Upper Snake Field Office sent Allotment Assessments to the parties above, which summarized the results of the field assessment and other monitoring information available for the allotments. The parties were asked to provide any other allotment specific information they may have which would be considered in the Evaluation Report. No information was provided. In December of 2011, the Evaluation Report and identified alternatives were sent to the parties. The parties were

asked to reply if they had any questions or concerns regarding the report or identified alternatives. Comments were received from several permittees and the Idaho Department of Fish and Game (IDFG) regarding the identified alternatives. The comments included identification of the operator proposed actions and concerns or suggestions regarding refinement of alternatives. Comments were incorporated into the Proposed Action and Alternatives.

CHAPTER 2 - NO ACTION AND OTHER ALTERNATIVES

Alternative A (No Action)

Issue Unmodified Grazing Permit

Under a No Action alternative, the Upper Snake Field Manager would authorize continued livestock grazing under the same terms and conditions and the same management guidelines as the current permits.

Elbow (#11001)

Authorized Use Changes

- 1) None

Projects

- 2) None

Grazing Plan

- 3) Continue three pasture rest rotation grazing system.

Year	5/1 – 5/16	5/17 – 6/2	Rest
2013	Pass Creek	Middle	South
2014	Middle	South	Pass Creek
2015	South	Pass Creek	Middle

*rotation repeats after completion of three year cycle

Mandatory Terms and Conditions

Livestock number/kind	Season	%PL	Active AUMs
166 Cattle	5/1 – 6/2	100	176
261 Cattle	5/1 – 6/2	90*	255

*one operator is recognized for 32 AUMs on 320 acres of private property within the allotment

Active AUMs	Suspended AUMs	Grazing Preference
431	0	431

Ramshorn Canyon (#11041)

Authorized Use Changes

- 1) None

Projects

- 2) None

Grazing Plan

- 3) Continue three pasture deferred rotation grazing system.

Year	5/1 – 5/31	6/1 – 6/30	10/15 – 11/10
2013	Native	North	South
2014	North	South	Native
2015	South	Native	North

*rotation repeats after completion of three year cycle

Mandatory Terms and Conditions

Livestock number/kind	Season	%PL	Active AUMs
280 Cattle	5/1 – 6/30	100	558
74 Cattle	5/1 – 6/30	46*	68
323 Cattle	10/15 – 11/10	100	284
5 Cattle**	5/1 – 10/30	17	5

*one operator is currently recognized for 48 AUMs from USFS and 32 AUMs from Idaho State Lands used in conjunction with public land.

**authorization is for Lone 40 pasture only, used in conjunction with adjacent private property.

Active AUMs	Suspended AUMs	Grazing Preference
915	263	1,178

Other Terms and Conditions

The following other Terms and Conditions would be included as part of the grazing permit under Alternative A in accordance with 43 CFR 4130.3-2.

1. Grazing use in the Elbow and Ramshorn Canyon Allotments must be in accordance with their allotment management plans and/or the permit renewal EA and grazing decision.
2. Average utilization will be no more than 50% of the annual growth of key upland species. Heavy use areas (as defined by the key forage method) will be limited to 10% or less of the suitable acreage in each pasture.
3. Range improvements must be maintained to BLM standards. All livestock water troughs must have a functional wildlife escape ramp and be appropriately floated. Installation and maintenance of wildlife escape ramps are the responsibility of the permittee.

Alternative B (Permittee Proposed Actions)

Issue Modified Grazing Permits, including changes in the season of use, grazing system, and rotation in Ramshorn Canyon Allotment, and authorization of livestock trailing within the allotments.

The Evaluation Report did not identify a need for changes in livestock management in the Elbow Allotment. The Determination for the Ramshorn Canyon Allotment found that current livestock grazing management practices were a contributing factor in the allotment not meeting Standards 4 and 8 of ISRH (Appendix B). Livestock operators within the allotments have requested several changes in management. Under Alternative B, the field manager would authorize continued livestock grazing with changes identified below:

Elbow (#11001)

Authorized Use Changes

- 1) None

Projects

- 2) From an existing trough in the South pasture, extend the pipeline approximately 1.4 miles along an existing road and place a trough in a disturbed area near existing road intersection (Figure 4). The trough would provide water to the southern portion of the South pasture in an area where current distance to water can range up to three miles. The pipeline would be buried and the trough floated. The area of disturbance associated with construction of the pipeline would be approximately two acres. The disturbed area would be reseeded with a mixture of native plant species appropriate for the site. Construction may not occur between March 1 and June 30 to minimize disturbance of migratory birds and other native wildlife.

Grazing Plan

- 3) Continue three pasture rest rotation grazing system.

Year	5/1 – 5/16	5/17 – 6/2	Rest
2013	Pass Creek	Middle	South
2014	Middle	South	Pass Creek
2015	South	Pass Creek	Middle

*rotation repeats after completion of three year cycle

- 4) Authorize livestock trailing across the Elbow Allotment on an annual basis in order to achieve orderly administration of public lands in the Big Lost River Valley. Authorized trailing would require active movement of livestock. A description of anticipated authorization specifics is listed in Appendix C, with anticipated trailing routes illustrated in Figure 6.

Mandatory Terms and Conditions

Livestock number/kind	Season	%PL	Active AUMs
166 Cattle	5/1 – 6/2	100	176
261 Cattle	5/1 – 6/2	90*	255

*one operator is recognized for 32 AUMs on 320 acres of private property within the allotment

Active AUMs	Suspended AUMs	Grazing Preference
431	0	431

Ramshorn Canyon (#11041)

Authorized Use Changes

- 1) Change the spring season from 5/1-6/30 to 5/1-7/15 to allow for flexibility in use of the allotment relative to annual climatic variation. Use would be authorized for 60 days within the season of use and all operators would use the same 60 day period. The basic schedule would be 5/10-7/10.
- 2) Change the fall season of use from 10/15-11/10 to 10/1-11/10 to allow for flexibility in timing of fall use. Use would be authorized for up to 27 days within the season of use. The basic schedule would remain 10/15-11/10.
- 3) Defer 160 AUMs from spring use to fall use. A total of 476 AUMs would be authorized in spring and 439 AUMs in the fall.

Projects

- 4) None

Grazing Plan

- 5) Continue three pasture deferred rotation grazing system, with modification. Rotation reflects basic schedule, authorized use may vary within a pasture within the seasonal time frames described above.

Year	5/1 – 5/31	6/1 – 6/30	10/15 – 11/10
2013	Native	North	South
2014	North	South	Native
2015	South	North	Native
2016	Native	South	North

*rotation repeats after completion of four year cycle

Mandatory Terms and Conditions

Livestock number/kind	Season	%PL	Active AUMs
160 Cattle	5/1 – 7/15	100	403
57 Cattle	5/1 – 7/15	46*	68
326 Cattle	10/1-11/10	100	439
5 Cattle**	5/1 – 10/30	17	5

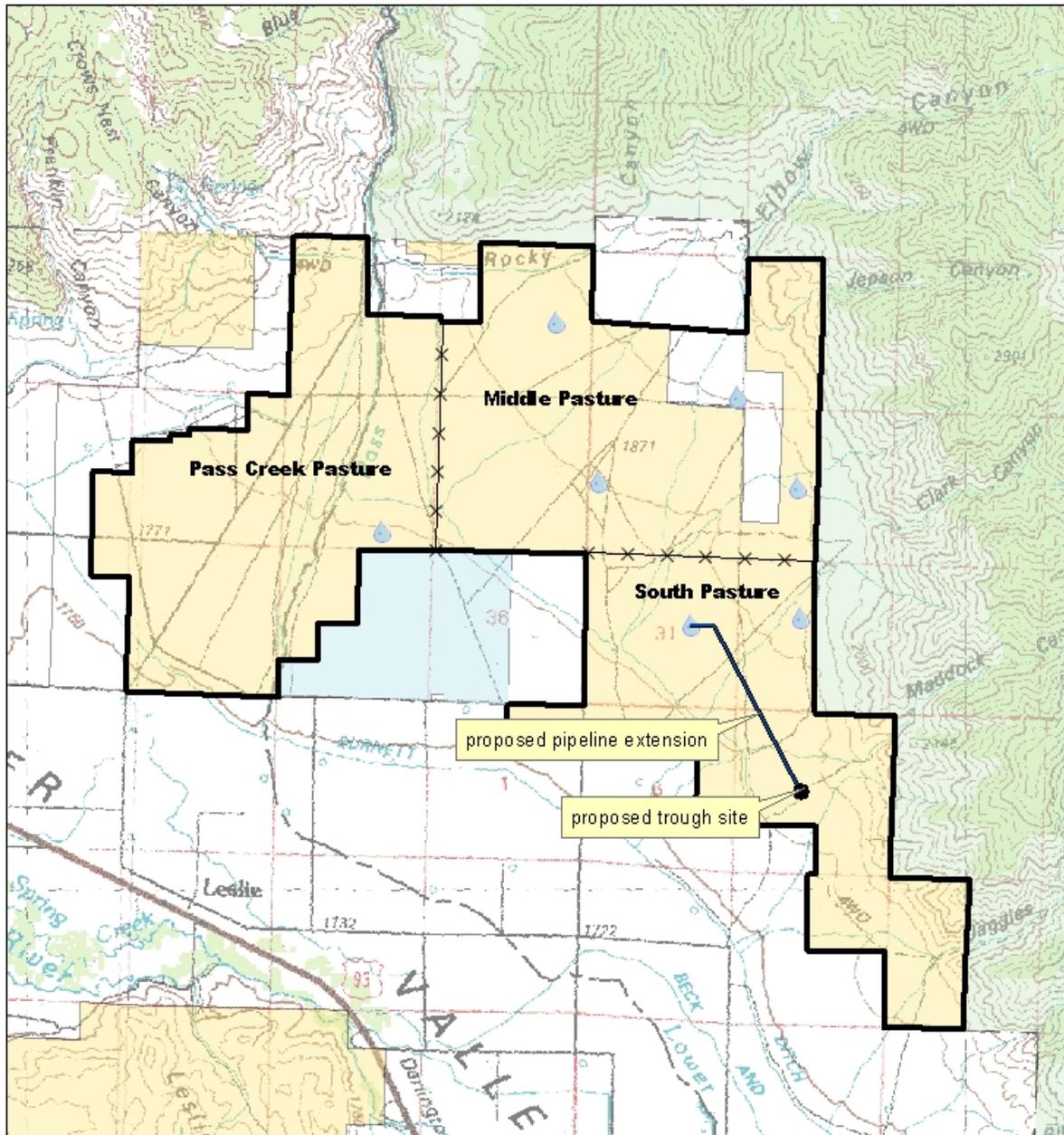
*authorization is for isolated 40 acre parcel of public land used in conjunction with adjacent private property.

*%PL adjustment reflects 48 AUMs recognized on adjacent unfenced USFS allotment and 32 AUMs recognized on adjacent unfenced Idaho State Land parcel.

**authorization is for Lone 40 pasture only, used in conjunction with adjacent private property.

Active AUMs	Suspended AUMs	Grazing Preference
915	263	1,178

Figure 4 - Proposed Projects under Alternative B



0 0.5 1 Miles



Legend

 Existing Trough Locations



No warranty is made by the Bureau of Land Management for use of the data for purposes not intended by BLM.

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Alternative C (Preferred Action)

Issue Modified Grazing Permit with a reduction in authorized use in the Ramshorn Canyon Allotment, combining the Elbow and Ramshorn Canyon Allotments into a single allotment, and modification of the grazing system.

The Evaluation Reports did not identify a need for changes in livestock management in the Elbow Allotment. The Determination for the Ramshorn Canyon Allotment found that current livestock grazing management practices were a contributing factor in the allotment not meeting Standards 4 and 8 of ISRH (Appendix B). An alternative action, developed with consideration of input from IDFG, was identified in order to meet the purpose and need for action. Under Alternative C, the field manager would authorize continued livestock grazing with changes identified below:

Elbow (#11001) and Ramshorn Canyon (#11041)

Authorized Use Changes

- 1) Reduce authorized use in the Ramshorn Canyon Allotment 34% from 915 AUMs to 605 AUMs.
- 2) Change the fall season of use from 10/15-11/10 to 10/1-11/10 to allow for flexibility in timing of fall use. Use would be authorized for up to 27 days within the season of use. The basic schedule would remain 10/15-11/10
- 3) Currently Ramshorn Canyon Allotment is authorized for 279 AUMs in the fall. Defer an additional 160 AUMs from spring use to fall use resulting in 439 AUMs of fall use prior to reduction. Following a 34% reduction in authorized use, a total 290 AUMs of fall use would be authorized between 10/1 and 11/10. A total of 315 AUMs would be authorized in the spring and 290 AUMs in the fall.
- 4) Combine the Elbow and Ramshorn Canyon Allotments into a single allotment which would be referred to as Elbow-Ramshorn Allotment (#11041). Change the name of Middle Pasture to Elbow Canyon Pasture. Change the name of South Pasture to South Elbow Pasture.

Projects

- 5) None

Grazing Plan

- 6) Implement a six pasture rest rotation grazing system.
- 7) Two herds would utilize the new allotment in the spring and one herd in the fall. Herd A would be comprised of operators currently authorized in Elbow Allotment. Herd B would be comprised of operators currently authorized in Ramshorn Canyon Allotment.

Year	5/1 – 5/16	5/17 – 6/2	5/1-5/31	6/1-6/30	10/1-11/10	Rest
Herd	A	A	B	B	B	
2013	Pass Creek	Middle Elbow	South Seeding	North Seeding	Native	South Elbow
2014	South Elbow	Middle Elbow	North Seeding	South Seeding	Pass Creek	Native
2015	South Elbow	Pass Creek	Native	North Seeding	South Seeding	Middle Elbow
2016	Middle Elbow	South Elbow	South Seeding	North Seeding	Native	Pass Creek
2017	Pass Creek	South Elbow	North Seeding	South Seeding	Middle Elbow	Native

*rotation repeats after completion of grazing cycle

- 8) Authorize livestock trailing across the Elbow-Ramshorn Allotment on an annual basis in order to achieve orderly administration of public lands in the Big Lost River Valley. Authorized trailing would require active movement of livestock. A description of anticipated authorization specifics is listed in Appendix C, with anticipated trailing routes illustrated in Figure 6.

Mandatory Terms and Conditions

Livestock number/kind	Season	%PL	Active AUMs
166 Cattle	5/1 – 6/2	100	176
261 Cattle	5/1 – 6/2	90 ^a	255
132 Cattle	5/1 – 6/30	100	265
62 Cattle	5/1 – 6/30	36 ^b	45
5 Cattle	5/1 -10/31	17 ^c	5
216 Cattle	10/1 – 11/15	100	290

- a. Operator is recognized for 32 AUMs on 320 acres of private property within the allotment
- b. Operator is recognized for 32 AUMs on unfenced adjacent Idaho State Land parcel and 48 AUMs on unfenced adjacent USFS allotment run in conjunction with Ramshorn Canyon Allotment.
- c. Operators authorized on Lone 40 pasture only, run in conjunction with surrounding private property.

Active AUMs	Suspended AUMs	Grazing Preference
1,036	263	1,299

Alternative D (No Grazing):

Under Alternative D, the Upper Snake Field Manager would not authorize livestock grazing within the allotments for a 10 year period from 2013 to 2022. The current operators would retain grazing preference within the allotments and may apply for grazing permit renewal after 2022.

Other Terms and Conditions Common to Alternatives B and C

The following other Terms and Conditions would be included as part of the grazing permit under alternatives B, C, and D, in accordance with 43 CFR 4130.3-2.

1. Authorized use will be made as described under the approved grazing plan for allotments.
2. Average livestock utilization will be no more than 40% of the annual growth of available native forage species.
3. Range improvements must be maintained to BLM standards. All livestock water troughs must have a functional wildlife escape ramp and be appropriately floated. Installation and maintenance of wildlife escape ramps and maintenance of range improvements are the responsibility of the permittees.
4. Distribution of livestock salt and mineral supplements will be at least ¼ mile from the nearest water source, unless prior approval is given by the authorized officer.
5. In connection with allotment operations under this authorization, if any human remains, cultural, archaeological, historical, paleontological, or scientific objects and sites are discovered, the permittee shall stop operations in the immediate area of the discovery, protect such resources, and immediately notify the BLM Authorized Officer (AO) of the discovery. The immediate area of the discovery must be protected until the operator is notified to resume operations by the AO.
6. If sage grouse fence strikes are documented on fences within the allotment, the fences will be modified to improve visibility in order to minimize sage grouse strikes.

Grazing Use Indicators and Criteria

The following Grazing Use Indicators identify applicable monitoring methods and criteria used to indicate whether the allotment is meeting or making progress toward meeting the ISRH. Grazing Use Indicators and Criteria are not terms and conditions of the authorization, rather they are informative points used to gauge the effectiveness of the terms and conditions of the authorization.

1. *Upland Utilization* – Utilization studies would be conducted in key upland areas and use areas would be mapped (Technical Reference 1734-3, 1999).

2. *Browse Utilization* – Browse utilization studies would be conducted in key areas. Browse utilization by livestock should be no more than 30 percent of the annual growth of the key browse species (Technical Reference 1734-3, 1999).
3. *Upland Trend* – Trend studies would be conducted in the uplands in key areas. One photo plot would be established at each key area. Long-term trend studies would be conducted using approved BLM methods (Technical Reference 1734-4, 1999).
4. *Sage Grouse Habitats* – Grazing use levels in pastures with sage grouse habitat would be monitored to evaluate if the grazing system is resulting in maintenance or improvement of vegetative characteristics needed for suitable habitat in accordance with the local working group's plan for increasing sage grouse populations, the Conservation Plan for Greater Sage Grouse in Idaho (ISGAC, 2006), and Instruction Memorandum No. 2012-043 - Greater Sage-Grouse Interim Management Policies and Procedures.

CHAPTER 3 - AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

This chapter provides a description of the general environmental setting and resources within that setting that could be affected by the alternatives. In addition, the section presents an analysis of the direct and indirect impacts likely to result from the implementation of the alternatives.

General Setting

The Elbow Allotment includes 7,140 acres of public land and 359 acres of private land. Elevation varies across the allotment ranging from 5,800 feet above seas level on the southwest side of the allotment and increasing gradually across the allotment to the northwest into the foothills of the Lost River Range to 7,200 feet. Weather stations at Arco and Mackay, Idaho report average annual precipitation of 9.5 inches. Vegetation varies across the allotment. Wyoming big sagebrush (*Artemisia tridentata* ssp. *wyomingensis*), three-tip sagebrush (*Artemisia tripartita*) and black sagebrush (*Artemisia nova*) are the primary shrub species within the allotment. The primary native grasses are bluebunch wheatgrass (*Pseudoroegneria spicata*) and Sandberg's bluegrass (*Poa secunda*). There are no springs, seeps, or wetlands in the allotment. Pass Creek, which historically flowed through the allotment, is diverted into irrigation pipelines and ditches. These ditch locations are accessible to livestock. A pipeline system originating from a well on private property provides livestock water to trough sites within the allotment.

The Ramshorn Canyon Allotment includes 4,280 acres of public land, 80 acres of private land, and is authorized concurrently with adjacent State of Idaho and USFS lands. Elevation ranges from 5,600 feet above sea level on the west side of the allotment, increasing gradually across the allotment to the east into the foothills of the Lost River Range to 7,000 feet. Vegetation varies across the allotment. The North and South Seedings are dominated by crested wheatgrass (*Agropyron cristatum*), though smaller portions of the pastures include native species, primarily Wyoming big sagebrush and three-tip sagebrush, with an understory of bluebunch wheatgrass and Sandberg's bluegrass. Approximately 2,200 acres or 51% of the allotment acreage were seeded. The Native Pasture includes areas dominated by Wyoming big sagebrush and three-tip sagebrush, as well black sagebrush. There are no springs, seeps, or wetlands on public lands in the allotment. A pipeline system originating from a spring on adjacent USFS lands provides water to established trough locations throughout the allotment.

Resources Considered in the Impact Analysis:

The results of the site-specific assessments indicate that not all of the resources considered are present and/or would be impacted by the alternatives (Table 1). Direct and indirect impacts on those resources that are present and impacted are discussed in the following narratives.

<i>Table 1 - Resources Considered in the Impact Analysis</i>		
Resource	Resource Status	Rationale
Access	Present, Not Impacted	The alternatives would not result in changes in access to the areas.
Air Quality	Present, Not Impacted	The implementation of the alternatives would not result in the production of emission or particulate matter above incidental levels.
Areas of Critical Environmental Concern (ACEC's)	Not Present	There are no ACEC's within the allotments.
Cultural Resource	Present, Impacted	Impacts are disclosed under Cultural Resources
Economic and Social Values	Present, Impacted	Impacts are disclosed under Economic and Social Values .
Environmental Justice	Not Present	There are no minority or low income populations residing near the proposed project area.
Existing and Potential Land Uses	Present, Not Impacted	The alternatives would not affect the areas existing or potential land uses.
Fisheries	Not Present	There are no fisheries in the allotments
Floodplains	Not Present	There are no perennial streams and associated floodplains in the allotments.
Forest Resources	Not Present	There are no Forest Resources within the allotments.
Invasive, Non-Native Species	Present, Impacted	Impacts are disclosed under Invasive, Non-Native Species
Mineral Resources	Present, Not Impacted	The alternatives would have no impact on mineral resources within the area.
Migratory Birds	Present, Impacted	Discussed under Migratory Birds .
Native American Religious Concerns	Not Present	There are no known ceremonial sites or resources associated with ceremonial practices in the project area.
Paleontological Resources	Not Present	There are no known paleontological resources located in these areas.
Prime and Unique Farmlands	Not Present	There are no prime or unique farmlands located within the allotments.
Recreational Use	Present, Not Impacted	The alternatives would not impact current or likely future use of the Elbow or Ramshorn Canyon Allotments by recreationists.
Soil Resources	Present, Impacted	Impacts are disclosed under Soil Resources .
Threatened, Endangered, and Sensitive Plants	Present, Impacted	Impacts are disclosed under Threatened, Endangered, and Sensitive Plants
Threatened, Endangered, and Sensitive Animals	Present, Impacted	Impacts are disclosed under Threatened, Endangered, and Sensitive Animals
Threatened, Endangered, and Sensitive Fish	Not Present	There are no fisheries in the allotments.
Tribal Treaty Rights and Interests	Present, Not Impacted	The alternatives would have no effect on the tribes' access to use the area to exercise their treaty rights and would have no known effect on resources they use for traditional purposes.

Table 1 - Resources Considered in the Impact Analysis		
Vegetation	Present, Impacted	Impacts are disclosed under Vegetation
Visual Resources	Present, Not Impacted in Ramshorn Canyon Present, Impacted in Elbow	There are no proposed projects under the alternatives for Ramshorn Canyon Allotment, therefore, the alternatives have no impact on the intent or integrity of the visual resource management class. There is one project proposed for the Elbow Allotment and the impacts are disclosed under Visual Resources .
Wastes, Hazardous and Solid	Not Present	There are no solid or hazardous wastes in the project area and none would be created during the implementation of the alternatives.
Water Quality (Surface and Ground)	Not Present	There is no perennial surface water on public lands in either allotment.
Wetland and Riparian Zones	Not Present	There is no wetland or riparian zone in either allotment.
Wild and Scenic Rivers	Not Present	There are no Wild and Scenic Rivers within the allotments.
Wild Horse and Burro HMA's	Not Present	There are no wild horse and burro HMA's in the region.
Wilderness	Not Present	There are no wilderness or wilderness study areas in either allotment.
Wildlife Resources	Present, Impacted	Impacts are disclosed under Wildlife Resources

Cultural Resources

Affected Environment

To evaluate the Elbow and Ramshorn Canyon Allotments for cultural resource values, a Class I records search was conducted using a Geographical Information System (GIS) inventory and site databases to determine previously surveyed acres and sites recorded within the allotment boundaries.

Inventories have been conducted within the Elbow and Ramshorn Canyon allotment boundaries (Table 2). Inventories were conducted at a Class III level and were completed according State Historic Preservation Office (SHPO) and BLM standards as outlined in the State Protocol.

Table 2 - Previous Inventories Conducted and Number of Cultural Resources Recorded

Allotment	Acres Surveyed	Type of Inventory	Cultural Resources Recorded	No. of Eligible Resources
Elbow	26	Class III	1	1
Ramshorn Canyon	23	Class III	1	0

There are two known cultural resources located within the allotment boundaries and these resources are prehistoric in nature. One of the two sites is recommended potentially eligible for inclusion to the National Register of Historic Places (NRHP).

Environmental Consequences

Alternative A (No Action)

Livestock grazing has the potential to directly impact historic properties primarily through trampling which can modify the horizontal and vertical distribution of artifacts and impact resource integrity. Livestock impacts to cultural resources use on the Elbow and Ramshorn Canyon Allotments are generally limited, with activity mainly focused at congregation areas. In areas where livestock use is more dispersed, such as the uplands or alluvial fans in the allotments, it can be predicted that impacts will be surficial, causing no stratigraphic mixing, but perhaps resulting in horizontal displacement of artifacts.

Multiple trough are located within the Elbow and Ramshorn Canyon Allotments. None of the trough locations or other congregation areas are within 200 meters of known historic properties that are recommended potentially eligible for inclusion to the NRHP. There are no seeps or springs within the Elbow and Ramshorn Canyon Allotments. Permit renewal in the Elbow and Ramshorn Canyon Allotments would have no adverse effect on known historic properties listed or eligible for listing on the National Register of Historic Places (NRHP).

Alternative B (Proposed Action)

Impacts to cultural resources would be similar to those presented under Alternative A; however, the authorization of trailing events may have effects on cultural resources. Trailing events and dispersed livestock grazing within allotment pastures have similar impacts to cultural resources. However, proposed routes that bisect potentially eligible historic properties or have holding areas where livestock will congregate overnight may have adverse effects to cultural resources.

Two trailing events have been identified within the Elbow Allotment in Figure 6. Two two-day trailing events have been identified which would occur on existing roads. There are no known historic properties on the routes. Pastures have been identified as holding areas, which would allow livestock to disperse and there would be no congregation areas as a result of the trailing events. Both of the trailing events would occur during seasons that typically exhibit dry soils which would result in less vertical displacement of soil due to livestock trampling.

Authorization of the permit renewals in the Elbow and Ramshorn Canyon Allotments, and the proposed changes and trailing authorization outlined in Alternative B would have no adverse effect on known historic properties listed or eligible for listing on the National Register of Historic Places (NRHP).

Alternative C (Preferred Action)

Impacts to cultural resources from authorized livestock use in the allotments would be similar to those presented under Alternatives B and would have no adverse effect on known historic properties listed or eligible for listing on the National Register of Historic Places (NRHP).

Alternative D (No Grazing)

Under Alternative D, no livestock use would be authorized in the allotments for a period of 10 years and therefore there would be no potential for impacts on cultural resources related to livestock use for the 10 year period.

Economic and Social Values

Affected Environment

Two measures of economic impacts used in studies exploring impacts to livestock operations due to changes in federal grazing permits and leases are herd reduction and forage substitution (Rowe and Bartlett, 2001). Herd reduction may be a better indicator of operation efficiency rather than direct economic impact at the level of the individual operator (Rowe and Bartlett, 2001). The impact on any single ranch operation of a reduction in public land AUMs may be enormous, depending on the flexibility of its nonfederal forage base and other factors (Harp et al, 2000). The impacts of herd reductions resulting from federal land management policy changes that reduce federal land AUMs have been estimated at the community and county level (Harp et al, 2000), however, these estimates are based on evenly distributed federal land AUM reductions at a scale beyond the allotment level. Based on recent USDA cattle market reports (USDA, 2012) the average recent market steer price was \$750 or \$75 per AUM assuming a 10 AUM input. The average recent market price for replacement cows was \$1100 or \$110 per AUM assuming 12 AUMs input. Therefore the change in gross revenue for the operators may range from \$75 to \$110 per AUM. Forage replacement has also been used as a proxy indicator of economic impact. Forage replacement values may range in cost from replacement from private pasture to replacement from hay versus the annual cost of forage on public land which was \$1.35 per AUM in 2011. Average private pasture cost in Idaho in 2011 was \$12.60 per AUM and average local hay prices were \$100 per AUM. Therefore the forage substitution cost annually would range from \$11.25 to \$98.65 per AUM.

Additional costs to livestock operations associated with public lands grazing may include construction and maintenance of range improvement projects, transportation costs, and operating cost associated with herd maintenance and management. The cost or impact on the individual operator is difficult to quantify and is highly variable depending upon their specific situation. Some costs would occur on private grazing lands as well and are therefore not associated specifically with public land grazing.

Environmental Consequences

Alternative A (No Action)

Alternative A would result in no changes in the mandatory terms and conditions for livestock grazing in the allotments. There would be no impact from Alternative A, which is the baseline for addressing economic and social values relative to the operators.

Alternative B (Proposed Action)

Under Alternative B, there would be no change in the authorized use levels and therefore no change in economic and social impacts.

Alternative C (Preferred Action)

Under Alternative C, there would be a 310 AUM reduction in authorized use levels in the Ramshorn Canyon Allotment which would impact the six operators authorized in the allotment. The forage substitution cost to the permittees under Alternative C would range from approximately \$3,488 to \$30,582 annually. If the herds are reduced as a result of decreased forage availability, the decreased gross revenue may range from \$23,250 to \$34,100 annually.

Alternative D (No Grazing)

Under Alternative D, no grazing would be authorized in the Elbow and Ramshorn Canyon Allotments for a period of ten years. The forage substitution cost to replace 1,346 AUMs would range from approximately \$15,143 to \$132,783 annually. If the herds are reduced as a result of decreased forage availability, the decreased gross revenue for the operators through herd reductions would range from approximately \$100,950 to \$148,060 annually.

Invasive, Non-Native Species

Affected Environment

Noxious weed monitoring and treatment records for the public lands within the Elbow and Ramshorn Canyon Allotments report isolated occurrences of leafy sprurge (*Euphorbia esula*). Occurrences of Canada thistle (*Cirsium arvense*) were noted in or adjacent to the Elbow and Ramshorn Canyon Allotments, primarily near boundaries with private agricultural lands and along roads. The Upper Snake Field Office actively inventories, monitors, and treats occurrences of invasive non-native species within the field office area using the Standard Operating Procedures outlined in the Programmatic Environmental Assessment for Integrated Weed Management for the Upper Snake Field Office and Pocatello Field Office (USDI-BLM 2009b).

Environmental Consequences

Alternative A (No Action)

The potential impacts of invasive, non-native species found in or near the allotments include degradation of native habitat and non-native seedings. Seeds of these undesirable species may be dispersed by wind, water, animals, or humans. Under Alternative A, livestock would continue to be authorized in the allotments. The native upland habitats in the Elbow Allotment and non-native seedings in the Ramshorn Canyon Allotment were found to be meeting Idaho Standards for Rangeland Health. By maintaining and/or improving the ecological health of the current plant communities in allotments, the opportunity for expansion of invasive, non-native species would be reduced. However, a portion of the upland native plant community in the

Ramshorn Canyon Allotment was evaluated and found to not be meeting Standard 4 of ISRH, and under Alternative A, would be expected to continue to not meet the standard. While occurrences of invasive non-native species would continue to be inventoried and treated within the field office, the potential for establishment or expansion of invasive species would remain higher in this area compared to communities in which conditions meet the plant community health standard.

Alternative B (Proposed Action)

The potential for establishment and expansion of invasive, non-native species would be similar to Alternative A as the authorized AUMs, numbers of livestock, and seasons of use would be similar. Documented occurrences of noxious weeds would continue to be treated following an integrated weed management approach.

Alternative C (Preferred Action)

The potential for establishment and expansion of invasive, non-native species would be similar to but slightly reduced under Alternative C compared to Alternative A. Although the seasons of use would be similar to Alternative A, a reduction in authorized use associated with the Ramshorn Canyon pastures would be implemented. The reduction in authorized use would lead to significant progress toward meeting the native plant community health standard, as described in detail under **Vegetation**, below. Improvement in native plant community health would reduce the potential for expansion of invasive, non-native species as increased density and vigor of native species would reduce available sites for non-native species establishment.

Alternative D (No Grazing)

Livestock are one of several vectors for dispersal of invasive, non-native species, and under Alternative D no livestock grazing would be authorized in the allotments for 10 years. Under Alternative D, the potential establishment or expansion of invasive, non-native species would be less than Alternative A, B, or C due to the removal of this vector, as well as improvement of native plant community health in areas of reduced ecological condition, which would limit available sites for non-native species establishment. Invasive, non-native species would persist in the allotments under all alternatives without continued control efforts following an integrated weed management approach.

Migratory Birds

Affected Environment

Approximately one half of the species of birds that breed in North America are neo-tropical migratory birds. A wide variety of migratory birds inhabit the sagebrush steppe habitat in the Big Lost River Valley. They may use these habitats briefly while migrating to other locations, or for extended periods, including nesting and fledging, before migrating. Population inventory and monitoring data are limited or absent for many migratory species, including sagebrush obligates associated with the allotments. Shrub-steppe birds that require sagebrush for nest sites or foraging benefit from intact mature sagebrush stands.

As top tier predators, raptors are important components of ecosystems (Sergio et al. 2006). The Big Lost River Valley provides summer and winter habitat for a variety of raptors. Summer raptors include Swainson's hawk, northern harrier, and sharp-shinned hawks. Rough-legged hawks are the predominant winter migrant found in the USFO, followed by red-tailed hawks. The pattern and amount of cover may determine foraging habits of raptors with some raptors being successful in areas with increased cover and other species being successful with increased bare ground (Baker and Brooks 1981).

The Elbow Allotment provides a sagebrush steppe habitat for migratory birds composed of Wyoming big sagebrush, three-tip sagebrush, and black sagebrush. The primary native grasses are bluebunch wheatgrass and Sandberg's bluegrass. The native plant communities in the allotment were determined to be meeting standards for native plant community health. Ocular estimate of the current ecological condition of the allotment indicates that the allotment is generally in late seral ecological condition, with a diversity of species within the expected life forms.

In the Ramshorn Canyon Allotment, large perennial bunchgrasses, primarily bluebunch wheatgrass, were reduced in cover across the allotment. Short-statured Sandberg's bluegrass was the dominant grass species within the interspaces between shrubs. Sandberg's bluegrass provides limited cover for nesting migratory birds. The allotment evaluation concluded that the allotment did not meet the standard for native plant community health on approximately 1,450 acres. This area provides less than optimal habitat conditions for migratory birds relative to site potential. In addition, the Ramshorn Canyon Allotment includes approximately 2,205 acres which were seeded to crested wheatgrass in 1955. The seeded area is within the North and South Pastures. Sagebrush, forbs and some native grasses have increased in the seeding area in the past 50 years, resulting in increased plant diversity with improved conditions relative to the habitat preference of many migratory birds. The increased vegetative diversity in the seeding area is providing some habitat characteristics suitable for use by migratory birds.

Environmental Consequences

Birds generally do not respond directly to the presence of livestock but rather to the impacts on vegetation as a result of grazing. Cattle impacts include: compaction of soil by hoof action, removal of plant materials, and indirect reduction of water infiltration, all of which can result in decreased vegetation density (Saab et al. 1995). Songbirds show the full range of responses to these impacts. For example, sage sparrow appear to respond positively to grazing; vesper sparrow, northern harrier, Savannah sparrow and western meadowlark appear to respond negatively; while mourning dove, loggerhead shrike, lark sparrow, sage thrasher and Brewer's blackbird may be unresponsive or show mixed responses to grazing impacts (Bock et al. 1993). Similar to songbirds, migratory raptors also show a range of responses to grazing, with some species such as northern harriers requiring increased ground cover and other species such as burrowing owls responding positively to reduced ground cover or bare ground (Saab et al. 1995).

Alternative A (No Action)

Under Alternative A there would be no change in the existing livestock grazing management for the allotments. Grazing would continue at the same timing and intensity levels as currently authorized. Ocular estimate of the current ecological condition of the Elbow Allotment indicates that the allotment is generally in late seral ecological condition, with a diversity of species within the expected life forms. Livestock authorized in the allotment would continue to follow a rest-rotation grazing system, with two pastures used in May each year during the nesting season (May 1- July 15), and one pasture receiving rest and providing migratory bird habitat without potential disturbance by livestock. Sagebrush steppe habitats in the Elbow Allotment are currently meeting habitat guidelines for migratory birds and would be expected to continue to meet them under Alternative A.

The Ramshorn Canyon Allotment was identified as not meeting Standards 4 and 8 of the ISRH and a portion of the allotment does not provide adequate habitat for migratory birds. Authorized livestock use has resulting in repeated heavy utilization on large areas of the allotment, which has resulted in a decline in suitable migratory bird habitat in the native plant communities. Under Alternative A, the native plant communities would be expected to continue to decline in species diversity and production, further lowering the suitability for migratory birds. Alternative A would not be expected to make progress toward meeting ISRH in Ramshorn Canyon Allotment.

Alternative B (Proposed Action)

Impacts of livestock grazing on vegetation in the Elbow Allotment would be similar to Alternative A. In addition, livestock trailing would be authorized across the allotment under Alternative B. The trailing in the Elbow Allotment occurs after the nesting season. The trailing of livestock for a brief period of time across the allotment would have short-term impact on migratory birds by creating a disturbance that some species may avoid. Raptors are sensitive to livestock and human presence. Raptor nesting is most likely to occur on the east side of the allotment which borders U.S. Forest Service, and would likely not be disturbed by trailing as described in Appendix C. Trailing has likely been occurring since livestock were first introduced in the areas, and continuing to trail livestock in the areas as identified under Alternative B would not cause additional impact to the current condition of migratory bird species or their habitat in the allotment. Due to the timing of trailing, there would be no displacement or disturbance of migratory birds during important breeding, nesting and brood-rearing seasons. Under Alternative B, the Elbow Allotment would continue to provide native vegetation in healthy condition to support a variety of migratory birds.

The authorized spring use in the Ramshorn Canyon Allotment would be reduced under Alternative B, due to the deferment of 160 AUMs from spring to fall use. However overall authorized use would remain the same as Alternative A. Spring grazing removes vegetation that would otherwise be utilized by migratory birds for nesting cover. Spring grazing may also remove forage that would otherwise be utilized by migratory birds for foraging and cover from predators. The shift in the level of use authorized in the dormant season versus the growing season would reduce impacts on vegetation important in providing cover for migratory birds, as

compared to Alternative A. The seeding pastures are currently meeting the standard, though concerns were identified relative to maintaining productivity and species diversity. The reduction in growing season use in these two pastures would likely maintain these pastures in conditions suitable to continue to meet the standard.

The four year grazing cycle would include use of the Native Pasture during the growing season in two out of four years. While the reduced grazing pressure during the active growing season would benefit native bunchgrasses in the allotment, large areas of heavy use would likely continue to occur in the Native Pasture when grazed in the spring, which is the important nesting period for migratory birds. The amount of authorized use under Alternative B would continue to result in higher utilization levels than desired to improve the ecological condition of the plant communities, and it is therefore unlikely that the change in timing of use alone would lead to significant progress in improving migratory bird habitat in the allotment over the course of the ten year permit.

Alternative C (Preferred Action)

Under Alternative C, the authorized use in the Ramshorn Canyon Allotment would be reduced by 34%. This would reduce use to approximately the average annual use level of the allotment prior to 2001 when it was determined to be meeting ISRH and provided suitable habitat for migratory birds. Further, the Elbow and Ramshorn Canyon Allotments would be combined into a single allotment with six pastures, of which four pastures would be used each spring during the important migratory bird nesting season (May 1 to July 15), one pasture would be used in the fall, and one pasture would be rested each year. The rested and fall pastures would provide an area in the spring each year which migratory birds may use without potential interaction with livestock. The combined decrease in authorized use and periodic rest would lead to significant improvement in the condition of the native plant community on the approximately 1,450 acres in the Native pasture of the Ramshorn Canyon Allotment currently not meeting ISRH, which would benefit migratory birds in the long term. Under Alternative C, the former Elbow Allotment would continue to maintain healthy plant communities that support migratory birds.

Alternative D (No Grazing)

Under Alternative D, no livestock grazing would be authorized within the allotment for a period of 10 years, from 2013 to 2022. The potential livestock related impacts on the vegetation would be removed from the allotment for a ten year period. Impacts to migratory birds from removing livestock grazing would vary by species as discussed under Alternative A. In general, understory cover of grasses and forbs would increase in size and vigor and provide habitat important to migratory bird life cycles. There would be no displacement or disturbance of migratory birds by livestock during breeding, nesting and brood-rearing seasons. Some species like the ferruginous hawk and prairie falcon may be negatively impacted by a reduction in prey availability due to increased vegetative cover (Douglass and Frisina, 1993). Some migratory birds such as the sage sparrow and Brewer's sparrow prefer patchy habitat that is most commonly found with livestock grazing.

The Elbow Allotment is meeting standards under the existing grazing authorizations and would continue to meet standards for native plant community health and seeding health under Alternative D. Under Alternative D, areas in lower ecological condition in the Ramshorn Canyon Allotment would improve over time. Overall, negative impacts to migratory birds would be less under Alternative D than under Alternatives A, B, or C due to reduced disturbance and increased forage and cover across the allotments.

Recreation

Affected Environment

Recreation use of public lands in the Elbow and Ramshorn Canyon Allotments is limited, and the majority of users simply travel through the area. Recreational opportunities in the allotments may include hunting, wildlife viewing, and off-highway vehicle (OHV) riding. There are no designated hiking or OHV trails within the allotments and OHV use generally occurs on established roads or routes. The BLM does not have sufficient recreation use data to describe the number of land-based visits to these allotments.

Alternative A (No Action)

Impacts on recreation users may include interaction with and/or observation of authorized livestock by individuals recreating on or adjacent to the allotments. The individual reaction to encounters with livestock is highly variable. Impacts may include a potential reduction in wildlife species observed where livestock are present, depending upon the species involved, recreational pursuit, and timing of recreation both diurnal and seasonal. While livestock use or presence in an area may diminish the visitor's recreation experience, generally livestock grazing within the allotments has a minor impact on most recreation users.

Alternative B (Proposed Action)

Impacts would be similar to Alternative A.

Alternative C (Preferred Action)

Impacts would be similar to Alternative A.

Alternative D (No Grazing)

Under Alternative D, livestock would not be authorized in the allotment for a period of 10 years and during that period there would be no impact on recreation users associated with the presence of livestock.

Soil Resources

Affected Environment

There are over 12 different soil series within the Elbow Allotment. The majority of the Pass Creek pasture is composed of Breitenback gravelly loam and Whitecloud series. The series form along fan remnants and are derived from mixed alluvium. Restrictive features occur at depths of 30 to 60 inches in the Breitenback series and 20 to 25 inches in the Whitecloud series due to strongly contrasting textural stratification. The series are well to excessively drained and compaction by heavy objects is limited due to the coarse nature of materials in the typical profile. The majority of the Middle pasture is composed of Elbow gravelly loam series. The series also occurs along fan remnants and is derived from mixed alluvium. A restrictive feature in the form of a duripan is located at a depth of 20 to 30 inches. The South pasture includes a several soil series. However, the largest area is composed of the Simeroi-Sparmo complex. The complex forms along fan remnants and is derived from mixed alluvium derived from limestone. The complex is relatively deep, with restrictive features occurring at more than 80 inches deep, and like the other series, is well drained.

There are six different soil series within the Ramshorn Canyon Allotment. However, the Simeroi gravelly loam series covers over 80% of the allotment. Characteristics of the series are that same as those described above for the Simeroi-Sparmo complex.

Environmental Consequences

The potential impacts to soils from livestock grazing include soil compaction and a reduction in the amount and distribution of ground cover, resulting in accelerated erosion as evidenced by rills, pedestals, and flow patterns. Soil compaction by heavy objects, including trailing by livestock, has the potential to penetrate and compact soil material to depths of 15 to 20 inches, depending upon soil composition, particle size, and moisture content. The majority of the soil units with the Elbow and Ramshorn Canyon Allotments have limited potential for compaction due to gravelly nature of the soils. Generally, the soils in the allotments will have increased moisture levels in the spring compared with the summer or fall. The soil from the surface to a depth of four to six inches is typically released from compaction by frost action. The deeper soil compaction that is not affected by frost action may remain in the soil for years. Soil compaction resulting from intensive livestock use, such as along trails and next to water sites, is estimated to occur on less than one percent of the allotment area. Deep soil compaction restricts root growth and reduces soil productivity.

Alternative A (No Action)

Under Alternative A, soil surface disturbance and compaction would not increase. Soil compaction resulting from intensive livestock use, such as along trails and next to water sites, is estimated to occur on less than one percent of the allotment area. Under Alternative A, soil conditions on the allotments as a whole would continue to support water infiltration and permeability rates appropriate to site potential. Vegetative cover on the allotments under Alternative A would continue to be sufficient to protect against wind and water erosion.

Alternative B (Proposed Action)

Under Alternative B, the level and distribution of existing soil compaction would be similar to Alternative A in the Elbow and Ramshorn Canyon Allotments. While trailing maybe authorized under Alternative B as described in Appendix C, these trailing actions have occurred in the past, resulting in conditions described under Alternative A, so there would be no measurable increased impact on soil resources by authorizing trailing as described.

Alternative C (Preferred Action)

Changes in the pattern and distribution of existing soil disturbance and compaction would likely occur due to the combining of the Elbow and Ramshorn Allotment and reduction in authorized use of the area. The overall scale of these impacts would be reduced relative to Alternatives A and B, due to the decrease in livestock numbers and the shift from spring to fall use. The shift in season of use would result in increased use occurring when soils are typically dry to greater depth, thereby reducing potential for compaction.

Alternative D (No Grazing)

Under Alternative D, the impacts to soil resources would be less than under Alternatives A, B, or C. Under Alternative D, no livestock would be authorized in the allotment for a period of 10 years. The limited soil compaction related to livestock use in the portion of the soil profile which is typically released annually through frost action, would not be subject to repeated compaction. Deep soil compaction would persist but would likely decrease over time due to the course nature of the substrate.

Threatened, Endangered, and Sensitive Animals

Affected Environment

All data known to the Upper Snake Field Office, including data from the U.S. Fish and Wildlife Service, Idaho Department of Fish and Game, and Idaho Natural Heritage Program (INHP) has been used to identify any animal species currently listed under the Endangered Species Act (ESA). There are no Threatened or Endangered terrestrial animal species in the allotments. There is habitat for one candidate species, sage-grouse, within the allotments.

BLM special status species include: (1) species listed or proposed for listing under the Endangered Species Act (ESA), and (2) species requiring special management consideration to promote their conservation and reduce the likelihood and need for future listing under the ESA (BLM 2008). In addition, the Idaho Comprehensive Wildlife Conservation Strategy (IDFG 2005) lists 229 species of greatest conservation need that BLM has incorporated, in part, into the sensitive list.

Table 3 lists special status species that identified as occurring or potentially occurring within the Elbow and Ramshorn Canyon Allotments. One federal Candidate species and seven BLM sensitive animals have been identified as occurring or potentially occurring within five miles of the renewing allotments within the last ten years. The probability of species occurring and

rationale for occurrence are listed. Species not occupying seasonal ranges or not expected to occur within the allotments are not discussed in the assessment.

Table 3 - Special Status Species and Occurrence within Elbow and Ramshorn Canyon Allotments

Species	Status*	Occurrence	Rationale
Brewer's sparrow (<i>Spizella breweri</i>)	S	Present	Breeding habitats
Greater sage-grouse (<i>Centrocercus urophasianus</i>)	C	Present	Habitats used during various periods of life cycle found on portions of the allotments
Ferruginous hawk (<i>Buteo regalis</i>)	S	Potential	Limited to foraging within the allotments.
Loggerhead shrike (<i>Lanius ludovicianus</i>)	S	Potential	Potential habitat
Piute ground squirrel (<i>Spermophilus mollis</i>)	S	Potential	Potential habitat
Prairie falcon (<i>Falco mexicanus</i>)	S	Potential	Foraging and potential nesting.
Pygmy rabbit (<i>Brachylagus idahoensis</i>)	S	Present	Animal occurrence and burrows documented in allotments.
Sage sparrow (<i>Amphispiza belli</i>)	S	Present	Breeding habitat

*Status Codes: C=Federal Candidate Species, S= BLM Sensitive Species

Brewer's sparrows breed in shrub steppe, transitions between shrub steppe and short grass prairie, and semi-desert shrub steppe habitats (Walker, 2004). Brewer's sparrows are gleaners, consuming small insects, gleaned from foliage and bark of shrubs or dwarf trees and seed taken from the ground (Rotenberry et al., 1999). Reduced occupancy, nest success and season-long productivity in fragmented shrub steppe habitats suggest smaller patches of habitat are of marginal suitability (Walker, 2004). Brewer's sparrows are known to occur in the Big Lost Valley, but none have been documented in the allotments.

On March 23, 2010 the US Fish and Wildlife Service determined that listing of the Greater sage-grouse range-wide was warranted but precluded by higher listing actions (75 FR 55). Habitats for sage-grouse on BLM managed lands are currently managed under Instruction Memorandum No. 2012-043 - Greater Sage-Grouse Interim Management Policies and Procedures. Locally,

management actions also follow the Upper Snake Local Working Group's Plan for Increasing Sage Grouse Populations (USLWG, 2009) and the Conservation Plan for Greater Sage Grouse in Idaho (ISGAC, 2006).

Sage-grouse Preliminary Priority Habitats (PPH) are those areas of highest conservation value due to high male lek attendance, high lek density and high lek connectivity (Makela and Major 2011). Preliminary General Habitats (PGH) are habitats occupied by sage-grouse not contained within PPH. PGH areas are characterized by lower lek densities that may serve as important connectivity corridors between PPH (Makela and Major 2011). Both PPH and PGH areas include the area formerly described as key habitat for sage-grouse based on native plant community composition. Thus the PPH/PGH concept captures both the population and habitat availability components relative to use of lands by sage-grouse. A GIS overlay process of the Elbow and Ramshorn Canyon Allotments with PPH/PGH areas was completed. Approximately 7,127 acres of the Elbow Allotment are identified as PPH, with the remaining 327 acres within the allotment identified as PGH. Approximately 4,008 acres of the Ramshorn Canyon Allotment are identified as PPH, with the remaining 352 acres identified as PGH. Actions in these areas may result in impacts to sage-grouse population centers, movement corridors, or habitat requirements.

Sage-grouse in southeast Idaho are part of the Snake-Salmon-Beaverhead Idaho population whose trend, as indicated by average number of males per lek, has declined by 57% from 1965–1969 to 2000–2007 (Garton et al. 2011). Overall in Idaho, based on long-term averages sage-grouse show a declining population trend (Connelly et al, 2004). However, populations in the Upper Snake Region are static to increasing within the past five years, according to Idaho Department of Fish and Game.

The Elbow and Ramshorn Canyon Allotments provide potential sage-grouse breeding and winter habitat. Late brood-rearing may also occur in these areas when forbs persist through the warmer seasons; though this is limited and dependent on summer precipitation. Elbow Allotment has three documented leks all located in the Middle pasture. According to IDFG, their current status is unknown. Two leks were visited in 1980 and the highest breeding season attendance was 31 males. The third lek was visited in 1980, the highest attendance during that breeding season was 12 males, and in 2003 the highest attendance was four males. The three lek sites in Elbow Allotment were visited in early May of 2012 and no evidence of current use was found. Ramshorn Canyon Allotment has one known lek in the South pasture. It was visited in 1980 and had a high count of four males during that breeding season. The lek site was visited in 2011 during the field assessment and no evidence of current use was found.

The native plant communities in Elbow Allotment were determined to be meeting standards for Standards 4 & 8. Overall, the allotment is in late-seral ecological condition and provides habitat for sensitive species found in sagebrush-steppe habitat. The native plant communities found in the Elbow Allotment, are also found in the Ramshorn Canyon Allotment. However, the current condition of the native plant communities in the Ramshorn Canyon Allotment is reduced, primarily due to the reduction of bluebunch wheatgrass. Currently, the small-statured Sandberg's bluegrass is the dominate grass by cover in the Native pasture and is less likely to provide the necessary cover for sensitive species. In the 1950s a portion of the Ramshorn

Canyon Allotment was seeded with non-native crested wheatgrass. The seeding area covered approximately 51% of the allotment, primarily in the low elevation Wyoming big sagebrush sites. Over the past 50 plus years since the seedings were established, Wyoming big sagebrush and three-tip sagebrush have regenerated and are within the ecological site potential. The Elbow and Ramshorn Canyon Allotments provide sagebrush species preferred by sage-grouse including: Wyoming big sagebrush, three-tip sagebrush and black sagebrush. Wyoming and three-tip sagebrush are used by sage-grouse year-round while black sagebrush is thought to provide seasonal habitat components more specifically during the spring and winter. Although black sagebrush is characteristically shorter in stature than other sagebrush species, a study in Utah found 17% of sage-grouse nests were found under black sagebrush (Connelly et. al. 2011).

Sage-grouse habitat evaluations were conducted in the Ramshorn Canyon Allotment in 2011 using Idaho BLM's protocol for assessing sensitive species' habitats. Breeding habitats are rated as suitable, marginal, or unsuitable based on the following habitat indicators: (1) sagebrush cover, (2) sagebrush heights, and (3) sagebrush growth form for nesting, (4) grass and forb heights, (5) perennial grass cover, (6) forb canopy cover, and (7) forb diversity. Winter habitat indicators are as follows: (1) sagebrush canopy cover, and (2) sagebrush height. The terms suitable, marginal, or unsuitable should not be inferred to imply presence or use by sage-grouse of these habitats. Rather, the terms describe a specific set of observed or measured habitat conditions for the seven indicators listed above. Vegetative cover values described for intact late-seral Wyoming big sagebrush plant communities have been documented as highly variable, and some of the rating values for the seven indicators exceed the ecological potential of sites within these communities (Davies et. al. 2006). Table 4 describes the breeding habitat conditions of the Elbow and Ramshorn Canyon Allotments based on field observations, monitoring data, and aerial photograph interpretation. Acreages in the table are approximate.

Table 4 - Breeding Habitat Condition in Elbow and Ramshorn Canyon Allotments

Pasture - acres	Breeding Habitat Rating		
	Suitable	Marginal	Unsuitable
Native-2,039		Reduction in large statured perennial native bunchgrasses.	
North Seeding-1,310		Due to presence of sagebrush and native forbs, habitat rating moved from unsuitable-restoration habitat to marginal. Reduction in large statured perennial native bunchgrasses, not expected in a non-native seeding, was rational maintaining marginal rating.	
South Seeding-1,212		Rationale same as North Seeding.	
Pass Creek-2,614	1,650 acres	964 acres marginal due to areas of reduced sagebrush cover	
Middle-2,840	2,085 acres	755 acres marginal due to areas of reduced sagebrush cover	
South-2,461	1,670 acres	791 acres marginal due to areas of reduced sagebrush cover	

Late brood-rearing habitat in the allotments may be suitable in the uplands when forbs persist through the summer. Elbow and Ramshorn Canyon Allotments border higher elevation lands managed by the U.S. Forest Service on the eastern boundaries and border agricultural lands on the western boundaries. Sage-grouse have been documented using irrigated agricultural lands for late brood-rearing habitat (Connelly et. al. 2011). Portions of the Elbow and Ramshorn Canyon Allotments provide sagebrush cover and heights suitable for sage-grouse wintering habitat.

Ferruginous hawks inhabit grasslands, shrub steppes, and deserts of North America and use sparse riparian forests, canyon areas with features such as cliffs and rock outcrops, and isolated trees and small groves of trees in grassland and shrub steppe areas for nesting (Bechard and Schmutz, 1995). Elbow and Ramshorn Canyon Allotments have limited potential nesting habitat for ferruginous hawks although they may nest on neighboring Forest Service land and forage within the allotments.

Loggerhead shrikes are passerines that prey upon reptiles, mammals, other birds and a wide array of invertebrates (Woods and Cade, 1996). They appear to be widely distributed throughout the southern portion of Idaho and are often locally abundant where they occur (Woods and Cade 1996). Loggerhead shrikes are known to use a variety of habitats including prairies, pastures,

sagebrush desert, fence rows or shelter belts of agricultural fields, orchards, riparian areas, open woodlands, farmsteads, suburban areas, mowed road rights-of way, abandoned railroad rights-of-way, cemeteries, golf courses, and reclaimed strip mines (Dechant et al., 2002). Habitat includes suitable nesting shrubs or small trees and hunting perches interspersed over a grassy or herbaceous ground cover with some bare areas, where shrikes find most of their prey (Cade and Woods, 1997). There is little information available on loggerhead shrikes within the allotments. However, suitable habitat exists and shrikes may nest and breed there during the summer months.

The Piute ground squirrel is widespread and found in Utah, California, Idaho, Oregon, and Washington (O'Hare et al. 2006). Currently, Idaho is the only state that has initiated concern for this species, identifying it as a protected nongame species. Piute ground squirrels are found in arid high desert habitats such as sagebrush, shadscale, and greasewood communities (Rickart, 1987). In 2007 two Piute ground squirrel was observed in Ramshorn Canyon Allotment.

Prairie falcons inhabit dry environments of western North America where cliffs or bluffs punctuate open plains and shrub-steppe deserts (Steenhof, 1998). Prairie falcon uses of the allotments are likely flying, perching, foraging and migration.

Pygmy rabbits are sagebrush-obligates, requiring sagebrush for food and cover. Pygmy rabbits can be found in a variety of landscape features including alluvial fans and hillsides, swales within rolling topography, floodplains, brushy draws, riparian channels, edges of rock and lava outcroppings, and mima mounds (IDFG, 2005). A survey of pygmy rabbit habitat and distribution within the Big Lost drainage was conducted in in 2003 and active burrow sites were identified (Roberts, 2003). Further inventory work has been completed since 2003. Currently, the Elbow Allotment has one recorded pygmy rabbit burrow and Ramshorn Canyon Allotment has 26 recorded pygmy rabbit burrows, and additional active burrows are likely present in both allotments.

Sage sparrows are dependent on stands of sagebrush for nest sites, food, and cover (Vander Haegen, 2003). They prefer semi-open habitats with evenly spaced shrubs 3-6 feet high (Martin and Carlson, 1998) and are found more frequently in extensive areas of continuous sage (Vander Haegen, 2003). Sage sparrows are ground foragers that eat insects, spiders, seeds, small fruits and succulent vegetation (Martin and Carlson, 1998). While no documentation of sage sparrow observations within the allotments are known, suitable habitat for the species is present.

Environmental Consequences

Direct impacts of livestock grazing on habitat used by special status species include nest or burrow damage and removal of vegetation by livestock that could otherwise be used for food or cover. Indirect impacts of livestock grazing on these habitats may occur when livestock grazing alters vegetation community composition, which can be beneficial or adverse depending upon the specific special status species and results of the impact. Connelly et al. (2004) suggested the impacts of livestock spread unevenly across the landscape in space and time, may positively or negatively affect the structure and composition of sage grouse habitat. In general, livestock management practices that promote the sustainability of desired native perennial grasses and

forbs would maintain or minimally impact sage-grouse as well as other special status species habitat. In general, native vegetation communities in late-seral to PNC condition provide habitat conditions suitable to the largest number of special status species.

Livestock grazing may impact prairie falcons and ferruginous hawks indirectly by changing the vegetation composition in ways that influence prey species. Grazing reduces vegetative cover, at least temporarily, which increases exposure of prey species resulting in increased predation. Periodic rest or deferment of grazing allows small rodent populations to recover and produce increased numbers when compared to continuous grazing, thereby increasing the prey base (Douglass and Frisina 1993).

Impacts to pygmy rabbits may be positive or negative. Livestock use may result in increased sagebrush cover or density which would provide additional forage and cover for rabbits, however this may also result in decreased grass and forb cover which are important components of their spring and summer diets (Thines et al. 2004). Pastures receiving heavy use during the growing season would result in reduced forbs and grasses reducing habitat quality for pygmy rabbits during the spring and summer.

Alternative A (No Action)

Under Alternative A, there would be no change in the existing livestock grazing management for the allotments. The current grazing systems would continue over the course of the renewed permits. Habitat conditions and native plant composition would be maintained and continue to meet standards for special status species in the Elbow Allotment.

The Allotment Evaluation concluded that Ramshorn Canyon Allotment did not meet the standard for native plant community health on approximately 1,450 acres. As identified in the Allotment Evaluation, while currently meeting the standard for non-native seedings, repeated average utilization in the heavy category, particularly in the South Seeding pasture, is placing the non-native seeding at risk of loss of diversity and productivity over time. Under Alternative A, the native plant community would be expected to continue to decline in species diversity and production, further lowering the suitability for sensitive species. Overall, habitat for sensitive species within the Ramshorn Canyon Allotment is reduced in both quality and extent and continuing livestock use as currently authorized would not facilitate habitat improvement for special status species.

Alternative B (Proposed Action)

Vegetation conditions in the Elbow Allotment for special status species would be maintained in suitable condition, similar to Alternative A. Livestock trailing would be authorized across the allotment under Alternative B. The trailing of livestock, for a brief period across the allotment, would have short-term impact on sensitive species by creating a disturbance that some species may avoid. Raptors may be sensitive to livestock and human presence but nesting is most likely to occur on the east side of the allotment, away from the trailing activities. Trailing has likely historically occurred since livestock were first introduced in the area. Continuing to trail livestock in the area as identified under Alternative B would not result in measurable additional

impact to the current condition of the native vegetation or sensitive species in the allotment. Due to the timing of trailing, there would be no displacement or disturbance of sensitive species, including sage-grouse, during critical breeding, nesting and brood-rearing seasons.

The authorized growing season use in the Ramshorn Canyon Allotment would be reduced under Alternative B due to the deferment of 160 AUMs from spring to fall use. However overall authorized use would remain the same as Alternative A. Impacts on special status species would be similar to those previously discussed under **Migratory Birds**. For the reasons identified above under **Migratory Birds**, it is unlikely that the change in timing of grazing alone would lead to significant progress in improving sensitive species' habitat in the allotment over the course of the ten-year permit.

Alternative C (Preferred Action)

The authorized use for those operators currently authorized in the Ramshorn Canyon Allotment would be reduced by 34%. This would reduce use to approximately the average annual actual use level of the allotment prior to 2001 when it was determined that the allotment was meeting ISRH. Further, the Elbow and Ramshorn Canyon Allotments would be combined into a single allotment with six pastures. Combining the allotments would provide for flexibility to establish a rest-rotation grazing system across the allotment. Under the rotation, four pastures would be used each spring between May 1 and June 30, which is within the breeding season for some of the special status species identified. Of the remaining two pastures, one would be used in the fall, and one would be rested each year. While the spring use pasture would continue to provide habitat, the rested and fall use pastures would provide areas for special status species in the spring undisturbed by authorized livestock. The combined decrease in authorized use and periodic rest would lead to significant improvement in the condition of the native plant community on the approximately 1,450 acres in the Native pasture of the Ramshorn Canyon Allotment and would allow sensitive species' habitat to improve, over time. Under Alternative C, the former Elbow Allotment would maintain the healthy plant communities that support special status terrestrial species.

Alternative D (No Grazing)

Under Alternative D, no livestock grazing would be authorized within the allotments for a period of 10 years, from 2013 to 2022. The potential impacts on vegetation from livestock grazing would be removed. In general, understory cover and vigor of grasses and forbs would increase and provide habitat to sustain special status species populations. There would be no potential displacement or disturbance to sensitive species by livestock during critical breeding, nesting, and brood-rearing seasons. Some species like the ferruginous hawk and prairie falcon may be negatively impacted by a reduction in prey availability due to increased vegetative cover (Douglass and Frisina 1993). Some sensitive species such as the sage sparrow and Brewer's sparrow prefer patchy habitat that is often associated with livestock grazing. This alternative provides the improved habitat conditions for a number of special status species when compared to the other alternatives.

Threatened, Endangered, and Sensitive Plants

Affected Environment

All data known to the Upper Snake Field Office, including data from the U.S. Fish and Wildlife Service, Idaho Native Plant Society, and Idaho Natural Heritage Program have been used to identify any plant species currently listed under the Endangered Species Act (ESA). There are no threatened or endangered plant species in the allotments. There is one sensitive plant species found within the Elbow Allotment. Lost River milkvetch (*Astragalus amnis-amissi*) is designated as sensitive plant species by the BLM.

Lost River milkvetch is a low slender perennial forb found on ledges, crevices, and other outcrops on steep limestone cliffs, and talus along cliff bases, often in partial shade. The species is found on the eastern and western slopes of the southern half of the Lost River Range, and southern end of the Lemhi range.

Environmental Consequences

Alternative A (No Action)

Lost River milkvetch has been documented in the South pasture of the Elbow Allotment. The habitat preference for Lost River milkvetch is within rough terrain at higher elevations, which is at considerable distance from available water within the pasture. It is unlikely that measurable livestock use would occur in areas occupied by this plant species.

Alternative B (Proposed Action)

Impacts to special status plant species would be similar to Alternative A.

Alternative C (Preferred Action)

Impacts to special status plant species would be similar to Alternative A.

Alternative D (No Grazing)

Under Alternative D, no livestock grazing would be authorized in the allotment for a period of ten years. During this period, the potential for livestock to impact sensitive plant species would be removed.

Vegetation

Affected Environment

Native plant communities vary across the Elbow Allotment. Wyoming big sagebrush, three-tip sagebrush, and black sagebrush are the primary shrub species within the allotment. The primary native grasses are bluebunch wheatgrass and Sandberg's bluegrass. The native plant communities in the allotment were previously assessed. Each site was evaluated based on

indicators of community health. Based on the ratings, the allotment was determined to be meeting standards for native plant community health. No changes in allotment grazing management have been implemented during the current assessment period from 2001 through 2011. Allotment use supervision has been completed several times during the assessment period and no grazing related issues have been identified. Ocular estimate of the current ecological condition of the allotment indicates that the allotment is generally in late-seral ecological condition, with a diversity of species within the expected life forms. Average annual production of the native plant communities in the allotment are highly variable depending on the amount and timing of precipitation, among other factors. A summary of the ecological sites found across the allotment identifies that annual production may vary from 300 lbs/acre in unfavorable years, 450-700 lbs/acre in average years, to 700-1000 lbs/acre in favorable years based on Natural Resource Conservation Service (NRCS) ecological site descriptions.

The native plant communities found in the Elbow Allotment, are found in the Ramshorn Canyon Allotment as well. Two upland native plant communities were assessed in the Native Pasture and departure from site potential was indicated for functional/structural groups. Large perennial bunchgrasses, primarily bluebunch wheatgrass, were reduced in cover across the allotment. Sandberg's bluegrass was the dominant grass species within the interspace between shrubs. Based on the information presented in the allotment assessment, the allotment evaluation concluded that the allotment did not meet the standard for native plant community health on approximately 1,450 acres. Ecological Site Inventory (ESI) locations were established in the allotment in 1971. Seven sites established in 1971 were inventoried again in 1991 and 2009. Each site measured improved in ecological condition between 1971 and 1991. However, each site then declined in condition between 1991 and 2009. Six of the seven sites inventoried in 2009 had lower ratings than recorded in the initial inventory in 1971. Three sites were rated in late-seral condition and four sites were rated in mid-seral condition in 2009. Utilization patterns within pastures vary between years due to annual precipitation and the timing and duration of authorized livestock use. Utilization pattern mapping has been completed on pastures within the allotment at various times over the past 20 years. Grazing utilization was mapped in five categories: none use – 0 to 5%, slight use – 6 to 20%, light use – 21 to 40%, moderate use – 41 to 60%, heavy use – 61 to 80%, and severe use – 81 to 100%. Prior to 2001, average utilization mapped within the pastures varied, but was within the light or moderate categories. During the current assessment period from 2001 to 2011, the average utilization mapped within pastures noticeably increased, with average utilization mapped at heavy in 2007-2009. Following completion of the ESI update in 2009, which indicated a downward trend in ecological condition across the allotment, a number of short term measures were implemented to improve conditions until further analysis was completed. The operators agreed to a voluntary 300 AUM reduction in authorized use and subsequent utilization mapping found average utilization decreased to within the moderate category.

The Ramshorn Canyon Allotment includes approximately 2,205 acres seeded to crested wheatgrass in the 1955. The seeded area is primarily within the South Seeding and North Seeding pastures. A field assessment was completed within each pasture and indicators of seeding health were generally rated as none to slight departure from potential. The indicator for functional/structural groups was rated as slight to moderate departure in both pastures. While crested wheatgrass was expected to be the dominate species by weight in the seedings, annual

biomass production appeared to be more equally distributed between shrubs and grasses. The Allotment Evaluation identified that the non-native seedings were meeting ISRH, though noting that some areas within the South Seeding Pasture had reduced levels of large bunchgrasses and a related decrease in productivity. Utilization pattern maps were completed in the seeded pastures. The average utilization measure in the South Seeding pasture in 2007 and 2008 was 70%, while the average utilization in the North Seeding pasture was 63% and 58% in the same years. Following the voluntary reduction, average utilization was reduced to 51% and 47% in the South Seeding and North Seeding pasture, respectfully. As identified in the Allotment Evaluation, while currently meeting the standard for non-native seedings, repeated average utilization in the heavy category, particularly in the South Seeding pasture, is placing the non-native seeding at risk of loss of diversity and productivity over time.

Environmental Consequences

Direct and indirect impacts to vegetation result from herbage removal or damage by foraging animals. Appropriate grazing or utilization levels can have the effect of stimulating plants, resulting in increased plant production if energy reserves are adequate. If the amount of grazing use or utilization is high for a given year, or especially for a sequence of years, the composition of the vegetative community may become modified as the more desirable, and more utilized species lose vigor and decrease in density throughout the site.

Alternative A (No Action)

Under Alternative A there would be no change in the existing livestock grazing management for the allotments. The current grazing systems would continue to be followed over the course of the renewed permits. The Elbow Allotment, which was previously identified as meeting the ISRH, would be expected to continue to meet the applicable standards. The level of herbage removal by authorized livestock on an annual basis would not alter the condition of the native plant communities within the allotment. The allotment would continue to provide a diversity of native plant species in healthy condition. Livestock authorized in the allotment would continue to follow a rest-rotation grazing system, with two pastures utilized in May each year and one pasture receiving rest.

The Ramshorn Canyon Allotment was identified as not meeting Standards 4 and 8 of the ISRH. Authorized livestock grazing management has resulted in repeated heavy utilization on large areas of the allotment, which has resulted in a decline in ecological condition in the native plant communities. The allotment was previously identified, in 2001, as meeting applicable ISRH. A review of the use history identified average use levels prior to 2001 were near 600 AUMs. Average use levels during the assessment period of 2001 to 2011, or more accurately between 2001 and 2009, were above 600 AUMs each year, with full use of 915 AUMs for several years leading up to 2009. Use was reduced to 605 AUMs on a voluntary basis in 2010-11. Under current grazing management, large bunchgrasses, both native and non-native, have declined in basal cover in areas of the allotment, resulting in reduced productivity over time. Under Alternative A, the native plant communities would be expected to continue to decline in species diversity and production. Repeated heavy use of the seeding pastures may eventually reduce the diversity and productivity of these sites to a level where they would not meet ISRH, although the heavy use levels likely contributed to the establishment and increase of sagebrush cover within

the non-native seedings as the vigor of crested wheatgrass was reduced creating opportunities for re-establishment of native species from adjacent areas.

Alternative B (Proposed Action)

Impacts of livestock grazing on vegetation in the Elbow Allotment would be similar to Alternative A. While livestock trailing across the allotment is identified under Alternative B, the trailing of livestock for a brief period of time across the allotment occurred historically in the area, and continuing to trail livestock in the area as identified under Alternative B would not result in measurable impacts on the current condition of the native vegetation across the allotment. Trailing occurs primarily on the Pass Creek Road, which is a graveled and maintained road that crossed over the Lost River Range. However, several operators trailing off of the USFS do follow another route along a maintained road with native surface, due to the location of their home operations and/or authorized fall grazing on an adjacent allotment. Under Alternative B, the Elbow Allotment would continue to provide native vegetation in healthy condition to support a variety of wildlife species and ecological processes.

The authorized growing season use in the Ramshorn Canyon Allotment would be reduced under Alternative B due to the deferment of 160 AUMs from spring to falls use. However overall authorized use would remain the same as Alternative A. The impact on forage species is higher when grazing occurs during the active growing season as grazing removes leaf surface area needed for photosynthetic processes, to maintain and expand rootmass, and produce seed. The shift in the level of use authorized in the dormant season versus the growing season would reduce impacts on forage species relative to Alternative A. The seeding pastures are currently meeting the standard, though concerns were identified relative to maintaining productivity and species diversity. The reduction in growing season use in these two pastures would likely maintain these pastures in conditions suitable to continue to meet the standard. The four year grazing cycle would include use of the Native Pasture during the growing season in two of four years. While the reduced grazing pressure during the active growing season would benefit native bunchgrasses in the allotment relative to Alternative A, large areas of heavy use would likely continue to occur in the Native Pasture when grazed in the spring due to the reduced density and vigor of native bunchgrasses in a large portion of the Native Pasture. It is therefore unlikely that the change in timing of use alone would lead to significant progress in improving native plant community health in the allotment over the course of the ten year permits.

Alternative C (Preferred Action)

The authorized use in the Ramshorn Canyon Allotment would be reduced from 34%, from 915 AUMs to 605 AUMs. This would reduce use to approximately the average annual use level of the allotment in 2001 when it was determined to be meeting ISRH. The reduction was implemented on a voluntary basis in 2010 and 2011 following the collection of ESI data in 2009 showing a downward trend in condition of native plant communities in the allotment. Utilization pattern maps following the reduction have documented a decrease from average heavy utilization to average moderate utilization in the allotment. Further, the Elbow and Ramshorn Canyon Allotments would be combined into a single allotment with six pastures, of which four pastures would be used each spring, one pasture would be used in the fall, and one pasture would be

rested each year. The change would provide increased flexibility in management across these public lands, facilitating a rotational grazing system which includes periodic full season rest of the Native Pasture over the five-year grazing cycle. Under Alternative C, the combined decrease in authorized use and periodic rest would lead to significant improvement in the condition of the native plant community on the approximately 1,450 acres in the Native pasture of the Ramshorn Canyon Allotment currently not meeting ISRH, while maintaining the healthy plant communities in the Elbow Allotment and improving the productivity and species diversity in the two seeding pastures.

Alternative D (No Grazing)

Under Alternative D, no livestock grazing would be authorized within the allotment for a period of 10 years, from 2013 to 2022. The potential impacts on vegetation, including herbage removal or damage by livestock, would be removed from the allotment for a ten year period. The potential for higher than desired utilization levels in preferred areas, which may lead to changes in compositions of the vegetative communities, would be removed. Increased biomass would be left on-site throughout the allotment, increasing the amount of residual cover and litter. The Elbow Allotment was meeting standards and would continue to meet standards for native plant community health and seeding health under Alternative D. Under Alternative D, areas in lower ecological condition in the Ramshorn Canyon Allotment would improve over time with the removal of livestock.

Visual Resources

Affected Environment

The public lands managed by the Upper Snake Field Office have been divided into four Visual Resource Management (VRM) classes to help manage and reduce impacts to the scenic (visual) resource. No projects have been proposed within the Ramshorn Canyon Allotment. The Elbow Allotment includes both VRM Class III and VRM Class IV areas. The proposed project is located in the VRM Class IV and the objective of this class is to provide for activities that require major modification of the landscape. The level of change to the characteristic landscape can be high and management activities may dominate the view and be the major focus of attention. Projects should still minimize impacts through location and design by repeating form, line, color, and texture.

The form elements within the allotment are simple. The project area is defined primarily as moderate texture, with wide visual characteristics. A visitor can see for many miles to the north, south, and west. The east side is flanked by the Lost Rivers mountain range. There are human alterations consisting of roads and existing range developments including fencing, pipelines, and associated water troughs. Fences and pipelines add curvilinear, continuous characteristics. Vegetation is predominately sagebrush and grasses, creating a harmonious combination of colors. The line elements within the allotment are smooth, long, and simple.

Environmental Consequences

Alternative A (No Action):

There are no proposed range improvement projects under Alternative A. Therefore, there would be no additional impacts to visual resources.

Alternative B (Proposed Action):

One project is proposed in the Elbow Allotment, consisting of approximately 1.4 miles of pipeline extension and a new water trough site in the South Pasture. The overall degree of contrast is weak due to the short-term impacts from pipeline installation. Original landscape characteristics and natural features would be largely restored once the pipeline project has been completed. The pipeline would be buried adjacent to existing roads; following the natural line and form of the landscape. Pipeline and water trough installation may attract attention from the casual observer but should not dominate the view upon completion of the project. The proposed range improvement project would meet objectives of VRM Class IV.

Alternative C (Preferred Action):

There are no proposed range improvement projects under Alternative A. Therefore, there would be no additional impacts to visual resources.

Alternative D (No Grazing)

Under Alternative D, no new projects would be implemented as livestock grazing would not be authorized for a period of 10 years. There would be no additional impact on visual resources from implementation of Alternative D.

Wildlife Resources

Affected Environment

Habitats on public lands in the Elbow and Ramshorn Canyon Allotments are important to a wide range of native wildlife species which seasonally occupy a variety of habitat types. Big game species inhabiting the Big Lost Valley include mule deer, pronghorn, elk, and bighorn sheep. The Elbow and Ramshorn Canyon Allotments include mule deer and elk winter range. Ramshorn Canyon further provides year-long mule deer range and both allotments include important spring and winter pronghorn antelope range.

Bighorn sheep utilize steep and rugged canyons, mountainous terrain, and adjacent habitats. Bighorn sheep may use the limited areas of steep terrain on the east side of Elbow and Ramshorn Canyon Allotments. The allotments overlap the IDFG designated Lost River population management unit (PMU). Although the USFS administers the majority of lands within the PMU, a small area administered by the BLM is present (IDFG 2010). Bighorn sheep populations were largely depleted in the unit by the 1950s. Initial releases of bighorn sheep to augment the population in the unit began in 1969 and continued through 1980. There were no further releases

until 2005 when a large augmentation of 62 sheep from Montana was completed. This augmentation spurred significant population growth, according to IDFG, with a record high of 240 bighorn sheep documented in the PMU in 2010. The IDFG identified in their management plan (IDFG 2010) that they will continue to manage for increased populations in the Lost River PMU.

Pronghorn populations in Idaho have densities considered as low to moderate relative to surrounding states. In general, Idaho's pronghorn habitats do not support population levels characteristic of high-quality habitats found in Wyoming and Montana. Low annual precipitation and habitat fragmentation may be factors contributing to population differences. Compared to other populations within Idaho, the Big Lost Valley supports a relatively high density of pronghorn (IDFG 2010).

Environmental Consequences

Alternative A (No Action)

Under Alternative A, there would be no change in the existing livestock grazing management for the allotments. The current grazing systems would continue over the course of the renewed permits. Potential impacts to wildlife are similar to those addressed above under **Threatened, Endangered, and Sensitive Animals**. As described above, the habitat conditions and native plant composition would be maintained and continue to meet standards in the Elbow Allotment, which would provide for a wide range of native wildlife species.

As described above under **Vegetation**, the current condition of the native plant communities in a portion of the Ramshorn Canyon Allotment is not meeting Standards 4 and 8. Under Alternative A, the native plant communities would be expected to continue to decline in species diversity and production, further lowering habitat quality for wildlife species. Native habitats within the Ramshorn Canyon Allotment are not providing adequate herbaceous cover and forb diversity to support most wildlife species, relative to site potential. Continuing the previously authorized grazing permit would not facilitate habitat improvement in the Ramshorn Canyon Allotment.

Alternative B (Proposed Action)

Impacts of livestock grazing on vegetation in the Elbow Allotment would be similar to Alternative A. In addition, livestock trailing would be authorized across the allotment under Alternative B. The trailing of livestock, for a brief period across the allotment, would have short-term impact on wildlife species by creating a disturbance that some species may avoid. This potential disturbance would not influence population densities within the valleys or habitat quality within the allotment. Under Alternative B, the Elbow Allotment would continue to provide native vegetation in healthy condition to support a variety of wildlife species.

The authorized growing season use in the Ramshorn Canyon Allotment would be reduced under Alternative B due to the deferment of 160 AUMs from spring to fall use. Approximately 25% less growing season use would occur compared to Alternative A, though the overall authorized use would remain the same. Spring grazing removes vegetation that would otherwise be utilized

by wildlife for nesting cover, foraging, and cover from predators. The shift in the level of use authorized in the dormant season versus the growing season would reduce impacts on vegetation, relative to Alternative A. While the reduced grazing pressure during the active growing season would benefit native bunchgrasses in the allotment, relative to Alternative A, areas of heavy use would likely continue to occur in the Native Pasture as forage species are currently reduced. Shifting additional use to the dormant season would further reduce residual cover in one pasture, which may influence wildlife use within that pasture the following spring. It is unlikely that the change in timing of grazing alone would lead to significant progress in improving wildlife habitat in the Ramshorn Canyon Allotment over the course of the ten-year permits.

Alternative C (Preferred Action)

Under Alternative C, the authorized use in the Ramshorn Canyon Allotment would be reduced by 34%. Further, the Elbow and Ramshorn Canyon Allotments would be combined into a single allotment with six pastures, of which four pastures would be used each spring. Spring grazing influences wildlife species by removing vegetation that would otherwise be used for consumption and cover from predators. Of the remaining two pastures, one would be used in the fall, and one would be rested each year. The rested and fall use pasture would provide an area in the spring which wildlife may utilize free from potential disturbance by livestock. Under Alternative C, the combined decrease in authorized use and periodic rest would lead to significant improvement in the condition of the native plant community on the approximately 1,450 acres in the Native Pasture of the Ramshorn Canyon Allotment. Over time, this would provide improved wildlife habitat conditions. Under Alternative C, the former Elbow Allotment would maintain the healthy plant communities that support wildlife.

Alternative D (No Grazing)

Under Alternative D, no livestock grazing would be authorized within the allotments for a period of 10 years, from 2013 to 2022. In general, understory cover, composed of grasses and forbs, would increase and provide habitat necessary in sustaining wildlife populations. Improved seed production would increase potential for establishment of native or seeded species if suitable microsites are available and climatic conditions are favorable. These changes would result in increased diversity, cover, and height of grasses and forbs, which would improve habitat quality for wildlife. There would be no potential displacement or disturbance to wildlife species by livestock during important breeding, nesting, calving, fawning and brood-rearing seasons.

The Elbow Allotment is meeting standards and would continue to meet standards for native plant community health and seeding health under Alternative D. Under Alternative D, areas in lower ecological condition in the Ramshorn Canyon Allotment would improve over time with the removal of livestock.

CHAPTER 4 - CUMULATIVE IMPACTS

This section of the document discloses the incremental impacts that Alternatives A, B, C, and D are likely to have when considered in the context of impacts associated with past, present, and reasonably foreseeable future actions that have occurred, or are likely to occur, in the area. The Big Lost Cumulative Impact Assessment Area (CIAA) for the purposes of this analysis includes the lower Big Lost River Valley and areas in close proximity to the valley within the boundary of the USFO (Figure 2). The CIAA was delineated from the Big Lost and Lake Walcott Hydrologic Unit as identified by the state of Idaho. The CIAA was further defined using administrative boundaries to delineate an area with similar climatic and anthropomorphic influences. The Big Lost CIAA is bordered by the Big Desert CIAA to the south, the Twin Buttes CIAA to the southeast and the Little Lost CIAA to the East. The Big Lost CIAA contains approximately 435,323 total acres and includes portions of Butte and Custer counties. Surface ownership within the CIAA is summarized in Table 5.

Figure 5 - Cumulative Impact Analysis Area

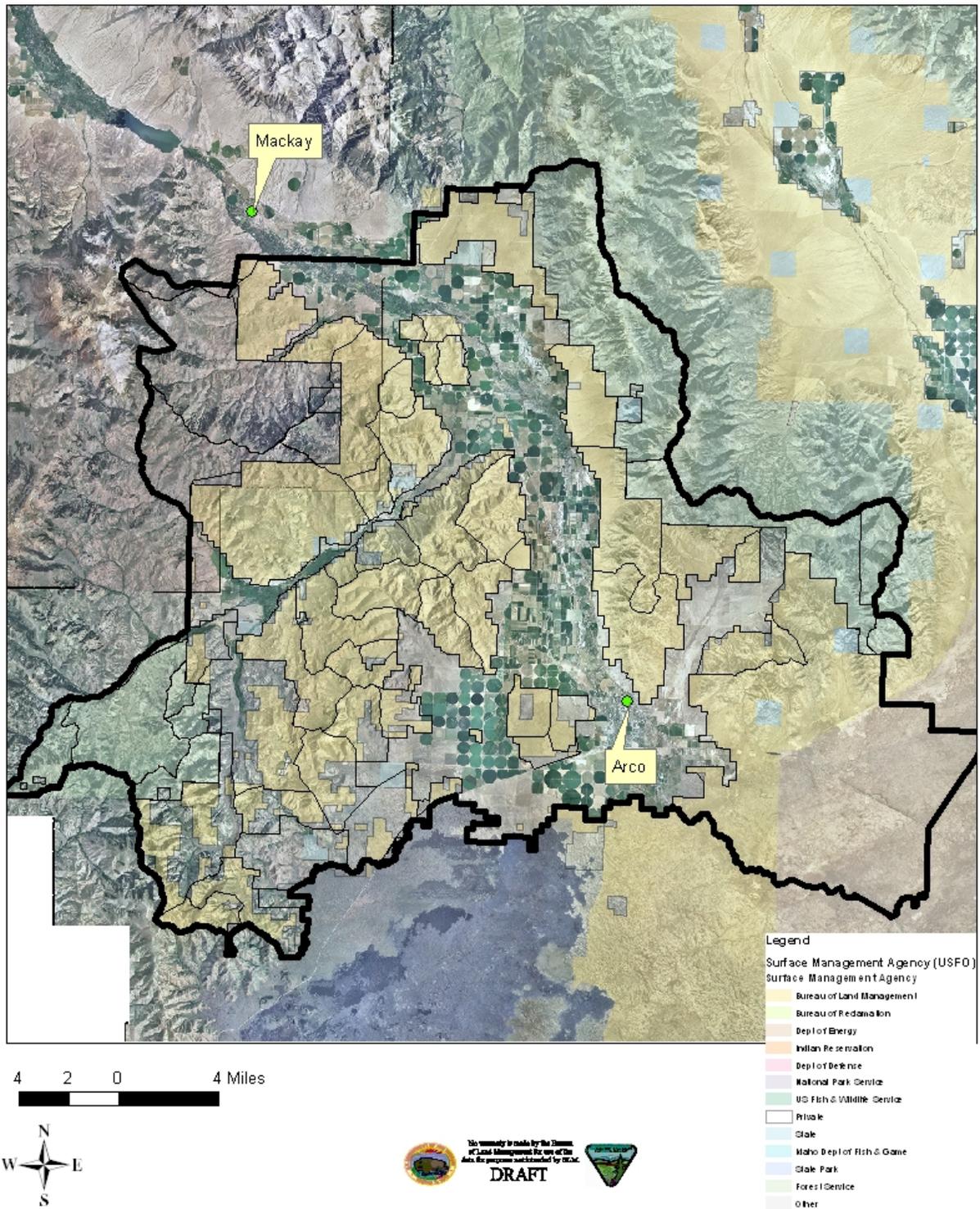


Table 5 - CIAA Surface Status within the CIAA		
Surface Management	Acres	Percent of CIAA
Idaho State Land	5,594	1%
Department of Energy-INL	29,984	7%
National Park Service	225	<1%
Private Land	141,815	33%
U.S. Forest Service	87,040	20%
BLM	170,665	39%
Total	435,323	100%

A number of general habitat types or classifications are found across the CIAA. Table 6 lists the acres within each cover classification based on the landscape classification map used for the Upper Snake Field Office Analysis of Management Situation (AMS).

Table 6 – Habitat Types or Classifications within the CIAA		
Dominant Land and Vegetation Features	Acres	Percent of CIAA
Perennial Grasslands	31,711	7%
Annual Grassland	6,286	1%
Shrubland	281,794	65%
Riparian and Wetland	5,502	1%
Forested	44,994	10%
Agriculture	52,349	12%
Urban	8,502	2%
Rock, Cliffs and Canyons	3,960	1%
Other	226	<1%
Total	435,323	100%

Shrublands dominate the CIAA with 281,794 acres (65% of CIAA) primarily comprised of various species of sagebrush. Agriculture, forests, and perennial grasslands also comprise a large area. Over time these vegetative communities have been affected by drought, human caused disturbance, invasive species, wildfire, and a variety of other factors. The White Knob and Appendicitis Hills Wilderness Study Areas (WSA) are located within the CIAA. These WSAs cover approximately 35,688 acres of BLM public lands or 8% of the CIAA.

Past and present actions identified for the CIAA which have impacted the human environment to varying degrees include agricultural development, urban development, infrastructure (i.e. roads, fences and water troughs), wildfire, and livestock grazing. Table 7 details acreage associated with the disturbances identified within the CIAA.

Table 7 - Past and Present Actions in the CIAA.	
Type of Activity	Impact
Agricultural Development	
<i>Number of Acres</i>	52,349 Acres developed for Agriculture.
<i>Percent of CIAA</i>	12%
Urban Development	
<i>Number of Acres</i>	8,502 Acres developed by Urbanization
<i>Percent of CIAA</i>	2%
Infrastructure (Roads, fences and water troughs)	
<i>Number of Acres</i>	990 Miles of road affecting *1,440 acres 440 Miles of fence affecting *58 acres 80 Water troughs affecting *40 acres
<i>Percent of CIAA</i>	<1%
Wildfire	
<i>Number of Acres</i>	17 Fires over 30 years affecting 31,268 acres
<i>Percent of CIAA</i>	7%
Livestock Grazing	
<i>Number of BLM Allotments</i>	42 Allotments; 13 Allotments not meeting standards; 12 Allotments not meeting due to livestock grazing; 5 Allotments not meeting but making progress.
<i>Number of Acres</i>	198,388 Acres** in 42 Allotments; Total BLM acres of the 12 Allotments not meeting standards: 63,324; Acres not meeting standards, within the 12 Allotments, due to livestock grazing: 5,175.
<i>Percent of CIAA</i>	BLM acres within allotments: 46%; 12 Allotments not meeting: 15%; Area within the 12 Allotments not meeting standards due to livestock grazing: 1%
*Area affected by roads assumes an average impact area of 12 feet surrounding all roads.	
*Area affected by fencing assumes an average impact area of 4 feet surrounding all fences.	
*Area affected by water troughs assumes an average impact area of ½ acre surrounding all troughs.	
**Figure includes BLM acres and acres where BLM administers livestock grazing on Department of Energy lands under a Memorandum of Understanding and National Parks Service lands under a Delegation of Authority.	

Agricultural development has a long history in the CIAA. Though Lewis and Clark first entered, what would later become the state of Idaho, in 1805, settlers were not attracted to the region in substantial numbers until the 1880s. There are no significant population centers within the CIAA. Settlement is generally dispersed with a larger numbers of residents in the southern portion of the CIAA associated with developed agriculture and the town of Arco, Idaho. The 2010 census placed the population estimate of Butte County at 2,891 and Custer County at 4,368. It is estimated that 2% of the CIAA has urban development. Private property makes up approximately 33% of the land base in the CIAA. Not all private ground is suitable for farming and those areas not used for crop production are often used for grazing livestock or other purposes. Approximately 12% of the CIAA has been developed for agricultural purposes.

Infrastructure development within the valley has increased over time, mostly in the form of conversion to agricultural lands. However, the majority of the land base in the CIAA remains undeveloped. Residential development is higher in proximity to the developed agricultural base along the Big Lost River and in the southern end of the CIAA. There are approximately 990 miles of existing roads within the CIAA, ranging from two lane paved routes to residential roads and undeveloped access routes. Using an average impact area of 12 feet along all roads the total area affected by roads is approximately 1,440 acres, which is less than 1% of the total area within Big Lost CIAA. Proliferation of approved, constructed and maintained roads within the CIAA is expected to be minimal in the foreseeable future. Proliferation of unauthorized roads is expected to continue, particularly as a result of OHV recreation. The extent to which unauthorized road proliferation will occur in the future is difficult to anticipate and quantify.

Livestock grazing has a long history in the region, dating back to the settlement of the area in the late 1800s. In the early settlement years, cattle and sheep were raised to support the surrounding miners and settlers. Within the CIAA, ranching has declined over time since its peak in the early to mid-20th century as more lands were devoted to agriculture. Livestock production has been relatively stable within the CIAA over the last 20 years and livestock production is a major economic segment of the CIAA. There are currently all or portions of 42 BLM grazing allotments, as well as all or portions of the 20 USFS allotments authorized for livestock grazing within the CIAA. Nearly all of the public lands within the CIAA are authorized for livestock grazing.

Recreation use within the CIAA has increased over time. Recreation use is primarily a dispersed activity within the CIAA. Dispersed campsites are found throughout the area and most are located adjacent to flowing water. Popular areas include Antelope Creek and suitable portions of the Big Lost River. Big game hunting, camping, fishing, and motorized vehicle use are the primary recreational pursuits within the CIAA. Many of the 990 miles of roads within the CIAA are used for motorized recreation. The White Knob and Appendicitis Hills Wilderness Study Areas (WSAs) are located within the CIAA. These WSAs cover approximately 35,688 acres of BLM public lands or 8% of the CIAA.

Reasonably Foreseeable Future Actions

Reasonably foreseeable future actions include continuation of the past and present actions as described above. The level and character of agricultural development is anticipated to remain consistent into the foreseeable future as most suitable private property within the CIAA has been developed. There are no identified renewable energy projects or residential developments within the CIAA and the level of existing infrastructure is expected to remain at or near current levels. Populations in Butte County, Idaho have fluctuated over the past 40 years with a high census count of 3,342 in 1980 to the current estimate of 2,891. Populations in Custer County have increased over the past 40 years to the current estimate of 4,368. Populations in both counties are not expected to change significantly in the future and urbanization or infrastructure is also not expected to increase substantially. The level and character of livestock grazing within the CIAA is expected to remain at or near current levels barring any significant policy change regarding grazing on federal lands which compose the majority of the CIAA. Recreational use is expected to continue to increase over time and the potential exists for development or expansion of recreation facilities on public lands within the CIAA. Many of the 990 miles of roads within the CIAA are used for motorized recreation. Proliferation of unauthorized roads resulting from unauthorized motorized recreation is expected to continue as recreation activities increase in the area. The extent to which unauthorized road proliferation will occur in the future is difficult to anticipate and quantify.

Impacts Associated with Past and Present Actions

Past and present actions have resulted in varying degrees of impact to the resources considered in the analysis. Impacts are higher for agricultural developments which have resulted in direct habitat loss and fragmentation of approximately 12% of the CIAA. Agricultural development has altered or removed the native vegetation communities, changed soil characteristics and introduced elements like accelerated erosion, irrigation and concentrated fertilization that have altered and would continue to alter the characteristics of the natural landscape.

Observable impacts associated with urban development have resulted in direct habitat loss and fragmentation of approximately 2% of the CIAA. These actions have introduced non-natural elements that have altered hydrology, energy cycles, soil characteristics and native vegetative communities within the CIAA.

Impacts associated with infrastructure development have resulted in direct habitat loss and fragmentation of less than <1% of the CIAA. Infrastructure often affects natural habitats differently than agriculture or urban development. In the case of roads and fences, the impacts are often drawn out over a linear area rather than large concentrated blocks as agriculture and urban development are. Although infrastructure may influence natural areas in different ways the impacts act similarly by removing the native vegetation communities and introducing non-natural elements into the natural landscape.

Over the past 30 years, 17 wildfires have burned 31,268 acres on BLM lands, which amounts to approximately 7% of CIAA. In the southeast corner of the CIAA, fires have burned within the same area multiple times. Wildfire can remove and/or permanently alter native vegetation

communities. Often, invasive species and noxious weeds are able to establish within fire disturbance areas. Perennial grasses and forbs are generally able to recover well after wildfire if their composition and health were adequate prior to the fire and fire intensity is not too severe. If shrubs are removed by wildfire, recovery to pre-fire conditions can take much longer.

Approximately 26,210 acres (6% of CIAA) of native habitat have been treated and/or seeded within the CIAA. Some vegetation treatments have been completed in an effort to rehabilitate and stabilize areas after wildfire. Recent treatments were completed to improve watershed functionality. Other treatments were completed in the late 1900s with the intent of increasing forage for livestock. Some treatment areas have burned or were treated on multiple occasions. The majority of seedings completed in the CIAA have included crested wheatgrass, a non-native species which generally decreases vegetation species diversity and habitat value to wildlife.

Of the 42 BLM grazing allotments in the CIAA, 13 have been documented to be not meeting ISRH. One allotment was not meeting standards, but concerns identified were not attributed to livestock grazing. There are 12 BLM livestock grazing allotments within the CIAA where standards are not meeting due to livestock grazing. The total area impacted by livestock grazing within the 12 allotments is approximately 5,175 acres, which is approximately 1% of the CIAA.

Unmanaged livestock (horses, cows, and sheep) grazing in the first half of the 20th century resulted in altered ecological conditions in the riparian areas and the uplands in the Big Lost River Valley. Use was historically higher adjacent to available water with limited use in the areas away from springs, creeks, and rivers. As livestock grazing became more carefully managed in the valley on the remaining native vegetation, the ecological health of the rangelands and riparian areas improved.

Fencing is commonly used as a livestock management tool and there are approximately 480 miles of fence occurring throughout the CIAA. Using an average impact area of 4 feet along all fences, the total area directly affected by fencing is approximately 58 acres, which is less than 1% of the total area within the Big Lost CIAA. Another livestock management tool often used in the CIAA is the use of water troughs to improve livestock distribution. There are a minimum of 80 livestock water troughs documented in the CIAA. Using an average direct impact area of 0.5 acres surrounding water troughs the total disturbance area is 40 acres, which is less than 1% of the total area within the Big Lost CIAA.

Activities that occur on public and private lands, such as agricultural practices; infrastructure development; recreational use such as camping, hunting, and ATV use; and livestock grazing management affect wildlife use patterns, the quantity and quality of habitats, and population viability. Many species of wildlife including birds and big game require large intact habitats for their continued survival. Urbanization and recreational properties on adjacent private lands reduces their value as wildlife habitat through fragmentation of existing habitats. Cumulative impacts of livestock grazing on wildlife habitat include compaction of soils, reduction of available forage and hiding cover, and disturbance of riparian vegetation. Maintaining intact habitats and having the flexibility to modify grazing schedules to meet the specific needs of vegetation and wildlife help maintain rangelands in good ecological condition.

The U.S. Fish and Wildlife Service (USFWS) identified primary and other threats to Greater sage-grouse in its 12-Month Findings for Petitions to List the Greater Sage- Grouse (*Centrocercus urophasianus*) as Threatened or Endangered (USFWS 2010). The primary cause of sage-grouse population decline identified by the USFWS was fragmentation of sagebrush habitats due to: habitat conversion for agriculture or urbanization, infrastructure within sagebrush habitats (powerlines, communication towers, fences, roads, railroads, etc.), wildfire, and energy development (specifically roads and energy related infrastructure). Other threats included: inadequate regulatory mechanisms, invasive plants (annual grasses and noxious weeds), climate change, collisions (with fence, powerlines, etc.), conifer invasion, contaminants, disease (West Nile virus), poorly managed livestock grazing, hunting, mining, predation, prescribed fire/vegetation treatments, recreation (OHV use) and water developments (USFWS 2010). It is often the cumulative impact of various disturbances that have the greatest effect on sagebrush ecosystems, rather than any single disturbance (Knick et al. 2011).

Key sage-grouse habitats are large scale, intact sagebrush steppe areas that provide sage-grouse habitat (Sather-Blair et al. 2000). Within the Big Lost CIAA there are approximately 267,458 acres of Key sage-grouse habitat, which is approximately 61% of the CIAA. There are also 20,963 acres (5% of CIAA) of Restoration Type 1 habitat in the CIAA. These areas have limited sagebrush composition, but acceptable understory comprised of native and/or seeded perennial grass rangelands. Restoration Type 1 habitats are considered important areas of focus for sagebrush establishment and retention (Sather-Blair et al. 2000). Within the CIAA there are also areas with acceptable sagebrush cover, but inadequate desirable herbaceous cover in the understory or the understory is comprised of invasive annual grasses or exotic plants. Habitats that meet these criteria are considered Restoration Type 2 (Sather-Blair et al. 2000). Within the CIAA there are only 27 acres of Restoration Type 2 habitat (<1% of CIAA). Restoration of Type 2 areas would require expensive management treatments.

Sage-grouse Preliminary Priority Habitats (PPH) are those areas of highest conservation value due to high male lek attendance, high lek density and high lek connectivity (Makela and Major 2011). There are approximately 172,700 acres of PPH within the Big Lost CIAA. Preliminary General Habitats (PGH) are habitats occupied by sage-grouse not contained within PPH. PGH areas are characterized by lower lek densities that may serve as important connectivity corridors between PPH (Makela and Major 2011). There are approximately 180,659 acres of PGH within the CIAA. Table 8 summarizes known impacts within PPH and PGH areas in the Big Lost CIAA:

Table 8 – Summary of impacts within Sage-grouse PPH and PGH				
Impact	PPH Acres Affected	Percent of CIAA	PGH Acres Affected	Percent of CIAA
Agricultural Development	11,602	7%	30,242	17%
Urban Development	1,297	<1%	5,280	3%
*Infrastructure	631	<1%	747	<1%
Wildfire	23,810	14%	4,895	3%
**Livestock Grazing	4,067	1%	1,108	<1%
Vegetation Treatments	13,246	3%	10,862	1.5%
*Note: Infrastructure is a combination of roads, fences and water trough sites.				
** Action describes areas identified as not meeting ISRH and livestock grazing management was determined to be the primary factor. In situations where the specific location of acres not meeting due to current livestock and the applicable standards were not delineated in a GIS data base and available for analysis relative to delineated PPH and PGH areas, the assumption was made if the allotment included PPH habitat, all of the acres not specifically located were within PPH areas. Likewise, if the allotment only included PGH habitat, all of the acres not meeting the applicable standard were considered to be within PGH areas. While this assumption may inflate that acreage impacted by livestock grazing in PPH or PGH habitat, respectively, it insures that potential PPH and PGH acreages impacted by livestock grazing are not excluded.				

Approximately 13,246 acres of PPH and 10,862 acres of PGH have been treated and/or seeded. Some vegetation treatments have been completed in an effort to rehabilitate and stabilize areas after wildfire. Other treatments were completed in the late 1900s to increase forage for livestock. Many of these areas have burned or were treated on multiple occasions. The majority of seedings completed in the CIAA have seeded crested wheatgrass, which decreases the habitat value to sage-grouse.

Wildfire and development (agricultural and urban) have resulted in the largest cumulative impact to sage-grouse habitat within the CIAA. Aside from the direct impacts of habitat alteration, these disturbances may alter sage-grouse behavior causing them to avoid impacted habitats or displace populations to more suitable areas.

Although livestock grazing was not identified as a primary threat, it is one of the more widespread uses occurring in sage grouse habitat (Connelly et al. 2004). There is limited evidence to suggest direct impacts to sage-grouse by livestock, such as stepping on eggs, but livestock grazing does indirectly affect sage-grouse habitats by removing vegetation (foraging) or changing species composition under poor management practices (Connelly and Braun 1997). Approximately 1% of the total PPH and PGH habitats within the CIAA have been identified as not meeting ISRH where livestock grazing was identified as a contributing factor.

Livestock grazing has occurred within the CIAA since the late 1800s. Impacts to sagebrush ecosystems were likely the greatest during this time as unregulated grazing occurred into the early 1900s (Knick et al. 2003). The Taylor Grazing Act (1934) was the foundational law for livestock management on public lands, and although it was intended to regulate livestock use, it

also benefited sage-grouse habitat within the CIAA by curbing unregulated grazing. Since then other laws, improved science, improved management cooperation (interagency and with private landowners), and improving adaptive management have provided more safeguards for sage-grouse habitats.

Sage-grouse within the CIAA are part of a larger population known as the Snake-Salmon-Beaverhead population. A population viability analysis for the Snake-Salmon-Beaverhead population was completed by Garton et al. (2011). The viability analysis factored in known current and historic anthropogenic factors including domestic livestock grazing from 1965-2007. This analysis included sage-grouse meta-populations within the CIAA. Garton et al. (2011) found that the Snake-Salmon-Beaverhead population had a 0%-27% chance of falling below population viability levels (≥ 500 male sage-grouse) in the next 100 years.

No new primary threats such as conversion of sage-grouse habitat for agriculture or urbanization, or infrastructure (roads, powerlines, energy development, etc.) are proposed on public lands in the CIAA. In addition, the USFO is unaware of any plans or proposals identified for nearby lands under other ownership (private, NPS, DOE or State of Idaho lands) in the CIAA. Invasive species and wildfire continue to be threats that cannot be anticipated in frequency or intensity. Impacts associated with wildfire are likely to continue to be the greatest threat to sage-grouse populations in the CIAA. Managing for healthy habitats in the CIAA provides protection against invasive species and resiliency to disturbances such as wildfire. PPH are comprised of areas that have the highest conservation value for maintaining sustainable sage-grouse habitats. Additional disturbances such as new infrastructure development on public lands are less likely to be implemented in PPH areas without adequate mitigation in the future (BLM 2011).

Grazing permits within the CIAA will continue to be evaluated, modified as needed and renewed according to law and BLM policy in the future. Other threats such as invasive plants, climate change, collisions with structures, contaminants, disease, hunting, mining, predation, vegetation treatments, and recreation (OHV use) are likely to continue in the CIAA, but the extent to which they affect sage-grouse are difficult to quantify. No new projects such as fencing, vegetation treatments, mining or water developments are proposed in this EA. Other such proposals may occur on public lands within the CIAA in the future, but would be subject to law and BLM policy to ensure that the cumulative effect to sage-grouse does not inhibit the viability of populations in the CIAA.

Incremental Impacts Associated with Alternatives

Alternative A

Alternative A would contribute very little to the collective impact associated with past, present and reasonably foreseeable future actions. Livestock use would remain at current levels and no infrastructure development associated with livestock use would be constructed. The number of road miles within the area would not increase as a result of implementing Alternative A. The amount of suitable habitat for wildlife species, including special status species that occur in the CIAA would remain about the same.

Alternative B

Alternative B would contribute very little to the collective impact associated with past, present and reasonably foreseeable future actions. Though livestock use would remain at current levels, approximately 1.4 miles of additional pipeline with one water development would be constructed within the Elbow Allotment. This project would result in approximately three acres of habitat disturbance associated with infrastructure, an increase of approximately 0.2% within the CIAA. The number of road miles within the area would not increase as a result of implementing Alternative B. The conditions of both native and non-native upland habitats would remain at similar levels as currently found across the CIAA.

Alternative C

Alternative C would contribute very little to the collective impact associated with past, present and reasonably foreseeable future actions. The reduction in authorized use in the Ramshorn Canyon Allotment and combining with the Elbow allotment to facilitate a rest rotation grazing system would lead to improved native plant community condition over time on approximately 1,450 acres, or approximately 21% of the public lands currently identified as not meeting ISRH associated with current livestock grazing management within the CIAA.

Alternative D

Alternative D would contribute very little to the collective impact associated with past, present and reasonably foreseeable future actions. Livestock use would not occur for a ten year period within the allotment. The number of road miles within the area would not increase as a result of implementing Alternative D. The removal of livestock under Alternative D would result in improvement in habitat conditions in some areas of native plant communities in the allotment in lower ecological condition.

CHAPTER 5 – SUMMARY AND CONCLUSIONS

The assessment indicates that Alternative A, which includes no changes in the current mandatory terms and conditions, would continue to meet applicable standards in the Elbow Allotment. However, with no change in livestock management in the Ramshorn Canyon Allotment, the allotment would not make significant progress toward meeting standards 4 and 8 on approximately 1,450 acres on native plant communities. Under Alternative A, there would be no impact on economic or social values of the operators.

The assessment indicates that Alternative B would also continue to meet standards in the Elbow Allotment. Under Alternative B, the shift of 160 AUMs of growing season use to dormant season use in the Ramshorn Canyon Allotment may lead to improved conditions in the native plant communities over time relative to Alternative A, however this change alone would be insufficient to make significant progress toward meeting standards 4 and 8 over the ten year term of the permits. The extension of the existing pipeline and placement of an additional watering site in the South Pasture of the Elbow Allotment would result in implementation cost but would not impact the economic or social values of the operators.

The assessment indicates that Alternative C would also continue to meet standards in the Elbow Allotment. Further, Alternative C would make significant progress toward meeting standards in the Ramshorn Canyon Allotment. A 34% reduction in authorized use of the Ramshorn Canyon Allotment would be implemented. The reduction in authorized use would have an economic impact on the operators with authorized use in the allotment. The forage substitution cost to the permittees under Alternative C would range from approximately \$3,488 to \$30,582 annually. If the herds are reduced as a result of decreased forage availability, the decreased gross revenue may range from \$23,250 to \$34,100 annually.

Similar to Alternative C, the assessment indicates that Alternative D would continue to meet all applicable ISRH in the Elbow Allotment and would result in the Ramshorn Canyon Allotment making significant progress toward meeting Standards 4 and 8 if the ISRH. However, Alternative D would result in substantial economic impacts on the operators authorized across these allotments. The forage substitution cost to replace 1,346 AUMs would range from approximately \$15,143 to \$132,783 annually over the ten year period. If the herds are reduced as a result of decreased forage availability, the decreased gross revenue for the operators through herd reductions would range from approximately \$100,950 to \$148,060 annually over the ten year period.

CHAPTER 6 - CONSULTATION AND COORDINATION

Persons and Agencies Consulted

Chairman, Land Use Policy Committee, Shoshone-Bannock Tribes
Chairman, Tribal Business Council, Shoshone-Bannock Tribes
Northwest Band of Shoshone Nation
Moj and Debbie Broadie
Harry Crawford
Albert Fullmer
Keith Lewis
Ramshorn Grazing Assn., Inc.
Snake River Valley View, LLC
Leon Williams
Idaho Department of Agriculture
Idaho Department of Fish and Game
Idaho Department of Lands
U.S. Fish and Wildlife Service
Western Watersheds Project

List of Preparers

Shannon Bassista: Recreation/Visual Resources
Marissa Guenther: Cultural Resources
Bret Herres: Economic and Social Values/Invasive, Non-Native Species/Soil
Resources/Threatened, Endangered, and Sensitive Plants/Vegetation
Dawn Loomis: Migratory Birds/Threatened, Endangered, and Sensitive Animals/Wildlife
Resources
Theresa Mathis: Migratory Birds/Threatened, Endangered, and Sensitive Animals/Wildlife
Resources

/s/ Bret Herres 9/4/2012
Preparer Date

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APPENDIX A – DETERMINATION DOCUMENT for ELBOW ALLOTMENT

SECTION 1 –DETERMINATION REQUIRED?

- All Standards are met or making significant progress towards meeting and there is conformance with the guidelines. **No Determination is required, review is complete.**
- One or more Standards is not being met or there is non-conformance with the guidelines. **An Authorized Officer’s Determination is required; continue with Section 2.**

SECTION 2 –DETERMINATION

The Determination documents the authorized officer’s finding that existing grazing management practices or levels of grazing use on public lands either are or are not significant factors in failing to achieve the standards and conform to the guidelines within a specified geographic area. (H-4180-1 page I-3)

APPENDIX B – DETERMINATION DOCUMENT for RAMSHORN CANYON ALLOTMENT

SECTION 1 – DETERMINATION REQUIRED?

_____ All Standards are met or making significant progress towards meeting and there is conformance with the guidelines. **No Determination is required, review is complete.**

 X One or more Standards is not being met or there is non-conformance with the guidelines. **An Authorized Officer's Determination is required; continue with Section 2.**

SECTION 2 – MAKE A DETERMINATION

The Determination documents the authorized officer's finding that existing grazing management practices or levels of grazing use on public lands either are or are not significant factors in failing to achieve the standards and conform to the guidelines within a specified geographic area. (H-4180-1 page I-3)

The determination document must include at a minimum:

1. Documentation of causal factors (other than livestock grazing) including identifying the evidence used to reach conclusions on which activities are causal factors for not achieving the Standard (H-4180-1 page III-13).

While climate change and fluctuations may have impacted upland vegetation to a degree, the predominant impact to upland vegetation on the allotment is livestock grazing. The allotment receives minimal use by recreationists. Based upon this information it can be said that no additional causal factors, outside of livestock grazing, have been identified as a reason for not achieving standards for rangeland health.

2. Answers to the grazing related questions below. (H-4180-1 page III-14)

a. Is it more likely than not that existing grazing management practices or levels of grazing use are significant factors in failing to achieve the Standards or conform to the guidelines? (**YES**/NO)

Rationale:

Standards 4 and 8 of the Idaho Standards of Rangeland Health were identified as not being met or making significant progress towards being met within the Ramshorn Canyon Allotment. Data collected from Ecological Site Inventories (ESI) conducted in 2009 identify downward trends in ecological across Ramshorn Canyon Allotment. Recent utilization pattern maps completed following use at or near authorized active use levels have resulted in average utilization in the heavy use category (61 to 80). This level of heavy use under the current livestock grazing management is reducing the vigor and productivity of the native plant communities and contributing to the downward ecological trend in the allotment.

b. Is there conformance with Idaho Guidelines for Livestock Grazing Management?
(YES/**NO**)

Guidelines that are not in conformance:

Guideline 12: Apply grazing management practices and/or facilities that maintain or promote the physical and biological conditions necessary to sustain native plant populations and wildlife habitats in native plant communities

3. Date determination is made and signature of authorized officer

/s/ Jeremy Casterson
Authorized Officer

9/4/2012
Date

APPENDIX C – Anticipated Livestock Trailing Authorization Details

Location: Trailing from Ramshorn Canyon Allotment to Squaw Creek Allotment or USFS Pass Creek Allotment in late spring.

Number of days: 2

Timing: between 7/1 and 7/16

Number of Livestock: up to 400 cattle

Point of entry: BLM road on southeast end of Elbow Allotment

Point of exit: Pass Creek Road on northwest end of Elbow Allotment

Route: see Figure 6

Holdover areas: overnight in northwest corner of Pass Creek Pasture of Elbow Allotment

Location: Trailing from USFS Pass Creek Allotment to home operations in Big Lost River Valley or to fall use pasture of Ramshorn Canyon Allotment

Number of days: 2

Timing: between 9/20 and 10/15

Number of Livestock: up to 1,200 cattle, with up to 500 cattle trailing to Ramshorn Canyon Allotment.

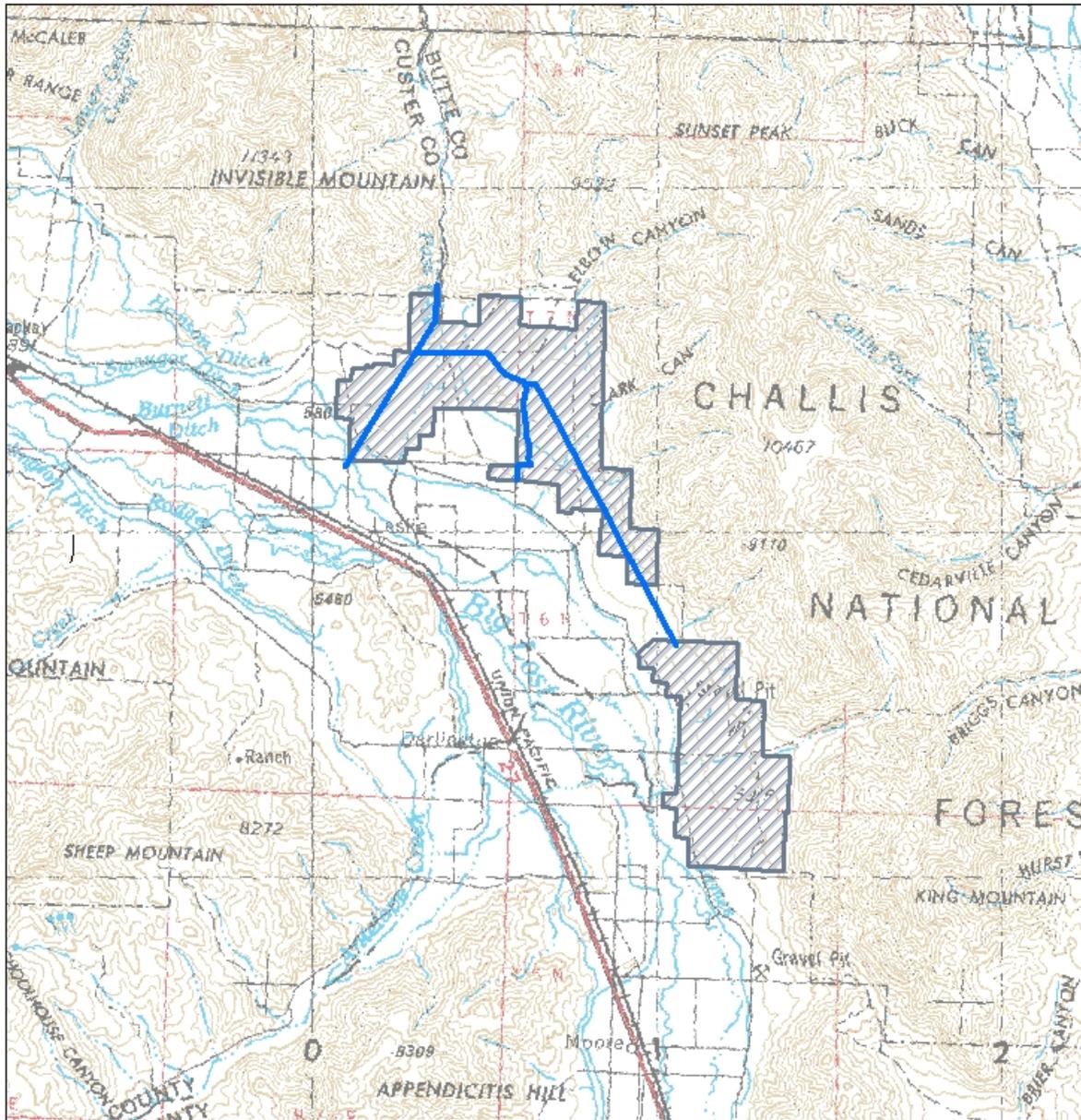
Point of entry: Pass Creek Road on northwest end of Elbow Allotment

Point of exit: Pass Creek Road on the southwest end of Elbow Allotment or BLM road on southeast end of Elbow Allotment

Route: see Figure 6

Holdover areas: overnight in northwest corner of Pass Creek Pasture of Elbow Allotment

Figure 6 - General Location of Anticipated Livestock Trailing Routes in the Elbow and Ramshorn Canyon Allotments



2.5 1.25 0 2.5 Miles

Legend

-  Allotments
-  Livestock trailing routes



No warranty is made by the Bureau of Land Management for use of the data for purposes not intended by BLM.

DRAFT



