



ENVIRONMENTAL ASSESSMENT  
GRAZING PERMIT RENEWAL FOR  
BIG DESERT SHEEP ALLOTMENT

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<b>CHAPTER 1 - INTRODUCTION:</b> .....	<b>3</b>
<b>Background</b> .....	3
<b>Purpose and Need for Action</b> .....	4
<b>Location</b> .....	5
<b>Conformance with Land Use Plan</b> .....	7
<b>Relationship to Statutes, Regulations, Guidance, or Other Plans</b> .....	7
<b>Public Contact and Issue Identification</b> .....	8
<b>CHAPTER 2 – NO ACTION AND ALTERNATIVES</b> .....	<b>8</b>
<b>Alternative A (No Action): Issue Unmodified Grazing Permit</b> .....	8
<b>Alternative B (Proposed Action): Adjust Season of Use</b> .....	10
<b>Alternative C (Preferred Alternative): Adjust Season of Use, Establish a Forage Reserve, Construct Boundary and Division Fence, Drill Well, Install Pipeline, and Build Corral</b> .....	13
<b>Alternative D (No Grazing):</b> .....	21
Monitoring Under All Alternatives.....	21
<b>CHAPTER 3 - AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES</b> .....	<b>21</b>
<b>General Setting</b> .....	<b>21</b>
<b>Resources Considered in the Impact Analysis:</b> .....	22
Cultural Resources .....	23
Economic and Social Values .....	26
Invasive, Non-Native Species.....	28
Migratory Birds.....	30
Soil Resources.....	33
Threatened, Endangered, and Sensitive Animals .....	35
Threatened, Endangered, and Sensitive Plants .....	44
Vegetation.....	46
Visual Resources.....	54
Wilderness Study Areas (WSAs).....	55
Wildlife Resources.....	57
<b>CHAPTER 4 - CUMULATIVE IMPACTS</b> .....	<b>59</b>
<b>CHAPTER 5 – SUMMARY AND CONCLUSIONS</b> .....	<b>68</b>
<b>CHAPTER 6 - CONSULTATION AND COORDINATION</b> .....	<b>71</b>
<b>Persons and Agencies Consulted</b> .....	71
<b>List of Authors</b> .....	71
<b>CHAPTER 7 - REFERENCES</b> .....	<b>72</b>
<b>APPENDIX A – TRAILING ROUTES IN BIG DESERT SHEEP ALLOTMENT</b> .....	<b>79</b>
<b>APPENDIX B – DETERMINATION DOCUMENT FOR BIG DESERT SHEEP ALLOTMENT</b> .....	<b>82</b>

## 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 (USFO).

The Big Desert Sheep Allotment is located 20 miles west of Blackfoot and incorporates portions of Bingham, Blaine, and Power Counties (Figure 1). The allotment includes 219,679 acres of BLM land, 6,712 acres of Idaho State land, and 10,599 acres of private land. Range improvements include reservoirs and wells. Fourteen permittees are authorized to run approximately 40,000 sheep from April 10<sup>th</sup> to May 31<sup>st</sup> and approximately 30,000 sheep from from October 16<sup>th</sup> to December 30<sup>th</sup> each year. The total allocated AUMs in the Big Desert Sheep Allotment is 29,248 AUMs. Many of the permittees use the allotment in the spring, move to summer range located in the Palisades and Soda Springs Area, and return to the allotment in the fall.

The general relief of the allotment is characterized by flat to rolling plains, lava outcrops, lava flows, and other volcanic extrusions. The land slopes gently to the southeast with the lowest elevation being 4,350 feet above sea level to 5,563 feet on the top of Split Top Butte in the northern portion of the allotment. The two main range sites in the Big Desert Sheep Allotment consist of an overstory of Wyoming big sagebrush (*Artemisia tridentata ssp. wyomingensis*) and basin big sagebrush (*Artemisia tridentata ssp. tridentata*) and an understory of bluebunch wheatgrass (*Pseudoroegneria spicata*). The vegetative composition in the Big Desert Sheep Allotment has been altered over the past forty years. Since 1970, only nine percent of the public land within the allotment has not been affected by wildfire, and large portions of the allotment have been burned repeatedly in the same time period. These repeated wildfires have converted a landscaped dominated by sagebrush to one dominated by perennial grasses. Project files for the allotment indicate that approximately 43,000 acres of both native and non-native seeding have been implemented in the allotment since 1970. The allotment has additional seedings implemented before 1970, although information as to size and implementation date is limited. A majority of the seedings were planted with crested wheatgrass (*Agropyron cristatum*). Average yearly precipitation is between 8 to 16 inches with 50 percent occurring during the months of April through September.

The Big Desert Sheep Allotment is located within two BLM field offices (Shoshone Field Office and USFO). Approximately 53,986 acres of the allotment lies within the Craters of the Moon Monument and Preserve, which is managed by the Shoshone Field Office. Through a Delegation of Authority, the USFO administers grazing on that portion of the allotment. The remaining 165,693 acres of the allotment is located within the USFO.

## Purpose and Need for Action

The Big Desert Management Framework Plan (MFP) and the Craters of the Moon National Monument and Preserve Resource Management Plan (RMP) identify the Big Desert Sheep Allotment as available for domestic livestock grazing. Where consistent with the goals and objectives of MFP, RMP, and Idaho's Standards and Guidelines for Grazing Management (1997), it is BLM policy to authorize 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 resource conditions and achieves the objectives and desired conditions described in the Big Desert MFP and the Craters of the Moon National Monument and Preserve (RMP). The action is needed to address the operators' applications for permit renewal in the Big Desert Sheep Allotment.

This EA analyzes the creation of a forage reserve allotment out of a portion of the Big Desert Sheep Allotment. The forage reserve would be located in a crested wheatgrass seeding. Grazing would be used as a tool to improve sage-grouse habitat by facilitating the increase of sagebrush. In addition, the forage reserve would be to provide temporary grazing for livestock owned by operators authorized on public lands so that their allotments would be rested following wildfires, vegetation treatments, or to allow an allotment to more rapidly attain rangeland health standards. Currently there are few options available to permittees that temporarily need to rest their grazing allotments.

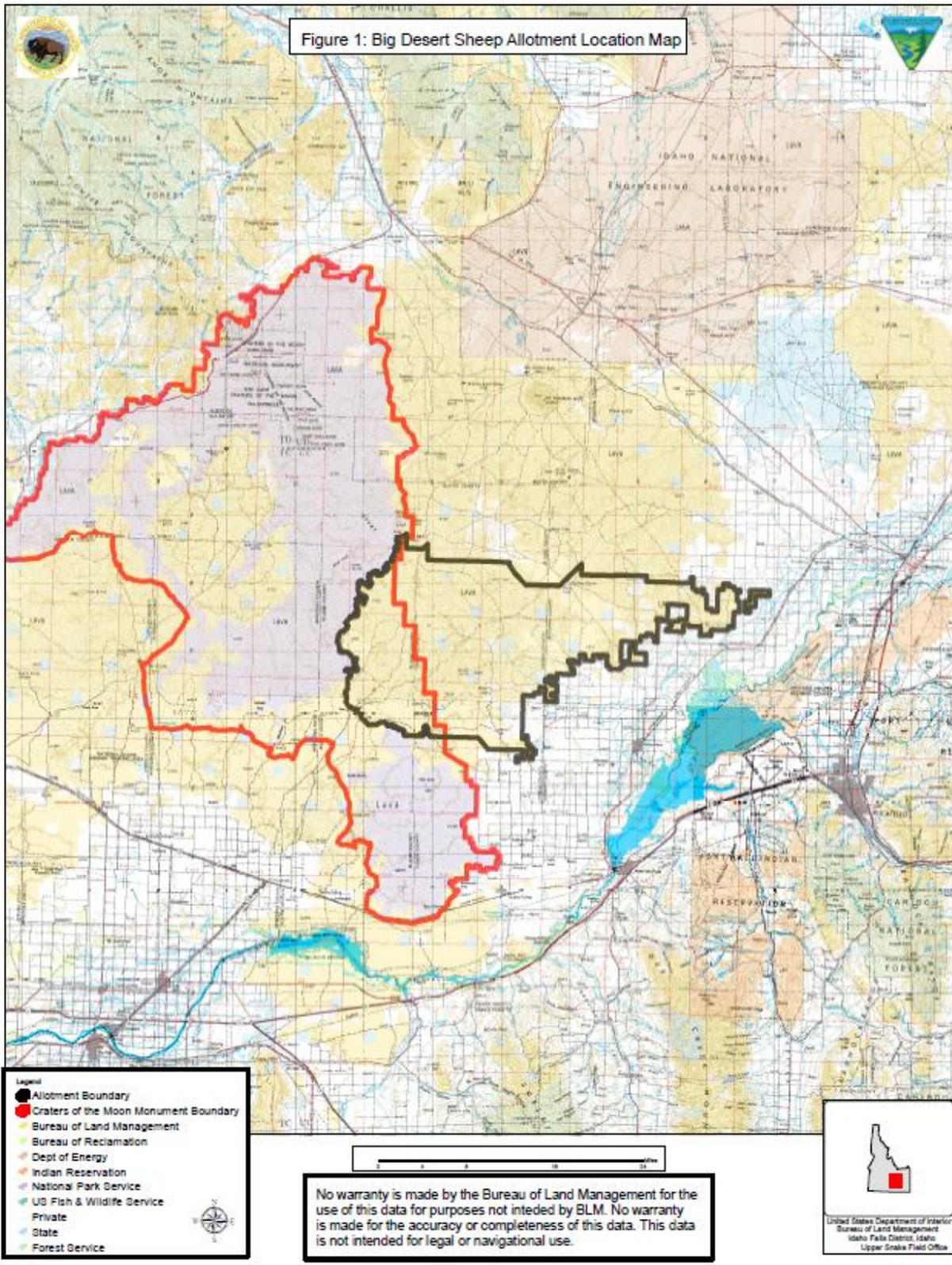
The evaluation for the Big Desert Sheep Allotment, dated December 12, 2011, identified that Standards 1 and 5 were meeting standards, while Standards 4 and 8 of the Idaho Standards for Rangeland Health were not being met but making significant progress towards being met. Standards 2, 3, 6, and 7 did not apply to the Big Desert Sheep Allotment.

- *The large majority of the Native Plant Communities in the Big Desert Sheep Allotment is not meeting the standard, but is making significant progress towards meeting. The frequent fire interval that has occurred in the allotment over the last forty years has reduced the shrub component. Since 1970, approximately ninety-one percent of the allotment has been affected by wildfire with portions of the allotment burning multiple times. The frequency and size of wildfires in the allotment will have the greatest impact on the rate of shrub establishment in the allotment. Despite the large reduction in the shrub component, the grass and forb components are productive and healthy within the Big Desert Sheep Allotment.*
- *Standard 8 is designed to assess whether habitats are suitable to maintain viable populations of special status species. The sagebrush community type in the allotment has been altered because of the increased fire interval in the allotment, with more recent substantial wildfires occurring between 1996 and 2006. Since 1996, approximately seventy-four percent of the allotment has been affected by wildfire multiple times. The shrub component on the allotment began to reestablish after each fire event, however, the rate of reestablishment has been hampered by repeated wildfires. Despite the reduction in the shrub component, the large majority of the grass and forb components are productive and healthy within the Big Desert Sheep Allotment.*

The Evaluation also indicated that livestock management in the allotment is in conformance with the Guidelines for Livestock Grazing Management.

**Location**

The Big Desert Sheep Allotment is located in Bingham, Blaine, and Power Counties (Figure 1). The southeastern border of the allotment is approximately 20 miles southwest of Blackfoot, Idaho, and extends west for an additional 37 miles (Figure 1).



## **Conformance with Land Use Plan**

The alternatives for the Big Desert Sheep Allotment have been reviewed for conformance with the Big Desert MFP, approved on October 15, 1981, and the Craters of the Moon MP/EIS, approved on March 2004. The actions are in conformance with the objectives to:

Big Desert MFP Objective: Maintain and/or improve quantity and quality of the vegetative resources through more intensive range management programs. This will be done by implementing grazing systems designed to provide for the physiological growth requirements of the vegetation, by installing management facilities and vegetative manipulation projects. (RM-1)

Big Desert MFP Objective as amended by the Fire, Fuels, and Related Vegetation Management Direction Plan Amendment (FMDA): Maintain, protect, and expand sage grouse source habitat. Management Action – Treat areas within source habitats that have low resiliency (i.e. areas characterized by low species diversity, undesirable composition, and dead or decadent sagebrush).

Craters of the Moon MP/EIS Objective: GRAZ-3: Permitted livestock use totals 36,965 animal unit months. The current livestock use authorizations will be maintained until Idaho Standards for Rangeland Health evaluations or similar NEPA-compliant decisions identify the need for adjustments in livestock use to meet standards, vegetation livestock, or resource objectives.

## **Relationship to Statutes, Regulations, Guidance, 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 the 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 were approved by the Secretary of the Interior. Subsequently, livestock management practices must be in conformance with the approved standards and guidelines.

6840 – Special Status Species Management Manual. This manual establishes policy of management of species listed or proposed for listing pursuant to the Endangered Species Act and Bureau sensitive species which are found on BLM-administered lands.

Greater Sage-Grouse Interim Management Policies and Procedures (Instruction Memorandum No. 2012-043). The IM provides interim conservation policies and procedures to the BLM field officials to be applied to ongoing and proposed authorizations and activities that affect the Greater Sage-Grouse and its habitat.

A Report on National Greater Sage-Grouse Conservation Measures: To ensure BLM management actions are effective and based on the best available science, the National Policy Team created a National Technical Team (NTT) in August of 2011. The BLM's objective for chartering this planning strategy was to develop new or revised regulatory mechanisms, through Resource Management Plans (RMPs), to conserve and restore the greater sage-grouse and its habitat on BLM-administered lands on a range-wide basis over the long term.

An Evaluation Report of Achieving Idaho Standards for Rangeland Health and Conformance with Guidelines for livestock grazing management was issued for the Big Desert Sheep Allotment in December of 2011. The report found that Standards 1 and 5 are being met in the allotment. Standards 4 and 8 are not being met but are making significant progress toward meeting the standards. Livestock management practices within the Big Desert Sheep Allotment conform to all applicable Idaho Guidelines for Livestock Grazing Management. Standards 2, 3, 6, and 7 are not applicable to the allotment.

### **Public Contact and Issue Identification.**

In the spring of 2011, the USFO sent a letter to the permittees, interested publics, and other agencies inviting them to participate in the field assessment for the Big Desert Sheep Allotment. Several permittees participated in the field assessment, however no interested public participated. In November 2010, the USFO sent an Allotment Assessment to the parties above, which summarized the results of the field assessment and other monitoring information available for the allotment. The parties were asked to provide any other allotment specific information they may have which would be considered in the Evaluation Report. No other information was provided by either the permittees or the interested public. In December 2011, the USFO sent the allotment Evaluation Report and potential alternatives for the Big Desert Sheep Allotment to the parties and they were invited to identify issues and alternatives. Comments were received from the permittees and were considered in the analysis.

## **CHAPTER 2 – NO ACTION AND 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 permit. Under Alternative A, no additional improvements or projects would be authorized in the Big Desert Sheep Allotment.

Alternative A includes the following:

#### Authorized Use Change:

1. None

#### Projects:

2. None

## Mandatory Terms and Conditions

### 3. Permit:

<u>Permittee Name</u>	<u>Livestock #</u>	<u>Livestock Kind</u>	<u>Begin Date</u>	<u>End Date</u>	<u>%PL</u>	<u>AUMs</u>
Todd Mickelsen	2,357	Sheep	4/10	5/31	100%	806
	1,357	Sheep	10/16	1/31	100%	964
Phillips Brothers Farm and Livestock, LLC.	3,417	Sheep	4/10	5/31	88% <sup>*1</sup>	1,075
	2,066	Sheep	10/16	1/31	88%	1,291
Matthew Phillips	3,238	Sheep	4/10	5/31	97% <sup>*2</sup>	1,074
	2,757	Sheep	10/16	1/31	97%	1,899
Mays Land and Livestock, LLC.	585	Sheep	4/10	5/31	100%	200
	563	Sheep	10/16	1/31	100%	400
John Basterrechea	614	Sheep	4/10	5/31	100%	210
Mariana Basterrechea	951	Sheep	4/10	5/31	100%	325
	458	Sheep	10/16	1/31	100%	325
Ball Brother Sheep Company	5,068	Sheep	4/10	5/31	100%	1,733
	2,897	Sheep	10/16	1/31	100%	2,057
Etcheverry Sheep Company	3,668	Sheep	4/10	5/31	100%	1,254
	2,915	Sheep	10/16	1/31	100%	2,070
Garro Properties, Inc. <sup>*3</sup>	4,799	Sheep	4/10	5/31	93% <sup>*4</sup>	1,526
	1,702	Sheep	10/16	1/31	93%	1,124
Jouglard Sheep Company	2,925	Sheep	4/10	5/31	90% <sup>*5</sup>	900
	1,408	Sheep	10/16	1/31	90%	900
Oxarango Lamb and Wool	1,749	Sheep	4/10	5/31	100%	598
	805	Sheep	10/16	1/31	100%	572
John Phillips	2,910	Sheep	4/10	5/31	100%	995
	2,607	Sheep	10/16	1/31	100%	1,851
Stanley Bingham	3,744	Sheep	4/10	5/31	100%	1,280
	1,218	Sheep	10/16	1/31	100%	865
Ken Wixom	2,323	Sheep	4/10	5/31	90% <sup>*6</sup>	715
	1,908	Sheep	10/16	1/31	100%	1,355
Forrest Arthur	1,211	Sheep	4/10	5/31	100%	414
	790	Sheep	10/16	1/31	100%	395

<sup>1</sup> The permittee is credited for 297 State AUMs that are run in conjunction with the allotment. The 297 AUMs are reflected in the reduced Percent Public Land (%PL) figure.

<sup>2</sup> The permittee is credited 92 State AUMs that are run in conjunction with the allotment.

<sup>3</sup> Garro Properties, Inc. is the Base Property Owner, but the permit is leased to Mike Seacrest.

<sup>4</sup> The permittee is credited for 211 State AUMs that are run in conjunction with the allotment.

5 The permittee is credited for 200 Private AUMs that are run in conjunction with the allotment.

6 The permittee is credited for 79 State AUMs that are run in conjunction with the allotment.

**Alternative B (Proposed Action): Adjust Season of Use**

The permittees have requested changes in management as described below:

Alternative B includes the following changes:

Authorized Use Change:

1. Change of the season of use in the spring from 4/10 – 5/31 to 4/1 – 6/15. The total number of AUMs authorized in the Big Desert Sheep Allotment would not change.
2. Change of the season of use in the Fall/Winter from 10/16 – 1/31 to 10/1 – 1/31.
3. Grazing from 4/1- 4/7 would only be authorized on the crested wheatgrass seedings on the eastside of the allotment (Figure 2).

Projects:

4. None

Mandatory Terms and Conditions

5. Permit:

<u>Permittee Name</u>	<u>Livestock #</u>	<u>Livestock Kind</u>	<u>Begin Date</u>	<u>End Date</u>	<u>%PL</u>	<u>AUMs</u>
Todd Mickelsen	1,613	Sheep	4/1	6/15	100%	806
	1,192	Sheep	10/1	1/31	100%	964
Phillips Brothers Farm and Livestock, LLC.	2,445	Sheep	4/1	6/15	88%* <sup>1</sup>	1,075
	1,814	Sheep	10/1	1/31	88%	1,291
Matthew Phillips	2,216	Sheep	4/1	6/15	97%* <sup>2</sup>	1,074
	2,408	Sheep	10/1	1/31	97%	1,889
Mays Land and Livestock, LLC.	400	Sheep	4/1	6/15	100%	200
	495	Sheep	10/1	1/31	100%	400
John Basterrechea	420	Sheep	4/1	6/15	100%	210
Mariana Basterrechea	650	Sheep	4/1	6/15	100%	325
	402	Sheep	10/1	1/31	100%	325
Ball Brother Sheep Company	3,468	Sheep	4/1	6/15	100%	1,733
	2,543	Sheep	10/1	1/31	100%	2,057
Etcheverry Sheep Company	2,509	Sheep	4/1	6/15	100%	1,254

<u>Permittee Name</u>	<u>Livestock #</u>	<u>Livestock Kind</u>	<u>Begin Date</u>	<u>End Date</u>	<u>%PL</u>	<u>AUMs</u>
	2,559	Sheep	10/1	1/31	100%	2,070
Garro Properties, Inc. <sup>*3</sup>	3,284	Sheep	4/1	6/15	93% <sup>*4</sup>	1,526
	1,494	Sheep	10/1	1/31	93%	1,124
Jougard Sheep Company	2,001	Sheep	4/1	6/15	90% <sup>*5</sup>	900
	1,236	Sheep	10/1	1/31	90%	900
Oxarango Lamb and Wool	1,197	Sheep	4/1	6/15	100%	598
	707	Sheep	10/1	1/31	100%	572
John Phillips	1,991	Sheep	4/1	6/15	100%	995
	2,289	Sheep	10/1	1/31	100%	1,851
Stanley Bingham	2,561	Sheep	4/1	6/15	100%	1,280
	1,070	Sheep	10/1	1/31	100%	865
Ken Wixom	1,590	Sheep	4/1	6/15	90% <sup>*6</sup>	715
	1,675	Sheep	10/1	1/31	100%	1,355
Forrest Arthur	828	Sheep	4/1	6/15	100%	414
	488	Sheep	10/1	1/31	100%	395

<sup>1</sup> The permittee is credited for 297 State AUMs that are run in conjunction with the allotment. The 297 AUMs are reflected in the reduced Percent Public Land (%PL) figure.

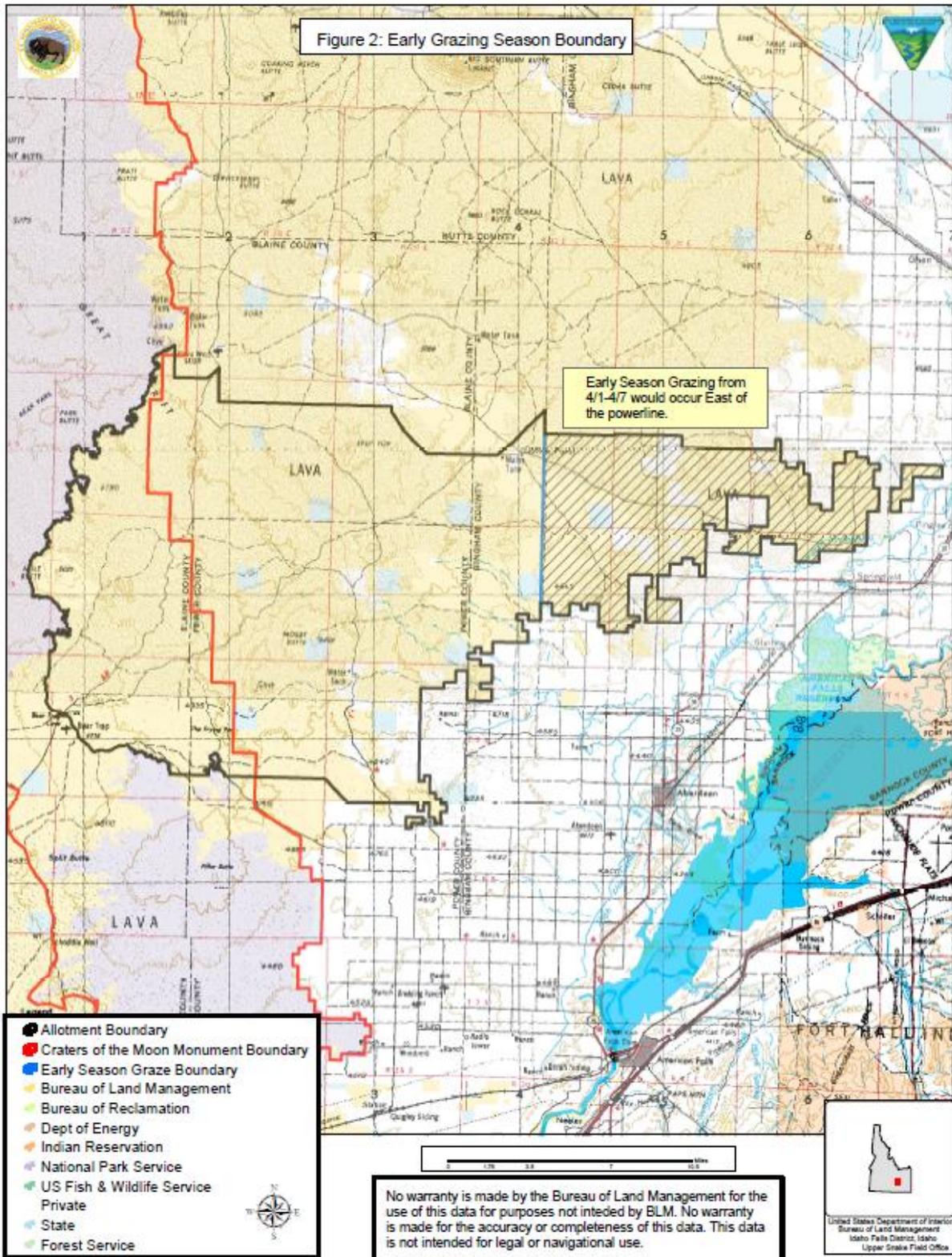
<sup>2</sup> The permittee is credited 92 State AUMs that are run in conjunction with the allotment.

<sup>3</sup> Garro Properties, Inc. is the Base Property Owner, but the permit is leased to Mike Seacrest.

<sup>4</sup> The permittee is credited for 211 State AUMs that are run in conjunction with the allotment.

<sup>5</sup> The permittee is credited for 200 Private AUMs that are run in conjunction with the allotment.

<sup>6</sup> The permittee is credited for 79 State AUMs that are run in conjunction with the allotment.



**Alternative C (Preferred Alternative): Adjust Season of Use, Establish a Forage Reserve, Construct Boundary and Division Fence, Drill Well, Install Pipeline, and Build Corral**

Alternative C includes an adjustment in season of use, trailing, and the creation of the forage reserve. Under this alternative, livestock trailing across the allotment by operators that do not have grazing preference in the allotment would be addressed and the need for a forage reserve in the field office would be addressed. Under this alternative, the Upper Snake Field Manager would authorize continued grazing within the allotment with changes discussed below.

Alternative C includes the following changes:

Authorized Use Change for Big Desert Sheep Allotment:

1. Change of the season of use in the spring from 4/10 – 5/31 to 4/1 – 6/15. The total number of AUMs authorized in the Big Desert Sheep Allotment would not change.
2. Change of the season of use in the Fall/Winter from 10/16 – 1/31 to 10/1 – 1/31.
3. Grazing from 4/1 - 4/7 would only be authorized on the crested wheatgrass seedings on the eastside of the allotment (Figure 2).
4. Authorize livestock trailing across the Big Desert Sheep Allotment for the duration of the permit. Authorized trailing would require active movement of livestock. Livestock would be trailed along existing roads. A description of anticipated authorization specifics is listed in Appendix A, with anticipated trailing routes illustrated in Figure 3.
5. 5,800 acres of the Big Desert Sheep Allotment would be removed to establish a crested wheatgrass Forage Reserve. The Forage Reserve would be named the Countyline Allotment. 1,300 AUMs would be allocated to the new allotment (Figure 4).
6. Total number of allocated AUMs in Big Desert Sheep would be reduced from 30,499 to 29,199 AUMs.

Authorized Use Change for Countyline Allotment:

7. The Countyline Forage Reserve Allotment would be authorized for livestock grazing use on a temporary, non-renewable basis. Use would be considered for BLM permittees. Permittees within the USFO area would receive a higher priority than permittees outside the field office area. Use would be considered for existing permittees or lessees who are being required to temporarily rest areas on their existing allotments due to fire/non-fire vegetation treatments, wildfire recovery, or an opportunity to provide for a more rapid attainment of Idaho Standards for Rangeland Health. If no use is scheduled for the forage reserve, the Big Desert Sheep Allotment permittees would have an opportunity to apply to graze in the forage reserve.

8. The season of use in the Countyline Allotment would be between 4/1 - 12/30 and the amount of livestock allowed in the allotment would be determined by the authorized officer. Up to 1,300 AUMs would be authorized within the forage reserve on an annual basis.
9. Type of livestock use within the Countyline Allotment could be a combination of either cattle or sheep.

Objective for Countyline Allotment:

10. Increasing sagebrush cover would be the primary consideration in determining the authorized annual season of use and the amount of use.

Projects (Figure 5):

11. Construct approximately 14 miles of boundary fence in order to separate the Countyline Allotment from the Big Desert Sheep Allotment. A four wire fence would be constructed according to BLM wildlife fencing specifications. The four wire fence would consist of three strands of barbed wire and one strand of smooth wire. The wire spacing would be 16 inches, 24 inches, 30 inches, and 42 inches from the ground with smooth wire on bottom to facilitate antelope passage underneath. Spacing would be 16.5' between "T" posts. A wire stay would be placed on the fence wire midway between steel "T" posts. Gates would also be added at appropriate locations. The area of disturbance associated with the boundary fence would be no greater than 6 acres. The area were the fenceline would be located would not be bladed. Maintenance of the fence would be the responsibility of the operator(s) who is authorized to graze in the forage reserve on an annual basis. The nearest active greater sage-grouse lek to the identified fence location is approximately 1.75 miles. The portion of the proposed fence located within 2 miles of an active lek would be made more visible by adding reflectors, and if subsequent observations determine that sage-grouse are striking the new fence in other locations, the fence would be modified to make it more visible by adding reflectors.

Authorize construction of approximately 3 miles of pasture fence in the Countyline Allotment. The fence would divide the forage reserve into two pastures named East and West Pastures. The fence would be a three strand standard fence which consists of two strands of barbed wire spaced at 38 inches, 26 inches, and 16 inches from ground level. Spacing would be 16.5' between "T" posts. A wire stay would be placed on the fence wire midway between steel "T" posts. The area of disturbance associated with the pasture fence would be no greater than 1.5 acres. The area were the fenceline would be located would not be bladed. If subsequent observations determine that sage-grouse are striking the new fence, the fence would be modified to make it more visible by adding reflectors or wood stays.

12. Authorize drilling of a well and placement of a storage tank in the Countyline Allotment.

- 13.** Authorize construction of 4.4 miles of pipeline in the Countyline Allotment. The pipeline would originate from the new well described above. A total of three troughs would be connected to the pipeline. There would be one trough located in the middle of each pasture as well as a trough located at the well that would provide water to each pasture. In total each pasture in the Countyline Allotment would have access to two troughs. The pipeline would be buried. The troughs would be set at ground level, as wells as have wildlife escape ramps. The area of disturbance associated with the pipeline would be no greater than 3 acres and the construction of the three troughs would account for another 1.5 acres of disturbance. The total amount of the disturbance would be 4.5 acres. The disturbed area would be reseeded with a mix of native species appropriate for the site after the project is complete.
- 14.** Construct two water developments for wildlife off of the new pipeline to provide late season water availability. The guzzlers would store approximately 3,000 gallons of water in buried storage tanks. Water from storage tanks is gravity fed through an underground pipe to a buried float box and then to a drinker. A three strand wire fence designed to allow for wildlife passage but prevent livestock access would be constructed on approximately one acre around the guzzler. Disturbed areas would be seeded to native grasses and forbs. The area of disturbance associated with the two guzzlers would be no greater than 1 acre of disturbance.
- 15.** Install one cattleguard in the Countyline Allotment.
- 16.** Construction of a new corral in the Countyline Allotment. The corral would be constructed of wood posts and poles, and the corral facility would encompass about 0.5 acre.
- 17.** Construction of the projects described above would not be authorized between March 1 and June 30 so as to not disturb nesting bird species in the area.

Grazing Plan for Countyline Allotment:

- 18.** Neither pasture would receive use for the entire period between April 1 and December 30.
- 19.** Neither pasture would receive more than two consecutive years of growing season use.

Mandatory Terms and Conditions for Big Desert Sheep and Countyline Allotments

- 20.** Big Desert Sheep Allotment Permit: The Permits for each permittee in the Big Desert Sheep Allotment would be the same as Alternative B.

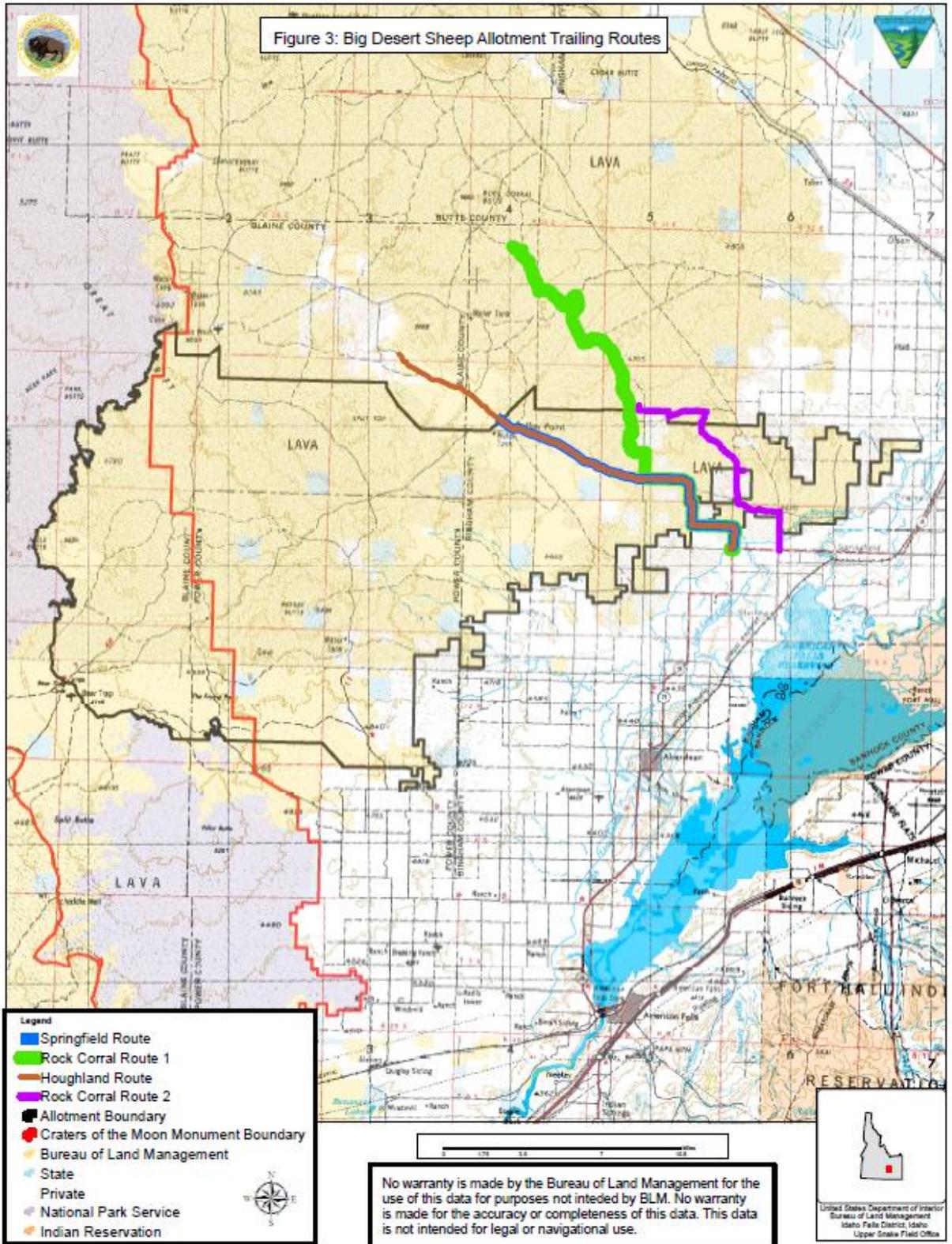
**21. Countyline Allotment Annual Authorization.**

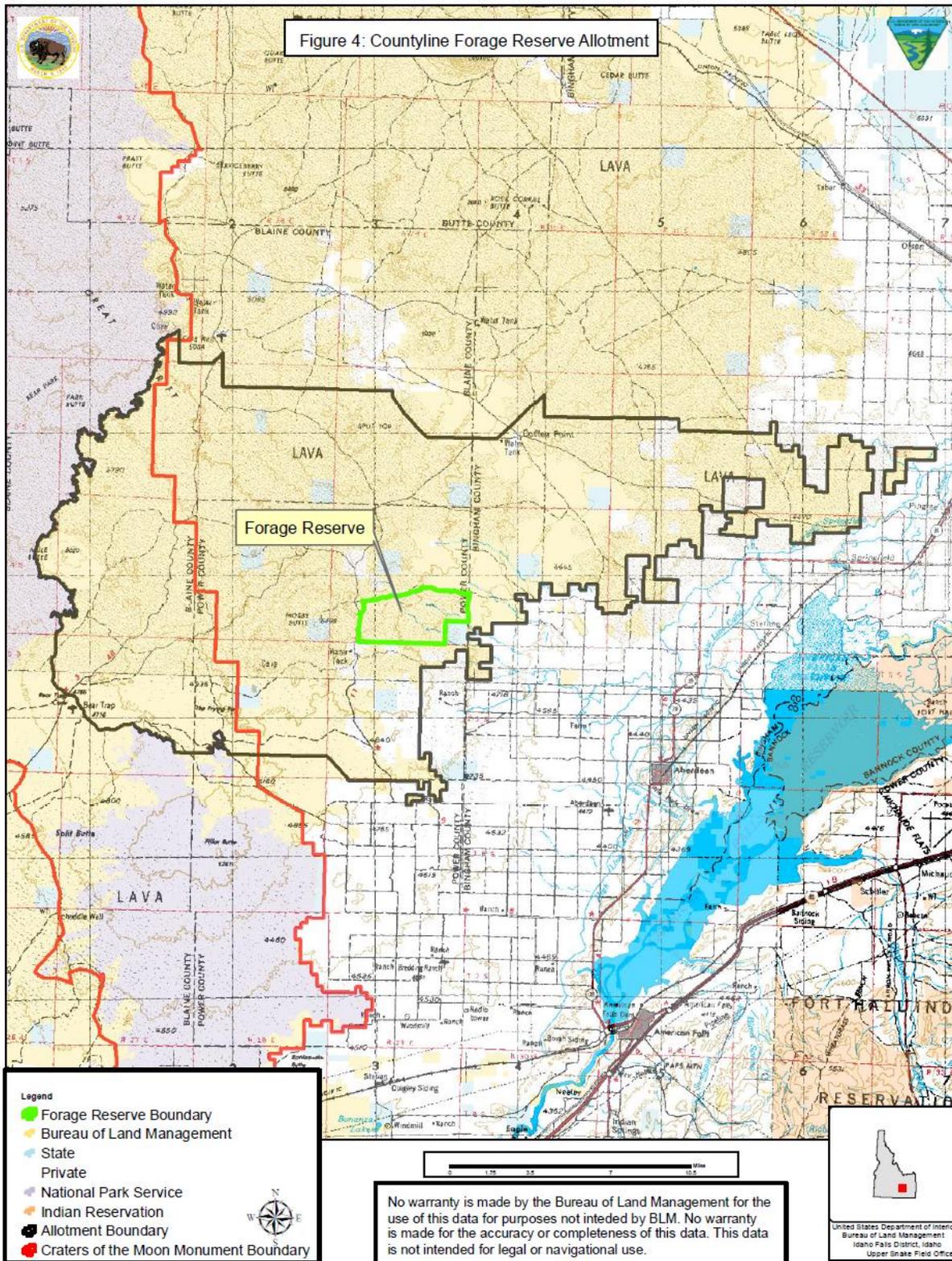
<b>Allotment Name</b>	<b>Lvstk Kind</b>	<b>Begin</b>	<b>End</b>	<b>AUMs</b>
Countyline	Cattle	4/1	12/30	1,300
	Or			
	Sheep	4/1	12/30	1,300

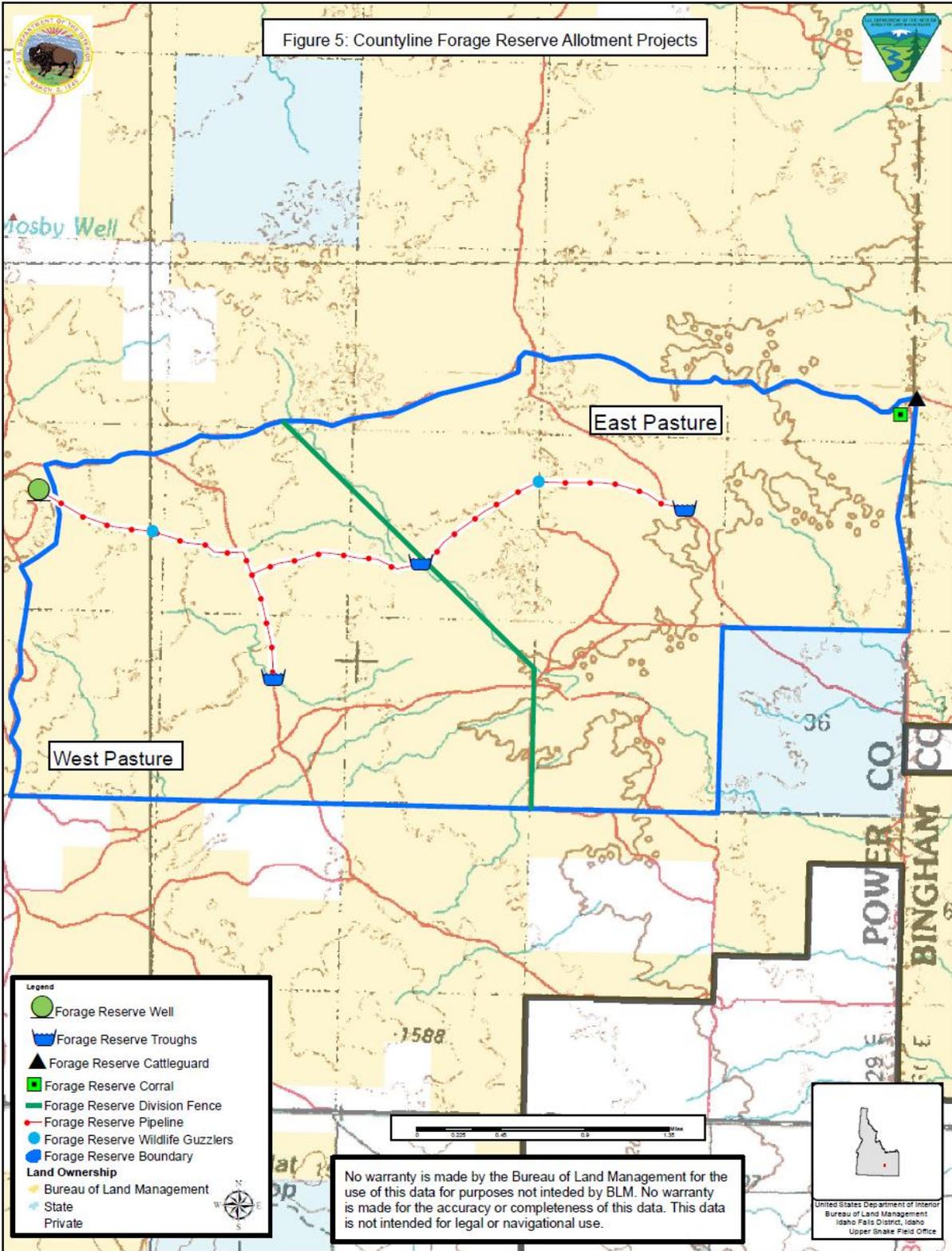
The permittee may be authorized to run more livestock for a shorter period of time within the authorized season of use and authorized AUMs.

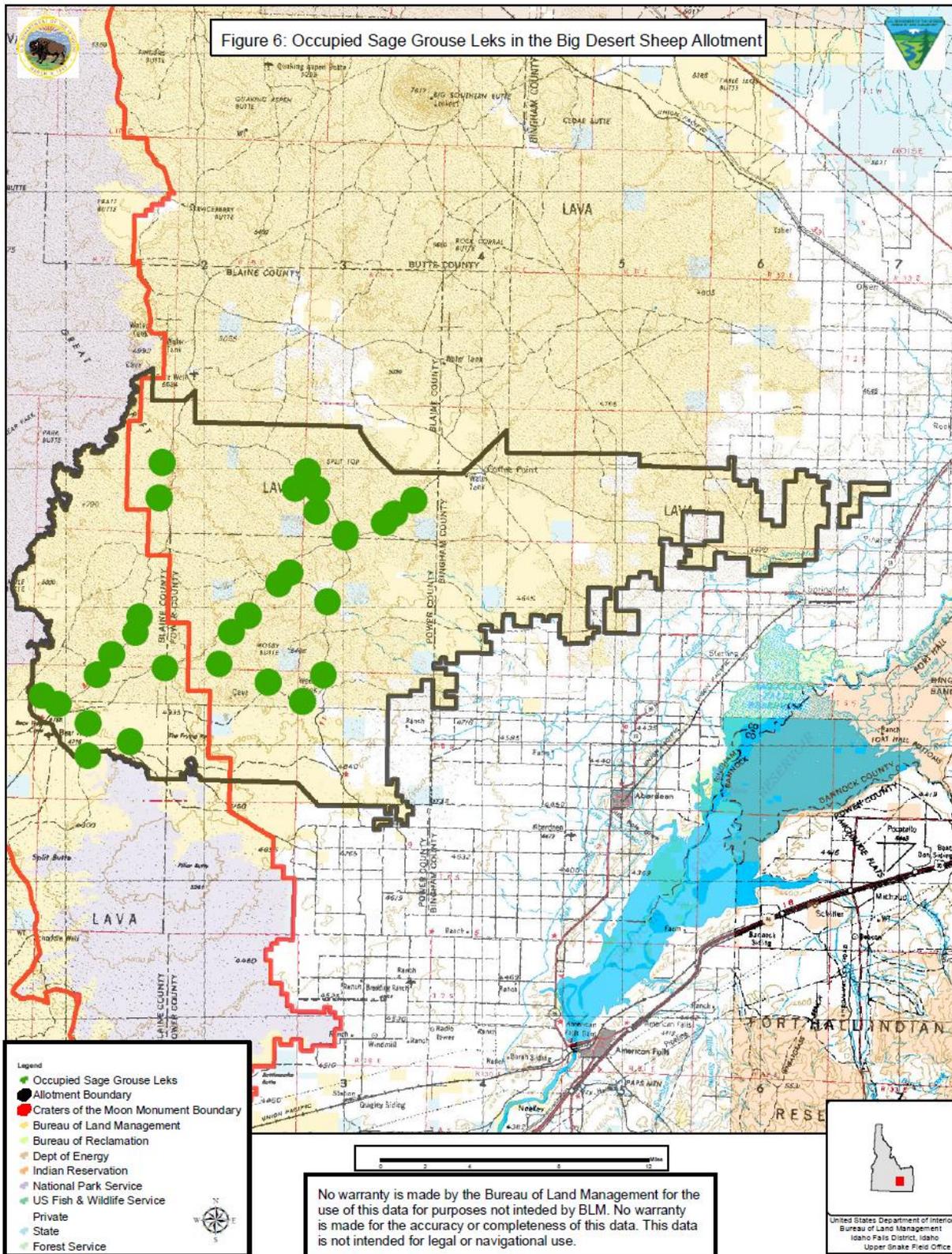
Other Mandatory Terms and Conditions for Big Desert Sheep and Countyline Allotments

- 22.** Average utilization would not exceed 40% of the annual growth on the native forage species in the Big Desert Sheep Allotment.
- 23.** No camping, temporary corrals, or water hauling within 0.6 miles of occupied leks from March 15 to May 1(Figure 6).
- 24.** 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.
- 25.** Objective: Increasing sagebrush cover would be the primary consideration in determining the authorized annual season of use and the amount of use in the Countyline Allotment.









### **Alternative D (No Grazing):**

Under a No Grazing Alternative, the Upper Snake Field Manager would discontinue all livestock grazing in the Big Desert Sheep Allotment for a 10 year period from 1/1/2013 to 12/31/2023. The permittees would retain their preference in the allotment, but would not be authorized to graze.

### **Monitoring Under All Alternatives**

The BLM will monitor the following attributes to determine whether the allotment continues to meet or make significant progress toward meeting the ISRH.

1. Upland Trend – Trend studies would be conducted in the uplands using approved BLM methods 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).
2. Sage-Grouse Habitats – Grazing utilization 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 Big Desert Local Working Group’s Plan for Increasing Sage-Grouse Populations (USLWG, 2009), 2006 Conservation Plan for Greater Sage-Grouse in Idaho (ISGAC, 2006), and Instruction Memorandum No. 2012-043 - Greater Sage-Grouse Interim Management Policies and Procedures (2012).

## **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 four alternatives.

### **General Setting**

The general relief of the allotment is characterized by flat to rolling plains, lava outcrops, lava flows, and other volcanic extrusions. The land slopes gently to the southeast with the lowest elevation being 4,350 feet above sea level and the highest being 5,563 feet on the top of Split Top Butte in the northern portion of the allotment. The majority of the allotment consists of Wyoming big sagebrush/bluebunch wheatgrass and basin big sagebrush/bluebunch wheatgrass ecological range sites. Average yearly precipitation is between 8 to 16 inches with 50 percent occurring during the months of April through September.

**Resources Considered in the Impact Analysis:**

The results of the site-specific assessment indicate that not all of the resources considered are present and/or would be impacted by Alternatives A, B, C, and D (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 proposed action and alternatives would not result in changes in access to the area.
Air Quality	Present, not Impacted	The implementation of the proposed action and alternatives would not result in the production of emission or particulate matter above incidental levels.
Areas of Critical Environmental Concern (ACECs)	Not Present	There are no Areas of Critical Environmental Concern in the allotment.
Cultural Resource	Present	Impacts are disclosed under Environmental Consequences
Economic and Social Values	Present	Impacts are disclosed under <b>Environmental Consequences</b>
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 proposed action and alternatives would not affect the areas current and likely future use as a grazing allotment.
Fisheries	Not Present	There are no fisheries located in the allotment.
Floodplains	Not Present	There are no floodplains located in the allotment.
Forest Resources	Not Present	There are no forest resources present in the Big Desert Sheep Allotment.
Invasive, Non-Native Species	Present	Impacts are disclosed under <b>Environmental Consequences</b>
Mineral Resources	Present, not Impacted	The proposed action and alternatives would have no impact on mineral resources within the area.
Migratory Birds	Present	Impacts are disclosed under <b>Environmental Consequences</b>
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 the area.
Prime and Unique Farmlands	Not Present	There are no prime or unique farmlands located within the allotment.
Soil Resources	Present	Impacts are disclosed under <b>Environmental Consequences</b>
Threatened, Endangered, and Sensitive Plants	Present	Impacts are disclosed under <b>Environmental Consequences</b>
Threatened, Endangered, and Sensitive Animals	Present	Impacts are disclosed under <b>Environmental Consequences</b>
Threatened, Endangered, and Sensitive Fish	Not Present	There are no waters in the area that support Threatened, Endangered, or Sensitive Fish.

<b>Table 1 - Resources Considered in the Impact Analysis*.</b>		
<b>Resource</b>	<b>Resource Status</b>	<b>Rationale</b>
Recreational Use	Present, not Impacted	None of the alternatives would impact the allotment's current and likely future use for recreationists.
Tribal Treaty Rights and Interests	Present, not Impacted	The proposed action and 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.
Vegetation	Present	Impacts are disclosed under <b>Environmental Consequences</b>
Visual Resources	Present	Impacts are disclosed under <b>Environmental Consequences</b>
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 proposed action, and other alternatives.
Water Quality (Surface and Ground)	Not Present	There are no water quality issues identified in the allotment.
Wetland and Riparian Zones	Not Present	There are no Wetland and Riparian Zones located in the allotment.
Wild and Scenic Rivers	Not Present	There are no designated wild and scenic rivers near the project area.
Wild Horse and Burro HMAs	Not Present	There are no wild horse and burro HMAs in the region.
Wilderness	Present	Impacts are disclosed under <b>Environmental Consequences</b>
Wildlife Resources	Present	Impacts are disclosed under <b>Environmental Consequences</b>

## **Cultural Resources**

### Affected Environment

To evaluate the Big Desert Sheep allotment 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 boundary.

Twenty-two previous inventories have been conducted within the Big Desert Sheep allotment boundary. Of the inventories, twenty were conducted at a Class III level and covered approximately 21,380 acres (10% of the allotment). These surveys were conducted between the years 1989 to 2011 and were completed according State Historic Preservation Office (SHPO) and BLM standards as outlined in the State Protocol. A Class II inventory was conducted in 1979-1980 in the Big Desert area and approximately 1,280 acres of the Big Desert Sheep allotment was inventoried as a result of this study.

There are 349 known cultural resources located within the allotment boundary. Of these, 138 are prehistoric sites, 64 are historic in nature, and 147 are isolated finds. The majority of the prehistoric resources within the allotment are described as lithic scatters, which represent the mobile hunter gatherer lifestyle practiced by the prehistoric inhabitants of the area. Several of the lithic scatters contain formal tools and diagnostic projectile points that span from the early Holocene (8,000 years before present [BP]) to the end of the late Prehistoric period (150 BP). Various activities are represented at these sites: tool manufacturing, short-term residence, gathering and hunting, and food processing. The historic sites represent early use (1880s-1930s) of the desert and include artifacts and features pertaining to sheepherding, dry land farming,

Civilian Conservation Corps projects, and homesteading. There are four potential homestead sites represented by foundations and associated features and materials. However, none of these homestead sites have standing structures.

There are 142 historic properties recommended eligible or potentially eligible for inclusion to the National Register of Historic Places (NRHP). The prehistoric lithic scatters with potential for intact, buried deposits are potentially eligible for the NRHP under criterion D. In addition, there are four homesteads sites that are potentially eligible to the NRHP under criteria A and D.

A significant historic property which bisects the Big Desert Sheep allotment is Goodale's (Jeffrey's) Cutoff of the Oregon Trail. The route was established by Indian peoples using the Snake River, Big Desert, the Lost Rivers, and camas meadows in their seasonal round. Fur trappers and explorers also utilized these routes when they entered Idaho in the early 19<sup>th</sup> century. Tim Goodale promoted the use of the trail as a northern alternative to the Oregon Trail. This alternate route bypasses the rough country and challenging river crossings of the main route along the Snake River to the south. Goodale led a party of immigrants along the trail in 1862 and his name later became commonly associated with this route. Goodale's Cutoff and subsequent state and freighting roads across the Big Desert from the southeastern edge approach the Big Southern Butte, circle its eastern side, and proceed northwesterly across the southern boundary of the INL towards the Big Lost River and Arco, Idaho. Approximately 4.3 miles of the trail is located within the Big Desert Sheep allotment and is represented as a two-track road. Goodale's Cutoff is eligible for inclusion to the NRHP under Criteria A, B, and D.

### 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 Big Desert Sheep Allotment is generally limited, with activity mainly focused at congregation areas. In areas where livestock is more dispersed, it can be predicted that impacts will be mainly surficial, causing no stratigraphic mixing, but perhaps resulting in horizontal displacement of artifacts.

No livestock congregation areas have been identified where there are known historic properties that are recommended potentially eligible for inclusion to the NRHP.

Permit renewal in the Big Desert Sheep Allotment would result in "no historic properties affected" of 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.

### *Alternative C - Preferred Alternative*

Impacts to cultural resources due to livestock grazing would be similar to those presented under Alternative A; however, the proposed forage reserve and authorization of trailing may have direct impacts on cultural resources.

The construction of approximately 17 miles of fence and 4.4 miles of pipeline could have direct impacts on cultural resources. Approximately 11 acres of disturbance would occur for these projects. This action would also create a well, three trough locations a guzzler, and corral, which in turn would create congregation areas totaling approximately 3.0 acres. However, no known cultural resources occur within the identified congregation areas. A Class III inventory was conducted in the Area of Potential Effect (APE) identified for the proposed forage reserve fence, pipeline, troughs, and wells. A total of eight cultural resources were identified as a result of the inventory; three historic debris scatters, one historic homestead, three prehistoric lithic and tool scatters, and one isolated find. Of these, four sites are potentially eligible for inclusion on the NRHP. In an effort to reduce impacts, the archaeologist and range management specialist have worked together to slightly alter the location of the proposed fence and pipeline to avoid ground disturbing impacts to historic properties.

The authorization of livestock trailing on an annual basis could directly impact cultural properties. 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.

Eight trailing events along four anticipated trailing routes have been identified for authorization within the Big Desert Sheep Allotment. These events represent the livestock trailing to and from the Rock Corral, Springfield, and Houghland Allotments in the spring and fall, respectively. Two three-day trailing events have been identified for Route 1 which would occur along existing roads. One event would take place in mid-April (for up to three days), and one event would take place in mid-June (for up to three days). There will be no holdover areas, as the trail takes one day; however, three days during each season are allotted for the different operators which move at different times. Two two-day trailing events have been identified for Route 2, which covers the same area within the Big Desert Sheep Allotment as Route 1. However, the Route 2 extends another 5.5 miles beyond the Big Desert Sheep allotment and continues to occur on existing roads. One event would take place in late March to early April, and one event would take place in early September. The livestock would overnight within fenced private land not in the Big Desert Sheep Allotment; there are no known historic properties located within this holding area. There are five known historic properties that are potentially eligible for inclusion on the NRHP within 200 meters of routes 1 and 2. However, none of these sites exhibit any features that could be damaged by trailing events. Furthermore, these routes have been used for approximately the last twenty years, and impacts to cultural resources have likely been surficial in nature. Although up to 1,300 cattle will be traversing along this route over the course of three days in the spring, they will be in smaller groups according to operator and are not likely to spread beyond the 200 meter wide corridor and impact unknown cultural resources. The five historic properties

will be revisited after the spring trailing event along route 1 to record the level of impact, if any, to cultural resources and will be documented with the SHPO.

Four three-day trailing events have been identified for routes 3 and 4 which would occur along existing roads. Route 3 would be utilized in mid-to-late April and early July. Route 4 would be utilized for up to six days between mid-October and mid-December. The lower pastures of Rock Corral have been identified as holding areas, which would allow the livestock to disperse and there would be no congregation areas as a result of the trailing events. There are no known historic properties that are potentially eligible for the NRHP on routes 3 and 4.

Of the eight trailing events, three would occur during early spring when the ground exhibits wet soils which could result in more vertical soil displacement, and could indirectly impact unknown cultural resources. However, these routes have been used for the last twenty years, and impacts to any known historic properties or unknown cultural resources would not continue beyond the current level of impact. The remaining five trailing events would occur during seasons when the ground exhibits dry soils, resulting in less vertical soil displacement due to trampling, and therefore less of an impact to cultural resources.

Permit renewal and the authorization of trailing in the Big Desert Sheep Allotment would result in “no historic properties affected” of known historic properties listed or eligible for listing on the National Register of Historic Places (NRHP).

#### *Alternative D - No Grazing*

This alternative would eliminate livestock threats associated with authorized grazing and the damage to historic properties for a period of 10 years.

### **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. The average recent market price for ewe lambs was \$196 (ASIA, 2011). Assuming an input of 8 AUMs and recognizing one cattle AUM is equivalent to 5 sheep, the

return equivalent to cattle is \$123 AUM. 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/AUM and average local hay prices were \$100/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 Big Desert Sheep Allotment. There would be no impact from Alternative A which is the baseline for addressing economic and social values.

#### *Alternative B – Proposed Action*

Alternative B would result in slight changes to the season of use in the Big Desert Sheep Allotment. The change in season of use would not result in a change in total AUMs, so these changes would not impact economic and social values.

#### *Alternative C – Preferred Alternative*

Alternative C would result in no changes in the mandatory terms and conditions for livestock grazing in Big Desert Sheep Allotment. There would be no impact from Alternative C on economic and social values related to herd reduction or forage substitution costs to the permittees in the allotment. Under Alternative C, livestock trailing may be authorized within the allotment, which based on response of local livestock operators, would reduce their costs associated with movement or transport of livestock. The creation of the forage reserve would have a potential long term positive economic impact to the permittees in the USFO. Permittees in the field office that have been impacted by short term allotment closures, such as fire/non-fire vegetation treatments, wildfire recovery, or an opportunity to provide for attainment of Idaho Standards for Rangeland Health in particular allotments or pastures, would have an opportunity to continue grazing on public land instead of reducing their herds or renting private pasture. The amount of authorized annual use in the forage reserve would not exceed 1,300 AUMs. The potential economic impact on operators authorized to use the forage reserve on a temporary basis would be a savings of between \$14,625 and \$128,245 when comparing the AUM cost for grazing public versus forage cost associated with private pasture or purchase of forage. The construction

of boundary/pastures fences, well, pipeline, trough sets, wildlife guzzlers, and corral under Alternative C would result in additional cost incurred by the USFO in order to implement the forage reserve.

#### *Alternative D – No Grazing*

Under Alternative D, the authorized use would be reduced by 31,066 BLM AUMs. The forage substitution cost to the permittees under Alternative D would range from approximately \$349,493 to \$3,064,661 each year, for the next ten years. If the herds are reduced as a result of decreased forage availability, the decreased gross revenue through herd reductions would range from approximately \$2,329,950 to \$3,417,260.

### **Invasive, Non-Native Species**

#### Affected Environment

Noxious weed monitoring and treatment records for the public lands within the Big Desert Sheep Allotment report occurrences of Canada thistle (*Cirsium arvense*), musk thistle (*Carduus nutans*), scotch thistle (*Onopordum acanthium*), spotted knapweed (*Centaurea stoebe*), Russian knapweed (*Acroptilon repens*), and rush skeletonweed (*Chondrilla juncea*). The large majority of the noxious weed infestations that occur in the allotment are located adjacent to roads. Recent inventories conducted in the allotment have found that rush skeleton weed is the most widespread noxious weed in the Big Desert Sheep Allotment. Due to the increased fire frequency in the allotment, as well as the surrounding area, cheatgrass (*Bromus tectorum*) has become a small part of the plant community in the Big Desert Sheep Allotment. The USFO 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 USFO and Pocatello Field Office (USDI-BLM 2009b).

#### Environmental Consequences

#### *Alternative A – No Action*

The potential impacts of invasive, non-native species found in the allotment included degradation of native habitat. Seeds of these undesirable species may be dispersed by wind, water, animals, or humans. There are approximately one hundred and sixty-two locations of known invasive, non-native species found in the allotment. The USFO continues to aggressively inventory and treat these weed species in order to reduce the potential spread. Under Alternative A, livestock would continue to be authorized in the allotment. The allotment evaluation identified that, overall, the allotment is making significant progress towards meeting applicable ISRH. By maintaining and/or improving the ecological health of the current native plant communities in allotment, the opportunity for expansion of invasive, non-native species would be reduced.

### *Alternative B – Proposed Action*

Under Alternative B, the potential impacts of invasive, non-native species would be similar to Alternative A. The potential for seed dispersal during the proposed season of use would be similar to Alternative A because of the timing in the growth cycle for the invasive, non-native species would be similar. During the spring season, the majority of the invasive, non-native plants would not have sufficient time to produce viable seed, while seed dispersal during the fall/winter season would be limited because the plants would have gone to dormancy and already set seed before the livestock return to the allotment. The USFO would continue to monitor and treat invasive, non-native species within the Big Desert Sheep Allotment following an integrated weed management approach (USDI-BLM-2009b). Continuing to treat known infestations in the allotment would ensure that Standards 4 and 8 would continue to make significant progress towards meeting standards.

### *Alternative C – Preferred Alternative*

Under Alternative C, the impacts would be same as Alternative B, except for the creation of a forage reserve allotment. The main difference between Alternatives B and C relative to invasive, non-native species is the ground disturbance activities associated with the construction of the pasture/boundary fence, well, pipeline, troughs, cattleguards, wildlife guzzler, and corral. The projects would result in approximately 14 acres of ground disturbance that would be vulnerable to new weed infestations. The potential increase of cheatgrass as well as other invasive/noxious weeds would be minimal because the proposed location of the fences would not be cleared or bladed before construction. However, all project areas would be monitored closely for new occurrences of noxious weeds. All new and existing infestations would continue to be aggressively treated. Noxious weed infestations, if not treated, can spread and alter healthy plant communities in the Big Desert Sheep and the proposed Countyline Allotment. Under Alternative C, livestock would be authorized to trail through the Big Desert Sheep Allotment along routes identified in Figure 3. Livestock are one vector in the transport of invasive species, and the potential for establishment of invasive, non-native species would be slightly higher than Alternative A and B. Successful noxious weed treatments, along with changes in authorized use described in Alternative C, would help the allotment continue to make significant progress toward meeting Standards 4 and 8.

### *Alternative D – No Grazing*

Livestock are one vector in the Big Desert Sheep Allotment that could disperse invasive, non-native species. Other potential vectors in the area include but are not limited to vehicles, wind, recreationists, waterways, and wildlife, including birds. Under Alternative D, no livestock grazing would be authorized in the allotment for 10 years. The potential establishment or expansion of invasive, non-native species would be less than the other alternative described above due to the removal of one of these vectors.

## **Migratory Birds**

### Affected Environment

Approximately one-half of the species of birds that breed in North America are neo-tropical migratory birds (Fisher 2000). The Big Desert Sheep Allotment provides habitats for many neo-tropical migrants. Spring and summer breeding bird surveys conducted in the Big Desert have identified twenty species of migratory birds including violet-green swallow, rock wren, mourning dove, western meadowlark, grasshopper and vesper sparrow, sage thrasher, burrowing owl and northern harrier using the habitat found in the Big Desert. Each of these species is found using sagebrush and grassland habitat during breeding, nesting, and brood-rearing seasons (Fichter 1959, DeChant et al. 1998, DeLong and Steenhof 2004, Brigham et al 2011, Jones and Cornely 2002). Additionally, the sparse vegetation cover, mudflats, and shallow waters of playas found in the Big Desert Sheep Allotment provide important stopover areas for spring migrant shorebirds (e.g., black-necked stilt, American avocet) and waterfowl (e.g., teal species, pintails) to replenish energy and nutrient reserves (Davis and Smith 1998).

Seven raptor species have been identified using the Big Desert. 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). Wildfires may serve to concentrate raptor species for brief periods of time due to reduced cover which would expose prey species (Smith 2000).

There are approximately 53,000 acres of crested wheatgrass seedings in the Big Desert Sheep Allotment. Studies have shown that non-native grasslands provide poor habitat for native sagebrush steppe birds such as sage thrasher (Entwistle et al. 2000). The reduced community diversity often found in crested wheatgrass seedings results in fewer nesting bird species and a lower density of birds (Reynolds and Trost 1980).

The allotment was evaluated and native plant communities were found to be not meeting but making significant progress. The vegetative components associated with the range site are relatively intact throughout the allotment, except for the shrub component. Multiple wildfires the past forty years have removed large areas of Wyoming big sagebrush throughout the allotment rendering the native plant communities not meeting. There has been observable reestablishment of the Wyoming big sagebrush in those areas of the allotment impacted by past wildfires. There is little trend information on migratory birds available in this allotment. However, over time as sagebrush cover improves in the allotment, habitat quality for sagebrush obligate migratory birds would improve.

### Environmental Consequences

#### *Alternative A - No Action*

Migratory birds generally do not respond to the presence of grazing livestock but to the impacts to vegetation as a result of grazing. Livestock compact soil by hoof action, remove plant materials, and indirectly reduce water infiltration, all of which can result in decreased vegetation

density (Saab et al. 1995). Songbirds show the full range of responses to grazing. 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 (Bock et al. 1993).

Similar to songbirds, migratory raptors also show a range of responses to grazing with some species (e.g., northern harrier) requiring increased ground cover and other species (e.g., burrowing owl) responding positively to reduced ground cover or bare ground (Saab et al. 1995).

Under Alternative A, grazing would continue at the same timing and intensity levels as currently authorized. Although a large proportion of the allotment is not meeting rangeland health standards due to the reduction in shrubs from frequent fires, grass and forb components are productive and healthy and provide habitat for grassland (e.g., grasshopper sparrow) and generalist migratory bird species (e.g., western meadowlark, Brewer's blackbird). The portion of the allotment with a healthy shrub component provides habitat for sagebrush dependent species (e.g., sage thrasher, vesper sparrow). Grazing at the current level would continue to meet habitat requirements of grassland and generalist migratory bird species mentioned above. As vegetation composition moves toward a more shrub dominated community bird species composition would also be expected to change.

#### *Alternative B - Proposed Action*

Impacts to migratory birds would be similar to those under Alternative A with the exception of the expanded grazing season (a total of 40 days) which allows grazing to occur earlier in both the spring and the fall grazing seasons. Use occurring between April 1 and April 7 would be restricted to crested wheatgrass seedings only, which may reduce decadent crested wheatgrass plants, in turn increasing distance between individual grass plants and provide an opportunity for the reestablishment of some sagebrush and native forbs. Spring and early summer grazing by cattle can be a tool to increase sagebrush cover where it is desired in crested wheatgrass stands (Huber and Goodrich 1999). Pellant and Lysne (2005) also state that livestock use at the appropriate time and intensity in crested wheatgrass seeding aids in increasing sagebrush cover. Recovery of sagebrush following burn treatments vary from 12 years in the mountain big sagebrush (*Artemisia vaseyana*) type to over 40 years in the drier Wyoming big sagebrush (*Artemisia wyomingensis*) type Winward (1991). Ultimately, an increase of native forbs and shrubs in the crested wheatgrass seedings would likely result in an increase in bird species richness and diversity.

Grazing native habitats three days earlier in the spring and fifteen days earlier in the fall than under Alternative A would have no measurable impact on native plants as total AUMs would remain the same. The largest impact from the extended season would occur when grazing continues into mid-June increasing the potential for sheep grazing to trample nests or disturb nesting birds and leaving little opportunity for renesting to occur.

Impacts to migratory birds under Alternative B would be slightly greater than under Alternative A, due to the longer grazing season and the limited potential for direct disturbance and

destruction of nests. However, as AUMs would remain the same it is expected that habitat conditions and native plant composition would remain the same or move toward a more sagebrush dominated landscape.

### *Alternative C - Preferred Alternative*

Impacts to migratory birds under Alternative C would be similar to those discussed under Alternative B except 5,800 acres of crested wheatgrass would be fenced and designated as a forage reserve and would become the Countyline Allotment. AUMs authorized under the forage reserve are included in the total AUMs authorized for the allotment. No additional AUMs would be authorized above those currently authorized under Alternatives A or B but grazing in the forage reserve could occur any time of year between April 1 and December 30. Grazing within the Countyline Allotment would be done with either cattle or sheep. The long season would allow the BLM to manage the proposed forage reserve using grazing practices as a tool in order to encourage an increase in sagebrush (Angell 1997). This would allow the BLM the ability achieve shrub cover objectives more quickly than Alternative B.

Grazing the crested wheatgrass during the nesting season would result in potential direct disturbance to migratory birds and their nests as described in Alternative B while grazing following the nesting season would have fewer direct impacts. Late season grazing would have indirect impacts due to the loss of residual cover useful to migratory birds during the spring nesting season. Ultimately, an increase in native forbs and shrubs in the crested wheatgrass seedings would likely result in an increase in nesting habitat, bird species richness and diversity.

Direct impacts from fencing would be increased perches for hunting, singing and territorial displays which may increase fitness and mating potential, but it may also increase their visibility to potential predators. Further impacts would be potential fence strikes resulting in injury or possible mortality of individual birds, more likely larger birds such as hawks and owls. As fences would be built outside of the nesting season there is little concern of disturbance or destruction of nests or nestlings.

The addition of a well, three troughs, the wildlife guzzlers, and the corral would remove nesting habitat for grass and ground nesting birds while providing nesting and perching habitat for migratory raptors and perching for song birds. The construction of the pipeline and corral would occur outside the nesting season reducing the potential for disturbance or destruction of existing nests. Other impacts would be short term and direct due to disturbance of migratory birds and the removal or modification of habitat at the time of construction. The addition of three troughs set at ground levels and the addition of the two wildlife guzzlers would provide a reliable, annual water source for migratory birds throughout the spring, summer and fall. Cutler and Morrison (1998) found that bird abundance and species richness were higher near watered sites. The troughs would also provide excellent resources for stopover habitat for migrating birds. Placement of approved wildlife escape ramps would reduce the potential of accidental drowning.

The majority of trailing through the Big Desert Sheep Allotment occurs before or after the nesting season and along existing roads reducing potential impacts to migratory songbirds. However, trailing along Routes 1 and 3 would occur during or at the end of the nesting season

increasing the potential for disturbance or destruction of active nests. If nests or fledglings are disturbed during this time songbirds would not have an opportunity to renest.

Impacts to migratory birds under Alternative C would be greater than under Alternative A or B due to the addition of fences, a well, water troughs, and trailing routes.

#### *Alternative D - No Grazing*

Impacts to migratory birds from no grazing would vary by species as discussed under Alternative A. In general, understory cover of grasses and forbs would increase, with improvement in size and vigor of preferred forage species. Seed production would likely increase, further providing increased cover and forage. There would be no potential displacement or disturbance of migratory birds during critical breeding, nesting and brood-rearing seasons. There would be little opportunity for establishment of native forbs, grasses and shrubs in crested wheatgrass seedings and they would continue to provide poor quality habitat for migratory birds.

Impacts to migratory birds would be less under Alternative D than under Alternatives A, B, or C due to reduced disturbance, increased forage and cover, lack of competition and no additional infrastructure.

### **Soil Resources**

#### Affected Environment

The soils across the Big Desert Sheep Allotment range from mixed fine to mixed coarse loamy soils. Six soil series dominate the the Big Desert Sheep Allotment: McCarey, Beartrap, Portino, and Molyneux, Thornock and Tenno. The McCarey, Beartrap, and Portino soil series are formed in wind or silty alluvium and material weathers from basalt. These series are deep, well drained soils that are found on basalt plains. Another deep, well-drained soil series found in the Big Desert Sheep Allotment is the Molyneux series. This soil series is found on fan terraces, basalt plains and foothills. The other dominate soil series found in the allotment are the Tenno and Thornock soil series. Rather than being deep soils, these particular series consist of shallow, well-drained soils. The dominant vegetation on all of these soils series are Wyoming big sagebrush, basin big sagebrush, and bluebunch wheatgrass (USDA-Soil Conservation Service, 1991, 1973, and 1981).

Seven field sites were evaluated in the allotment in 2011 (USDI-BLM 2011), which are representative of the watershed integrity condition across the allotment. Generally, indicators were rated no higher than slight to moderate departure from site potential, with several exceptions. The Pedestals and/or Terracettes and the Plant Community Composition and Distribution Relative to Infiltration indicator was rated in the slight to moderate or moderate category throughout the allotment. The departure from site potential was mainly attributed to the frequent fire interval in the allotment. In addition to the indicators described above, Bare Ground, Soil Surface Resistance to Erosion, Soil Surface Loss or Degradation, and Litter Amount indicators on the eastside of the Big Desert Sheep Allotment were rated consistently in the moderate category. The departure on the eastside was attributed to the change in plant

community. The increased fire interval in the eastside of the allotment has reduced the shrub composition and large perennial bunchgrass composition in turn affecting the majority of the Soil and Hydrologic indicators. The increased fire interval has also contributed to the increase in shallow rooted grasses and forbs in the allotment.

### 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 accelerating 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. Generally, the soils in the allotment 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 livestock use, such as along trails and next to water sites, is estimated to occur on less than one percent of the allotment area. Soil conditions in the Big Desert Sheep Allotment would continue to support water infiltration and permeability rates appropriate to site potential. Vegetative cover on the allotment would continue to be sufficient to protect against wind and water erosion.

#### *Alternative B – Proposed Action*

The impacts to soil resources would be similar to Alternative A. Since the amount of authorized AUMs in the Big Desert Sheep Allotment would remain the same, the amount of compaction as a result of livestock use would still occur on less than one percent of the allotment. The allotment would continue to support water infiltration and permeability rates appropriate to site potential.

#### *Alternative C – Preferred Alternative*

The impacts associated with livestock grazing would be similar to Alternative B. The amount of soil disturbance associated with the construction of the boundary/pasture fences, the pipeline, three trough sets, the cattleguards, the corral, the wildlife guzzlers, and the drilling of a well would be minimal. The amount of ground disturbance from the combination of the pipeline, drilling the well, the corral, the wildlife guzzlers, and the placement of the troughs would be approximately 6 acres. The construction of the boundary/pasture fences in the forage reserve allotment would disturb approximately 7.5 acres. Soil disturbance would be minimal during the fence construction because the proposed fenceline would not be bladed. Increased soil surface

disturbance and compaction would be expected in a narrow area adjacent to the new fences, as livestock commonly trail along fences more intensively. The increase in compaction would occur on a small area of the total acreage of public lands and would not be a critical factor in achieving rangeland health. The areas of disturbance would be reseeded with native plants in order to reduce the potential of erosion or establishment of the invasive, non-native species. Under Alternative C, livestock trailing would be authorized in the allotment. Trailing would be as described in Appendix A, along routes identified in Figure 3. The routes generally follow existing roads and trailing has historically occurred along these routes so that the current allotment conditions observed reflect both the authorized use described in Alternative A and livestock trailing. Because cattle are concentrated, livestock trailing has an increased potential to result in deep compaction; however, as described this occurs primarily along existing roads. The allotment would continue to support water infiltration and permeability rates appropriate to site potential.

#### *Alternative D – No Grazing*

The impacts to soil resources would be less than the other alternatives. No livestock use would be authorized in the allotment for a period of 10 years under this alternative. Deep soil compaction resulting from intensive livestock use, such as along trails and next to water sites, would no longer occur on the allotment. 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. Elimination of livestock use for the duration of the permit may reduce the areas affected by deep soil compaction. Deep soil compaction would persist but would likely decrease over time due to the coarse nature of the substrate. Soil conditions on the allotment as a whole would continue to support water infiltration and permeability rates appropriate to site potential.

### **Threatened, Endangered, and Sensitive Animals**

#### Affected Environment

All data known to the USFO, including data from the U.S. Fish and Wildlife Service, Idaho Department of Fish and Game, and the Idaho Natural Heritage Program 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 allotment. There is one candidate species in the allotment.

BLM special status species are: (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 2 lists special status species that have been identified as occurring or potentially occurring within the Big Desert Sheep Allotment. The probability of species occurring and justification for

occurrence is provided. Species not occupying seasonal ranges or not expected to occur within the Big Desert Sheep Allotment are not discussed.

<b>Table 2. Wildlife Special Status Species and Occurrence within Big Desert Sheep Allotment</b>				
Species	Status <sup>a</sup>	Type <sup>b</sup>	Occurrence	Rationale
greater sage-grouse ( <i>Centrocercus urophasianus</i> )	C	BLM Type 2	Present	Preliminary Priority Habitat (PPH) and Preliminary General Habitat (PGH)
pygmy rabbit ( <i>Brachylagus idahoensis</i> )	S	BLM Type 2	Potential	Potential habitat
loggerhead shrike ( <i>Lanius ludovicianus</i> )	S	BLM Type 3	Present	Breeding habitat present
ferruginous hawk ( <i>Buteo regalis</i> )	S	BLM Type 3	Present	Active nest
Brewer's sparrow ( <i>Spizella breweri</i> )	S	BLM Type 3	Present	Breeding habitat present
sage sparrow ( <i>Amphispiza belli</i> )	S	BLM Type 3	Present	Breeding habitat present
Piute ground squirrel ( <i>Peromophilus mollis artemisiae</i> )	S	BLM Type 3	Present	Observed in and near allotment
Townsend's big-eared bat ( <i>Corynorhinus townsendii</i> )	S	BLM Type 3	Present	Roosting habitat present

Status Codes: T=Federal Threatened Species; C=Candidate Species; XN=Experimental, Non-essential; S=BLM Sensitive Species

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). The Special Status Species Management Manual states that, "All Federal candidate species, proposed species, and delisted species in the 5 years following delisting will be conserved as Bureau sensitive species" (DOI-6840, 2008). Habitat for sage-grouse within the BLM is currently managed under Instruction Memorandum No. 2012-043 - Greater Sage-Grouse Interim Management Policies and Procedures. Local management actions also follow the Big Desert Local Working Group's Plan for Increasing Sage-Grouse Populations (BDLWG 2009) and the Conservation Plan for Greater Sage-Grouse in Idaho (ISGAC 2006). Although Idaho populations have shown increases in recent years, they have not reached levels attained in the late 1960s or early 1970s and long term averages continue to indicate a declining population trend (Connelly et al. 2004).

The allotment consists of 236,990 acres of which 134,840 are designated as Preliminary Priority Habitat (PPH) for sage-grouse and 24,807 acres are designated as Preliminary General Habitat (PGH). Both PPH and PGH are divided into subsets: perennial grasslands and sagebrush. All of the PPH and PGH acres in Big Desert Sheep Allotment lie within the perennial grasslands subset. In general, PPH and PGH designations are based on sage-grouse populations as identified in *Sage-grouse Priority and General Areas in Idaho* (BLM 2011). In particular, PPH is based on combined high male lek attendance, high lek density and high lek connectivity while PGH provides corridors connecting PPH, potential stepping stones for grouse movements within corridors, or occupied habitats characterized by low lek density. Both PPH and PGH may include areas of non-habitat. Impacts in these areas result in impacts to sage-grouse population centers and movement corridors.

Of the 236,990 acres within the Big Desert Sheep Allotment, 213,220 acres are identified as Restoration Type 1 sage-grouse habitat and 1,287 acres are identified as Restoration Type 2 sage-grouse habitat. Due to recent wildfires, there is limited key sage-grouse habitat identified within the Big Desert Sheep Allotment.

Restoration Habitats are areas that currently are or were historically sage grouse habitat that, if restored, would provide better habitat at some time in the future.

- Restoration type 1 refers to sagebrush-limited areas with acceptable understory conditions in terms of grass species composition. It includes native and seeded perennial grass rangelands. Such areas are often a result of wildfires or seedings. Management Recommendations of type 1 include areas that are very important to protect from wildfire and maintain or restore sagebrush and forb communities, where needed. Restoration costs are relatively inexpensive for these areas. The majority of the allotment is classified as restoration 1 (perennial grass) sage-grouse habitat (BLM 2011) due to fires within the allotment that have reduced sagebrush cover and forb diversity and abundance. Sagebrush provides critical habitat components (escape cover, nesting habitat) as well as a major food source for sage-grouse (Idaho Sage-grouse Advisory Committee 2006). Due to the limited sagebrush canopy cover and lack of forb diversity in these areas sage grouse very rarely use them.
- Restoration type 2 refers to existing sagebrush cover in these areas may or may not be adequate to meet the needs of sage grouse, but understory herbaceous conditions are poor. Undesirable plant species such as cheatgrass, medusahead rye (*Taeniatherum caput-medusae*) or other exotic plants are common to dominant. Expensive management treatments are needed for restoration. Management Recommendations of type 2 include management treatments, such as prescribed fire, chemicals, or seeding are encouraged for certain R2 areas, contingent on site-specific analysis. Opportunities also exist for managing wildfire via Appropriate Management Response to achieve restoration objectives. Restoration can be very expensive. Sage grouse may still use these sites during the winter months when the bulk of their diets are comprised of sagebrush. Use during breeding and brood-rearing seasons would be limited due to the poor condition of the understory.

Sage-grouse within the Big Desert Sheep Allotment are part of the Snake-Salmon-Beaverhead ID 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). The five-year baseline from 1996-2000 in the Big Desert was 9.23 males per lek and 17.17 males per active lek. The current three-year average males per lek are 17.88, which is over 150% of the baseline period. The current three-year average for males on active leks is 31.25, which is also over 150% of the average males for active leks (IDFG, 2012).

There are thirty known sage-grouse leks within the allotment and another sixty-five leks within five miles of the allotment. Forty-eight percent of these ninety-five leks are occupied. The remaining leks are undetermined, inactive, or not verified. Analysis of occupied lek data gathered by Idaho Fish and Game and BLM within 5 miles of the allotment show sage-grouse populations fluctuate annually and are currently at their ten year average.

The majority of the allotment is classified as restoration 1 (perennial grass) sage-grouse habitat (BLM 2011) due to fires within the allotment that have reduced sagebrush cover and forb diversity and abundance. Sagebrush provides critical habitat components (escape cover, nesting habitat) as well as a major food source for sage-grouse (Idaho Sage-grouse Advisory Committee 2006). Connelly et al. (2004) reported breeding habitat consists of contiguous sagebrush stands with a sagebrush canopy cover between 15 to 25% while adequate summer habitat consists of a sagebrush canopy cover of 10 to 20% and a total shrub cover of less than 25% (Connelly et al. 2000). A healthy perennial grass and forb understory is also important component of nesting and brood-rearing habitat (Idaho Sage-grouse Advisory Committee 2006). Due to the lack of sagebrush cover and forb diversity, restoration type 1 habitat (majority converted into crested seedings) provides for poor quality habitat for sage-grouse.

Pygmy rabbits are sagebrush obligate species inhabiting dense, tall stands of big sagebrush growing on deep, friable soils that allow them to dig extensive burrow systems (Janson 2002). Landscape features include alluvial fans and hillsides, swales within rolling topography, floodplains, brushy draws, riparian channels, edges of rock and lava outcroppings, and mima mounds (IDFG 2005). Pygmy rabbits have not been observed in or near Big Desert Sheep Allotment although inclusions of sagebrush and rocky outcrops may provide some habitat for them.

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, fencerows or shelterbelts 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. 1998b). Habitat must include 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). Habitat is available for loggerhead shrikes within or near the allotment although shrikes have not been recorded there.

Ferruginous hawks are large grassland raptors that breed in the shrub-steppe and semi-arid regions of western North America (Olendorff 1993). Their density and productivity are closely associated with cycles of prey abundance with mammals being the primary prey source during breeding season although birds, amphibians, reptiles, and insects are also taken (Dechant et al. 1998a, Woffinden and Murphy 1989). Habitat degradation due to agriculture and overgrazing has been reported as a threat to the species' survival in North America (Leary et al. 1998). There is one known active ferruginous hawk nest within five miles of the allotment that produced two young in 2010.

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). There is limited habitat available for Brewer's sparrows within Big Desert Sheep allotment due to history of wildfire in the area.

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). Lack of large tracts of contiguous habitat within the allotment reduces the potential for the occurrence of sage sparrows.

Piute ground squirrels are among the smallest members of the genus and one of the most desert-adapted (Rickart 1988). They are obligate hibernators emerging from estivation in the spring, remaining active for approximately 4 months and then returning to estivation the remainder of the year (Alcorn 1940). Densities of ground squirrel populations are related to local food supplies (Yensen and Sherman 2003) with densities increasing with rich food supplies (Rickart 1988). Ground squirrels eat a variety of grasses and forbs early in the active season, but consume flower and grass seeds when available (Yensen and Sherman 2003). Piute ground squirrels have been found in and around the allotment.

Lava tubes and caves are found in the Big Desert Sheep Allotment that provide winter and summer habitat for a variety of bat species. Townsend's big-eared bats use these caves and tubes as day roosting and winter hibernacula. Distances traveled from roosts to foraging areas for Townsend's big-eared bats can be as much as 18 miles (Fellers and Pierson 2002). As Dobkin et. al. (1995) found Townsend's foraging primarily over open habitats provided by shrub-steppe and forest-shrub ecotones they are likely to also use the allotment for foraging.

### Environmental Consequences

Livestock grazing can have direct and indirect impacts on sage-grouse during nesting. Direct impacts include flushing or disturbing hens incubating eggs or trampling of nests or grouse, however direct impacts are considered rare (Beever and Aldridge 2011). Indirect impacts include the removal of vegetation used for scent, visual and physical barriers to potential

predators by nesting sage-grouse (DeLong et al. 1995). Poorly managed livestock grazing can alter plant community composition and distribution of desirable vegetation species and facilitate invasive species establishment. Livestock management practices that provide for the sustainability of perennial grasses and forbs generally maintain or minimally impact sage-grouse habitat (Idaho 2006).

Grass height and cover are considered important factors for sage-grouse nest sites (Connelly et al. 2000). Taller herbaceous vegetation surrounding a nest likely influences the success of nesting sage-grouse (Wik 2002, DeLong et al. 1995). Livestock grazing can remove herbaceous vegetation used for cover by nesting sage-grouse. In sagebrush habitats livestock graze herbaceous vegetation in shrub interspaces, and begin foraging on vegetation beneath shrubs as interspace plants are depleted. Under light to moderate utilization levels, livestock use of sub-canopy vegetation has been documented as negligible (France et al. 2008). The degree of impact that livestock grazing has on sage-grouse nesting habitat is dependent on timing, intensity of use, vegetation composition, and other factors (Idaho 2006). Nest success is not considered to be a widespread problem in Idaho with an average success rate averaging 49% (Connelly et al. 2004).

There would be no impacts to Threatened and Endangered Species under any of the alternatives as there have been no known occurrences within 5 miles of the allotment in the last 10 years.

#### *Alternative A - No Action*

Alternative A renews the current grazing permit at existing levels with spring use from 4/10 through 5/31 and a fall use season from 10/16 through 1/31 for sheep only. Grazing would continue to occur during important sage-grouse breeding and nesting seasons, potentially impacting sage-grouse through the reduction of understory grass and forb height and cover and resulting in reduced nesting success or increased nest and chick predation. Impacts to other sensitive bird species would be similar to those discussed under **Migratory Birds**.

Trailing and movement by sheep may result in the collapse or filling in of entries into pygmy rabbit burrows, though this has not been documented in the allotment. This would not remove habitat but may result in increased energy use by pygmy rabbits as they would have to reopen the burrow. Townsend's big-eared bats roost in caves during the summer. There would be no direct impacts expected to Townsend's big-eared bats by herders or grazing sheep as they would not be expected to enter caves while bats are roosting.

Disturbed areas along roads, troughs, fences, cattleguards and rocky outcrops provide habitat for Piute ground squirrels. Direct impacts to Piute ground squirrels from grazing include trampling and collapse of existing burrows, and removal of vegetation they may use for forage.

Grazing would continue at the same time and intensity levels as currently authorized. Impacts to sensitive species from grazing would be minimal. It is expected that habitat conditions and native plant composition especially shrubs would continue to increase, because there has been an observable reestablishment of the Wyoming big sagebrush within the allotment impacted by past wildfires. The existing 53,000 acres of crested wheatgrass seedings would continue to provide little useable habitat for special status species. The remaining 146,000 acres are not meeting

rangeland health standards due to the reduction of shrubs from frequent fires. However, grass and forb components are productive and healthy and provide forbs and insects important for late brood-rearing of sage-grouse chicks. Additionally, inclusions of sagebrush and rabbit brush provide some cover and perching habitat for sagebrush obligate species. As vegetation composition moves toward a more sagebrush dominant community special status species of the area would likely increase.

#### *Alternative B - Proposed Action*

Alternative B would extend the grazing season for sheep an additional 40 days; 25 days in the spring and another 15 days in the fall. AUMs would remain the same so there would be no additional reduction of grasses and forbs in the spring or impacts to shrubs in the fall would be minimal because Wyoming and basin big sagebrush are the least preferred of the sagebrush taxa (Dennis, P.S. and Winward, A.H. 1981). Permitted use in the Big Desert Sheep Allotment would remain the same. Forty-five percent of the AUMs would be permitted in the spring season, while the remaining 55% would be permitted in the fall/winter season. Grazing would be restricted to crested wheatgrass seedings during the first seven days of the grazing season. This may reduce vigor and seed set of crested wheatgrass potentially providing an opportunity for native forbs, grasses and shrubs to become reestablished over time. Disturbance to lekking and nesting birds may occur while sheep are grazing or herders are hauling water. Potential direct impacts to sage-grouse may occur in limited native habitat for an additional 18 days during critical nesting and brood-rearing seasons.

Impacts to other sensitive bird species would be similar to those discussed under Alternative B in under **Migratory Birds**.

Impacts to sensitive raptor species, Piute ground squirrels, pygmy rabbits and Townsend's big-eared bats would be similar to those discussed under Alternative A. Disturbance would likely increase due to the increased time of use.

Impacts to sensitive species would be slightly greater than under Alternatives A due to the longer grazing season and the limited potential for direct disturbance and destruction of nests.

#### *Alternative C - Preferred Alternative*

The impacts associated with the season of use change would be similar to those impacts discussed under Alternative B. Adding the additional term and condition of limiting utilization to less than 40% would leave grasses and forbs in amounts appropriate to provide cover and forage during nesting and brood-rearing periods. Restricting camping, temporary corrals, and water hauling within 0.6 miles for leks would minimize the disturbance to lekking and nesting birds.

The Big Desert MFP as amended by the FMDA has an objective to "Maintain, protect, and expand sage-grouse source habitat." A management action of this objective is to "Treat areas within source habitats that have low resiliency (i.e. areas characterized by low species diversity, undesirable composition, and dead or decadent sagebrush)." The FMDA has a list of "Selected

Conservation Measures to be Considered in Developing Vegetation Treatments Potentially Affecting Greater Sage-Grouse.” One measure is to “Reduce competition of crested wheatgrass to facilitate the establishment and persistence of the desired species.” Development of a forage reserve is also supported in the state sage-grouse conservation plan. The Idaho Sage Grouse Conservation Plan (2006) states that areas should be identified and when feasible, establish strategically located forage reserves focusing on areas unsuitable for sage-grouse habitat restoration, or lower priority habitat restoration areas. These reserves (such as seedings) would serve to provide livestock operators with temporary alternative forage opportunities during the resting of recently seeded restoration or fire rehabilitation areas and could serve as additional fuel breaks depending on location and configuration, due to reduced fuel loads.

Currently, the availability of forage reserves in Idaho is extremely limited. Without the development of additional reserves, economic incentives, or other processes, the restoration of Idaho’s annual grasslands and diversification of exotic perennial grass seedings will proceed slowly, and both operators and sage-grouse will continue to remain at risk of wildfires and their associated after-effects. Pellant and Lysne (2006) show that livestock grazing can facilitate an increase in the diversification of crested wheatgrass or similar seedings. Another benefit of livestock use at the appropriate time and intensity in crested wheatgrass seedings is to facilitate the return of sagebrush. Sagebrush encroachment in seedings is less under light to moderate spring livestock use, but increases under higher crested wheatgrass utilization levels for the same period of time (Frischknecht and Harris, 1968). A grazing system that promotes heavy spring livestock use over a period of years can promote an increase of sagebrush in crested wheatgrass seedings. Angell (1997) found that this same grazing management system would also promote the survival of juvenile sagebrush plants due to decreased soil water depletion by crested wheatgrass. Thus, once juvenile sagebrush plants are established in a seeding, continued heavy livestock use will accelerate sagebrush growth and potentially increase additional sagebrush recruitment. Without deliberate intervention to improve plant species diversity and structure, some large seeded grasslands are unlikely to support habitat characteristics suitable for sage-grouse within a reasonable management timeframe (Big Desert Conservation Plan, 2010). A forage reserve would allow for increased management flexibility in attaining an increased sagebrush canopy cover. The forage reserve would also be used to facilitate other resource objectives such as riparian recovery or to provide rest to improve herbaceous cover in certain nesting or brood habitat areas (IDFG 2006).

Seventeen miles of fences would be installed to establish the forage reserve. Fencing would be within crested wheatgrass seedings. The nearest occupied lek is greater than 1.75 miles from the proposed forage reserve fence. According to Connelly, placement of new fences and structures should be avoided within 1 km (0.6 mi) from occupied leks (Connelly et al, 2000b), and the BLM IM-2012-043 suggests evaluating any new fences within 1.25 miles of leks that have been active within the past 5 years. Potential impacts to greater sage-grouse from installation of seventeen miles of fence would include disturbance and displacement during installation phase, fence posts and wires that may provide perches for predators, and the fence may pose a collision hazard to sage-grouse (Stevens et al. 2009, Connelly et al. 2004). Potential impacts to sage-grouse are minimal due to the lack of suitable sage-grouse habitat and distance to occupied leks. Fence posts would provide perches for predators of sage-grouse nests and chicks but the distance

to suitable sage-grouse habitat diminishes the potential for predators to be successful from fence posts.

The addition of a well, three troughs, wildlife guzzlers, and corral (approximately 13.5 acres of disturbance) would remove nesting habitat for grass and ground nesting birds while providing nesting and perching habitat for resident raptors, perching for song birds. The construction of the pipeline and the corral would occur outside the nesting season reducing the potential for disturbance of wildlife during birthing seasons. Other impacts would be short term and direct due to disturbance of special status species and the removal or modification of habitat at the time of construction. However, the addition of three troughs and the wildlife guzzlers would provide a reliable, annual water source for special status species throughout the spring, summer and fall while placement of approved wildlife escape ramps would reduce the potential of accidental drowning. An open surface would provide a swoop zone for bats increasing their access to water in this arid environment.

The majority of trailing through the Big Desert Sheep Allotment occurs before or after the nesting season and along existing roads reducing potential impacts to sensitive bird species. However, trailing along Routes 1 and 3 would occur during or at the end of the nesting season increasing the potential for disturbance or destruction of active nests. If nests or fledglings are disturbed during this time songbirds would not have an opportunity to renest. Impacts to burrowing species may be crushing or burrows and disturbance causing them to flee and increasing potential for predation. There are no known raptor nests along proposed trailing routes. Impacts to raptors would be disturbance during the trailing or increased exposure of prey species. Other than direct destruction of nests and burrows any disturbance would be of short duration and have little impact on sensitive species.

The majority of trailing through the Big Desert Sheep Allotment occurs during big game calving and fawning seasons. Impacts are expected to be minimal as trailing occurs along existing roads and big game are expected to fawn or calve in more protected or secure habitats. Trailing during the fall is likely to displace big game for the short duration that trailing occurs.

Trailing would likely result in trampling or collapsing of some burrows resulting in an increased energy output for small mammals and reptiles as they re-dig burrows. Impacts associated with trailing would be minimal because it would occur in less than one percent of the allotment.

Impacts to sensitive species would be slightly higher than impacts under Alternatives A or B due to the loss of habitat and increased infrastructure.

#### *Alternative D - No Grazing*

Impacts to special status bird species from no grazing would vary by species as discussed under **Migratory Birds**. In general, understory cover of grasses and forbs would increase, with improvement in size and vigor of preferred forage species. Seed set would occur annually, further providing for increased cover and forage. There would be no displacement or disturbance of special status species during critical breeding, nesting and brood-rearing seasons. Little opportunity for establishment of native forbs, grasses and shrubs in the crested wheatgrass

seedings would occur and the seedings would continue to provide poor quality habitat for most special status species. Potential impacts to burrowing species associated with authorized grazing would be reduced.

Impacts to most sensitive animal species would be less under Alternative D than under Alternatives A, B, or C due to reduced disturbance, increased forage and cover, lack of competition, and no additional infrastructure.

## **Threatened, Endangered, and Sensitive Plants**

### Affected Environment

All data known to the USFO, including data from the U.S. Fish and Wildlife Service, Idaho Department of Fish and Game, and the Idaho Natural Heritage Program has been used to identify any plant currently listed under the Endangered Species Act (ESA) within the allotment. There are no known threatened or endangered plant species in the Big Desert Sheep Allotment. There are two plant species located within the Big Desert Sheep Allotment which are designated as sensitive by the BLM.

Obscure scorpion plant (*Phacelia inconspicua*) is found on the volcanic foothills and buttes on the Upper Snake River Plain. The plant grows on concave, moderately steep and sheltered northeast to east facing aspects where snowdrifts persist late into the spring. It typically grows in small gaps within shrubby vegetation often dominated by deciduous mountain shrubs. The species requires low-level soil disturbance and occasional fire for persistence (Murphy, 2002). There is one observation of a single plant in the Big Desert Sheep Allotment, and the occurrence has not been documented since 1990.

Picabo milkvetch (*Astragalus oniciformis*) is restricted to sandy soils in the north-central portion of the eastern Snake River Plain. The eastern limit of the main range of Picabo milkvetch is the Craters of the Moon Lava Field. Five disjunct occurrences totaling approximately 90 acres occur east of the lava field in the vicinity of Mule Butte. Beyond this particular area, there is little suitable habitat on the Big Desert Sheep Allotment, between Craters of the Moon Lava Field and Big Southern Butte (Moseley and Popovich, 1995).

### Environmental Consequences

#### *Alternative A – No Action*

Under Alternative A, there would be little to no impact to the known location of *Phacelia inconspicua* in the allotment. All occurrences of the plant in the Big Desert are in areas open to livestock grazing. Trailing and browsing of livestock was observed at all occurrences and combined with light utilization, can be beneficial for maintaining and creating open microsites for the plant (Murphy, 2002).

Five locations of Picabo milkvetch have been identified in the allotment. There is a potential impact to the species from herbivory by the sheep in the spring season, since sheep prefer to

utilize succulent forbs. During the inventory conducted by the Idaho Natural Heritage Program, the majority of the herbivory on the plants was by rabbits and small rodents. Another impact that could occur on or near the Picabo milkvetch is trampling by livestock. Livestock grazing and trampling in the area occupied by the plant is slight because annually, utilization in the Mule Butte Area is light.

The biggest threat to the populations of sensitive plants in the Big Desert Sheep Allotment is wildfire. The majority of the allotment has been burned multiple times in the past thirty years. Frequent fire activity in the allotment has increased the potential of invasion of the invasive or non-native species that in turn increase the amount of the plant competition in sensitive plant habitat. When these invasive or non-native species increase there is the potential for increased fuel loads that when burned can radically alter soil conditions and reduce or eliminate the seed bank.

#### *Alternative B – Proposed Action*

The impacts to sensitive plants would be slightly higher than Alternative A because the phenology of both *Phacelia inconspicua* and *Astragalus oniciformis* is variable year to year in response to climate conditions. Since the flowering period for both of the plants range from May to late June, the opportunity for herbivory increases because of the fifteen day extension on the end of the spring season of use. However, because authorized growing season AUMs would remain the same, utilization levels on an annual basis would remain consistent with Alternative A. The impacts associated with authorized livestock use would be similar to Alternative A because the total amount of authorized AUMs in the Big Desert Sheep Allotment would remain the same. The proposed change in the season of use would continue to make progress towards meeting upland vegetation standards in the Big Desert Sheep Allotment.

#### *Alternative C – Preferred Alternative*

The impacts for threatened, endangered, and sensitive plants would be similar to Alternative B. Identified trailing routes for permittees trailing livestock to adjacent allotments would not occur near sensitive plant habitat. The forage reserve allotment would not impact any sensitive plant habitat since the forage reserve would be placed in a crested wheatgrass seeding and the nearest known sensitive plant habitat is located more than six miles away.

#### *Alternative D – No Grazing*

The Big Desert Sheep Allotment would be closed to livestock grazing. The potential for physical damage to sensitive plant species from livestock would be removed. Under Alternative D, the allotment would continue to provide habitat conditions to support special status plant species.

## Vegetation

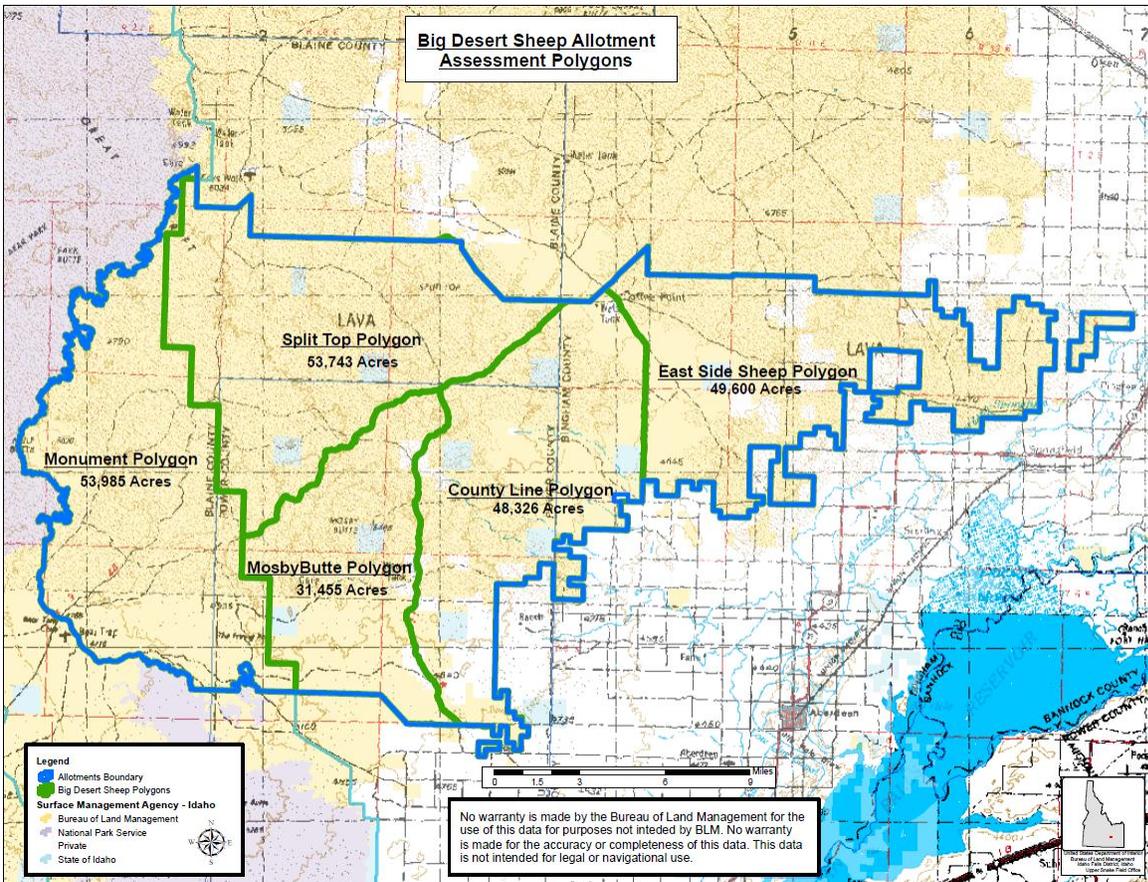
### Affected Environment

The primary ecological site found in the Big Desert Sheep Allotment is a Wyoming big sagebrush / bluebunch wheatgrass ecological site. The vegetative components associated with the range site are relatively intact throughout the allotment, except for the shrub component. Multiple wildfires the past forty years have removed large areas of Wyoming big sagebrush throughout the allotment. There has been observable reestablishment of the Wyoming big sagebrush in those areas of the allotment impacted by past wildfires. Other common species across the allotment include green rabbitbrush (*Chrysothamnus viscidiflorus*), pockets of basin big sagebrush (*Artemisia tridentata* sp. *tridentata*), Sandberg bluegrass (*Poa secunda*), squirreltail (*Elymus elymoides*), Indian ricegrass (*Achnatherum hymenoides*), junegrass (*Koeleria cristatum*), and western wheatgrass (*Pascopyrum smithii*). Numerous species of forbs were also observed throughout the allotment. 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. Annual production varies from 450 lbs/acre in unfavorable years, 750 lbs/acre in average years, to 1,200 lbs/acre in favorable years based on Natural Resource Conservation Service (NRCS) ecological site descriptions.

The native vegetative composition in the Big Desert Sheep Allotment has been altered the past forty years, and thus the allotment is not currently at its potential in terms of species composition. Since 1970, only nine percent of the public land within the allotment has not been affected by wildfire, and large portions of the allotment have been burned repeatedly in the same time period. Cheatgrass has increased in density in areas throughout the allotment because of the increased fire frequency. Three-tip sagebrush (*Artemisia tripartita*) has also increased in the allotment as a result of the amount of wildfires.

The following upland plant species are the ones most likely to be directly affected by livestock grazing: western wheatgrass, bluebunch wheatgrass, Junegrass, Indian ricegrass, Nevada bluegrass (*Poa nevadensis*), Sandberg's bluegrass, squirreltail, and needle and thread grass. Many annuals and perennial forbs are present and receive grazing pressure.

Four field assessments were conducted across the native range and four on a crested wheatgrass seedings (*Agropyron cristatum*) in the Big Desert Sheep Allotment using techniques described in Interpreting Indicators of Rangeland Health – Technical Reference 1734-6 (BLM 2005). Due to the large size of the allotment, the vegetation discussion of Big Desert Sheep Allotment was completed in five assessment polygons ranging from 31,000 acres to 54,000 acres. The assessment of standards for Rangeland Health at the polygon level is more descriptive of the conditions found on the ground compared to assessment at the allotment scale.



A Native Plant Community Assessment was conducted in the Monument Polygon. The assessment rated five of the nine indicators in the none to slight departure category. The indicator for Functional/Structural Groups was rated in the slight to moderate departure category because the shrub composition in the polygon has been greatly reduced because of the recent wildfires in 2006. The interdisciplinary team also observed reduced cover of large bunchgrass. The Litter Amount and Annual Production indicators were also rated in the slight to moderate or moderate departure from site potential, mainly due to the loss of shrub composition in the area. According to the NRCS range site guides, shrub composition by weight should make up approximately 15 to 30 percent of the annual production. The Invasive Plant indicator was rated in the moderate to extreme departure category because cheatgrass occurs throughout the site. The area where the assessment was conducted was located within the 2006 Crystal wildfire perimeter. The next year, approximately 10,000 acres of the polygon, was drilled seeded with native species.

The second Native Plant Community Assessment was conducted in the Split Top Polygon. The assessment rated six of the nine indicators in the none to slight departure category. The reduced rating for Functional/Structural Groups and the Annual Production indicators were directly correlated to increased fire activity that has occurred in the allotment. The assessment team also observed some plant mortality and/or decadence in the green rabbitbrush on the west side of the Split Top Butte.

The third Native Plant Community Assessment was conducted in the Mosby Butte Polygon. The assessment rated five of the nine indicators in the none to slight departure category. The Functional/Structural Groups, Litter Amount, and Annual Production are directly attributed to the shift in the plant community. Increased wildfires in the area have contributed to increase cheatgrass composition, reduced shrub composition, and reduce large bunchgrass composition. The Invasive Plant indicator was rated in the moderate to extreme departure category because cheatgrass was common throughout the site. The majority of the polygon has been affected by wildfire multiple times in the past twenty years.

The fourth Native Plant Community Assessment was conducted in the East Side Sheep Polygon. The assessment rated three of the nine indicators in the none to slight departure category. As described above in the three previous Native Plant Community Assessments, the departure from site potential for the Functional/Structural Groups, Litter Amount, Annual Production, and Invasive Plants indicators are directly attributed to the fire frequency in the Big Desert Sheep Allotment. The change in plant community in the East Side Sheep Polygon from one dominated by shrubs and large bunchgrasses to one dominated by small bunchgrass and annual shallow rooted forbs (desert alyssum) and grasses (cheatgrass) was the main factor why the Soil Surface Resistance to Erosion and the Soil Surface Loss or Degradation indicators were a slight to moderate departure.

A step-point cover transect was completed in three of the five polygons during the field assessment in the Big Desert Sheep Allotment. Two step-point transects were completed in the County Line Polygon and one each in the Split Top and East Side Sheep Polygons. The results of the cover surveys are summarized in Table 3. Step-point cover data was not previously collected in the allotment.

**Table 3 - Foliar Cover Summary**

	Split Top		County Line #1		County Line #2		East Side Sheep	
	Ground Cover %	Foliar Cover %	Ground Cover %	Foliar Cover %	Ground Cover %	Foliar Cover %	Ground Cover %	Foliar Cover %
<b>Perennial grasses</b>		32		16		32		24
<b>Annual grasses</b>		0		23		38		20
<b>Forbs</b>		12		22		12		2
<b>Sagebrush</b>		22		6		0		9
<b>Decadent Shrubs</b>		2		0		0		0
<b>Dead Shrubs</b>		0		0		0		1
<b>Other Shrubs</b>		4		9		4		16
<b>Total Vegetative Cover</b>		60		59		72		58
<b>Litter</b>	12		16		14		9	
<b>Bare Ground</b>	24		16		14		27	
<b>Microbiotic Crust</b>	0		0		0		5	
<b>Rock</b>	0		6		0		0	
<b>Gravel</b>	4		3		0		1	

Due to the frequent fire interval in the Big Desert Sheep Allotment, the USFO has implemented several projects since 2000 in order to reestablish a viable Wyoming and basin big sagebrush seed source in the area. In the allotment approximately 1,000 acres have been drilled seeded, 100,000 acres have been aerially seeded, and 100,000 sagebrush plugs have been planted. In addition to the described treatments, natural regeneration of the sagebrush has also been observed throughout the Big Desert Sheep Allotment.

Four field sites within non-native seedings in the Big Desert Sheep Allotment were assessed in 2011. Approximately 53,000 acres in the Big Desert Sheep Allotment have been seeded to crested wheatgrass (*Agropyron cristatum*). Information on some seedings is limited and an exact acreage and year of implementation of all known seedings could not be determined. Many of the seedings were to rehabilitate areas which had been burned by wildfire. Table 4 describes the estimated acres of non-native seedings within each assessment polygon.

**Table 4 - Approximate seeding acreage per Big Desert Sheep Polygons:**

Polygon Name	~ Acres
Monument	9,379
Split Top	11,303
Mosby Butte	5,230
County Line	11,772
East Side Sheep	15,350

Four step-point cover transects were conducted in non-native seedings in the Big Desert Sheep Allotment. The results of the cover surveys are summarized in Table 5. Step-point cover data was not previously collected in the seedings.

**Table 5 - Ground Cover and Foliar Cover Summary.**

	Monument Seedings		Split Top Seedings		Mosby Butte Seedings		East Side Sheep Seedings	
	Ground Cover %	Foliar Cover %	Ground Cover %	Foliar Cover %	Ground Cover %	Foliar Cover %	Ground Cover %	Foliar Cover %
<b>Perennial grasses</b>		38		36		28		32
<b>Annual grasses</b>		2		0		0		8
<b>Forbs</b>		12		16		14		2
<b>Sagebrush</b>		2		0		2		0
<b>Other Shrubs</b>		2		4		6		0
<b>Total Vegetative Cover</b>		52		54		48		40
<b>Litter</b>	34		28		36		30	
<b>Bare Ground</b>	12		18		12		30	
<b>Gravel and Stone</b>	2		0		2		0	
<b>Biological Crust</b>	0		0		2		0	

## 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. The Evaluation for the Big Desert Sheep Allotment found that the native plant communities were making significant progress towards meeting the standard for Rangeland Health.

### *Alternative A – No Action*

Under Alternative A, the season of use and authorized AUMs would remain at their current levels. The amount of authorized use in the Big Desert Sheep Allotment is appropriate for the site potential. Plant litter accumulation and standing dead matter after grazing on any given year is sufficient to allow decomposition and leave onsite nutrients for cycling. The allotment was evaluated and native plant communities were found to be not meeting but making significant progress. The vegetative components associated with the range site are relatively intact throughout the allotment, except for the shrub component. Multiple wildfires the past forty years have removed large areas of Wyoming big sagebrush throughout the allotment rendering the native plant communities not meeting. There has been observable reestablishment of the Wyoming big sagebrush in those areas of the allotment impacted by past wildfires. Under Alternative A, the allotment would continue to make significant progress towards meeting standards for rangeland health.

### *Alternative B – Proposed Action*

Alternative B includes lengthening both the spring and fall/winter seasons of use. The seasons of use would be lengthened by a total of 25 days in the spring and a total of 15 days in the fall/winter, but the number of authorized AUMs would remain the same. The majority of the time that makes up the ten day extension on the start of the spring season would be restricted to the crested wheatgrass seedings east of the powerline (see Figure 2). Sheep grazing in the Big Desert Sheep Allotment would be authorized on native range for an additional eighteen days. Lengthening the seasons of use on the end of the spring season would allow the permittees more flexibility to adjust grazing in light of range readiness. The fifteen day extension in the fall/winter season would occur when most native plants are dormant. The ratio of the spring AUMs to fall/winter AUMs in the allotment would remain the same; there would be little or no change in utilization levels or patterns of use. Currently, the stocking density in the spring season is seventeen acres per AUM, while the fall/winter season of use is fourteen acres per AUM. Historically, the allotment has exhibited light (21-40%) overall utilization. The existing permitted livestock use in the allotment would provide an opportunity for the majority of the preferred plants in the allotment to maintain or gain vigor and provide an opportunity to store carbohydrates and set seed on a regular basis. This in turn would allow the ecological condition of the native vegetation in the Big Desert Sheep Allotment to continue to make significant progress towards meeting standards.

In fall, domestic sheep utilize basin big sagebrush to a limited degree. Basin big sagebrush may serve as emergency food during severe winter weather, but it is not usually sought out by livestock (Beetle and Johnson 1982). Since basin big sagebrush is the least palatable of the three major sagebrush taxa, it would only be utilized when other palatable species are not available (Owens and Norton 1990). Similar to basin big sagebrush, sheep will browse Wyoming big sagebrush but may use it only lightly when other palatable herbaceous species are not available (Ngugi, et al. 1992). The extended season of use would have minimal impact to the recovery of sagebrush species due to its low to moderate palatability. Barring impacts of future wildfires in the allotment, the increase in the amount of the both Wyoming and basin big sagebrush would continue under this alternative. The grazing use changes described under Alternative B would be very similar to Alternative A because the season of use would be similar and the amount of permitted use would remain the same. The only difference between the two alternatives would be the extra use on the crested wheatgrass seedlings in the spring that could aid in the establishment and/or cover of sagebrush in the seeded areas of the allotment. Alternative B would allow the plant communities to continue to make significant progress toward meeting Standards for native plant community health. Under this alternative, non-native seeding which make up approximately 53,000 acres would continue to meet standards.

#### *Alternative C – Preferred Alternative*

The majority of the actions are the same as Alternative C except for the projects needed to establish the Countyline Forage Reserve Allotment. The additional actions include authorizing the construction of a boundary/pasture fence, the construction of a pipeline with three trough sets, the drilling of a well, the placement of a storage tank, the construction of the corral, and the placement one cattleguard in the proposed forage reserve allotment.

Both the Sage Grouse Comprehensive Conservation Strategy (2006) and the Big Desert Sagegrouse Planning Areas Conservation Plan (2010) suggest pursuing opportunities for forage reserves to accommodate livestock operators during implementation of rehabilitation and restoration activities. Currently, there are insufficient alternative forage reserves identified in the Big Desert during natural recovery of untreated areas, or during rehabilitation and restoration establishment/rest periods for treated sites. These measures would facilitate resource objectives such as providing rest to improve herbaceous cover in certain nesting and brood-rearing areas. Another potential benefit of a forage reserve would be to reduce fuel loads where forage is being under-utilized, in turn reducing the frequency of wildfire and cause sagebrush to reestablish sooner onsite.

The Countyline Allotment would be used as a forage reserve allotment. Grazing use in the allotment would only be authorized on a temporary basis to existing BLM operators whose permitted use has been temporarily suspended due to fire, vegetation rehabilitation, or other causes. Use in the allotment may be authorized between 4/1 – 12/30. The expanded season of use in the allotment would give the BLM the flexibility to determine the most appropriate time to graze. Permitted AUMs in the forage reserve would be 1,300. The AUMs needed to establish the forage reserve would be removed from the AUMs allocated in the Big Desert Sheep Allotment under the MFP. Approximately 2,800 acres of the proposed forage reserve was

homesteaded and farmed in the past and later reconveyed back to the BLM. In addition to being farmed in the past, the area that would be set aside for the forage reserve has been seeded into crested wheatgrass multiple times (1952 and 1971). Currently, over 80% of the proposed forage reserve is dominated by crested wheatgrass. Crested wheatgrass is highly palatable in the spring and tends to become fibrous as it matures. Therefore, palatability and nutritional quality decrease after July. Although it provides lower nutritional value in the summer grazing it can start growing in the fall if the area receives adequate fall moisture. The use of available resources earlier in the spring allows crested wheatgrass the ability to gain a competitive edge on the native grass species in the Big Desert. Generally, crested wheatgrass can be grazed two to three weeks earlier than the native grasses. In addition to being grazed earlier, heavier grazing can invigorate crested wheatgrass stands (Bleak, 1956).

Under Alternative C, sheep or cattle can be authorized to use the allotment. Sheep tend to utilize forbs in the months of April and May, while the cattle tend to utilize the grasses. During the later months, as available forbs become less abundant, sheep adjust their grazing to include more shrubs. Cattle will eat shrubs but prefer grasses and forbs. Utilization on the crested wheatgrass dominated plant community in the forage reserve would be monitored closely in order to ensure the allotment continues to meet the non-native seeding standard under ISRH. Livestock distribution can vary greatly between sheep and cattle use. Sheep can be herded more easily by a herder in order to use the area that are not typically used by cattle due to increased topography or distance from available water. By allowing both livestock species to graze within the forage reserve, the diversity of the plant community has the potential to increase. The difference in food selection between the two species could reduce the competitive advantage of the crested wheatgrass, which in turn could lead to an increase in sagebrush in the area.

Pellant and Lysne (2006) show that livestock grazing can facilitate an increase in the diversification of crested wheatgrass or similar seedings. Another benefit of livestock use at the appropriate time and intensity in crested wheatgrass seedings is to facilitate the return of sagebrush. Sagebrush encroachment in seedings is less under light to moderate spring livestock use, but increases under higher crested wheatgrass utilization levels for the same period of time (Frischknecht and Harris, 1968). A grazing system that promotes heavy spring livestock use over a period of years can promote an increase of sagebrush in crested wheatgrass seedings. Angell (1997) found that this same grazing management system would also promote the survival of juvenile sagebrush plants due to decreased soil water depletion by crested wheatgrass. Thus, once juvenile sagebrush plants are established in a seeding, continued heavy livestock use will accelerate sagebrush growth and potentially increase additional sagebrush recruitment. Without deliberate intervention to improve plant species diversity and structure, some large seeded grasslands are unlikely to support habitat characteristics suitable for sage-grouse within a reasonable management timeframe (Big Desert Conservation Plan, 2010). A forage reserve would allow for increased management flexibility in attaining an increased sagebrush canopy cover. Under Alternative C, the sagebrush in the forage reserve would increase at a faster rate than any of the other alternatives, including the no grazing alternative.

In order to implement the forage reserve, a boundary and pasture fence would be constructed. The fences would both ensure control of livestock as well as allow for the establishment of a deferred grazing rotation in the forage reserve allotment. Increased utilization and trampling of

the vegetation would be expected in a narrow area adjacent to the new fences, as livestock commonly trail along fences more intensively, but the impacts would lessen as distance from water increases. In addition to the construction of the fences, a cattleguard would be installed.

The new well would provide water to a pipeline that supplies water to three trough sets and wildlife guzzlers. Vegetation around the new well and trough would be utilized heavier due to the short distance to water, but with declining use as distance from water increased. The new well and pipeline would distribute livestock in the forage reserve by providing a permanent water source in each of the two pastures. The vegetation affected by this change in livestock distribution would be found in roughly the ¼ mile radius around each trough.

Alternative C also proposes the authorization of a new corral site in the Countyline Allotment. The corrals would be constructed adjacent to the road in a crested wheatgrass seeding. The area where the new corrals would be constructed would result in a net loss of up to 0.5 acres in the East Pasture. The corrals would be used when livestock are turned out into the allotment and removed from the allotment. Heavier utilization would be expected around the corrals during these time periods.

Under Alternative C, livestock trailing may be authorized upon request through the Big Desert Sheep Allotment. Anticipated trailing details are described in Appendix A, with trailing routes identified in Figure 3. Livestock trailing through the allotment must be active rather than passive, requiring physical pressure from herding dogs, riders on horseback, etc. With active herding, livestock grazing is minimal as animals remain moving. Forage use would be incidental. Physical damage of plants may occur along the trailing routes due to the concentration of livestock in a small area along existing roads. While these areas generally have an increased level of disturbance compared to areas further from roads, as livestock authorized within the allotment tend to use these same routes for movement within the allotment, the impact would be greater under Alternative C within the small area authorized for trailing. The potential impact associated with trailing activities would not impact the overall conditions of the allotment relative to ISRH.

#### *Alternative D – No Grazing*

Livestock grazing would be closed in the Big Desert Sheep Allotment for a period of 10 years resulting in increased plant production and vigor on portions of the allotment compared to Alternatives A, B, and C. Grasses would be allowed season-long growth which would increase seed production and vigor. The numbers of individual bunchgrasses and forbs would increase, due to the decrease in grazing pressure. There would be less sagebrush established in the crested wheatgrass seedings than in the other alternatives. Residual plant matter, debris, and cover would increase over time as more of the biomass remained after the growing season. Davies et al. (2010) found that moderate livestock grazing decreased wildfire risk in sagebrush grasslands, as compared to long-term livestock grazing exclusion. Davies et al. also suggest that potential wildfires in moderately grazed sagebrush steppe would have decreased size, severity, and continuity as compared to non-grazed sagebrush rangelands. Wildfires would reduce the sagebrush cover in the allotment which could be detrimental to sagebrush obligate species such as sage grouse. Under Alternative D, sagebrush establishment would occur at a slower rate than

both Alternative A, B, and C because livestock use at the appropriate time and intensity could facilitate the return of sagebrush. The no graze alternative would result in overall improved habitat condition on those portions of the allotment where the vegetation community is influenced by current grazing management.

## **Visual Resources**

### Affected Environment

The public lands managed by the USFO have been divided into four Visual Resource Management (VRM) classes to help manage and reduce impacts to the visual resource. The Big Desert Sheep Allotment is within a VRM Class III and the objective of this class is to partially retain the existing character of the landscape. The level of change to the characteristic landscape should be moderate and management activities may attract attention but should not dominate the view of the casual observer. Changes should repeat the basic elements found in the predominant natural features of the characteristic landscape.

The Big Desert Sheep Allotment is characterized by a rolling desert landscape, dominated by sagebrush, lava flow remnants, and dry soils. The combination of colors in the desert landscape is described as visually harmonious; the textures uniform, continuous and smooth. The landscape is wide and rolling with curving yet rugged line features. The scenic quality of the project area has lower ratings due to its low, rolling hills; little contrast in vegetation, lack of water bodies, and subtle color variations. The sensitivity level is low due to minimal visitation to the area and little public controversy concerning the BLM management policies.

### Environmental Consequences

#### *Alternative A – No Action*

There are no proposed range improvement projects under Alternative A. Therefore, there would not be impacts to visual resources.

#### *Alternative B – Proposed Action*

There are no proposed range improvement projects under Alternative B. Therefore, there would not be impacts to visual resources.

#### *Alternative C – Preferred Alternative*

Alternative C proposes establishing a forage reserve; delineated by wire perimeter fencing and division fence. Within the forage reserve, a new well would be drilled, pipeline constructed, and troughs installed. Based on the contrast rating worksheet for the proposed pipeline, the overall degree of contrast is weak. This evaluation was based on the short-term impacts from pipeline installation. The original landscape characteristics and natural features would be restored once the pipeline project has been completed. Native seeding would help restore the vegetative disturbance from pipeline construction. The pipeline would mainly be adjacent to roads;

following the natural line and form of the landscape. The project may attract attention from the casual observer but should not dominate the view upon completion of the project.

The wire fencing associated with the forage area would be constructed following the natural rolling landscape features. The contrast rating worksheet established that the degree of contrast is weak and meet the objectives of a VRM Class III. Visitors could view the fence from the roadways, but the topography of the area would camouflage the fence further into the distance. The color of the fencing would blend in with the natural colors of the desert environment. The fencing may attract the attention from the casual observer but should not dominate their view.

The watering troughs and new well would be constructed in areas where improvements blend in with the surrounding line, form and texture of the visual environment. The troughs and new well may attract the attention of the casual observer, but should not dominate their view.

The proposed range improvement projects meet objectives of a VRM Class III. There are greater impacts to the visual resources compared to Alternative A and B.

#### *Alternative D – No Grazing*

Alternative D proposes no grazing in the Big Desert Sheep Allotment for a period of ten years; therefore, there would not be impacts to visual resources.

### **Wilderness Study Areas (WSAs)**

#### Affected Environment

The Great Rift Wilderness Study Area (WSA) is comprised of 322,450 acres of public land and 18,550 acres of state lands. WSAs are managed by the BLM to protect the values that made them eligible for designation as wilderness by Congress. These values include naturalness, solitude, primitive and unconfined recreational experiences, and the presence of special features; such as ecological, geological, educational, historical, scientific and scenic values.

The Great Rift Proposed Wilderness Final Environmental Impact Statement (1980) identified that the Great Rift WSA had outstanding opportunities for solitude and primitive unconfined recreation. Naturalness was present as well as the following supplemental values: unique geologic resources, wildlife, soil, and vegetative interrelationships.

The Big Desert Sheep Allotment incorporates a portion of the WSA 8,448 acres along the perimeter edge. There is a dirt boundary road that separates the WSA portion within the Big Desert Sheep Allotment from the non-WSA portion of the allotment.

Livestock grazing can continue within a WSA in the same manner and degree in which it was being conducted on October 21, 1976; as long as it does not cause unnecessary or undue degradation of the lands and their resources (IMP, 1995).

### *Alternative A - No Action*

Under Alternative A, grazing would continue with no changes to the number of livestock or season of use for grazing within the WSA. As identified in Great Rift Final Wilderness Study Report (1980), livestock grazing exists near the lava's edge and within the proposed boundary; which does not disqualify the WSA from meeting naturalness criteria.

Opportunities for primitive and unconfined recreation activities were identified in the wilderness inventory and are available within the WSA. Interaction between recreation visitors and livestock would impact primitive and unconfined recreation since livestock could interfere with the goals of a particular activity.

### *Alternative B - Proposed Action*

Alternative B proposes an adjustment in the season of use in the fall/winter from 10/16 – 1/31 to 10/1 – 1/31 and in the spring from 4/10 – 5/31 to 4/1 – 6/15. The spring adjustment is consistent with the season of use before wilderness inventory, and is grazed in the same manner and degree as it was on October 21, 1976. The proposed spring change would address the needs of the permittees and provide greater flexibility for annual climatic and vegetative conditions.

Solitude is the primary wilderness characteristic that would be impacted by the proposed fall/winter season of use change from 10/16 – 1/31. By allowing the permittees an earlier turnout date, there would be greater opportunity for interaction between visitors and livestock. For example, visitors would be exposed to vehicles associated with the grazing operation for longer periods of time. Naturalness would not be impacted by season of use changes since no range improvement projects are proposed. Opportunities for primitive and unconfined recreation activities were identified in the wilderness inventory and are occurring within the WSA. Interaction between recreation visitors and livestock would impact primitive and unconfined recreation since livestock could interfere with the goals of a particular activity. The extent of this interaction is unknown due to lack of visitor use numbers. Additionally, the majority of recreation activity occurs on the lava flows and not the perimeter; especially once the snow falls.

### *Alternative C - Preferred Alternative*

The direct and indirect impacts to wilderness would be the same as Alternative B. None of the proposed projects in the forage reserve occur in a designated WSA.

### *Alternative D - No Grazing*

There would be no impacts to wilderness characteristics under Alternative D due to lack of grazing and the proposed projects associated with grazing. Alternative D has fewer impacts to wilderness characteristics compared to the other alternatives analyzed in this environmental assessment.

## Wildlife Resources

### Affected Environment

The unburned portions of the allotment vegetation consist primarily of Wyoming big sagebrush, three-tip sagebrush and bluebunch wheatgrass. The majority of the allotment has been burned and consists of perennial grasses with some small intrusions of sagebrush. Some burned areas may also have an annual species component such as tumble mustard and cheatgrass.

Crested wheatgrass seedlings were planted following disturbances to stabilize soil, reduce colonization of disturbed habitats and reduce potential wildland fire spread in summer (Zlatnik 1999). These seedlings provide green forage in spring and fall and may be important to wild ungulates when other preferred food sources are unavailable, such as following wildfires. However, others have found that crested wheatgrass is only minimally used by pronghorn in the intermountain west (Zlatnik 1999); supports fewer nesting bird species and a lower density of birds, mammals, and reptiles compared to areas dominated by sagebrush (Reynolds and Trost 1980). Significantly more small mammals are captured in native sagebrush habitat compared to crested wheatgrass seedlings, although crested wheatgrass is an important food item for some small mammal species (Koehler and Anderson 1991).

### Environmental Consequences

#### *Alternative A - No Action*

Direct impacts to wildlife from grazing occur when vegetation is removed or trampled that could otherwise be used for food and cover. These impacts could be beneficial if grazing opens up dense stand of herbaceous or shrubby vegetation that impedes wildlife movement or impacts could be negative if loss of vegetation is extreme and results in a loss of diversity and cover subsequently reducing wildlife diversity and abundance. Additional direct impacts include disturbance or displacement of wildlife due to the presence of livestock, herders, and increased traffic from water hauling. Indirect impacts occur when grazing pressure modifies vegetation composition.

Mule deer prefer native grasses to crested wheatgrass and pronghorn consume less grass than deer with crested wheatgrass only minimally used (Zlatnik 1999). However, pronghorn have been observed foraging in crested wheat grass seedlings where forbs are available (Hall 1985). Crested wheatgrass is highly palatable to black-tailed jackrabbits (Ganskopp et al. 1993). Some small mammals (e.g., deer mice, montane vole, Townsend's ground squirrel) have been found using crested wheatgrass for food and cover (Koehler and Anderson 1991) while another study found that least chipmunks avoided crested wheatgrass and species diversity was reduced in crested wheatgrass seedlings (Reynolds 1980). The palatability of crested wheatgrass to black-tailed jackrabbits (Ganskopp et al. 1993), small mammals (Koehler and Anderson 1991), and grasshoppers (Zlatnik 1999) may also serve to concentrate resident raptor species (e.g., golden eagle, American kestrel) along treatment areas.

Grazing would continue at the same timing and intensity levels as currently authorized. Although a large proportion of the allotment is not meeting rangeland health standards due to the reduction in shrubs from frequent fires, grass and forb components are productive and healthy and provide habitat for burrowing mammals and reptiles, big game, and resident bird species. The portion of the allotment with a healthy shrub component provides habitat for sagebrush dependent species (i.e., pronghorn). Grazing at the current level under Alternative A would continue to make significant progress towards meeting habitat requirements of wildlife.

*Alternative B - Proposed Action*

Alternative B would extend the grazing season for sheep an additional 40 days; 25 days in the spring and another 15 days in the fall. AUMs would remain the same so there would be no anticipated additional reduction of grasses and forbs in the spring or impacts to shrubs in the fall. Grazing would be restricted to crested wheatgrass seedings during the first seven days of the grazing season which may reduce vigor and seed set of crested wheatgrass potentially providing an opportunity for native forbs, grasses and shrubs to become reestablished over time.

Impacts to wildlife would be the same as those described under Alternative A with the potential of further disturbance or displacement of wildlife due to the extended grazing seasons.

*Alternative C - Preferred Alternative*

Impacts to wildlife would be similar to those discussed under Alternative B with the following additional impacts.

Seventeen miles of fences would be installed within crested wheatgrass seedings to establish the forage reserve. Direct impacts include negatively affecting wildlife movement patterns as the fences may pose as barriers. All fences would be built to meet BLM wildlife specifications, which will reduce the influence of fences on wildlife movement. Indirect effects include a potential increase of cover and food available to wildlife by controlling livestock distribution.

The addition of three troughs and wildlife guzzlers would provide water source for wildlife species throughout the spring, summer and fall while placement of approved wildlife escape ramps would reduce the potential of accidental drowning. An open surface would provide a swoop zone for bats increasing their access to water in this arid environment. Behavior and big game movement may increase within the allotment due to the additional water resources

Impacts to resident bird species are similar to those addressed under **Migratory Birds**.

*Alternative D - No Grazing*

Under Alternative D, no grazing would be authorized in the allotment for a period of 10 years. During this period, wildlife species utilizing the allotment would not be disturbed or displaced by livestock. Over the 10 year period, some improvement in upland habitat conditions would be expected which would benefit wildlife species. In general, understory cover of grasses and forbs would increase and plants would retain leaf surface for photosynthesis to maintain and increase root mass resulting in increased vigor. Improved seed production would increase potential for

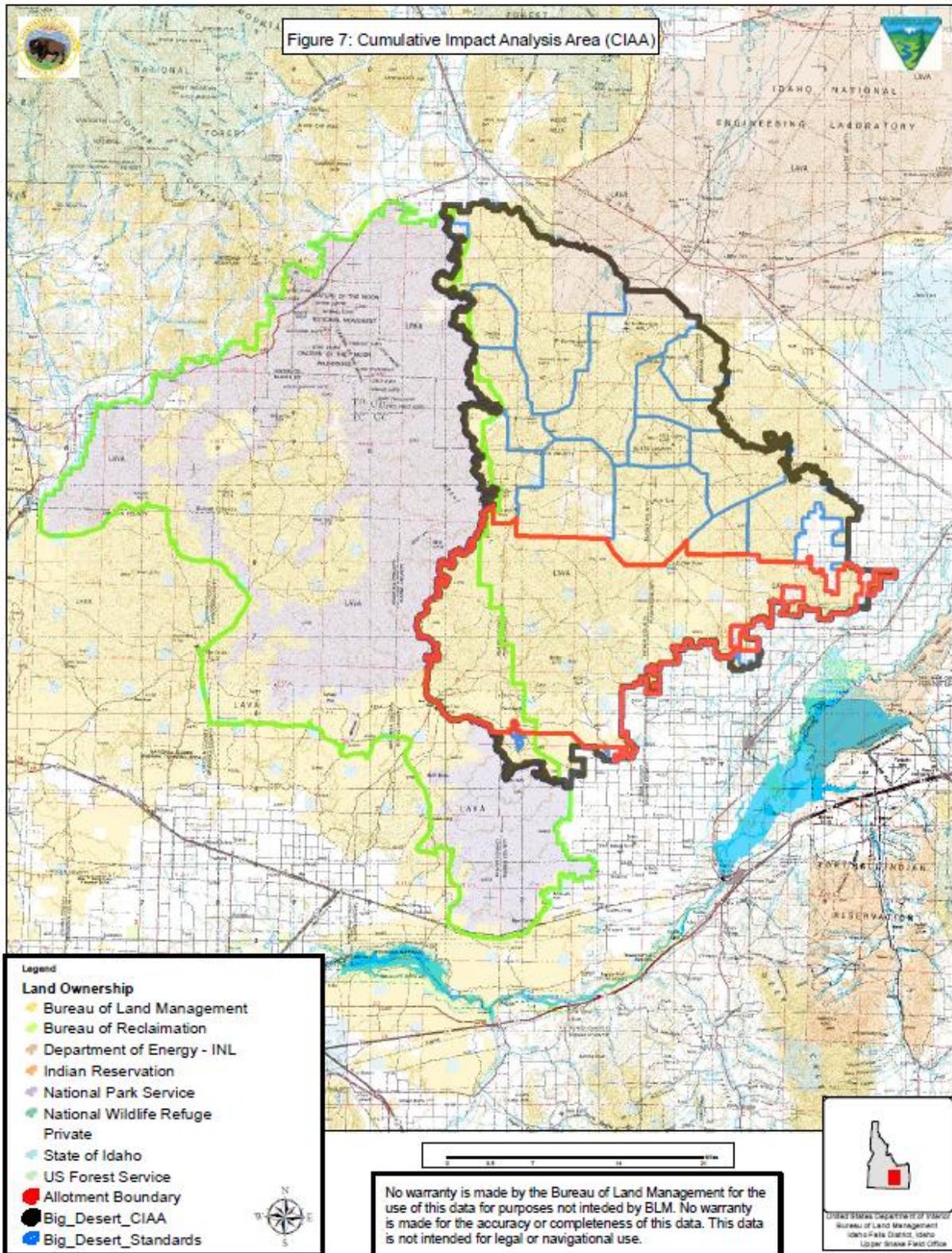
establishment of native or seeded species if suitable microsites are available and climatic conditions are suitable. These changes would result in increased diversity, cover, and height of grasses and forbs which would improve habitat quality (i.e., forage and cover) of native species for wildlife. Removal of grazing may reduce prey availability, due to increased cover, of raptors (Douglass and Frisina 1993). Existing patterns of habitat use and movement patterns of big game would continue due to no additional fence installation. Resident raptors and songbirds would continue to use existing perch sites for foraging and singing.

Little opportunity for establishment of native forbs, grasses and shrubs would occur in crested wheatgrass seedings, providing reduced quality habitat for wildlife species. There would be no potential impacts to burrowing species.

Impacts to wildlife would be less under Alternative D than under Alternatives A, B, or C due to the lack of disturbance and displacement, lack of additional infrastructure, and increased habitat quantity and quality.

#### **CHAPTER 4 - CUMULATIVE IMPACTS**

This section of the document discloses the incremental impact 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 Cumulative Impact Assessment Area (CIAA) for this analysis includes the Big Desert (Figure 7). The CIAA was delineated from the boundary of the American Falls, Lake Walcott, and Big Lost Hydrologic Unit as identified by the state of Idaho. The CIAA was further defined using administrative boundaries and major highways to delineate an area with similar climatic and anthropomorphic influences.



The CIAA contains approximately 623,381 total acres and includes portions of Bingham, Blaine, Butte, and Power counties. Table 6 describes the surface management status for lands within the CIAA.

Table 6 – Surface Management Status within the CIAA	
Bureau of Land Management	545,792 acres
Department of Energy – Idaho National Laboratory	24,592 acres
Idaho State Lands	8,827 acres
Private Property	43,267 acres
National Park Service	903 acres

A number of general habitat types or classifications are found across the CIAA. Table 7 list the acres within each cover classification based on the landscape classification map used for the USFO Analysis of Management Situation (AMS).

Table 7 – Habitat Types or Classifications within the CIAA	
Agriculture	15,617 acres
Annual Grasslands	5,461 acres
Bedrock-Cliffs-Scree	1,445 acres
Forest	430 acres
Perennial Grasslands	409,067 acres
Riparian-Wetland, including open water	82 acres
Sagebrush and Desert Shrublands	178,272 acres
Shrublands, including juniper and mountain mahogany	587 acres
Urban	891 acres
Volcanic Rock	11,528

Lands with special designations are found throughout the CIAA. The CIAA includes the entire China Cup Butte Wilderness Study Area (WSA)/Research Natural Area (RNA) and Cedar Butte and Great Rift WSAs. The WSAs encompass approximately 12,875 acres of public land within the CIAA. A portion of the Craters of the Moon National Monument is found within the CIAA, which encompasses approximately 75,536 acres.

#### *Past and Present Actions*

Past and present actions identified for the Big Desert which have impacted the natural environment to varying degrees include agricultural development, infrastructure such as highways and power lines, wildfires, livestock grazing, and recreation development. Table 8 summarizes actions which have occurred within the CIAA based on agency documents and GIS analysis.

Agricultural development has a long history in the CIAA. The majority of the agricultural development in the CIAA occurs in the southern end of the unit. Though Lewis and Clark first entered what would later become the state of Idaho in 1805, settlers were not attracted to the region until the 1880s. All of the settlements in the CIAA consist of small rural developments. The CIAA includes several counties, but generally includes the least densely populated areas within those counties. Private property makes up approximately 7% of the land base in the CIAA, and the majority of that property is in agricultural production.

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 supply the surrounding miners and settlers. Within the CIAA, ranching has declined over time since its peak in the early to mid-20<sup>th</sup> century as more lands were devoted to agriculture and urban development, and stricter controls of livestock use of public lands were established following the Taylor Grazing Act of 1934. Livestock production has remained relatively stable within the CIAA over the past 20 years and continues to be an important economic segment of the CIAA.

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. Big game hunting, camping, fishing, and motorized vehicle use are the primary recreational pursuits within the CIAA. Concentrated recreation use can result in habitat loss or alteration, as observed at camp sites. Dispersed recreation use may temporarily displace wildlife and cause physical damage to native vegetation, but by their very natures as dispersed, impacts are minor.

<b>Table 8. Past Present Actions in the CIAA.</b>	
<b>Type of Activity</b>	<b>Past and Present Actions</b>
<b><i>Agricultural Development</i></b>	
<i>Land in Agricultural Production</i>	<i>15,617 acres</i>
<b><i>Urban Development</i></b>	
<i>Lands developed for residential or industrial use</i>	<i>891 acres</i>
<b><i>Infrastructure</i></b>	
<i>Roads</i>	<i>1,342 miles</i>
<i>Recreation Facilities</i>	<i>&lt;10 acres associated with dispersed campsites and trailheads.</i>
<i>Fences</i>	<i>349 miles</i>
<i>Livestock Water Facilities</i>	<i>59</i>
<i>Mineral Material Sites</i>	<i>5 active pits affecting 199 acres</i>
<i>Powerline Corridor</i>	<i>28 miles affecting 689 acres</i>
<b><i>Wildfire</i></b>	
<i>Wildfires within the past 30 years</i>	<i>430,467 acres</i>
<b><i>Non-Native Seedings</i></b>	
<i>Area seeded to non-native species, not included under agricultural or urban development</i>	<i>135,081 acres</i>

<b>Livestock Grazing</b>	
<i>Number of Allotments</i>	<i>17 Active BLM Allotments comprising 544,891 public acres and 24,592 DOE acres managed by the BLM. 2 Vacant BLM Allotments comprising 643 acres.</i>
<i>Condition of Public Lands as Measured under ISRH</i>	<i>3 allotments meet all standards totaling 310,810 acres (17,075 acres of the total is DOE land managed by the BLM)  7 allotment making significant progress towards meeting all standards on 129,648 of 177,702 acres (6,000 acres of the total is DOE land managed by the BLM)  5 allotments not meeting standards but not due to current livestock grazing management on 8,915 of 22,886 acres  3 allotments not meeting standards due to livestock grazing on 44,363 of 57,090 acres. Management changes have since been implemented.  1 allotment is vacant and has not been assessed (120 acres)</i>

*Reasonable 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. Populations within the CIAA are expected to remain static in near future. 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. The level and character of livestock grazing within the CIAA is expected to remain at or near current levels barring any significant policy changes regarding grazing on federal lands which compose the majority of the CIAA. One new action has been identified as reasonably foreseeable. The Mountain States Transmission Intertie (MSTI), a high-voltage power line, may occur in the CIAA within the next ten years. At the current time, three alternative routes are being evaluated and a portion of a proposed route would occur in or adjacent to the CIAA.

*Impacts Associated with Past, Present, and Reasonably Foreseeable Actions*

Past and present actions have resulted in varying degrees of impact to the resources considered in the analysis area. Observable impacts are higher for agricultural development, infrastructure, and wildfire which have result in direct habitat loss, alteration, and/or fragmentation of the natural environment. Assuming an average impact width of 12 feet relative to roads, 4 feet relative to fences, 200 feet relative to powerlines, one-half acre per water development, 40 acres per gravel pit, 10 acres associated recreational facilities, including the acres identified as agricultural and urban development, and non-native seedings/acres impacted by wildfire, approximately 496,489 acres or 80% of the CIAA has been impacted. These actions have altered

or removed the native vegetation communities and introduced non-natural elements of form, line, and color that have altered and would continue to alter the characteristics of the visual landscape.

Unmanaged livestock (horses, cows, and sheep) grazing in the first half of the 20<sup>th</sup> century likely resulted in altered ecological conditions in the Big Desert. Use was historically higher adjacent to available water. As livestock grazing became more carefully managed in the areas, the ecological health of the rangelands improved. Since the majority of the land within the CIAA is public land, the condition of the vegetation communities on public lands authorized for grazing within the CIAA, which >99% has been assessed through ISRH. Of the approximately 570,126 acres of BLM within authorized grazing allotments, only 44,363 acres or 8% were determined to not be meeting one of the eight Idaho Rangeland Health Standards and livestock grazing was identified as a contributing factor.

Historically, big game species in the CIAA were used by Native Americans and early settlers as food and for their fur, teeth, bones and antlers or horns. Today big game are economically important for tourism, hunting and for their meat and other products. 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 health. Prior to the 1980s livestock typically grazed the CIAA in the spring and were gone by June resulting in little competition between big game and livestock. The addition of water troughs and wildlife guzzlers has resulted in big game species using the Big Desert as yearlong habitat instead of seasonal habitat increasing competition for available forage.

There is little historical information on the other wildlife species such as resident and migratory birds, reptile and small mammal species found in the CIAA. Historically, migratory bird response to past grazing pressure was likely similar to their response to current grazing practices, but on a much greater scale due to the unregulated grazing use. Compaction of soil, removal of plant materials and reduced water infiltration from grazing likely resulted in decreased grasses and forbs and an increase in shrub habitat. Changes in vegetation composition and structure ultimately results in a change in wildlife species abundance and diversity moving from species specialized for a certain habitat type to more generalist species.

Development of infrastructure and conversion of native habitats fragment the landscape reducing their value for some species, though other species may benefit from such development. While many wildlife species are mobile and have general habitat needs which may be met under a combination of the cover types or activities in the CIAA listed in Table 10, several species of concern have more restrictive habitat requirements.

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 important 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 Desert CIAA there are approximately 155,569 acres of Key sage-grouse habitat, which is approximately 25% of the CIAA. There are also 347,207 acres (56% 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 1,393 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 504,643 acres of PPH within the Big Desert 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 74,247 acres of PGH within the CIAA. Table 9 summarizes known impacts within PPH and PGH areas in the Big Desert CIAA:

Table 9– Impacts within PPH and PGH Areas in Big Desert CIAA.

	<b>Agricultural Development</b>	<b>Urban Development</b>	<b>Infrastructure</b>	<b>Wildfire</b>	<b>Livestock* Grazing</b>	<b>Non-Native Seedings</b>
PPH Acres of Perennial Grasslands	189	88	1,579	336,911	374	62,010
PPH Acres of Sagebrush	172	3	783	17,928	23,099	17,989
Total PPH Acres Affected	361	91	2,362	354,839	23,473	79,999
% of all PPH Acres	<1%	<1%	<1%	70%	5%	16%

	<b>Agricultural Development</b>	<b>Urban Development</b>	<b>Infrastructure</b>	<b>Wildfire</b>	<b>Livestock* Grazing</b>	<b>Non-Native Seedings</b>
PPH Acres of Perennial Grasslands	189	88	1,579	336,911	374	62,010
PGH Acres of Perennial Grasslands	489	135	267	62,347	20,890	23,897
PGH Acres of Sagebrush	177	1	38	890	75	968
Total PGH Acres Affected	666	136	305	63,237	20,965	24,865
% of all PGH Acres	3%	<1%	<1%	85%	28%	33%

\* Actions describe 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 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.

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, but livestock grazing does directly affect sage-grouse habitats by removing vegetation (foraging) or changing species composition under poor management practices (Connelly and Braun 1997). Of the actions identified within PPH and PGH areas, public lands acres affected by wildfire accounts for the largest amount (70%) of habitat impacted. Though it is important to note that because PPH is based on the highest lek attendance and lek density, past actions such as conversion to agriculture and urban development likely displaced sage-grouse, and because they no longer occupy these areas, the amount of these activities occurring in the defined PPH would be expected to be low. In total, the identified actions have impacted approximately <1% of PPH and PGH area. 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.

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 ( $\geq 500$  male sage-grouse) in the next 100 years.

No new primary threats such as conversion of sage-grouse habitat for agriculture and urbanization have been identified in the CIAA. One of the routes for the Mountain States Transmissions Intercept (MSTI) is proposed to run through the center of the CIAA. Approximately thirty nine miles of the transmission line would run through PPH and ten miles would run through PGH. MSTI would also potentially run through 525 acres of Key and 1500 acres of Restoration Type 1 sage-grouse habitats. No other foreseeable infrastructure projects (roads, energy development, etc.) have been identified within the CIAA. Expansion of invasive species and wildfire are foreseeable threats within the CIAA that are difficult anticipated in frequency or intensity. Loss of habitat associated with wildfire is likely to continue to be the greatest foreseeable threat to sage-grouse populations in the CIAA. Managing for healthy habitats in the CIAA provides the most 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 (e.g. new infrastructure development) are less likely to be implemented in PPH areas without adequate mitigation in the future (BLM 2011).

#### *Alternative A – No Action*

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 number of upland acres being maintained or improved to ensure the proper functioning of ecological processes and continued productivity and diversity of native plant species. Standard 4 and 8 would likely to continue to make progress and the amount of suitable habitat for wildlife species, including special status species that occur in the Big Desert would also continue to make progress. Under this alternative, there would no increase in the amount of PPH not meeting standards due to livestock.

#### *Alternative B – Proposed Action*

Alternative B would contribute very little to the collective impact associated with past, present and reasonably foreseeable future actions similar to Alternative A.

#### *Alternative C - Preferred Alternative*

Alternative C would contribute very little to the collective impact associated with past, present and reasonably foreseeable future actions in both the Big Desert Sheep Allotment and Countyline Forage Reserve Allotment. The impacts associated with the Big Desert Sheep Allotment would be similar to both Alternative A and B. The impacts needed to implement the forage reserve would include the construction of the boundary/pasture fences, the pipeline, corral, and the drilling of a well. These projects would result in approximately thirteen acres of habitat disturbance associated with infrastructure, an increase of approximately 0.4% within the

CIAA. The construction of the forage reserve fences would result in approximately a 4% increase in fence infrastructure within the CIAA. The forage reserve would provide the Upper Snake Field Office the increased flexibility to provide temporary grazing for livestock operators authorized to graze on public lands while particular areas are rested within the field office. Specific areas that could be rested would include burned areas, riparian areas, and areas impacted by restoration projects. In addition, a benefit of livestock use located in the proposed forage reserve at the appropriate time and intensity in crested wheatgrass seedings is to help facilitate the return of sagebrush. Standards within both the Big Desert Sheep and Countyline Forage Reserve Allotments would likely continue to meet or make progress and the amount of suitable habitat for wildlife species, including special status species that occur in the Big Desert would also continue to make progress.

#### *Alternative D – No Grazing*

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. The amount of suitable habitat for wildlife species, including special status species that occur in the CIAA would remain about the same.

## **CHAPTER 5 – SUMMARY AND CONCLUSIONS**

The results of the environmental assessment indicate that the actions described in Alternative A would maintain the existing conditions on the allotment. Standard 1 (*Watersheds*) would continue to be met, meaning that the existing soil and site stability and hydrologic function would be maintained. Standard 5 (*Seedings*) would also continue to be met functioning to maintain life form diversity, production, native animal habitat, nutrient cycling, energy flow, and the hydrologic cycle. Standards 4 (*Native Plant Communities*) and 8 (*Threatened, Endangered, and Sensitive Species Habitat*) would continue to make significant progress towards being met, meaning that the allotment would make progress towards providing biotic integrity that would result in healthy plant communities and wildlife habitat. Renewing the current grazing permits in the Big Desert Sheep Allotment would continue to aid in improving the sagebrush cover on the allotment. Under Alternative A, there would be no impact on economic or social values.

The rangeland health assessment indicates that Alternative B would continue to meet Standards 1 and 5, and make significant progress toward meeting Standards 4 and 8. Under Alternative B, the season of use would be extended an additional 40 days; 25 days in the spring and another 15 days in the fall. The change in the spring season in the Big Desert Sheep Allotment is identical to the season of use outlined in the Big Desert MFP. Lengthening the seasons of use on the end of the spring season would allow the permittees more flexibility to adjust grazing in light of range readiness. The majority of the time that makes up the ten day extension on the start of the spring season would be restricted to the crested wheatgrass seedings east of the powerline. This may reduce vigor and seed set of crested wheatgrass potentially providing an opportunity for native forbs, grasses and shrubs to become reestablished over time. Even though the season of

use is extended by 40 days, the total amount of AUMs would remain the same so there would be no additional reduction of grasses and forbs in the spring or impacts to shrubs in the fall. The fifteen day extension in the fall/winter season would occur while the native plants have gone dormant. The extended season of use would have minimal impact to the recovery of sagebrush species due to its low to moderate palatability. The ratio of the spring AUMs to fall/winter AUMs in the allotment would remain the same; there would be little or no change in utilization levels or patterns of use. The utilization level in the allotment would provide an opportunity for the majority of the preferred plants in the allotment to maintain or gain vigor and provide an opportunity to store carbohydrates and set seed on a regular basis. This in turn would allow the ecological condition of the native vegetation in the Big Desert Sheep Allotment to continue to make significant progress towards meeting standards. Under Alternative B, there would be no impact on economic or social values in the Big Desert Sheep Allotment.

The rangeland health assessment indicates that Alternative C would also continue to meet Standards 1 and 5, and continue to make significant progress toward meeting Standards 4 and 8 at a similar rate as Alternative B. Use of the Big Desert Sheep Allotment would be similar to Alternative B, except for the creation of the Countyline Forage Reserve Allotment. The establishment of the Countyline Forage Reserve Allotment would include authorizing the construction of a boundary/pasture fence, the construction of a pipeline with three trough sets and two wildlife guzzlers, the drilling of a well, the placement of a storage tank, corral, and the placement of one cattleguard in the forage reserve allotment. Both the Sage Grouse Comprehensive Conservation Strategy (2006) and the Big Desert Sage-grouse Planning Areas Conservation Plan (2010) suggest pursuing opportunities for forage reserves to accommodate livestock operators during implementation of rehabilitation and restoration activities. Currently, there are no alternative forage reserves identified in the Big Desert during natural recovery of untreated areas, or during rehabilitation and restoration establishment/rest periods for treated sites. These measures would facilitate resource objectives such as providing rest to improve herbaceous cover in certain nesting and brood-rearing areas. Another potential benefit of a forage reserve would be to reduce fuel loads where forage is being under-utilized, in turn reducing the frequency of wildfire and cause sagebrush to reestablish sooner onsite.

Seventeen miles of fences would be installed to establish the forage reserve. Fencing would be within the crested wheatgrass seedings. The proposed projects are all in conformance with IM 2012-043 (Greater Sage-Grouse Interim Management Policies and Procedures). A primary objective of the fence is to benefit greater sage-grouse habitat by increasing sagebrush cover in a crested wheatgrass seeding. The fence will no closer than 1.75 miles from the closest known lek and reflectors will be installed to improve fence visibility to sage-grouse. Approximately 2,800 acres of the proposed forage reserve was homesteaded and farmed in the past and later reconveyed back to the BLM. In addition to being farmed in the past, the forage reserve has been seeded into crested wheatgrass multiple times (1952 and 1971). Currently, over 80% of the proposed forage reserve is dominated by crested wheatgrass. The nearest occupied lek is greater than 1.75 miles from the proposed fence. Increased soil surface disturbance and compaction would be expected in a narrow area adjacent to the new fence, as livestock commonly trail along fences more intensively. The portion of the proposed fence located within 2 miles of an active lek would be made more visible by adding reflectors, if subsequent observations determine that sage-grouse are striking the new fence in other locations, the fence would be modified to make it

more visible by adding reflectors. The addition of three troughs and wildlife guzzlers would provide a water source for migratory birds and wildlife throughout the spring, summer, and fall. Grazing use in the allotment would only be authorized on a temporary basis to existing BLM operators whose permitted use has been suspended due to fire, vegetation rehabilitation projects, or other causes. The season of use in the allotment would be 4/1 – 12/30. The expanded season of use in the allotment would give the BLM the flexibility to determine the most appropriate time to graze. Grazing will be used as a tool to improve sage-grouse habitat. Increasing sagebrush would be the primary consideration in determining the authorized annual season of use and amount of use. Permitted AUMs in the new allotment would be 1,300. The AUMs needed to establish the forage reserve would be removed from the AUMs allocated in the Big Desert Sheep Allotment under the MFP.

The area that would be set aside for the forage reserve has been seeded into crested wheatgrass multiple times (1952 and 1971). By allowing both livestock species to graze within the forage reserve, the diversity of the plant community has potential to increase. The difference in food selection between the two species could reduce the competitive advantage of the crested wheatgrass, which dominates the area. The area of the proposed forage reserve is in priority sage grouse habitat that currently lacks sagebrush plants. Without taking some kind of action the crested wheatgrass seeding will continue to have an absence of sagebrush cover. Sagebrush cover would increase in the forage reserve considerably more in Alternative C than the other alternatives. Pellant and Lysne (2006) show that livestock grazing can facilitate an increase in the diversification of crested wheatgrass or similar seedings. Another benefit of livestock use at the appropriate time and intensity in crested wheatgrass seedings is to facilitate the return of sagebrush. Sagebrush cover in seedings is less under light to moderate spring livestock use, but increases under higher crested wheatgrass utilization levels for the same period of time (Frischknecht and Harris, 1968). The creation of the forage reserve would have a potential long term positive impact to the permittees in the USFO. Permittees in the field office that have been impacted by short term allotment closures, such as fire/non-fire vegetation treatments, wildfire recovery, or an opportunity to provide for a more rapid attainment of Idaho Standards for Rangeland Health in particular allotments or pastures, would have an opportunity to continue grazing on public land instead of reducing their herds or purchasing forage. The potential economic impact on operators authorized to use the forage reserve on a temporary basis would be a savings of between \$14,625 and \$128,245 when comparing the AUM cost for grazing public versus forage cost associated with private pasture or purchase of forage. The construction of boundary/pastures fences, well, pipeline, corral, wildlife guzzlers, and trough sets under Alternative C would result in additional cost incurred by the USFO in order to implement the forage reserve. Impacts to sage-grouse would be minimal due to the bedding area restrictions around leks and anti-collision reflectors being installed on new fence construction. Under Alternative C, livestock trailing may be authorized upon request through the Big Desert Sheep Allotment. With active herding, livestock grazing is minimal as animals remain moving. Forage use would be incidental. Physical damage of plants may occur along the trailing routes due the concentration of livestock in a small area along existing roads. While these areas generally have an increased level of disturbance compared to areas further from roads, as livestock authorized within the allotment tend to use these same routes for movement within the allotment, the impact would be greater under Alternative C within the small area authorized for trailing. The potential

impact associated with trailing activities would not impact the overall conditions of the allotment relative to ISRH.

The assessment indicates that Alternative D, which includes no livestock grazing in the allotment for a 10 year period, would continue to meet Standards 1 and 5 and continue to make progress toward meeting Standards 4 and 8. However, under Alternative D, there would be a substantial economic impact on the operators. The forage substitution cost to replace 31,066 AUMs would range from approximately \$349,493 to \$3,064,661 annually, depending upon forage substitution options available. If the herd are reduces as a result of decreased forage availability, the decreased gross revenue for the operators through herd reductions would range from approximately \$2,329,950 to \$3,417,260 annually. Under Alternative D, there would be no project implementation on BLM lands.

## **CHAPTER 6 - CONSULTATION AND COORDINATION**

### **Persons and Agencies Consulted**

Todd Mickelen, Phillips Brother Farm and Livestock, Matthew Phillips, John Phillips, Mays Land and Livestock, John Basterrechea, Mariana Basterrechea, Ball Brothers Sheep, Etcheverry Sheep Company, Jougard Sheep Company, Oxarango Lamb and Wool, Stanley Bingham, Ken Wixom, Mike Seacrest, Forrest Arthur, Garro Properties – Permittees  
Idaho Department of Fish and Game  
Idaho State Dept. of Agriculture  
Chairman, Land Use Policy Committee, Shoshone-Bannock Tribes  
Northwest Band of Shoshone Nation  
Chairman, Tribal Business Council, Shoshone-Bannock Tribes  
U.S. Fish and Wildlife Service  
National Park Service - Craters of the Moon National Monument & Preserve  
Shoshone BLM Field Office – Monument Manager  
Idaho Department of Lands  
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Scott Minnie: Economic and Social Values/Invasive, Non-Native Species/Vegetation/Soil Resources, Threatened, Endangered, and Sensitive Plants  
Theresa Mathis and Devin Englestead: Migratory Birds/Wildlife Resources/Threatened, Endangered, Sensitive Animals  
Marissa Guenther: Cultural Resources  
Shannon Bassista: Visual Resources, Wilderness Study Areas

<u>/s/ Scott Minnie</u>	<u>12/3/12</u>
Preparer	Date

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## APPENDIX A – TRAILING ROUTES IN BIG DESERT SHEEP ALLOTMENT

### Route 1

*Location:* Trailing from private pasture to pastures located in the Springfield Allotment in the spring.

*Number of days:* 3 (trail takes one day however, operators move at different times)

*Timing:* between 4/12 and 4/20

*Number of Livestock:* up to 1,300 cattle

*Point of entry:* Round Butte Road (county road) on south central part of the allotment

*Point of exit:* End of the Coffee Point Road located on the north central part of the allotment

*Route:* see Figure 3

*Holdover areas:* none

*Location:* Trailing from pastures located in the Springfield Allotment to private property in the fall

*Number of days:* 3 (trail takes one day however, operators move at different times)

*Timing:* 6/11 – 6/21 (trailing can occur between this ten day period)

*Number of Livestock:* up to 1,300 cattle

*Point of entry:* Coffee Point Road located on the northern part of the Big Desert Sheep Allotment

*Point of exit:* Private property located on the Round Butte Road

*Route(s):* see Figure 3

*Holdover areas:* none

### Route 2

*Location:* Trailing from private to Houghland Allotment in the spring.

*Number of days:* 2

*Timing:* between 3/30 and 4/10

*Number of Livestock:* up to 900 cattle

*Point of entry:* Round Butte Road (county road) on south central part of the allotment

*Point of exit:* End of the Coffee Point Road located on the north central part of the allotment

*Route:* see Figure 3

*Holdover areas:* overnight on fenced private land located in the Big Desert Sheep Allotment.

*Location:* Trailing from Houghland Allotment to private property in the fall.

*Number of days:* 2

*Timing:* between 9/1 and 9/7

*Number of Livestock:* up to 900 cattle

*Point of entry:* Coffee Point Road located on the northern part of the Big Desert Sheep Allotment

*Point of exit:* Private property located on the Round Butte Road

*Route:* see Figure 3

*Holdover areas:* overnight on fenced private land located in the Big Desert Sheep Allotment.

### Route 3

*Location:* Trailing from private property to Rock Corral Allotment.

*Number of days:* 3

*Timing:* between 4/13 and 4/20

*Number of Livestock:* up to 400 cattle

*Point of entry:* Round Butte Road (county road) on south central part of the allotment as well as other adjacent county roads located in the southern part of the Big Desert Sheep Allotment

*Point of exit:* existing roads such as the Coffee Point Road located on the north central part of the allotment

*Route:* see Figure 3

*Holdover areas:* Lower pastures of Rock Corral when trailing to two upper pastures.

*Location:* Trailing from Rock Corral Allotment to private property in the spring.

*Number of days:* 3

*Timing:* between 7/1 and 7/7

*Number of Livestock:* 400 cattle

*Point of entry:* Existing roads located in the north central part of the allotment.

*Point of exit:* Round Butte Road (county road) on south central part of the allotment as well as other adjacent county roads located in the southern part of the Big Desert Sheep Allotment

*Route:* see Figure 3

*Holdover areas:* Lower pastures of Rock Corral when trailing to two upper pastures.

### Route 4

*Location:* Trailing from private to Rock Corral Allotment in the fall/winter.

*Number of days:* 3 day

*Timing:* between 10/13 and 11/1

*Number of Livestock:* 400 cattle

*Point of entry:* Round Butte Road (county road) on south central part of the allotment as well as other adjacent county roads located in the southern part of the Big Desert Sheep Allotment

*Point of exit:* Existing roads located in the northern part of the allotment.

*Route:* see Figure 3

*Holdover areas:* Lower pastures of Rock Corral when trailing to two upper pastures.

*Location:* Trailing from Rock Corral Allotment in the fall/winter to private.

*Number of days:* 3 day

*Timing:* between 11/1 and 12/18

*Number of Livestock:* 400 cattle

*Point of entry:* Existing roads located in the northern part of the allotment.

*Point of exit:* Round Butte Road (county road) on south central part of the allotment as well as other adjacent county roads located in the southern part of the Big Desert Sheep Allotment

*Route:* see Figure 3

*Holdover areas:* Lower pastures of Rock Corral when trailing to two upper pastures.

## APPENDIX B – DETERMINATION DOCUMENT FOR BIG DESERT SHEEP ALLOTMENT

### SECTION 1 – IS A 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)*