



## ENVIRONMENTAL ASSESSMENT

### Grazing Permit Renewal for Patelzik Creek and Southwest Allotments

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## **CHAPTER 1- INTRODUCTION**

### **Background**

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

The two allotments addressed in this Environmental Assessment lie in Jefferson and Clark Counties in Idaho. Patelzik Creek includes 6,308 acres of BLM land, 3,437 acres of private land, and 563 acres of state land about four miles west of Spencer, Idaho (Figure 1). There are seven pasture divisions in Patelzik Creek Allotment. Southwest Allotment includes 2,530 acres of BLM land about eight miles west of Hamer, Idaho (Figure 1). There are three pastures in Southwest Allotment (Figure 1). There are two permittees in Patelzik Creek Allotment. One of the permittees in Patelzik Creek Allotment is also authorized to graze Southwest Allotment.

Previous Rangeland Health Assessments were conducted in 1999 in Patelzik Creek and Southwest Allotments. Patelzik Creek Allotment was determined to be meeting Standards 1 (Watersheds), 4 (Native Plant Communities), and 7 (Water Quality) of the Standards for Rangeland Health in 1999. Standards 2 (Riparian Vegetation), 3 (Stream Channels and Floodplains), and 8 (Special Status Species Habitat) were not being met, and livestock grazing management was determined to be a significant factor. Standard 5 (Seeded Plant Communities) was not assessed on Patelzik Creek Allotment in 1999. The subsequent permit renewal Environmental Assessment proposed a change to the grazing rotation on Patelzik Creek Allotment, and the permit was renewed incorporating the change. The grazing use on Patelzik Creek Allotment has followed the permit issued in 1999, with minor changes to the pasture rotation made in 2008. Southwest Allotment was determined to be meeting Standards 1, 4, 5, and 8 of the Standards for Rangeland Health in 1999. The subsequent permit renewal Environmental Assessment did not propose any changes to the grazing rotation on Southwest Allotment, and the permit was renewed without changes. The grazing use on Southwest Allotment has followed the permit issued in 1999.

### **Purpose and Need for Action**

The Medicine Lodge Resource Management Plan (RMP) identifies Patelzik Creek and Southwest Allotments as available for domestic livestock grazing (DOI-BLM 1985). Where consistent with the goals and objectives of the RMP, and Idaho's Standards for Rangeland Health and Guidelines for Livestock Grazing Management (1997), the BLM authorizes allocation of forage for livestock to qualified operators. The purpose of the Proposed Action and

alternatives is to authorize livestock grazing in a manner that maintains or improves allotment resource conditions and achieves the objectives and desired conditions described in the RMP. The analysis and authorization is needed because changes to the authorized use have been identified for both allotments.

The Evaluation for Patelzik Creek Allotment completed in December 2011 identified that Standards 1, 2, 3, 4, 5, 7, and 8 of the Idaho Standards for Rangeland Health are being met. Standard 6 (Exotic Plant Communities) does not apply to Patelzik Creek Allotment. The Evaluation for Southwest Allotment completed in December 2011 identified that Standards, 1, 4, 5 and 8 of the Idaho Standards for Rangeland Health are being met. Standards 2, 3, 6, and 7 do not apply to Southwest Allotment.

## **Location**

Patelzik Creek Allotment is located in Townships 11 and 12 North, Ranges 35 and 36 East, in several sections. Patelzik Creek Allotment is located in Clark County, Idaho about three miles west of Spencer, Idaho (Figure 1). Southwest Allotment is located in Townships 7 and 8 North, Range 35 East, in several sections. Southwest Allotment is located in Jefferson County, Idaho about eight miles west of Hamer, Idaho (Figure 1).

## **Conformance with the Applicable Land Use Plan**

The Proposed Action and alternatives have been reviewed for conformance with the Medicine Lodge Resource Management Plan. The Proposed Action and Alternative Action are in conformance with the RMP objective to:

“Maintain or improve existing perennial forage plants, maintain soil stability, stabilize areas currently in downward trend, and increase availability of perennial forage plants (DOI-BLM 1985).”

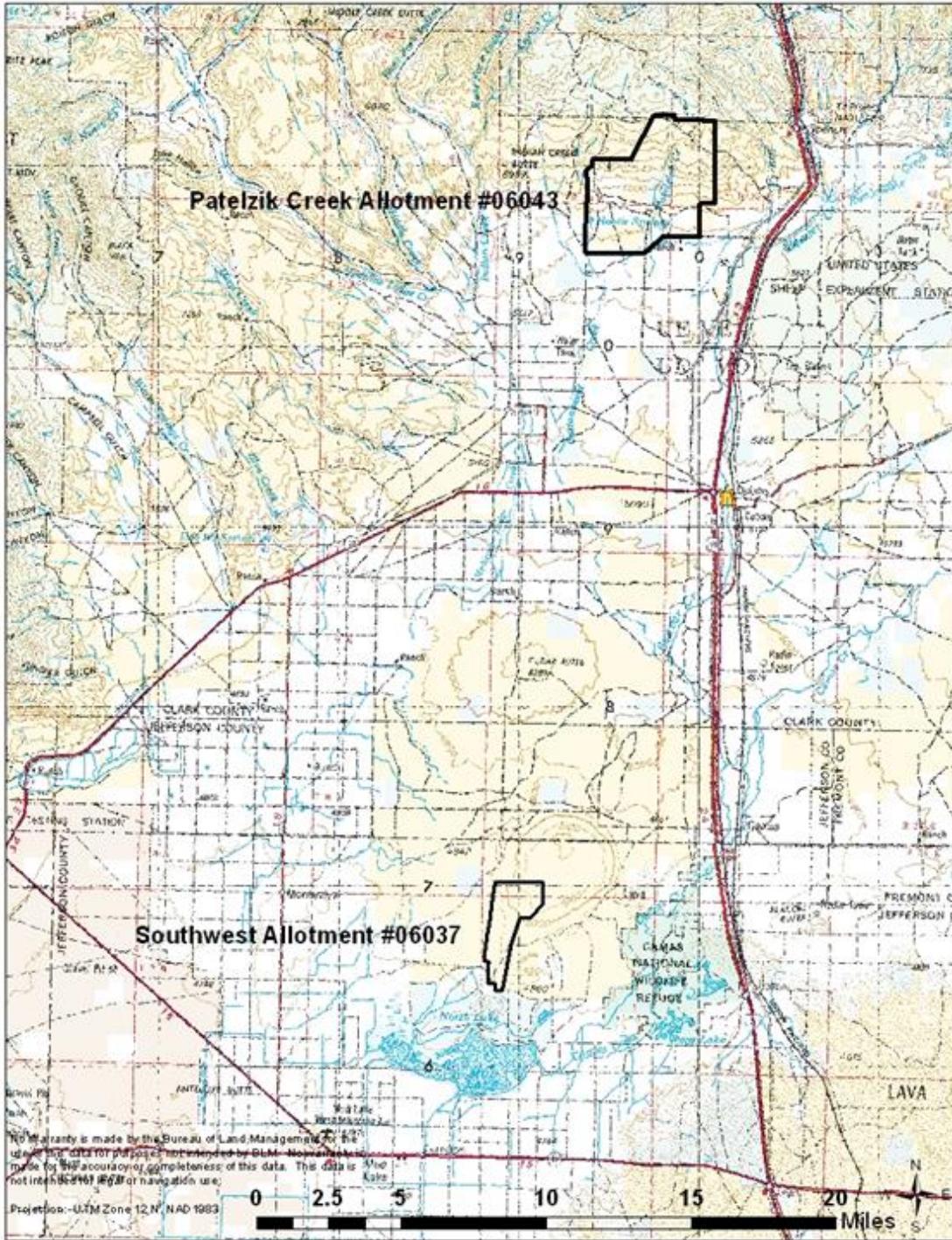
The Medicine Lodge RMP placed Patelzik Creek Allotment in the “Improve” category, and set objectives of reducing sagebrush density through prescribed burns and improving the riparian conditions along Patelzik Creek. Two division fences were built and a grazing rotation was developed to achieve better livestock distribution and improve riparian conditions. A prescribed burn was also conducted in 1991 on a portion of Patelzik Creek Allotment. The Medicine Lodge RMP placed Southwest Allotment in the Maintain category, meaning that there were no projects or improvements needed on the allotment at that time.

## **Relationship to Statutes, Regulations or Other Plans**

The 1868 Fort Bridger Treaty, between the United States and the Shoshone and Bannock Tribes, reserves the Tribes right to hunt, fish, gather, and exercise other traditional uses and practices on

unoccupied federal lands. Under 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.

**Figure 1. Location of Patelzik Creek and Southwest Allotments.**



Grazing administration exclusive of Alaska is governed under the Code of Federal Regulations 43 CFR §4100- Grazing Administration. The purpose of these regulations is to provide uniform guidance for the 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. Subsequent to this approval, livestock management practices must be evaluated in relation to the approved standards and guidelines.

Patelzik Creek Allotment was evaluated to assess whether the allotment was meeting requirements of the Idaho Standards for Rangeland Health and Guidelines for Livestock Grazing Management (ISRH). A Rangeland Health Evaluation was issued for the allotment. Standards 1 (Watersheds), 2 (Riparian Vegetation), 3 (Stream Channels and Floodplains), 4 (Native Plant Communities), 5 (Seeded Plant Communities), 7 (Water Quality), and 8 (Special Status Species Habitat) were being met on Patelzik Creek Allotment. Standard 6 (Exotic Plant Communities) is not applicable.

Southwest Allotment was evaluated to assess whether the allotment was meeting requirements of the Idaho Standards for Rangeland Health and Guidelines for Livestock Grazing Management (ISRH). A Rangeland Health Evaluation was issued for the allotment. Standards 1 (Watersheds), 4 (Native Plant Communities), 5 (Seeded Plant Communities), and 8 (Special Status Species Habitat) were being met on Southwest Allotment. Standards 2 (Riparian Vegetation), 3 (Stream Channels and Floodplains), Standard 6 (Exotic Plant Communities), and 7 (Water Quality), is not applicable.

## **Public Contact and Issue Identification**

In the spring of 2011, the USFO sent letters to the permittee, interested publics, the Shoshone-Bannock Tribes, and other agencies inviting them to participate in the field assessment for Patelzik Creek Allotment. The permittees attended and participated in the field assessment. In November of 2011, the allotment assessments (USDI-BLM, 2011) for Patelzik Creek and Southwest Allotments were sent to these parties requesting comments and additional data. No information was received. In December 2011, the USFO sent the allotment evaluations (USDI-BLM, 2011) and potential management alternatives to the parties and they were invited to identify related issues. The permittees provided information that helped to develop the proposed action. No additional data or comments were received regarding grazing permit renewal in Patelzik Creek and Southwest Allotments.

## CHAPTER 2 – NO ACTION AND OTHER ALTERNATIVES

### Alternative A (No Action) – Renew Unmodified Grazing Permits

Under a No Action alternative, the Upper Snake Field Manager would authorize continued livestock grazing under the same mandatory terms and conditions as the current permits. Under Alternative A, no additional improvements or projects would be authorized in Patelzik Creek and Southwest Allotments. The existing pasture boundaries and watering locations for Patelzik Creek Allotment are shown in Figure 2, below. The existing pasture boundaries and watering locations for Southwest Allotment are shown in Figure 3, below.

#### Alternative A Mandatory Terms and Conditions:

##### Southwest #06043

# / class of livestock	Season	%PL	Type	AUMs*
360 cows	2/15 – 3/15	30	ACTIVE	103
460 cows	3/16 – 4/15	50		234
460 cows	4/16 – 4/30	90		204

\*Southwest Allotment contains 545 total BLM AUMs of active use.

#### Other Terms and Conditions for Southwest Allotment:

Range Improvements must be maintained to BLM Standards by the turnout dates for each allotment on this permit. All livestock water troughs must have a functional wildlife escape ramp and be appropriately floated. Installation and maintenance of wildlife escape ramps are the responsibility of the permittee.

The Allotment(s) listed on this grazing permit is subject to requirements 43 CFR Subpart 4180 – Fundamentals of Rangeland Health and Standards and Guidelines for Grazing Administration. This permit shall be modified, if necessary, to meet these requirements upon completion of a standards and guidelines assessment and determination as scheduled by the authorized officer.

##### Patelzik Creek #06043

# / class of livestock	Season	%PL	Type	AUMs
380 cows	5/10 – 5/24	76	ACTIVE	142
480 cows	5/25 – 6/21	76		336
93 cows	7/01 – 10/10	76		237
300 cows	10/25 – 11/30	76		277
125 cows	5/05 – 7/05	37	ACTIVE	94
125 cows	7/06 – 8/31	87		204
125 cows	9/01 – 11/07	37		103
6 horses	5/05 – 10/31	37		13

\*Patelzik Creek Allotment is 61 percent Public Land. The allotment contains 10,307 acres, of which 6,308 acres are BLM land, 563 acres are State of Idaho land, and 3,437 acres are private land. The allotment contains 1,406 active BLM AUMs, 125 State AUMs, and 764

private AUMs. The differing amounts of %PL shown on the permitted use reflect the differing amounts of %PL in the pastures being used.

Other Terms and Conditions for Patelzik Creek Allotment:

Salting locations must be established at least one-quarter mile from streams, unless geographic features or allotment boundaries restrict options to a lesser distance.

Key herbaceous riparian vegetation will have a minimum stubble height of 4 inches on the streambank, along the greenline, after the grazing season.

Key riparian browse vegetation will not be used more than 30% of the current annual twig growth that is within the reach of the animals.

No more than 20 percent of the streambanks will be sheared by livestock hoof action annually.

L&M Ranch shall have exclusive use of Pastures A and G (see attached schedule) and that 160 AUMs and 70 AUMs of their total permitted use are within these pastures respectively.

Shively Ranch shall have exclusive use of Pastures E and F and that 210 AUMs of their total permitted use are within these pastures.

Cattle will be rotated through the pastures on a scheduled basis (see attached schedule). The livestock operator will notify BLM personnel of turnout date and move dates between pastures.

Range improvements must be maintained to BLM standards by the turnout dates for each allotment on these permits. All livestock water troughs must have a functional wildlife escape ramp and be appropriately floated. Installation and maintenance of wildlife escape ramps are the responsibility of the permittee.

The allotments listed on these grazing permits are subject to requirements 43 CFR Subpart 4180 – Fundamentals of Rangeland Health and Standards and Guidelines for Grazing Administration. These permits shall be modified, if necessary, to meet these requirements upon completion of a Standards and Guidelines Assessment and Determination as scheduled by the authorized officer.

Alternative A Grazing Plan for Patelzik Creek Allotment:

**Years 2013, 2015, 2017, 2019, 2021:**

<i>L&amp;M Cattle Company</i>				
<u>Pasture</u>	<u>#s / class</u>	<u>Dates</u>	<u>Days</u>	<u>AUMs</u>
Pasture G	380 cattle	5/05 – 5/24	19	70
Pasture A	480 cattle	5/25 – 6/10	17	160
Pasture B (upper)	480 cattle	6/11 – 6/24	14	168
Pasture C	480 cattle	6/25 – 6/30	6	72
Pasture C	93 cattle	7/01 – 7/20	20	47
Pasture D	93 cattle	7/21 – 10/10	82	191

<i>Shively Brothers</i>				
<u>Pasture</u>	<u>#s / class</u>	<u>Dates</u>	<u>Days</u>	<u>AUMs</u>
Pasture E and F	6 horses	5/05 – 10/31	179	13
Pasture E and F	125 cattle	5/05 – 7/05	61	94
Pasture B (lower)	125 cattle	7/06 – 8/31	57	204
Pasture E and F	125 cattle	9/01 – 11/7	67	103

**Years 2014, 2016, 2018, 2020, 2022:**

<i>L&amp;M Cattle Company</i>				
<u>Pasture</u>	<u>#s / class</u>	<u>Dates</u>	<u>Days</u>	<u>AUMs</u>
Pasture G	380 cattle	5/05 – 5/24	19	70
Pasture A	480 cattle	5/25 – 6/10	17	160
Pasture B (lower)	480 cattle	6/11 – 6/20	10	120
Pasture D	480 cattle	6/21 – 6/30	10	120
Pasture D	93 cattle	7/01 – 8/20	51	119
Pasture C	93 cattle	8/21 – 10/10	51	120

<i>Shively Brothers</i>				
<u>Pasture</u>	<u>#s / class</u>	<u>Dates</u>	<u>Days</u>	<u>AUMs</u>
Pasture E and F	6 horses	5/05 – 10/31	179	13
Pasture E and F	125 cattle	5/05 – 7/05	61	94
Pasture B (lower)	125 cattle	7/06 – 8/31	26	93
Pasture B (upper)	125 cattle	8/01 – 8/31	31	111
Pasture E and F	125 cattle	9/01 – 11/7	67	103

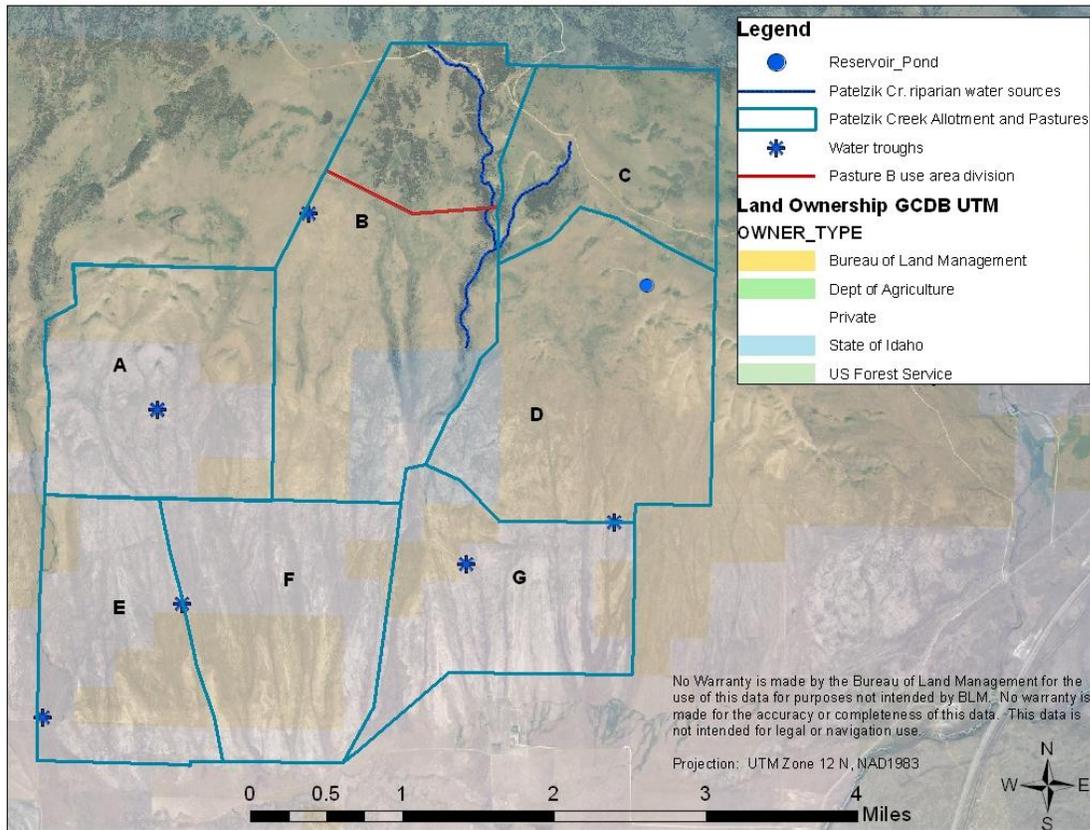
Shively Brothers ranch would have exclusive use of pastures E and F, and 210 AUMs of their total permitted use are within these pastures. Pastures E and F would be alternated spring and fall every other year.

L&M ranch would have exclusive use of pastures G and A, and 70 AUMs and 160 AUMs of their total permitted use would be within these pastures, respectively.

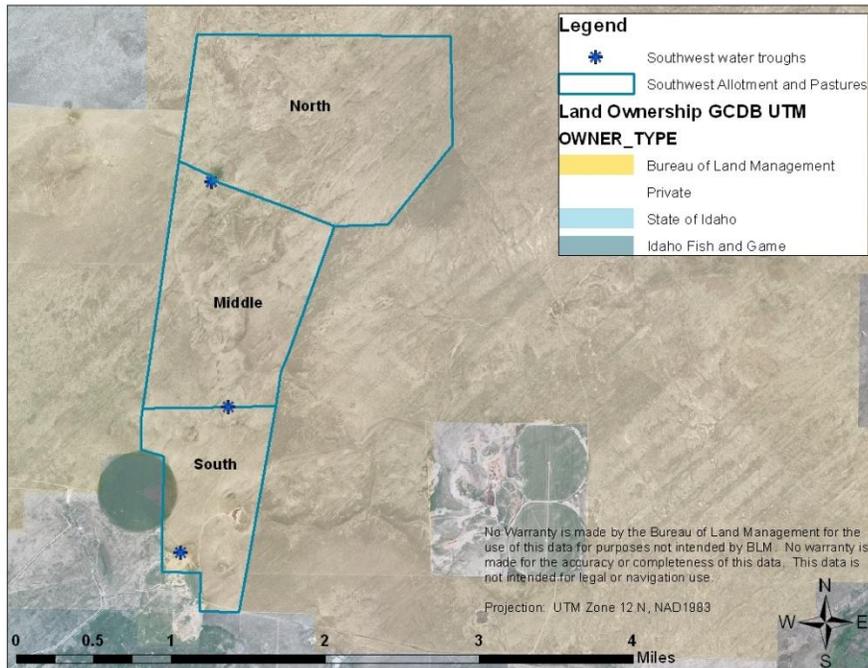
Pastures E and F would be billed at 37% Public Land (PL) and pastures B, C, and D would be billed at 87% PL for Shively Brothers and 76% PL for L&M. Pastures G and A are billed at 70 and 160 AUMs, respectively.

Cattle are rotated through the pastures on the above schedule. The livestock operators notify BLM personnel of turnout date and move dates between pastures.

**Figure 2. Patelzik Creek Allotment Pastures, Use Areas, and Water Sources – Alt. A**



**Figure 3. Southwest Allotment Pastures and Water Sources – Alt. A**



## Alternative B (Proposed Action) –Adjust Southwest Grazing Season and Patelzik Creek Grazing Rotation

The permittee has requested changes in management as described below to meet the purpose and need for action. Under the Proposed Action, the Upper Snake Field Manager would authorize continued grazing within the allotments with changes discussed below. Under Alternative B, no additional improvements or projects would be authorized in Patelzik Creek and Southwest Allotments.

### Grazing Use Changes:

1. Adjust the season of use on Southwest Allotment from 2/15 – 4/30 to 3/1 – 5/10.
2. Divide Pasture B (lower) in Patelzik Creek Allotment into two use areas, Pasture B (lower) and Pasture B (middle), as shown in Figure 4.
3. Adjust the grazing rotation on Patelzik Creek Allotment to allow the Shivelys to use Pasture B (upper) and Pasture B (middle) instead of Pasture B (lower). L&M Cattle would use Pasture B (lower).

### Alternative B Mandatory Terms and Conditions:

#### Southwest #06043

# / class of livestock	Season	%PL*	Type	AUMs*
419 cows	3/1 – 3/25	30	ACTIVE	103
460 cows	3/26 – 4/25	50		234
460 cows	4/26 – 5/10	90		204

\*Southwest Allotment contains 545 total BLM AUMs of active use.

#### Patelzik Creek #06043

# / class of livestock	Season	%PL*	Type	AUMs
380 cows	5/10 – 5/24	76	ACTIVE	142
480 cows	5/25 – 6/21	76		336
93 cows	7/01 – 10/10	76		237
300 cows	10/25 – 11/30	76		277
125 cows	5/05 – 7/05	37	ACTIVE	94
125 cows	7/06 – 8/31	87		204
125 cows	9/01 – 11/07	37		103
6 horses	5/05 – 10/31	37		13

\*Patelzik Creek Allotment is 61 percent Public Land. The allotment contains 10,307 acres, of which 6,308 acres are BLM land, 563 acres are State of Idaho land, and 3,437 acres are private land. The allotment contains 1,406 active BLM AUMs, 125 State AUMs, and 764 private AUMs. The differing amounts of %PL shown on the permitted use reflect the differing amounts of %PL in the pastures being used.

Other Terms and Conditions for Patelzik Creek Allotment:

1. Salting locations would be established at least one-quarter mile from streams, unless geographic features or allotment boundaries restrict options to a lesser distance.
2. Key herbaceous riparian vegetation will have a minimum stubble height of 4 inches on the streambank, along the greenline, after the growing season.
3. Key riparian browse vegetation will not be used more than 30 percent of the current annual twig growth that is within the reach of the animals.
4. No more than 20 percent of the streambanks will be sheared by livestock hoof action annually.
5. L&M Ranch shall have exclusive use of Pastures A and G (see attached schedule) and that 160 AUMs and 70 AUMs of their total permitted use are within these pastures respectively.
6. Shively Ranch shall have exclusive use of Pastures E and F and that 210 of their total permitted use are within these pastures.
7. Cattle will be rotated through the pastures on a scheduled basis (see attached schedule). The livestock operator will notify BLM personnel of turnout date and move dates between pastures.

In addition to the Mandatory Terms and Conditions, the permittees would follow the **Other Terms and Conditions Common to Alternatives B and C**, as described below.

Alternative B Grazing Plan for Patelzik Creek Allotment:

**Years 2013, 2015, 2017, 2019, 2021:**

<i>L&amp;M Cattle Company</i>				
<u>Pasture</u>	<u>#s / class</u>	<u>Dates</u>	<u>Days</u>	<u>AUMs</u>
Pasture G	380 cattle	5/05 – 5/24	19	70
Pasture B (lower)	480 cattle	5/25 – 5/29	5	60
Pasture A	480 cattle	5/30 – 6/15	17	160
Pasture B (lower)	480 cattle	6/16 – 6/20	5	60
Pasture D	480 cattle	6/21 – 6/30	10	142
Pasture D	93 cattle	7/01 – 8/20	51	119
Pasture C	93 cattle	8/21 – 10/10	51	120

<i>Shively Brothers</i>				
<u>Pasture</u>	<u>#s / class</u>	<u>Dates</u>	<u>Days</u>	<u>AUMs</u>
Pasture E and F	6 horses	5/05 – 10/31	179	13
Pasture E and F	125 cattle	5/05 – 7/05	61	94
Pasture B (middle)	125 cattle	7/06 – 8/9	35	125
Pasture B (upper)	125 cattle	8/10 – 8/31	22	79
Pasture E and F	125 cattle	9/01 – 11/7	67	103

**Years 2014, 2016, 2018, 2020, 2022:**

<i>L&amp;M Cattle Company</i>				
<u>Pasture</u>	<u>#s / class</u>	<u>Dates</u>	<u>Days</u>	<u>AUMs</u>
Pasture G	380 cattle	5/05 – 5/24	19	70
Pasture B (lower)	480 cattle	5/25 – 5/29	5	60
Pasture A	480 cattle	5/30 – 6/15	17	160
Pasture B (lower)	480 cattle	6/16 – 6/20	5	60
Pasture C	480 cattle	6/21 – 6/30	10	158
Pasture C	93 cattle	7/01 – 7/20	20	47
Pasture D	93 cattle	7/21 – 10/10	82	191

<i>Shively Brothers</i>				
<u>Pasture</u>	<u>#s / class</u>	<u>Dates</u>	<u>Days</u>	<u>AUMs</u>
Pasture E and F	6 horses	5/05 – 10/31	179	13
Pasture E and F	125 cattle	5/05 – 7/05	61	94
Pasture B (middle)	125 cattle	7/06 – 8/9	35	125
Pasture B (upper)	125 cattle	8/10 – 8/31	22	79
Pasture E and F	125 cattle	9/01 – 11/7	67	103

Shively Brothers ranch would have exclusive use of pastures E and F, and 210 AUMs of their total permitted use are within these pastures. Pastures E and F would be alternated spring and fall every other year.

L&M ranch would have exclusive use of pastures G and A, and 70 AUMs and 160 AUMs of their total permitted use would be within these pastures, respectively.

Pastures E and F would be billed at 37% Public Land (PL) and pastures B, C, and D would be billed at 87%PL for Shively Brothers and 76%PL for L&M. Pastures G and A are billed at 70 and 160 AUMs, respectively.

Cattle are rotated through the pastures on the above schedule. The livestock operators notify BLM personnel of turnout date and move dates between pastures.

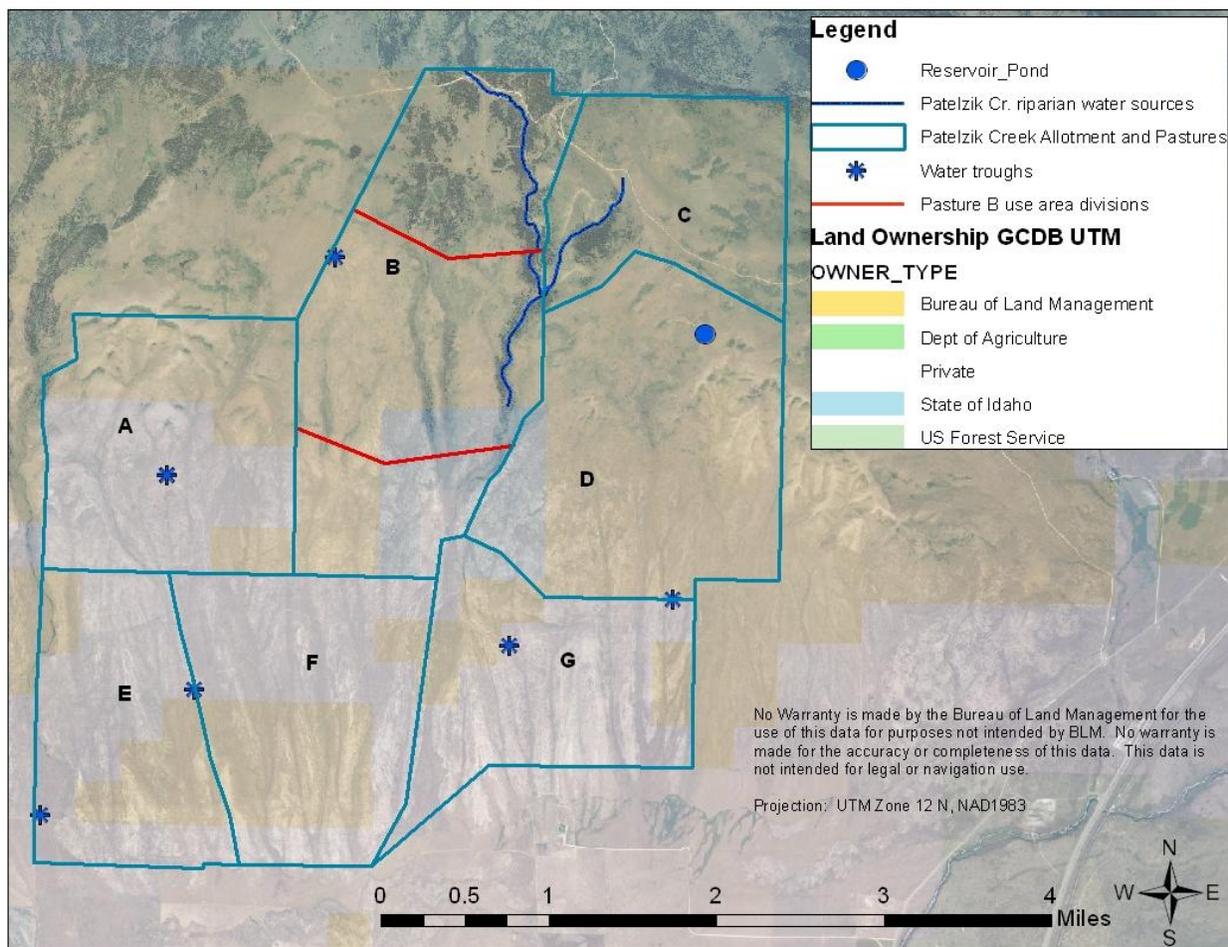
Grazing Use Indicators and Criteria for Alternative B:

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

1. *Upland Utilization* – Utilization studies would be conducted in key upland areas and use areas would be mapped. Average utilization should be no more than 50 percent of the annual growth of key native upland species.
2. *Upland Trend* – Trend studies would be conducted in the uplands in key areas. One photo plot would be established at each key area. Long-term trend studies would be conducted using approved BLM methods.

3. *Sage Grouse Habitats* – Grazing use levels in pastures with key or priority 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 Upper Snake Local Working Group’s Plan for Increasing Sage Grouse Populations (USLWG, 2009), the 2006 Conservation Plan for Greater Sage Grouse in Idaho (ISGAC, 2006), and the BLM’s Greater Sage-Grouse Interim Management Policies and Procedures (USDI-BLM, 2011a).

**Figure 4. Patelzik Creek Allotment Pastures, Use Areas, and Water Sources – Alt. B**



## **Alternative C (Preferred Alternative) – Adjust Southwest Public Land Calculation, and Adjust the Grazing Season for One Patelzik Creek Permit in Addition to Alternative B Actions**

The BLM has identified the need for a second management option as described below to meet the purpose and need for action. Under the Alternative Action, the Upper Snake Field Manager would authorize continued grazing within the allotments with changes discussed below. This management option would include all the actions described under Alternative B, with two additional changes. Under Alternative C, no additional improvements or projects would be authorized in Patelzik Creek and Southwest Allotments.

### Grazing Use Changes:

1. Implement Alternative B actions 1, 2, and 3, above.
2. Adjust the percent public land (%PL) in Southwest Allotment to reflect that the allotment is entirely made up of public land. There is no exchange of use for this allotment and there are no private or other acres within the allotment boundary. To account for this change in the percent public land, the livestock numbers would be adjusted accordingly.
3. Adjust authorized season on Patelzik Creek to close the existing gap in grazing use between 6/21 and 7/1 that exists for one permittee. There is no increase in AUMs, because the existing grazing rotation already included livestock use during this period (see Alternative A grazing plan).
4. Adjust the percent public land (%PL) on the permits for Patelzik Creek Allotment to more accurately reflect different amounts of public land in the pastures. The existing L&M Cattle permit shows that all pastures used by L&M contain 76%PL, which is not accurate. Pasture G contains 22%PL, Pastures A and B (lower) contain 46%PL, and Pastures C and D contain 100%PL. The areas used in late fall would continue to be authorized at 76%PL. The existing Shively Brothers permit shows that the pastures used by Shively Brothers contain 37 and 87%PL, which is not accurate. Pastures E and F contain 35%PL and Pasture B (middle and upper) contains 91%PL.

### Alternative C Mandatory Terms and Conditions:

Southwest #06043

# / class of livestock	Season	%PL*	Type	AUMs
233 cows	3/1 – 5/10	100	ACTIVE	545

### Other Terms and Conditions for Southwest Allotment:

1. Permittee would be allowed to graze up to 460 cows in Southwest Allotment, as long as the above permitted AUMs are not exceeded.

Patelzik Creek #06018

# / class of livestock	Season	%PL*	Type	AUMs
380 cows	5/10 – 5/24	22	ACTIVE	41
480 cows	5/25 – 6/20	46		196
480 cows	6/21 – 6/30	100		158
93 cows	7/01 – 10/10	100		312
300 cows	10/25 – 11/30	76		277
125 cows	5/05 – 7/05	35	ACTIVE	89
125 cows	7/06 – 8/31	91		213
125 cows	9/01 – 11/07	35		98
6 horses	5/05 – 10/31	35		12

\*Patelzik Creek Allotment is 61 percent Public Land. The allotment contains 10,307 acres, of which 6,308 acres are BLM land, 563 acres are State of Idaho land, and 3,437 acres are private land. The allotment contains 1,406 active BLM AUMs, 125 State AUMs, and 764 private AUMs. The differing amounts of %PL shown on the permitted use reflect the differing amounts of %PL in the pastures being used.

Other Terms and Conditions for Patelzik Creek Allotment:

1. Key herbaceous riparian vegetation will have a minimum stubble height of 4 inches on the streambank, along the greenline, after the growing season.
2. Key riparian browse vegetation will not be used more than 30 percent of the current annual twig growth that is within the reach of the animals.
3. No more than 20 percent of the streambanks will be sheared by livestock hoof action annually.

In addition to the Mandatory Terms and Conditions, the permittees would follow the **Other Terms and Conditions Common to Alternatives B and C**, as described below.

Alternative C Grazing Plan for Southwest Allotment:

The basic schedule for pasture rotation would be as outlined in the table below. Any changes to the basic schedule would be made through application prior to livestock turnout.

Cattle #s	dates	days	% PL	AUMs
135	3/01 – 3/25	25	100	111
225	3/26 – 4/25	31	100	229
415	4/26 – 5/10	15	100	205

Alternative C Grazing Plan for Patelzik Creek Allotment:

**Years 2013, 2015, 2017, 2019, 2021:**

L&M Cattle Company

Pasture	Cattle #s	dates	days	% PL	AUMs
Pasture G	380	5/05 – 5/24	19	22	55
Pasture B (lower)	480	5/25 – 5/29	5	51	40
Pasture A	480	5/30 – 6/15	17	43	115
Pasture B (lower)	480	6/16 – 6/20	5	51	40
Pasture D	480	6/21 – 6/30	10	90	142
Pasture D	93	7/01 – 7/20	20	90	55
Pasture C	93	7/21 – 10/10	82	100	251
<b>TOTAL</b>		<b>5/5 – 10/10</b>		<b>62</b>	<b>698</b>

Shively Brothers

Pasture	Cattle #s	dates	days	% PL	AUMs
Pasture E and F	6 horses	5/5 – 10/31	179	35	12
Pasture E	125	5/5 – 7/5	61	35	89
Pasture B (middle)	125	7/6 – 8/9	35	87*	125
Pasture B (upper)	125	8/10 – 8/31	22	100	90
Pasture F	125	9/1 – 11/7	67	35	98
<b>TOTAL</b>		<b>5/5 – 11/7</b>		<b>61</b>	<b>414</b>

**Years 2014, 2016, 2018, 2020, 2022:**

L&M Cattle Company

Pasture	Cattle #s	dates	days	% PL	AUMs
Pasture G	380	5/05 – 5/24	19	22	55
Pasture B (lower)	480	5/25 – 5/29	5	51	40
Pasture A	480	5/30 – 6/15	17	43	115
Pasture B (lower)	480	6/16 – 6/20	5	51	40
Pasture C	480	6/21 – 6/30	10	100	158
Pasture C	93	7/01 – 7/20	20	100	61
Pasture D	93	7/21 – 10/10	82	90	226
<b>TOTAL</b>		<b>5/5 – 10/10</b>		<b>62</b>	<b>695</b>

Shively Brothers

Pasture	Cattle #s	dates	days	% PL	AUMs
Pasture E and F	6 horses	5/5 – 10/31	179	35	12
Pasture F	125	5/5 – 7/5	61	35	89
Pasture B (middle)	125	7/6 – 8/9	35	87	125
Pasture B (upper)	125	8/10 – 8/31	22	100	90
Pasture E	125	9/1 – 11/7	67	35	98
<b>TOTAL</b>		<b>5/5 – 11/7</b>		<b>61</b>	<b>414</b>

Shively Brothers ranch would have exclusive use of pastures E and F. Pastures E and F would be alternated spring and fall every other year.

L&M ranch would have exclusive use of pastures G and A.

Cattle are rotated through the pastures on the above schedule. The livestock operators notify BLM personnel of turnout date and move dates between pastures.

The basic billing schedule for Patetzik Creek Allotment would follow the above grazing plan.

#### Grazing Use Indicators and Criteria for Alternative C:

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

5. *Upland Utilization* – Utilization studies would be conducted in key upland areas and use areas would be mapped. Average utilization should be no more than 50 percent of the annual growth of key native upland species.
6. *Upland Trend* – Trend studies would be conducted in the uplands in key areas. One photo plot would be established at each key area. Long-term trend studies would be conducted using approved BLM methods.
7. *Sage Grouse Habitats* – Grazing use levels in pastures with key or priority 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 Upper Snake Local Working Group's Plan for Increasing Sage Grouse Populations (USLWG, 2009), the 2006 Conservation Plan for Greater Sage Grouse in Idaho (ISGAC, 2006), and the BLM's Greater Sage-Grouse Interim Management Policies and Procedures (USDI-BLM, 2011a).

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

Under a No Grazing alternative, the Upper Snake Field Manager would discontinue all livestock grazing in Patetzik Creek and Southwest Allotments for a 10 year period from 1/1/2013 to 12/31/2022. The permittees would retain their preference in the allotments, but would not be authorized to graze.

## **Other Terms and Conditions Common to Alternatives B and C**

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

1. Authorized use would be made as described under the approved grazing plans for Patelzik Creek and Southwest Allotments.
2. Range improvements must be maintained to BLM standards. All livestock water troughs must have a functional wildlife escape ramp and be appropriately floated. Installation and maintenance of wildlife escape ramps and maintenance of range improvements are the responsibility of the permittee.
3. Distribution of livestock salt and mineral supplements would be at least ¼ mile from the nearest water source, unless prior approval is given by the authorized officer.
4. 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.
5. If sage grouse fence strikes are documented on fences in the allotments, the fences would be modified using approved BLM methods to minimize sage grouse strikes.

## CHAPTER 3 - AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

### General Setting

Patelzik Creek Allotment lies approximately ten miles north of Dubois in Clark County, Idaho, on the foothills of the Beaverhead Mountains. Patelzik Creek includes 6,309 acres of BLM land, 3,436 acres of private land, and 563 acres of state land about four miles west of Spencer, Idaho (Figure 1). There are seven pastures in Patelzik Creek Allotment. Most of the BLM land is concentrated in Pastures B, C, and D. Pastures A, E, F, and G are mainly private land, with smaller inclusions of BLM land.

Patelzik Creek Allotment is mostly covered by mountain big sagebrush (*Artemisia tridentata* ssp. *vaseyana*) and threetip sagebrush (*Artemisia tripartita*) vegetation. Soils range from deep loams and boulders in the riparian areas of the allotment, to gravelly loams and loams mixed with boulders. The average annual precipitation ranges from 12 to 24 inches. The topography on Patelzik Creek Allotment varies by pasture. Pastures E, F, G, and the lower parts of A, B, and D are made up of undulating benches that slope upward to the north, towards the Beaverhead mountain range. Pasture C and the upper parts of Pastures A, B, and D are on the southern foothills of the Beaverhead mountain range. In the upper pastures, topography slopes more steeply than in the lower pastures. There are large patches of Douglas-fir (*Pseudotsuga menziesii*) and quaking aspen (*Populus tremuloides*) in the upper portions of Pastures B and C. Patelzik Creek and its tributary streams lie in Pastures B and C. Portions of Pastures A, G, and D are dominated by crested wheatgrass (*Agropyron cristatum*). These areas make up about 1,383 acres, or 22 percent of the public land on Patelzik Creek Allotment.

Southwest Allotment lies approximately eight miles west of Hamer in Jefferson County, Idaho, just west of Interstate 15. The allotment includes 2,530 acres of BLM land. There are three pastures in Southwest Allotment. The allotment is mostly covered by crested wheatgrass (*Agropyron cristatum*). A small portion of the north pasture contains native vegetation, but crested wheatgrass is present throughout the allotment. Soils range from sands to shallow fractured loam over lava bedrock. The average annual precipitation ranges from eight to 12 inches. The topography is mostly undulating dune structures covered with vegetation and punctuated by lava outcrops and low lava buttes. The elevation ranges from 4,850 feet to 4,900 feet above sea level. About 578 acres or 23 percent of the allotment, in the north pasture were burned in the Camas Fire in 2000. However, the area that burned had been previously seeded to crested wheatgrass, and the vegetation cover has recovered and stabilized the area.

### Resources Considered in the Analysis

The results of the site-specific assessments indicate that not all of the resources considered are present or would be directly or indirectly affected by any of the alternatives described in Chapter

2. Only those resources that are present and affected are discussed in the following narratives (Table 1).

**Table 1. Resources Considered in the Impact Analysis.**

<b>Resource</b>	<b>Resource Status</b>	<b>Rationale</b>
<b>Vegetation</b>	<b>Present, Impacted</b>	<b>Impacts are disclosed under Vegetation.</b>
<b>Invasive, Non-Native Species</b>	<b>Present, Impacted</b>	<b>Impacts are disclosed under Invasive, Non-Native Species.</b>
<b>Soil Resources</b>	<b>Present, Impacted</b>	<b>Impacts are disclosed under Soil Resources.</b>
<b>Wetland and Riparian Zones</b>	<b>Present, Impacted</b>	<b>There are no wetlands or riparian zones on Southwest Allotment. Impacts for Patelzik Creek Allotment are disclosed under wetlands and riparian zones.</b>
<b>Floodplains</b>	<b>Present, Impacted</b>	<b>There are no floodplains on Southwest Allotment. Impacts for Patelzik Creek Allotment are disclosed under floodplains.</b>
<b>Water Quality</b>	<b>Present, Impacted</b>	<b>There is no natural surface water on Southwest Allotment. Impacts for Patelzik Creek Allotment are disclosed under water quality.</b>
<b>Migratory Birds</b>	<b>Present, Impacted</b>	<b>Impacts are disclosed under Migratory Birds.</b>
<b>Threatened, Endangered, and Sensitive Animals</b>	<b>Present, Impacted</b>	<b>Impacts are disclosed under Threatened, Endangered, and Sensitive Animals.</b>
<b>Wildlife</b>	<b>Present, Impacted</b>	<b>Impacts are disclosed under Wildlife.</b>
<b>Threatened, Endangered, and Sensitive Fish</b>	<b>Present, Impacted</b>	<b>There are no streams or fish habitat in Southwest Allotment. Impacts for Patelzik Creek Allotment are disclosed under Threatened, Endangered, and Sensitive Fish.</b>
<b>Fisheries</b>	<b>Present, Impacted</b>	<b>There are no streams or fish habitat in Southwest Allotment. Impacts for Patelzik Creek Allotment are disclosed under Fisheries.</b>
<b>Economic and Social Values</b>	<b>Present, Impacted</b>	<b>Impacts are disclosed under Economic and Social Values.</b>
<b>Recreational Use</b>	<b>Present, Impacted</b>	<b>There is little or no recreational use on Southwest Allotment. Impacts for Patelzik Creek Allotment are disclosed under Recreational Use.</b>
<b>Cultural Resources</b>	<b>Present, Impacted</b>	<b>Impacts are disclosed under Cultural Resources.</b>
<b>Air Quality</b>	Present, not Impacted	None of the alternatives would result in the production of emission or particulate matter above incidental levels.
<b>Forest Resources</b>	Present, not Impacted	There are forest resources on Patelzik Creek Allotment. Renewing the grazing permits would not affect the health, productivity, or uses of the forest resources on Patelzik Creek Allotment. There are no forest resources on Southwest Allotment.
<b>Mineral Resources</b>	Present, not Impacted	There are no mining claims within the allotments.
<b>Access</b>	Present, not Impacted	None of the alternatives would result in changes in access to the areas.
<b>Environmental Justice</b>	Present, not Impacted	None of the alternatives would result in disproportionately high and adverse impacts to low income or minority populations.
<b>Existing and Potential Land Uses</b>	Present, not Impacted	None of the alternatives would affect the lands current and likely future use as grazing allotments.
<b>Tribal Treaty Rights and Interests</b>	Present, not Impacted	None of the Alternatives would have an 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.
<b>Visual Resources</b>	Present, not Impacted	Southwest allotment is within BLM's Visual Resource Management Class III designation, which has an objective to partially retain the existing character of the landscape. Patelzik Creek Allotment is within BLM's VRM Class II designation, which has an objective to retain the existing character of the landscape. Management activities may be seen, but should not attract the attention of the casual observer. There are no projects proposed in any of the alternatives.

Resource	Resource Status	Rationale
Vegetation	Present, Impacted	<b>Impacts are disclosed under Vegetation.</b> Therefore, grazing permit renewals in the allotments would have no effect on the intent or integrity of the Class II and Class III visual resource designations.
Threatened, Endangered, and Sensitive Plants	Not Present	There are no known Threatened, Endangered, or Sensitive plants or their habitat within the allotments.
Prime and Unique Farmlands	Not Present	There are no prime or unique farmlands located within the allotments.
Paleontological Resources	Not Present	There are no known paleontological resources located in the within or near the allotments.
Areas of Critical Environmental Concern (ACEC's)	Not Present	The allotments are not located within or near an ACEC.
Native American Religious Concerns	Not Present	There are no known ceremonial sites or resources associated with ceremonial practices in the allotments.
Wastes, Hazardous and Solid	Not Present	There are no known solid or hazardous wastes within the allotments.
Wild and Scenic Rivers	Not Present	There are no rivers within the allotments.
Wild Horse and Burro HMAs	Not Present	There are no wild horse and burro HMAs in the region.
Wilderness	Not Present	There are no wilderness areas or WSAs near the allotments.

## Direct and Indirect Impacts

### Vegetation

#### Affected Environment:

The primary ecological sites on Patelzik Creek Allotment are mountain big sagebrush / Idaho fescue (*Artemisia tridentata* ssp. *vaseyana* / *Festuca idahoensis*), low sagebrush / bluebunch wheatgrass (*Artemisia arbuscula* / *Pseudoroegneria spicata*), and threetip sagebrush (*Artemisia tripartita*) / bluebunch wheatgrass. Portions of Pastures B and C include patches of Douglas-fir and quaking aspen. Other common species in the allotment include bitterbrush (*Purshia tridentata*), snowbrush ceanothus (*Ceanothus velutinus*), green rabbitbrush (*Chrysothamnus viscidiflorus*), horsebrush (*Tetradymia canescens*), snowberry (*Symphoricarpos albus*), Junegrass (*Koeleria cristata*), oniongrass (*Melica bulbosa*), Kentucky bluegrass (*Poa pratensis*), Sandberg bluegrass (*Poa secunda*), and western wheatgrass (*Pascopyrum smithii*). Based on NRCS ecological site descriptions, about 800 pounds per acre of biomass is produced each year on the mountain sagebrush / Idaho fescue sites, and about 500 pounds per acre of biomass on the lower elevation threetip sagebrush / bluebunch wheatgrass sites. On all ecological sites, the annual production varies with soil depth and current year precipitation. Portions of Pastures A, G, and D are dominated by crested wheatgrass (*Agropyron cristatum*). These seeded areas make up about 1,383 acres, or 22 percent of the allotment.

Southwest Allotment is mostly covered by crested wheatgrass. A small portion of the north pasture contains native vegetation, but crested wheatgrass is present throughout the allotment.

Field Site Assessments. The field site evaluations on Patelzik Creek Allotment were conducted in areas that represented the typical condition of the allotment. During the field assessment, 17 species of shrubs and trees, 14 species of grasses, 55 species of forbs, and one species of moss were seen on Patelzik Creek Allotment. Six field assessments were conducted in Patelzik Creek Allotment. Four of the six assessments were in areas representing the native plant communities on the allotment. Five of the nine indicators for Biotic Integrity were rated as none or slight departure from site potential across the allotment, and four indicators showed a greater departure from site potential on one or more portions of the allotment.

Functional/Structural Groups was rated as slight to moderate departure from site potential on portions of the allotment. The portion of Pasture D covered with native vegetation was rated as none to slight departure from site potential. Most of Pasture D was burned in a prescribed burn in 1989, and the relative amounts and proportions of shrubs, forbs, and grasses were very near ecological site potential. On Pastures B, C, E, and F, the relative amounts and proportions of shrubs, forbs, and grasses differed somewhat from ecological site potentials. Specifically, shrub cover was higher than expected based on the site descriptions on Pasture C, and the relative amounts of herbaceous species in Pastures B, E, and F were somewhat altered as compared to the site potentials in these pastures. However, all desired species were present and reproducing successfully. This area includes about 3,755 acres, or 59 percent of the allotment. All desired ecological processes are occurring in the native plant communities, and the amount of microbiotic crust found was appropriate for the area.

Plant Mortality and Decadence was rated as slight to moderate departure from site potentials in Pasture C and in Pastures E and F. In Pasture C, the mountain big sagebrush was dense and decadent, which lead to the departure from site potential. In Pastures E and F, bluebunch wheatgrass was in low vigor in the interspaces between shrubs. However, bluebunch wheatgrass was present and reproducing successfully in the pasture. These areas rated as a slight to moderate departure for plant mortality and decadence include about 1,833 acres, or 29 percent of the allotment.

Annual Production was rated as a slight to moderate departure from site potentials in Pastures E and F. Because there were fewer bluebunch wheatgrass bunches than desired for site potential, the amount of herbaceous production was somewhat reduced as compared to site potential on these pastures. This area includes about 848 acres, or 13 percent of the allotment.

Invasive plants received a slight to moderate departure rating in Pastures E and F. This rating is the result of small patches of leafy spurge found within the pastures. There is also a small amount of cheatgrass (*Bromus tectorum*) in the plant communities on Pastures E and F. There is little or no cheatgrass on the rest of the allotment. Canada thistle occurs along the Patelzik Creek riparian areas.

Ecological Site Inventory. Ecological Site Inventory (ESI) is a long term trend monitoring method that uses vegetation composition by weight to determine a site's ecological condition. ESI sites are rated as early seral (zero to 25 percent), mid-seral (26 to 50 percent), late seral (51 to 75 percent), or potential natural community (76 to 100 percent), based on how closely a given

site matches its corresponding ecological site description. A change of five percent or more from the previous ESI is considered a downward or upward trend in ecological condition, depending on the direction of the change. Changes of less than five percent are considered a static trend.

An Ecological Site Inventory (ESI) was conducted on Patetzik Creek Allotment on three sites in 1983 and 1993 and on one site in 2012. One site is Pasture B, one site is in Pasture D, and one site is in Pasture F. In 1983, one site was in mid-seral ecological condition, one site was in late seral condition, and one site was at its potential natural community (PNC). In 1993, two sites were in late seral ecological condition, and one site was at PNC. The apparent ecological trend is static across the allotment. ESI has not been conducted on Southwest Allotment.

*Vegetation Cover Studies.* Four step-point cover transects were conducted on Patetzik Creek Allotment in areas dominated by native vegetation during the 2011 field assessments. The step-point cover data is shown below in Table 2, below. One transect represented the lower elevation areas in the allotment which are relatively dry and gravelly, and three transects represented the upper elevation areas, which are cooler and wetter stony loams.

**Table 2. Ground and Foliar Cover Measured on Patetzik Creek Allotment during Rangeland Health Assessment, 2011.**

<b>Ground Cover (%)</b>	<b>Upper Elevation Areas (4,072 acres)</b>	<b>Lower Elevation Areas (848 acres)</b>
Vegetation	73	54
Litter	20	10
Microbiotic Crust	0	1
Bare Ground	5	31
Rock or Gravel	2	4
<b>Foliar Cover (%)</b>		
Perennial Grasses	36	29
Sagebrush	22	23
Sprouting Shrubs	2	2
Perennial Forbs	32	12
Annual Grasses	0	1
Annual Forbs	1	1

The ground cover and foliar cover percentages were at or near what is expected for the site potentials at all the native vegetation sites visited. Perennial bunchgrass cover was lower than site potential on the low elevation site, but remained the most dominant functional group on the site.

*Utilization Studies.* Utilization is mapped into the following categories: No use (zero to five percent), Slight use (six to 20 percent), Light use (21 to 40 percent), Moderate use (41 to 60 percent), Heavy use (61 to 80 percent), and severe use (81 to 100 percent) of the available forage species. Utilization was mapped on Patetzik Creek Pasture C in 2011. This pasture received mostly light use, and the utilization averaged 28 percent across the pasture.

Allotment Evaluation. Both Patelzik Creek and Southwest Allotments were found to be meeting Standard 4 for Native Plant Community Health and Standard 5 for Seeded Plant Community Health.

A total of five out of the nine indicators for Biotic Integrity were rated as none to slight departure from site potential on the native portions of Patelzik Creek Allotment. Although the plant communities show slight to moderate departures for four indicators over portions of the plant communities, all desired species are present and reproducing successfully across the allotment. Increased shrub cover as compared to site potential was the cause of two of the four indicators showing a slight to moderate departure from site potential. Overall, the native plant communities on Patelzik Creek Allotment are healthy and desired ecological processes are occurring.

Six of the nine indicators for Biotic Integrity were rated as none to slight departure from site potential on the seeded areas in Patelzik Creek Allotment. Although the plant communities show slight to moderate departures for three indicators over portions of the plant communities, all desired species are present and reproducing successfully across the seeded areas. Overall, the seeded plant communities on Patelzik Creek Allotment are healthy and desired ecological processes are occurring. Therefore, the allotment is meeting Standard 5.

Patelzik Creek Allotment contains approximately 11 acres of riparian vegetation. The current condition of riparian vegetation and impacts associated with the implementation of the alternatives is disclosed under the heading, **Wetlands and Riparian Zones**.

On Southwest Allotment, the native plant community (flora and microbotic crusts) is being maintained to ensure the proper functioning of ecological processes and continued productivity and diversity of native plant species. The diversity of native species is maintained. Plant vigor (total plant production, seed and seedstalk production, cover, etc.) is adequate to enable reproduction and recruitment of plants when favorable climatic events occur. Adequate litter and standing dead plant material are present for site protection and for decomposition to replenish soil nutrients relative to site potential. There are no known problems or issues in the small area of native vegetation on the allotment.

The seeding on Southwest Allotment is functioning to maintain life form diversity and production. The diversity of perennial species is not diminishing over time. Plant production, seed production, and cover are adequate to enable recruitment when favorable climatic events occur. Noxious weeds are not increasing. Adequate litter and standing dead plant material are present for site protection and for decomposition to replenish soil nutrients relative to site potential.

#### Environmental Consequences:

Direct and indirect impacts to vegetation result from herbage removal or damage by foraging animals. Appropriate grazing or utilization levels can have the effect of stimulating plants, resulting in increased plant production if energy reserves are adequate. If the amount of grazing

use or utilization is high for a given year, or especially for a sequence of years, the composition of the vegetative community may become modified as the more desirable, and more utilized species lose vigor and decrease in density throughout the site.

#### *Alternative A – No Action*

Under Alternative A, Patelzik Creek Allotment would continue to be grazed in the spring, summer and fall each year. The seasons of use and number of AUMs would remain the same. The existing level and timing of use in Patelzik Creek Allotment is appropriate for the site potential, and would continue to result in light to moderate use of the allotment. The practice of grazing the same areas during the growing season each year can potentially reduce the vigor and productivity of the perennial grasses in a plant community. However, cover data collected in 2011 do not indicate a problem with the vigor and productivity of perennial grasses on Patelzik Creek Allotment.

Under Alternative A, Southwest Allotment would continue to be grazed in late winter and early spring each year. The seasons of use and number of AUMs would remain the same. The existing level and timing of use in Southwest Allotment is not damaging the crested wheatgrass seeding, which makes up most of the allotment area. Although the percent public land figure is currently inaccurate, there is no data to indicate that the allotment is receiving excessive grazing use.

Alternative A would allow the plant communities in Patelzik and Southwest Allotments to continue to meet Standards 1, 4, 5, and 8 for watershed health, native plant community health, seeded plant community health, and threatened, endangered, and sensitive species habitat.

#### *Alternative B – Proposed Action*

Alternative B for Patelzik Creek Allotment includes adjustments to the grazing rotation on the allotment. Alternative B for Southwest Allotment includes lengthening the season of use, but reducing the livestock number so that the total amount of use would remain the same.

The amount of use proposed for Patelzik Creek Allotment would remain appropriate for site potential and is not expected to result in a loss of vigor or productivity in native herbaceous plants. By following the rotation described in the grazing plan, some deferment of growing season use would occur in some of the pastures each year. This would maintain or increase the vigor and productivity of the native herbaceous plants, and allow them to remain stable or increase in cover and density. When livestock leave the early pastures in June, there would be time for grazed plants to regrow and restore carbohydrates before the growing season is over.

Alternative B would adjust the timing of grazing in the spring, but the total amount of use would remain the same. The existing level of use is maintaining the plant communities on Southwest Allotment in their current condition, which is satisfactory. There would be adequate time after livestock leave the allotment for grazed plants to regrow and store carbohydrates before the growing season is over.

### *Alternative C – Preferred Alternative*

For Patelzik Creek Allotment, there would be no substantial difference between Alternatives B and C. Alternative C would close a ten day gap on the permit in the middle of the grazing season; however, this gap has already been closed in the existing grazing plan that was approved in 1999.

Under Alternative C, the season of use on Southwest would be adjusted as described in Alternative B, and the percent public land figure would be corrected so it is accurate. Although the number of AUMs on the permit would not change, this action would result in a substantial effective reduction in AUMs. Reducing the number of AUMs in the allotment would result in substantially lighter utilization levels as compared to Alternatives A and B. This would increase the vigor and productivity of the herbaceous plants, and allow them to increase in cover and density. When livestock leave the allotment in May, there would be time for grazed plants to regrow and restore carbohydrates before the growing season is over. Most of the herbaceous cover is crested wheatgrass. A substantial reduction in AUMs may result in decadence and an increase in ‘wooly’ plants, which have large amounts of dry dead rough material that limits new growth within the bunch. Increased residual herbaceous and litter cover would result in increased continuity of fine fuels, thereby increasing the risk of a larger and more severe wildfire than would likely occur if the allotment were grazed as described in Alternatives A or B.

### *Alternative D – No Grazing*

Under Alternative D, all livestock grazing would be discontinued in Patelzik Creek and Southwest Allotments for a ten year period. This would increase the vigor and productivity of the native and seeded herbaceous plants, and allow them to increase in cover and density. This in turn would maintain or improve the ecological condition on the allotments. Patelzik Creek and Southwest Allotments would continue to meet Standards for native plant community health and threatened, endangered, and sensitive species habitat health.

Sagebrush cover would likely increase over time, but more slowly than under Alternatives A, B, or C. According to Heitschmidt and Stuth (1991), defoliation of grasses can increase the probability of woody plant seedling establishment and subsequent rate of growth and development by adversely affecting the capacity of grasses to preempt resources above-and below-ground (Caldwell et al. 1987), and reducing biomass and continuity of fine fuels and hence fire frequency. Without livestock grazing, the vigor of the herbaceous plants would likely increase, which would allow fewer sagebrush seedlings to compete for limited soil and water resources. This would result in a slower rate of increase in sagebrush cover, as compared to Alternatives A, B, and C.

Under Alternative D, residual herbaceous cover and litter cover from native plants and cheatgrass would increase across the allotments. As residual herbaceous and litter cover increases, the continuity of fine fuels would increase, thereby increasing the risk of a larger and more severe wildfire than would likely occur if the allotments were grazed as described in

Alternatives A, B, or C. 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 allotments which could be detrimental to sagebrush obligate species such as sage grouse.

In summary, the plant communities on Patelzik Creek and Southwest Allotments would continue to meet applicable Standards for Rangeland Health under Alternatives A, B, C, and D. Alternatives B and C include rotation and deferment of use, and may impart additional benefits, such as improvement in the ecological condition of the plant community. Alternative D would impart similar benefits, but would result in increased risk of wildfire in the Table Butte and Medicine Lodge areas.

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

### Affected Environment:

Patelzik Creek Allotment has a small amount of cheatgrass (*Bromus tectorum*), found scattered throughout the plant community in the lower elevations of the allotment. There are no known occurrences of noxious weeds on Patelzik Creek Allotment, although there are infestations of leafy spurge (*Euphorbia esula*) and spotted knapweed (*Centaurea stoebe*) in adjacent areas. There are no known noxious weed infestations on or adjacent to Southwest Allotment. Known infestations are treated with chemical applications, and special attention is paid to any new infestations to contain the spread of these noxious weeds. Weed treatments in the USFO are accomplished using methods described and analyzed in the Upper Snake-Pocatello Integrated Weed Management Program Environmental Assessment (USDI-BLM, 2009b).

### Environmental Consequences:

#### *Alternative A – No Action*

Under Alternative A, Patelzik Creek and Southwest Allotments would continue to be grazed in a manner that leaves the upland plant communities in a stable ecological trend. This would allow the native and seeded plant communities to maintain vigor and productivity, and would not change the likelihood of further infestation by cheatgrass and possible new invasions by noxious weeds. All new and existing noxious weed infestations in Patelzik Creek and Southwest Allotments would continue to be aggressively treated. Alternative A would result in Patelzik Creek and Southwest Allotments continuing to meet Standards 1, 4, 5 and 8.

#### *Alternative B – Proposed Action*

Alternating the side of the allotment livestock graze first each spring would allow for some deferment of growing season use on one side of the allotment every year. These actions would maintain or increase the vigor and productivity of the native plants in the allotment, which would reduce potential for the spread of leafy spurge and cheatgrass. The changes in the seasons of use would have little, if any effect on the potential for the spread of noxious and invasive species on the allotment.

Noxious weed infestations, especially leafy spurge, can still spread in healthy plant communities. Successful noxious weed treatments, along with changes in authorized use described in Alternative B, would allow the allotments to continue to meet Standards 1, 4, 5 and 8.

#### *Alternative C –Preferred Alternative*

Alternating grazing use between spring and fall each year would allow for deferment of growing season use on the allotment every other year. These actions would maintain or increase the vigor and productivity of the native plants in the allotment, which would reduce potential for the spread of leafy spurge and cheatgrass. The changes in the seasons of use would have little, if any effect on the potential for the spread of noxious and invasive species on the allotment.

Noxious weed infestations, especially leafy spurge, can still spread in healthy plant communities. Successful noxious weed treatments, along with changes in authorized use described in Alternative C, would help the allotment continue to meet Standards 4 and 8.

#### *Alternative D – No Grazing*

Eliminating livestock grazing for ten years would increase the vigor and productivity of the native herbaceous species in the allotment, which would reduce potential for the spread of leafy spurge and cheatgrass. Noxious weed infestations, especially leafy spurge, can still spread in healthy plant communities. All new and existing infestations would continue to be aggressively treated. Successful noxious weed treatments would help the allotment to continue to meet Standards 4 and 8.

## **Soil Resources**

### Affected Environment:

The soils across Patelzik Creek Allotment range from deep loams and stony loams in the riparian areas of the allotment, to gravelly loams and clay loams over large rhyolite boulders on the south and west sides of the allotment, to shallow stony loams over Red Conglomerate cobble and boulders on the uplands on the north and east sides of the allotment. The primary soil series found on the allotment are Patelzick, Deadhorse, Araveton, Rammel, Decross, Parkalley, Zeebar, Ezbin, Tineman, Latigo, Targhee, and Fulcher Variant. All 12 of the Soil and Site Stability and Hydrologic Function indicators showed none to slight departure from site potential on Patelzik Creek Allotment. The soil surfaces on Patelzik Creek Allotment have sufficient vegetative cover

to protect against wind and water erosion. Soil and vegetative features on the allotment are providing proper hydrologic and nutrient cycling appropriate to site potentials. Patelizik Creek Allotment provides for adequate infiltration, retention, and water release appropriate to soil types, vegetative cover, and landforms to provide for proper nutrient cycling, hydrologic cycling, energy flow, and site stability.

The soils across Southwest Allotment range from sands and loamy sands to very shallow fractured loams on lava outcrops, to small playas. The primary soil series found on the allotment are Malm, Matheson, Diston, and Bondfarm. On Southwest Allotment, the plant community composition and distribution in relation to water infiltration is somewhat altered as compared to the site potential, because the lack of large shrub cover in the seeded area limits the amount of snow captured and held on site. However, this is common in areas seeded to crested wheatgrass, and is not impacting overall site stability and hydrologic function on the allotment. The sandy soils across the allotment are naturally unstable without adequate perennial vegetation cover, and are subject to severe wind erosion following wildfires. About 578 acres, or 23 percent of the allotment, in the north pasture were burned in the Camas Fire in 2000. However, the burned area was nearly all seeded to crested wheatgrass, and the vegetation cover has recovered and stabilized the area. The soils on the allotment have sufficient perennial vegetation cover to resist soil movement by wind beyond what is natural for the site. There are no known problems or issues related to site stability or hydrologic function on Southwest 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. Deep soil compaction restricts root growth and reduces soil productivity.

#### *Alternative A – No Action*

Under Alternative A, soil surface disturbance and compaction would not increase. Soil compaction resulting from intensive livestock use, such as along trails and next to water sites, is estimated to occur on less than one percent of the area. Due to sandy soil conditions across Southwest Allotment, deep soil compaction is limited. Where deep soil compaction exists, it would be expected to continue into the foreseeable future. Under this alternative, soil conditions on the allotments as a whole would continue to support water infiltration and permeability rates appropriate to site potentials. Snow retention and water infiltration on the seeded areas would continue to be limited by the lack of sagebrush cover.

### *Alternative B – Proposed Action*

Under Alternative B, the total amount of soil surface disturbance would remain the same as compared to Alternative A on both allotments. The amount of deep soil compaction on the allotments would be the same as under Alternative A. 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 area. Due to sandy soil conditions across Southwest Allotment, deep soil compaction is limited. Where deep soil compaction exists, it would be expected to continue into the foreseeable future. Under this alternative, soil conditions on the allotments as a whole would continue to support water infiltration and permeability rates appropriate to site potential. Snow retention and water infiltration on the seeded areas would continue to be limited by the lack of sagebrush cover.

### *Alternative C – Preferred Alternative*

Under Alternative C, the total amount of soil surface disturbance would remain the same as compared to Alternative A for Patelzik Creek, but would decrease on Southwest Allotment. The overall amount of deep soil compaction on Patelzik Creek Allotment would be the same as under Alternatives A and B. 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 area. Due to sandy soil conditions across the Southwest Allotment, deep soil compaction is limited, and would continue to be limited under Alternative C. Where deep soil compaction exists, it would be expected to continue into the foreseeable future. Under this alternative, soil conditions would continue to support water infiltration and permeability rates appropriate to site potential on both allotments. Snow retention and water infiltration on the seeded areas would continue to be limited by the lack of sagebrush cover.

### *Alternative D – No Grazing*

Under Alternative D, the amount of soil surface disturbance would decrease as compared to Alternatives A, B, and C. The decrease in soil surface disturbance would lead to increased herbaceous cover over time, which would improve this area's resistance to wind erosion. The amount of deep soil compaction on Patelzik Creek and Southwest Allotments would be the same as under Alternatives A and B. 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 area. Due to sandy soil conditions across Southwest Allotment, soil compaction is limited. Where deep soil compaction exists, it would be expected to continue into the foreseeable future. Under this alternative, soil conditions on the allotments as a whole would continue to support water infiltration and permeability rates appropriate to site potential. Snow retention and water infiltration on the seeded areas would continue to be limited by the lack of sagebrush cover.

## Wetlands and Riparian Zones

### Affected Environment:

There are no wetlands or riparian zones on Southwest Allotment.

### West Fork of Patelzik Creek

About 1.5 perennial miles of the West Fork of Patelzik Creek flows through public land in Patelzik Creek Allotment, forming about 4.7 acres of riparian vegetation. The dominant vegetation includes the following community types (CTs) and habitat types (HTs): geyer willow/beaked sedge (*Salix geyeriana*/*Carex rostrata*) HT, quaking aspen / red-osier dogwood (*Populus tremuloides*/*Cornus stolonifera*) HT, Douglas-fir (*Pseudotsuga menziesii*) / red-osier dogwood HT, geyer willow (*Salix geyeriana*) CT, and Baltic rush (*Juncus balticus*) CT.

The initial inventory in 1994 split the West Fork of Patelzik Creek into three reaches, and the riparian vegetation was found to be functioning-at-risk (FAR) on two reaches and in proper functioning condition (PFC) on one reach. Assessments on the three reaches in 1997, 1998, and 2000 found downward trends on two of the reaches and an upward trend on the third reach. Two reaches remained FAR and the third had attained PFC. All three reaches were reassessed in 2011, and the upper two reaches had improved and attained PFC. The lower reach remained in PFC, with a static trend.

Overall vegetative cover ranges from 85 to 100 percent, and the majority of the woody cover is comprised of vigorous, mature willows, quaking aspen, and Douglas-fir. Establishment of young willows exceeds 15 percent along the three reaches. Undesirable herbaceous species such as Kentucky bluegrass (*Poa pratensis*) and dandelion (*Taraxacum officinale*) comprise five to 20 percent of the riparian zone in all of the reaches. Light utilization by livestock and wildlife was observed. Two of the reaches have less than five percent decadent or dying shrubs and trees, and the third has 15 to 25 percent decadent Douglas-fir and quaking aspen. Table 3 provides a summary of the parameters used to rate the current condition of the riparian vegetation on the West Fork of Patelzik Creek.

**Table 3. Riparian Vegetation – West Fork of Patelzik Creek\***

Parameters for Riparian Vegetation	Proper Functioning Condition	Functional at Risk	Nonfunctional
Vegetative cover of floodplain and streambanks	1, 3	2	
Invasive canopy cover of invasive plant species (weeds)	1, 2, 3		
Density distribution patterns of invasive plant species (weeds)	1, 2, 3		
Disturbance-increaser undesirable herbaceous species		1, 3	2

Parameters for Riparian Vegetation	Proper Functioning Condition	Functional at Risk	Nonfunctional
Preferred tree and shrub species establishment and regeneration	1, 2, 3		
Browse utilization of available preferred trees and shrubs		1, 2, 3	
Live woody vegetation removal by other than browsing	1, 2, 3		
Standing decadent and dead woody material	1	2, 3	

\* 1=Reach 1 (upper-most); 2=Reach 2; 3=Reach 3 (lower-most)

#### Middle Fork of Patelzik Creek

Approximately 0.4 perennial miles of the Middle Fork of Patelzik Creek flows through public land in the Patelzik Creek Allotment, forming about one acre of riparian vegetation. Numerous community and habitat types are present along the stream include the following: Geyer willow/beaked sedge HT, beaked sedge HT, Kentucky bluegrass CT, Geyer willow CT, Douglas fir/red-osier dogwood HT, and quaking aspen/red-osier dogwood HT.

The initial riparian inventory in 1998 assessed the Middle Fork of Patelzik Creek in one reach. The initial inventory found the vegetation on the reach in nonfunctional (NF) condition. A subsequent visit in 2004 found that the reach had improved to FAR condition. In 2011, the vegetation on this reach was still FAR, but in a strong upward trend toward PFC.

Vegetative cover of the floodplain and streambanks ranges from 75 to 80 percent on this reach, but this rating is mostly related to the high amount of rock and boulder cover along the reach. Browse utilization by mostly wildlife was observed, and was light (20 to 25 percent) on this reach. The overall vigor of the woody canopy is good, although more sparse than desired. Some decadent or dying willows, Douglas-fir, and quaking aspen (about 30 percent) were observed. Undesirable species such as Kentucky bluegrass, dandelion, and stinging nettle (*Urtica dioica*) are common, comprising 25 to 50 percent of the vegetation community. Table 4 provides a summary of the parameters used to rate the current condition of the riparian vegetation on the Middle Fork of Patelzik Creek.

**Table 4. Riparian Vegetation – Middle Fork of Patelzik Creek**

Parameters for Riparian Vegetation	Proper Functioning Condition	Functional at Risk	Nonfunctional
Vegetative cover of floodplain and streambanks		X	
Invasive canopy cover of invasive plant species (weeds)	X		

Parameters for Riparian Vegetation	Proper Functioning Condition	Functional at Risk	Nonfunctional
Density distribution patterns of invasive plant species (weeds)	X		
Disturbance-increaser undesirable herbaceous species			X
Preferred tree and shrub species establishment and regeneration	X		
Browse utilization of available preferred trees and shrubs		X	
Live woody vegetation removal by other than browsing	X		
Standing decadent and dead woody material			X

*East Fork of Patetzik Creek*

Approximately 0.9 perennial miles of the East Fork of Patetzik Creek flows through public land in the Patetzik Creek Allotment, forming about 2.3 acres of riparian vegetation. Numerous community types and habitat types are present along the stream, including the following: quaking aspen / red-osier dogwood HT, Geyer willow/beaked sedge HT, Douglas-fir / red-osier dogwood HT, and Geyer willow CT.

The health of the East Fork of Patetzik Creek was initially assessed in 1994 in two reaches. The riparian vegetation was found to be NF on the upper reach and FAR on the lower reach. In 1997 and 2003, the upper reach remained NF. In 2003, the lower reach remained FAR. In 2011, the vegetation on the upper reach had improved to FAR condition, and the vegetation on the lower reach had attained PFC. Both reaches had substantially improved since the previous assessment.

The overall vegetative cover is 90 to 95 percent, and there is sufficient establishment of young willows that comprise 10 to 15 percent of the woody canopy in the two reaches. Canada thistle makes up one percent of the vegetative cover in the lower reach, but was not observed on the upper reach. Other undesirable herbaceous species such as Kentucky bluegrass and dandelion are higher in the upper reach (20 percent) compared to the lower reach (observed, but sparse). The upper reach has about 10 percent willow seedlings, and the lower reach has more than 15 percent willow seedlings. Browse utilization ranges from 5 percent in the upper reach to 20 percent in the lower reach. Table 5 provides a summary of the parameters used to rate the current condition of the riparian vegetation on the East Fork of Patetzik Creek.

**Table 5. Riparian Vegetation – East Fork of Patelzik Creek\***

Parameters for Riparian Vegetation	Proper Functioning Condition	Functional at Risk	Nonfunctional
Vegetative cover of floodplain and streambanks	1	2	
Invasive canopy cover of invasive plant species (weeds)	1	2	
Density distribution patterns of invasive plant species (weeds)	1	2	
Disturbance-increaser undesirable herbaceous species	2	1	
Preferred tree and shrub species establishment and regeneration	2	1	
Browse utilization of available preferred trees and shrubs		1, 2	
Live woody vegetation removal by other than browsing	1, 2		
Standing decadent and dead woody material	1	2	

\* 1=Reach 1 (upper-most); 2=Reach 2 (lower-most)

Patelzik Creek

Approximately 0.7 perennial miles of the main Patelzik Creek (below the confluence of the East and West Forks of Patelzik Creek) flow through public land in Patelzik Creek Allotment, forming about 2.6 acres of riparian vegetation. The dominant riparian vegetation includes the following community and habitat types (CT and HT, respectively): quaking aspen / red-osier dogwood HT, and Douglas fir / red-osier dogwood HT.

The initial riparian inventory in 1994 assessed Patelzik Creek in one reach. At that time, the reach was in FAR condition. The reach was surveyed in 2004, and the condition had declined to NF. The reach was surveyed in 2011, and the riparian vegetation along the reach had attained PFC, indicating a strong upward trend since the previous assessment.

Overall vegetative cover ranges from 85 to 100 percent, and establishment of young willows accounts for over 15 percent of the woody canopy cover. Browse utilization is about 10 percent on the willows, but the use is in patches, and not throughout the reach. There is less than five percent cover of dead or dying willows along this reach. Undesirable herbaceous species such as Kentucky bluegrass and dandelion are sparse. Table 6 provides a summary of the parameters used to rate the current condition of the riparian vegetation on Patelzik Creek.

**Table 6. Riparian Vegetation – Patelzik Creek**

Parameters for Riparian Vegetation	Proper Functioning Condition	Functional at Risk	Nonfunctional
Vegetative cover of floodplain and streambanks	X		
Invasive canopy cover of invasive plant species (weeds)	X		
Density distribution patterns of invasive plant species (weeds)	X		
Disturbance-increaser undesirable herbaceous species	X		
Preferred tree and shrub species establishment and regeneration	X		
Browse utilization of available preferred trees and shrubs		X	
Live woody vegetation removal by other than browsing	X		
Standing decadent and dead woody material	X		

Environmental Consequences:

*Alternative A – No Action*

The present grazing system in this alternative should lead to continued improvement of riparian vegetation conditions throughout the allotment. Those reaches that have already obtained PFC are expected to remain in that condition and those reaches that are functioning at risk are expected to continue to improve. Terms and conditions for stubble height, and woody browse utilization would help to prevent over-utilization and the continuing improvement of riparian vegetation. This alternative would result in the slowest and least amount of improvement of riparian-wetland vegetation compared to Alternatives B and C.

*Alternative B – Proposed Action*

Under Alternative B, the grazing rotation in Pasture C would be the same as in Alternative A. Grazing in upper Pasture B would occur during the hot season every year rather than alternating every other year between spring grazing and hot season grazing as in Alternative A. However, under this Alternative, AUMs would be reduced by approximately 29 percent in year one and by 53 percent in year two in upper Pasture B. In addition, the grazing season would be nine days shorter compared to Alternative A.

In middle Pasture B, livestock grazing in year one would include 88 fewer AUMs compared to Alternative A. In year two, the middle pasture would include the same AUMs as Alternative A, but the grazing season would be 22 days shorter, resulting in less grazing during the hot season. The management direction in Alternative B, along with terms and conditions limiting vegetation utilization would allow the riparian-wetland areas that are currently in PFC to remain so, and would allow the FAR reaches to continue making progress towards PFC. This alternative would protect riparian-wetland areas to a greater extent compared to Alternative A, but to a lesser extent compared to Alternative D.

#### *Alternative C – Preferred Alternative*

The effects of Alternative C on the riparian areas and wetlands within Patelzik Creek Allotment would be the same as those described under Alternative B.

#### *Alternative D – No Grazing*

Under Alternative D, no grazing would be authorized in Patelzik Allotment for a period of 10 years. The riparian-wetland condition of the reaches which have achieved PFC would be maintained. The removal of livestock would allow the remaining riparian-wetland areas to make progress towards and/or achieve PFC. This alternative would result in the greatest and most rapid improvement of riparian-wetland vegetation compared to Alternatives A, B, and C.

### **Floodplains**

#### Affected Environment:

There are no floodplains on Southwest Allotment.

West Fork of Patelzik Creek. The West Fork of Patelzik Creek includes 1.5 stream miles in Patelzik Creek Allotment. In 1994, the upper reach of the West Fork of Patelzik Creek was rated NF, the middle reach was rated FAR, and the lower reach, below the confluence with the Middle Fork, was rated PFC. The reaches were re-assessed between 1997 and 2000, and all the reaches had improved substantially. The upper reach was rated FAR, and the middle and lower reaches were rated PFC for stream channel and floodplain characteristics.

All three reaches of the West Fork of Patelzik Creek were re-assessed in 2011. The upper and lower were rated PFC, and the middle reach was rated FAR. All three reaches had an upward trend in riparian vegetation cover and regeneration. Streambank rootmass protection varies from about 80 to 100 percent. Large boulders along the lower reach added to the stability of the channel. Along all reaches the floodplain showed no incisement, and adequate recruitment of riparian vegetation.

**Table 7. Stream Channel and Floodplain Characteristics – West Fork of Patelzik Creek**

Parameters for Lotic Wetland Areas	Proper Functioning Condition (PFC)	Functional at Risk (FAR)	Nonfunctional (NF)
Streambank Rootmass Protection	Upper and Lower reaches	Middle reach	
Human-Caused Bare Ground	Upper and Lower reaches	Middle reach	
Streambank Structurally Altered by Human Activity	Upper and Lower reaches	Middle reach	
Human Physical Alteration to the Rest of the Polygon	Upper and Lower reaches	Middle reach	
Stream Channel Incisement	Upper, Middle, and Lower reaches		

*Middle Fork of Patelzik Creek.* The Middle Fork of Patelzik Creek includes 0.4 stream miles in Patelzik Creek Allotment. This reach was initially assessed in 1998, and rated FAR for stream channel and floodplain characteristics. The reach was re-assessed in 2004, and remained in FAR condition. In 2011, this reach was re-assessed and rated PFC. This reach had little evidence of structural bank alterations and about 90 percent streambank root mass protection. However, undesirable bank vegetation species, such as Kentucky bluegrass and dandelion were also present. The reach had a few visible stream bank alterations at trail crossings. The reach showed no incisement, because most of the reach was armored with large bank rock and bedrock.

**Table 8. Stream Channel and Floodplain Characteristics – Middle Fork of Patelzik Creek**

Parameters for Lotic Wetland Areas	Proper Functioning Condition (PFC)	Functional at Risk (FAR)	Nonfunctional (NF)
Streambank Rootmass Protection	X		
Human-Caused Bare Ground		X	
Streambank Structurally Altered by Human Activity		X	
Human Physical Alteration to the Rest of the Polygon		X	
Stream Channel Incisement	X		

*East Fork of Patelzik Creek.* The East Fork of Patelzik Creek includes 0.9 stream miles in Patelzik Creek Allotment. These two reaches were assessed during the initial riparian inventory in 1994. At that time, both reaches were rated NF. The upper reach was re-assessed in 1997, and remained NF. However, it had improved 13 percent since the previous assessment. Both reaches were re-assessed in 2003. The upper reach remained NF, but had improved ten percent over the 1997 assessment. The lower reach had improved to FAR condition.

Both reaches of the East Fork of Patelzik Creek were re-assessed in June 2011. The upper reach had improved to FAR, and the lower reach had improved to PFC. Streambank rootmass protection was high, over 85 percent on the lower reach. The upper reach was stabilized with 65 to 70 percent boulder cover, with sedges in between the boulders. Trailing by livestock was noted along the perimeter of the riparian area on the lower reach, but trailing was common in the upper reach. There was no incisement noted along the upper reach and the majority of the lower reach, but a few small areas of incisement were noted along the lower reach.

**Table 9. Stream Channel and Floodplain Characteristics – East Fork of Patelzik Creek\*\***

Parameters for Lotic Wetland Areas	Proper Functioning Condition (PFC)	Functional at Risk (FAR)	Nonfunctional (NF)
Streambank Rootmass Protection	1	2	
Human-Caused Bare Ground		1, 2	
Streambank Structurally Altered by Human Activity	2	1	
Human Physical Alteration to the Rest of the Polygon	2	1	
Stream Channel Incisement	1	2	

\*\* 1=Reach 1 (upper-most); 2=Reach 2 (lower-most)

Patelzik Creek. The main channel of Patelzik Creek includes 0.7 stream miles within Patelzik Creek Allotment. This reach was first inventoried in 1994, and was rated FAR for stream channel and floodplain characteristics. The reach was re-assessed in 2004, and remained FAR.

Patelzik Creek was re-assessed in June 2011. BLM found the channel/floodplain characteristics to be PFC. Overall, this stream reach had 80 to 95 percent stream bank stability, with very little bare ground or bank alteration. Much of the reach is armored by rocks. This channel has vigorous riparian shrub and herbaceous vegetation providing excellent cover on the streambanks in between the rocks. No incisement was observed along this reach.

**Table 10. Stream Channel and Floodplain Characteristics – Patelzik Creek**

Parameters for Lotic Wetland Areas	Proper Functioning Condition (PFC)	Functional at Risk (FAR)	Nonfunctional (NF)
Streambank Rootmass Protection	X		
Human-Caused Bare Ground	X		
Streambank Structurally Altered by Human Activity	X		
Human Physical Alteration to the Rest of the Polygon	X		
Stream Channel Incisement	X		

## Environmental Consequences:

### *Alternative A – No Action*

The present grazing system in this alternative should lead to continued improvement of channel and floodplain conditions throughout the allotment. Those reaches that have already obtained proper functioning condition should remain in that condition and those reaches that are functioning at risk should continue to improve because all of the channel characteristics improved with the exception of one reach. Terms and conditions for bank alteration, and woody browse utilization should help to prevent over utilization and the continuing improvement of riparian vegetation, which would continue to stabilize the bank and channel.

### *Alternative B – Proposed Action*

Grazing upper Pasture B, the location of the majority of riparian areas in the allotment, in August with a reduction in time being grazed and AUMs in relation to Alternative A should improve channel and floodplain conditions at a faster rate. This alternative would lead to less compaction and bank alteration due to the lesser period of time livestock would be in the pasture. Some increase in root de

### *Alternative C – Preferred Alternative*

The effects of Alternative C on the stream channels and floodplains within Patelzik Creek Allotment would be the same as those described under Alternative B.

### *Alternative D – No Grazing*

By removing grazing from the allotment for a ten year period, channel and floodplain conditions should improve at a faster rate than the other alternatives. By not having livestock utilizing riparian vegetation and trampling banks to any degree, it can be expected that vegetation would recover and banks would stabilize to a potential greater than if it were grazed.

## **Water Quality**

### Affected Environment:

There is no surface water on Southwest Allotment.

Patelzik Creek and its Tributaries. Water quality characteristics were rated on June 22, 2011 for the upper West Fork of Patelzik Creek (upper WFK) only, two indicators were rated “at risk” (beneficial uses and water temperature) and six indicators were rated “plus” (turbidity, dissolved oxygen, excess nutrient, sediment as surface fines, macroinvertebrates, and BMPs). Beneficial uses and water temperature were both rated “at risk” due to warm water temperatures, a natural condition caused by input from thermal springs in the area. No turbidity or dissolved oxygen

problems were observed or documented, very little sediment as surface fines was observed, and clean gravels on the stream bottom were noted. Many mayflies and caddisflies were observed. Best management practices (BMPs) were rated “plus” because most of the drainage was not exhibiting detrimental impacts from livestock grazing. All eight indicators were rated “plus” on the lower West Fork of Patelzik Creek (lower WFK). Yellowstone cutthroat trout (YCT) were observed along this reach. Water temperature measured 11° C. at 1150 hours. Clean gravel bottom material and abundant mayfly and caddis fly nymphs were observed.

On the Middle Fork of Patelzik Creek (MFK), all eight water quality indicators were rated “plus,” indicating excellent water quality conditions on this reach of the Middle Fork.

The East Fork and the Main Patelzick Creek had only two indicators “at risk”, water temperature and BMP’s. Once again YCT were observed, very little sediment or surface fines were observed and mayfly and caddis fly nymphs were observed.

**Table 11. Patelzik Creek and its Tributaries –Water Quality Assessment.**

Parameter	Plus	At Risk	Minus
Beneficial Uses	Lower WFK, MFK, EFK, MP	Upper WFK	
Temperature	Lower WFK, MFK,	Upper WFK, EFK, MP	
Turbidity	Upper WFK, Lower WFK, MFK, EFK, MP		
Dissolved Oxygen	Upper WFK, Lower WFK, MFK, EFK, MP		
Excess Nutrients	Upper WFK, Lower WFK, MFK, EFK, MP		
Sediment as Surface Fines	Upper WFK, Lower WFK, MFK, EFK, MP		
Macroinvertebrates	Upper WFK, Lower WFK, MFK, EFK, MP		
BMP’s	Upper WFK, Lower WFK, MFK,	EFK, MP	

## Environmental Consequences:

### *Alternative A – No Action*

The present grazing system in this alternative should continue meeting most water quality standard indicators in the “plus” condition for the streams in the allotment. Naturally thermal waters in this allotment will continue to maintain some “at risk” water temperature conditions.

### *Alternative B – Proposed Action*

The proposed grazing system in this alternative should have similar impacts to water quality conditions as Alternative A. There may be a slightly greater rate of improvement due to the lowering of livestock use of the area around water resources on the allotment. Sediment and nutrient introduction should be less due to the shorter duration of grazing and the consequential reduction of AUMs within the pasture B.

### *Alternative C – Alternative Action / Preferred Alternative*

The effects of Alternative C on water quality in Patelzik Creek Allotment would be the same as those described in Alternative B.

### *Alternative D – No Grazing*

By removing grazing from Patelzik Creek Allotment, water quality condition should improve at a faster rate than it would have if the allotment was grazed by any of the grazing systems in the other three alternatives. By not having livestock trampling riparian vegetation and banks, it can be expected that vegetation would recover and banks would stabilize, reducing sediment and nutrients such that water quality would improve to a potential greater than if it were grazed. In addition, nutrient levels in the water would also likely decline as a result of the removal of livestock from the allotment.

## **Migratory Birds**

The diverse habitat within Patelzik Creek Allotment provide for a variety of migratory birds including chipping sparrow, green-tailed towhee, western meadowlark, sage thrasher, vesper sparrow, dark-eyed junco, mourning dove, rock wren, Bullock’s oriole, western tanager and mountain bluebirds and a couple of migratory raptors (e.g., northern harrier, Swainson’s hawk). These species are found in all habitat types including patches of Douglas fir, riparian areas along streams and expanses of sagebrush.

There are approximately 1,383 acres of crested wheatgrass seedings in Patelzik Creek Allotment. Studies have shown that non-native grasslands provide poor habitat for native sagebrush steppe

birds such as sage thrasher (Entwistle et al. 2000). In addition, crested wheatgrass seedings result in fewer nesting bird species and a lower density of birds (Reynolds and Trost 1980).

There is limited habitat for migratory birds in Southwest Allotment due to the large amount of crested wheatgrass seedings. However, migratory song birds likely are found within the allotment and may include brown-headed cowbird, vesper and savannah sparrows. The limited native habitat may support species such as sage thrasher, green-tailed towhee, western meadowlark and gray flycatchers. Migratory raptors that may use the allotment for foraging include northern harrier, short-eared owl, Swainson's and red-tailed hawks however, there is likely little raptor nesting occurring within the allotment due to limited nesting substrate.

Birds generally do not respond to the presence of grazing livestock but to the impacts on vegetation as a result of grazing. The principal means by which livestock grazing impacts migratory bird populations is by altering habitat structure and food availability. Livestock have the potential to directly impact migratory bird species by reducing, at least temporarily, required understory grasses and forbs used for foraging, nesting and cover from predators. Cattle compact soil by hoof action, removal of plant materials, and indirectly reducing 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, the western meadowlark appears to respond negatively; while mourning dove, loggerhead shrike, and sage thrasher 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).

#### Environmental Consequences:

##### *Alternative A – No Action*

Under Alternative A, grazing on Patetzik Creek Allotment would continue at the same timing and intensity levels as currently authorized. The allotment was evaluated and the plant communities were found to be meeting rangeland health standards. There is little trend information on migratory birds available for this allotment, however, as the allotment is meeting rangeland health standards it is expected that habitat requirements (e.g., cover, food, space) of migratory birds are being met and would continue to be met under Alternative A.

Under Alternative A, grazing on Southwest Allotment remain the same. The crested wheatgrass seeding has withstood this level of grazing and continues to remain healthy and self-sustaining. The native habitat has been grazed based on 90 percent public land, is on a slope and grazed at appropriate levels. Impacts to migratory birds would be minimal due to little native habitat and based on modification of cover the grazing period occurs prior to arrival of most migratory birds.

### *Alternative B - Proposed Action*

On Patelzik Creek Allotment, impacts to migratory birds under Alternative B would be similar to those under Alternative A with a few differences. Grazing of Pasture A would occur 5 days later under Alternative B than under Alternative A. Disturbance of nesting birds would have little opportunity to re-nest without disturbance in Pasture A under this alternative as grazing use would continue into the middle of June. Lower Pasture B would be managed as two separate pastures; however, there would be no fence between the two pastures and no herders so cattle may continue to use the area as one pasture and the amount and location of grazing expected to occur would be similar to that under Alternative A.

The major difference would be that the lower portion of Pasture B would be used twice as cattle are moved between Pastures A and G. Cattle moving through the pasture twice during the nesting season may reduce the potential for successful re-nesting if the first nest failed. However, as cattle would not be pushed hard from one pasture to another, the potential to disturb nesting migratory birds would be minimized.

Use would occur every year in both the mid and upper B pastures with a delayed rotation. The delayed rotation would provide opportunity for seed set and increased vigor of plants to occur through extended photosynthesis of whole plants every other year.

Impacts to migratory birds under Alternative B would be similar to impacts under Alternative A over the short term. The twice over grazing of the lower pasture, due to the delayed use may, over time, result in smaller grasses with reduced vigor. This would likely only be noticeable following trend monitoring.

On Southwest Allotment, impacts to migratory birds from adjusting the season of use in this allotment is likely minimal. Grazing of native habitats would be completed when migratory birds are arriving from their winter habitats. If any nests failed due to trampling or other disturbance from livestock there would be an adequate amount of time available for a re-nesting attempt.

### *Alternative C –Preferred Alternative*

On Patelzik Creek Allotment, the main difference between Alternatives B and C involves closing a ten day gap in the permitted use for one permittee; however, they are already using the allotment during this time under the existing grazing plan, so there is no effective difference between Alternatives B and C with respect to migratory bird habitat.

On Southwest Allotment, impacts to migratory birds from the reduction and adjusting the season of use in this allotment is likely minimal. Grazing of the small amount of native habitat within the allotment would be completed when migratory birds are arriving from their winter habitats. If any nests failed due to trampling or other disturbance from livestock there would be an adequate amount of time available for a re-nesting attempt.

### *Alternative D – No Grazing*

Impacts to migratory birds from no grazing would vary by species as discussed under Alternative A. In general, understory cover (e.g., grasses and forbs) would increase in size and vigor with seed set occurring annually, which would provide increased cover and forage. There would be no displacement or disturbance of migratory birds during crucial breeding, nesting and brood-rearing seasons. Crested wheatgrass seedlings would grow decadent and thick with little opportunity for establishment of native forbs, grasses and shrubs to occur, which would retain their poor quality for migratory birds.

Existing water troughs and wildlife escape ramps would not be maintained, resulting in a reduction of existing water in an arid environment. This reduced access to water may result in a reduction in migratory bird species abundance and richness, as well as reduced fitness and reproductive success due to increased energy used obtaining water. Water troughs may collect water following winter snowmelt and spring rains, potentially creating a drowning risk.

As residual herbaceous and litter cover increases, the continuity of fine fuels would increase, thereby increasing the risk of a larger and more severe wildfire than would likely occur if the allotments were grazed as described in Alternatives A, B, or C. Wildfires would reduce the sagebrush cover in the allotments which could be detrimental to sagebrush obligate species such as sage grouse.

#### *Summary*

All four alternatives would allow the allotments to either maintain or improve the current vigor and productivity of native herbaceous species, which would allow the allotments to continue meet Standards 1, 4, 5, and 8 of the Idaho Standards for Rangeland Health. Alternative D would likely result in greater improvement in the vigor and productivity of herbaceous species as compared to Alternatives A, B and C. Alternative C would likely result in greater improvement in the vigor and productivity of herbaceous species on Southwest Allotment as compared to Alternatives A and B. Alternatives C and D may result in slower recruitment and success of sagebrush seedlings in the crested wheatgrass seeding areas. Alternative C would have the least detrimental impact of the Alternatives in terms of water availability

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

#### Affected Environment:

All data known to the USFO, including data from the Idaho Conservation Data Center and the Idaho Department of Fish and Game, has been considered to identify any species currently listed under the Endangered Species Act (ESA) or any other special status species. There are no known occurrences of Threatened or Endangered species within five miles of the allotments within the last ten years. One federal Candidate species and eight species of sensitive animals have been identified as occurring or potentially occurring within five miles of the renewing allotment within the last ten years (Table 12). Species not occupying seasonal ranges or not

expected to occur within the Patelzik Creek and Southwest Allotments are excluded from discussion.

**Table 12. Wildlife Special Status Species and Occurrence within Patelzik Creek and Southwest Allotments.**

Species	Status <sup>a</sup>	Allotment	Occurrence	Rationale
Greater sage-grouse ( <i>Centrocercus urophasianus</i> )	C	Patelzik Cr	Present	Key habitat; breeding, brood rearing, fall to winter transition range
		Southwest	Potential	Potential habitat
Pygmy rabbit ( <i>Brachylagus idahoensis</i> )	S	Patelzik Cr Southwest	Potential	Potential habitat
Northern goshawk ( <i>Accipiter gentilis</i> )	S	Patelzik Cr Southwest	Potential Not Present	Foraging habitat No habitat available
Loggerhead shrike ( <i>Lanius ludovicianus</i> )	S	Patelzik Cr Southwest	Potential	Breeding habitat
Lewis's woodpecker ( <i>Melanerpes lewis</i> )	S	Patelzik Cr Southwest	Potential Not Present	Potential habitat No habitat available
Brewer's sparrow ( <i>Spizella breweri</i> )	S	Patelzik Cr Southwest	Present	Breeding habitat
			Potential	Breeding habitat
Sage sparrow ( <i>Amphispiza belli</i> )	S	Patelzik Cr Southwest	Potential	Breeding habitat
Common garter snake ( <i>Thamnophis sirtalis</i> )	S	Patelzik Cr Southwest	Potential	Potential habitat

a. 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 (hereinafter referred to as sage grouse) range-wide was warranted but precluded by higher listing actions (75 FR 55). Habitat for sage grouse within the BLM is currently managed under Instruction Memorandum No. 2012-043 - Greater Sage-Grouse Interim Management Policies and Procedures. Locally, management actions also follow the Upper Snake Local Working Group's Plan for Increasing Sage Grouse Populations (USLWG 2009) and the Conservation Plan for Greater Sage Grouse in Idaho (ISGAC 2006). Although Idaho populations have shown increases in the past ten years they have not reached levels attained in the late 1960s or early 1970s. Long term sage grouse population averages continue to indicate a declining population trend (Connelly et al. 2004).

Sage grouse require large tracts of relatively continuous sagebrush cover throughout the entire year (Pehrson and Sowell 2011). In general, the PPH designation is based on sage grouse populations as identified in *Sage-grouse Priority and General Areas in Idaho* (BLM 2011 and Makela and Major 2011). In particular, PPH is based on combined high male lek attendance, high lek density and high lek connectivity. Areas designated as PPH may include areas of non-habitat. Impacts in these areas result in impacts to sage grouse population centers and movement corridors. In addition, Patelzik Creek Allotment is identified as key sage-grouse habitat (Makela

and Major 2011) which is described as large-scale, intact sagebrush steppe areas with the potential for small inclusions of perennial grasslands, either native or introduced, or other habitats (e.g., mountain mahogany) to be present.

There are five occupied leks within five miles of Patelzik Creek Allotment and the allotment falls within the modeling parameters for PPH (Makela and Major, 2011). However, there is little sign of sage grouse use in the Beaverhead Front Range area, which begins at Indian Creek Butte (four miles west of Patelzik Creek Allotment) and runs eastward to Interstate-15. Although sage grouse sign was observed during the assessment on Patelzik Creek Allotment, steep slopes within the allotment reduce habitat suitability for nesting. The southern lower elevation portion of the allotment consists of low sagebrush and threetip sagebrush vegetation. Further upslope, Douglas-fir forests and aspen stands surround open meadows, further reducing the potential for sage grouse to occur within the allotment.

Patelzik Creek Allotment consists of 6,210 acres and Southwest Allotment consists of 2,530 acres, of which nearly all is designated as Preliminary Priority Habitat (PPH) for sage grouse. There are 1,383 acres of crested wheatgrass seedings in Patelzik Creek Allotment, and most of Southwest Allotment is seeded to crested wheatgrass. These seedings reduce or remove sagebrush habitat and also reduce populations of sagebrush obligate species such as Brewer's and sage sparrows, and sage grouse (Pehrson and Sowell 2011 and McAdoo et al. 1989). Additionally, conversion of sagebrush habitat within the analysis area and treatments to reduce sagebrush on private land within the allotment has reduced habitat quantity and quality for sage grouse within the area. Patelzik Creek Allotment also likely provides late brood-rearing habitat due to the riparian areas and forbs at higher elevations.

Sage grouse within the allotments are considered 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). However, this population has been stable since 1992, fluctuating around 5,000 males (Garton et al. 2011). Garton et al. (2011) conclude through their population analysis that the Snake-Salmon-Beaverhead ID population has a zero percent chance of dropping below a minimum viable population of 500 males in the next 100 years. Lek data from Table Butte north to the Centennial Mountains and west of Dubois to Medicine Lodge was used to analyze male sage grouse lek attendance for this grazing permit renewal. These data show average number of greater sage grouse males per lek has remained static over the same time periods.

Habitat diversity within the Patelzik Creek Allotment also provides for a variety of other special status species including northern goshawk, loggerhead shrike, Lewis's woodpecker, pygmy rabbit, garter snakes and sagebrush obligate species of Brewer's and sage sparrows. There is little information about trends for special status species within the allotment but as there is suitable nesting, foraging and cover habitat available (Walker 2004, Rotenberry et al. 1999, Vander Haegen 2003, Martin and Carlson 1998, Stebbins 2003, Janson 2002, IDFG 2005 and Carpenter 1952) it is likely they would be found during appropriate surveys.

Sage grouse within the vicinity of the Southwest Allotment are also considered part of the Snake-Salmon-Beaverhead ID population. There are no known leks within the allotment; however, there are six occupied leks within five miles of the allotment. Lek route data for this area has been conducted annually since 1997. Since that time male lek attendance has declined by nearly 35 percent. This may be due in part to the fires that occurred in 2000. The majority of the Southwest Allotment is unsuitable for sage grouse due to the extent of the crested wheatgrass seeding and lack of sagebrush cover within the seeding.

Table Butte, the land form the allotment is on, is important winter sage grouse habitat. As sage-grouse rely nearly 100% on sagebrush for forage during the winter it is unlikely there is much use in Southwest Allotment, again due to the crested wheatgrass seedings.

#### 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, which is considered rare (Beever and Aldridge 2011). Indirect impacts include the removal of vegetation used for hiding cover by nesting grouse. Poorly managed livestock grazing can alter plant community composition and distribution of desirable vegetation species. Although livestock grazing can have negative impacts on nesting sage grouse, the two uses can also be compatible under appropriate livestock management (Greer 1990, Patterson 1952).

#### *Alternative A – No Action*

Alternative A renews the current grazing permits on Patetzik Creek Allotment at existing levels with use occurring from 5/5 through 11/30 by 605 cows and 6 horses. Sagebrush habitats with high plant species richness and abundant forbs and insects provide brood-rearing areas (Connelly et al. 2000). Grazing that reduces herbaceous cover in sagebrush steppe may have negative impacts on sage grouse populations (Connelly et al. 2000). However, cover and density data collected in 2011 do not indicate a problem with the vigor and productivity of perennial grasses on Patetzik Creek Allotment. Impacts to loggerhead shrike, Brewers and sage sparrows would be similar to those discussed under **Migratory Birds**.

This allotment provides minimal foraging and perching habitat for the northern goshawk. Any impacts would be minimal and indirect and would include reduced cover and forage for prey. Lewis's woodpeckers are a cavity nesting, insect eating bird. Impacts to Lewis's woodpeckers would be minimal and may include reduced nesting substrates due to a reduction in woody browse species (e.g., aspen shoots) that could grow into nesting trees.

Potential impacts to pygmy rabbits would be potential crushing or collapsing of burrows and a reduction of forbs and grasses important in their spring and summer diets as well as for cover. A reduction of forbs and grasses would reduce cover for common garter snakes increasing their vulnerability to predators. The existing crested wheatgrass seedings provide little useable habitat for special status species.

Under Alternative A, grazing would continue at the same timing 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 would remain the same and continue to meet the needs of special status species as identified in the Rangeland Health Assessment.

#### *Alternative B – Proposed Action*

Impacts to vegetation and sage grouse, loggerhead shrike, Brewers and sage sparrows from the changes in grazing use on lower Pasture B of Patelzik Creek Allotment would be similar to those discussed under **Migratory Birds**. Impacts to the remaining special status species would be similar to those described under Alternative A.

#### *Alternative C – Preferred Alternative*

Impacts to vegetation and sage grouse, loggerhead shrike, Brewers and sage sparrows resulting from the changes in use on Pasture B of Patelzik Creek Allotment would be similar to those discussed under **Migratory Birds**. Impacts to the remaining special status species would be similar to those described under Alternative A.

There would be no discernible short term impacts to sensitive species by reduced grazing of the crested wheatgrass seedings in Southwest Allotment. Long term potential impacts may be the spread of crested wheatgrass into existing native habitats, reducing quality of those native habitats.

#### *Alternative D – No Grazing*

Impacts to sensitive bird species from no grazing would vary by species as discussed under **Migratory Birds**. In general, understory cover (e.g., grasses and forbs) would increase in size and vigor with seed set occurring annually providing increased cover and forage. There would be no displacement or disturbance of sensitive bird species during critical breeding, nesting and brood-rearing seasons. Browsing of woody plant species would be minimal and potentially increase nesting habitat for cavity and tree nesting species. Crested wheatgrass seedings would become wolfy and thick with little opportunity for establishment of native forbs, grasses and shrubs to occur providing poor quality habitat for sensitive bird species. Impacts to burrowing species would be a lack of disturbance or potential crushing or collapsing of burrows.

Impacts to special status species from lack of water troughs and wildlife escape ramps would be similar to those discussed under **Migratory Birds**.

#### *Summary*

Impacts to special status species under Alternative A would be *slightly* greater than those under Alternatives B and C due to the same season grazing occurring in all pastures and the reduced potential for increased vigor and seed set to occur from delayed rotation grazing. Impacts to

special status species under Alternative A would be greater than under Alternative D due to grazing occurring, reduction of cover and potential disturbance and displacement to occur.

Impacts to special status species under Alternatives B and C would be greater than those under Alternative D due to reduction of cover from grazing and potential for disturbance. Impacts to special status species under Alternatives B and C would be *slightly* less than those impacts under Alternative A due to the delayed rotation in the Upper B and Middle B pastures providing opportunity for increased vigor and seed set to occur ultimately increasing cover and forage for special status species.

Impacts to sensitive species would be less under Alternative D than under Alternatives A, B, or C due to reduced disturbance, increased forage and cover, and lack of competition.

## **Wildlife**

### Affected Environment

Patelzik Creek Allotment lies in the east central portion of IDFG GMU 59 and is important to big game providing crucial winter elk habitat, yearlong moose and mule deer habitat and crucial spring, summer, and fall pronghorn habitat. In this area elk numbers are relatively stable (IDFG 2010a), but moose numbers fluctuate annually with a general observation of declining numbers (IDFG 2009a), trend counts of mule deer populations in the mid-2000s were at or slightly higher than the highs observed in the 1960s (IDFG 2010b) and pronghorn herds are of relatively high density (IDFG 2009b).

A variety of resident birds use Patelzik Creek Allotment including red-tailed hawks that nest in the northern portion, golden eagles, dark-eyed juncos, common ravens, horned larks, American kestrels, northern flickers, and black-billed magpies. There is also sign of coyotes, voles, and ground squirrels in the allotment. There is no trend data available for resident birds, small mammals or reptiles within the area. It is expected that several bat species (e.g., little brown, Yuma myotis, long-eared, silver-haired) use the area during breeding and pup-rearing seasons.

Southwest Allotment is considered crucial pronghorn winter and spring habitat. Other big game species observed in or near the allotment include elk and mule deer. Resident bird species found in the allotment include horned lark, northern flicker, common raven, and black-billed magpie. Other small mammals such as voles, ground squirrels, coyote and badger as well as reptiles such as short-horned lizard and western fence lizards are also likely to use the allotment.

### Environmental Consequences

Livestock grazing can have direct and indirect impacts on wildlife habitat. Direct impacts include the removal and/or trampling of vegetation that would otherwise be used for food and cover, and livestock-wildlife interactions that may result in wildlife displacement or disease transmission.

Indirect impacts result from changes in plant community composition, structure, and productivity which together largely determine wildlife habitat suitability.

#### *Alternative A – No Action*

Under Alternative A, grazing would continue at the same timing and intensity levels as currently authorized. Patelzik Creek Allotment was evaluated and the plant communities were found to be meeting rangeland health standards. Although moose populations appear to be in a downward trend, riparian habitats are in Proper Functioning Condition with good regeneration and establishment of young willows found along the West Fork of Patelzik Creek. In general, habitat is currently providing for the needs of wildlife within this allotment and it is expected that renewing the grazing permit at the existing levels would continue to provide habitat for native wildlife species. Southwest Allotment was also evaluated and the plant communities were found to be meeting rangeland health standards. Southwest Allotment provides limited wildlife habitat due to the extent of the crested wheatgrass seeding. However, for those wildlife species using crested wheatgrass seedings, there would be the same level disturbance and cover.

#### *Alternative B – Proposed Action*

Impacts to wildlife under Alternative B would be similar to those under Alternative A with the following differences:

The major difference would be that the lower portion of Pasture B would be used twice as cattle are moved between Pastures A and G. The presence of cattle may also displace big game species.

Livestock use would occur every year in both the mid and upper B pastures with a delayed rotation. The delayed rotation would provide opportunity for seed set and increased vigor of upland plants to occur through extended photosynthesis of whole plants every other year. The delayed rotation in the B Pastures may reduce browse and trampling that occurs every other year in the riparian habitat, eventually resulting in increased riparian vegetation (e.g., willows).

Impacts to wildlife under Alternative B would be the same as those described under Alternative A for Southwest Allotment.

#### *Alternative C – Preferred Alternative*

Impacts to wildlife under Alternative C would be the same as those described under Alternative B for Patelzik Creek Allotment.

Impacts to wildlife under Alternative C would be the same as those described under Alternative A for Southwest Allotment.

### *Alternative D – No Grazing*

Impacts to wildlife species from removing livestock grazing would be minimal. There would be no competition between big game and livestock for forage, cover and space. Understory cover (e.g., grasses and forbs) would increase in size and vigor with seed set occurring annually providing increased cover and forage for resident bird species, small mammals and reptiles. Browsing of woody plant species would be minimal and potentially increase browse for big game and nesting habitat for cavity and tree nesting species.

However, crested wheatgrass seedings in both allotments would become wolfy and thick with little opportunity for establishment of native forbs, grasses and shrubs to occur providing poor quality habitat for many native species. However, some native species have adapted to using crested wheatgrass seedings at certain times of the year. Big game would likely use the seedings in the spring and fall when native grasses are not ready or have already cured. Some small mammals make use of the seeds and edges of crested seedings. Impacts to burrowing species would be a lack of disturbance, or potential crushing or collapsing of burrows.

There would be minimal impacts to big game from the lack of maintained water troughs and wildlife escape ramps as there is adequate free-flowing water available in the allotment and Medicine Lodge country in general. Impacts to small mammals and resident bird species would be similar to those discussed under **Migratory Birds**.

### *Summary*

Impacts to wildlife would be greater under Alternative A than under Alternatives B or C due to the same season grazing annually within pastures. Impacts to wildlife would also be greater under Alternative A than under Alternative D due to reduced cover and forage available for wildlife and potential for disturbance and displacement to occur.

Impacts to wildlife under Alternative B would be similar to impacts under Alternative A over the short term. The twice over grazing of the lower pasture, due to the delayed use may result in smaller grasses with reduced vigor, but this is unlikely. This rotation may also increase riparian habitat within the Middle and Upper B Pastures on Patelzik Creek Allotment.

Impacts to wildlife would be less under Alternative C than under Alternative A due to the potential to increase riparian habitat in Patelzik Creek Allotment.

Impacts to wildlife 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 Fish**

### Affected Environment:

There is no fisheries habitat on Southwest Allotment.

Patelzik Creek below the confluence of the West and Middle Forks is occupied habitat for Yellowstone cutthroat trout (*Oncorhynchus clarki bouvieri*) (YCT), a BLM Type 2 special status species. YCT have been petitioned for federal listing under the Endangered Species Act but was determined not warranted. Several four to eight foot high waterfalls near the confluence of the West and Middle Forks appear to be fish migration barriers. No fish have been collected on the West or Middle Forks above this confluence. At this time the streams provide limited occupied habitat for YCT. The East Fork and Main Patelzik Creek below the East Fork and West Fork confluence are not fishery habitat.

Cold water species of fish residing in the streams of the allotment need cold, clean water with abundant instream and overhead cover. In addition they need adequate prey available and clean silt free stream bottom materials for spawning.

The condition of fisheries habitat is intrinsically linked to the condition of the adjacent riparian habitat and also the stream channel characteristics. Riparian vegetation moderates water temperatures, adds structure to the banks to reduce erosion, provides overhead cover for fish and provides habitat for terrestrial prey species.

Intact vegetated floodplains dissipate stream energy, store water for later release, and provide rearing areas for juvenile fish. Water quality, especially in regard to factors such as temperature, sediment, and dissolved oxygen, also greatly affects fisheries habitat.

The indicator ratings for YCT for the West and Middle Forks are shown in Tables 13, and 14, below.

The middle and lower reaches of the West Fork of Patelzik Creek support a fishery habitat. The lower reach has suitable water temperature and water quality to meet the YCT standards for all life stages. The middle reach is marginal for water temperature, but has good water quality to meet the YCT standards for all life stages. These reaches are boulder and bedrock controlled and very stable. There are small areas of alteration where livestock access the middle reach. Sediment loading appears to be minimal. Pool frequency is good to excellent for a small, second order, steep gradient, high energy stream system. Pool quality is good but somewhat limited by size, depth and in-channel cover. However, the pool quality is at or near the expected level for this type of stream channel. These reaches are in FAR and PFC with stable to upward trends, and are currently providing suitable habitat for YCT.

**Table 13. Yellowstone Cutthroat Trout Habitat Indicator Ratings for the West Fork of Patelzik Creek below the confluence of the Middle Fork and above the confluence of the East Fork.**

Pathway	Indicators	Proper Functioning Condition	Functioning at Risk	Not Functioning
Watershed Condition	Proper Functioning Condition	Lower	Middle	
	Change in Peak/Base Flow	Middle, Lower		
Channel Condition and Dynamics	Width/Depth Ratio	Lower	Middle	
	Streambank Stability	Lower	Middle	
	Floodplain Connectivity	Middle, Lower		
Water Quality	Temperature- Spawning	Lower	Middle	
	Temperature- Adult Holding and Migration	Lower	Middle	
	Turbidity	Middle, Lower		
	Chemical Contamination and Nutrients	Middle, Lower		
Habitat Elements	Cobble Embeddedness	Middle, Lower		
	Small Woody Debris	Middle, Lower		
	Pool Quality	Middle, Lower		
	Pool Frequency	Middle, Lower		
Habitat Access	Physical Barriers	Middle, Lower		
Refugia	Existence and Management	Lower	Middle	

The Middle Fork of Patelzik Creek supports fish habitat. This reach has suitable water temperature and water quality to meet the Yellowstone cutthroat trout standards for all life stages. The reach is boulder and bedrock controlled and very stable. Sediment loading appears to be minimal. Pool frequency is good to excellent for a small, second order, steep gradient, high energy stream system. Pool quality is good but somewhat limited by size, depth and in-channel cover. However, the pool quality is at or near the expected level for this type of stream channel. This reach is in FAR condition with an upward trend, and is currently providing suitable habitat for Yellowstone cutthroat trout.

**Table 14. Yellowstone Cutthroat Trout Habitat Indicator Ratings for the Middle Fork of Patelzik Creek.**

Pathway	Indicators	Proper Functioning Condition	Functioning at Risk	Not Functioning
Watershed Condition	Proper Functioning Condition		X	
	Change in Peak/Base Flow	X		
Channel Condition and Dynamics	Width/Depth Ratio	X		
	Streambank Stability	X		
	Floodplain Connectivity	X		
Water Quality	Temperature- Spawning	X		

Pathway	Indicators	Proper Functioning Condition	Functioning at Risk	Not Functioning
	Temperature- Adult Holding and Migration	X		
	Turbidity	X		
	Chemical Contamination and Nutrients	X		
Habitat Elements	Cobble Embeddedness	X		
	Small Woody Debris	X		
	Pool Quality	X		
	Pool Frequency	X		
Habitat Access	Physical Barriers	X		
Refugia	Existence and Management	X		

In the East Fork of Patelzick Creek fish were observed only at the very lower section of the reach, near the confluence with the Middle Fork of Patelzik Creek. The upper end of the East Fork is more of a lentic riparian area with open wet meadows and numerous spring sources. There is not a well-developed channel. The lower section provides good fish habitat with adequate pools, clean spawning gravels and good cover.

The Main Fork of Patelzick provides excellent fish habitat. It is a forest type stream with a high gradient and numerous large, deep, plunge pools with good instream and overhead cover provided by downed wood, boulders and overhanging vegetation. Water temperatures are acceptable but due to upstream conditions may exceed thresholds for rearing and migration in the hottest part of the summer. However, banks are stable and well vegetated and provide good shading so additional water warming should not be a concern. YCT were observed in this section.

**Table 15. Yellowstone Cutthroat Trout Habitat Indicator Ratings for the East Fork of Patelzik Creek above the confluence of the Middle Fork and the Main Patelzik Creek below the confluence of the Middle and East Forks of Patelzik Creek.**

Pathway	Indicators	Proper Functioning Condition	Functioning at Risk	Not Functioning
Watershed Condition	Proper Functioning Condition	Main	EF	
	Change in Peak/Base Flow	Main, EF		
Channel Condition and Dynamics	Width/Depth Ratio	Main, EF		
	Streambank Stability	Main, EF		
	Floodplain Connectivity	Main, EF		
Water Quality	Temperature- Spawning	Main, EF		
	Temperature- Adult Holding and Migration		Main, EF	
	Turbidity	Main, EF		
	Chemical Contamination and	Main, EF		

Pathway	Indicators	Proper Functioning Condition	Functioning at Risk	Not Functioning
	Nutrients			
Habitat Elements	Cobble Embeddedness	Main, EF		
	Small Woody Debris	Main, EF		
	Pool Quality	Main, EF		
	Pool Frequency	Main, EF		
Habitat Access	Physical Barriers	Main, EF		
Refugia	Existence and Management	Main, EF		

Environmental Consequences:

*Alternative A – No Action*

The present grazing system in this alternative should lead to continued meeting or improvement of water quality, riparian and fisheries habitat condition indicators in the streams in the allotment if the terms and conditions for stubble height, bank alteration and woody browse utilization are met.

*Alternative B – Proposed Action*

The proposed grazing system in this alternative should lead to continued meeting or faster improvement of water quality, riparian and fisheries habitat condition indicators in the streams in the allotment than Alternative A because livestock use will be reduced in Pasture B, where most of the occupied fisheries streams are located.

*Alternative C – Preferred Alternative*

The effects of Alternative C would be the same as those described under Alternative B.

*Alternative D – No Grazing*

By removing grazing from the allotment, water quality, riparian and fisheries habitat condition indicators should improve at a faster rate than they would have if the allotment was grazed by any of the grazing systems in the other three alternatives. By not having livestock trampling riparian vegetation and banks, it can be expected that vegetation would recover and banks would stabilize and water quality would improve to a potential greater than if it were grazed.

## **Fisheries**

### Affected Environment:

There is no fisheries habitat on Southwest Allotment.

The fisheries habitat in Patelzik Creek Allotment is described in detail under Threatened, Endangered, and Sensitive Fish, above.

### Environmental Consequences:

The environmental consequences of the alternatives on fisheries habitat is the same as that described in detail under **Threatened, Endangered, and Sensitive Fish**, above.

## **Cultural Resources**

### Affected Environment:

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

One Class III inventory of approximately ten acres has been conducted within the Patelzik or Southwest allotment boundaries. There are four (4) known cultural resources located within the allotment boundaries. All four of these cultural resources are lithic and tool scatters, and all are potentially eligible under for inclusion to the National Register of Historic Places (NRHP) under Criterion 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 on the Patelzik Creek and Southwest Allotments are generally limited, with activity mainly focused at congregation areas. In areas where livestock is more dispersed, such as the uplands or alluvial fans in the allotment, it can be predicted that impacts will be mainly surficial, causing no stratigraphic mixing, but perhaps resulting in horizontal displacement of artifacts.

Eight trough locations have been identified within the allotments. 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 Patelzik Creek and Southwest Allotments 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 the same as those presented under Alternative A.

*Alternative C – Preferred Alternative*

Impacts to cultural resources would be similar to those presented under Alternative A; however, the change in authorized use for the Southwest allotment may afford historic properties protection from disturbance caused during wet seasons in which more vertical displacement of soil could occur due to livestock trampling.

*Alternative D – No Grazing*

This alternative would eliminate all livestock threats of damage to historic properties for a period of ten years.

## **Economic and Social Values**

### Affected Environment:

Economic and Social Values of the livestock operations associated with Patelzik Creek and Southwest Allotments are difficult to quantify. 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, as an indicator, has resulted in conflicting results. The contribution margin resulting from 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, 2011) the average recent market steer price was \$770 or \$77 per AUM assuming a 10 AUM input. The average recent market price for bred cows was \$1150 or \$96 per AUM assuming 12 AUMs input. Therefore the change in gross revenue for the operators may range from \$77 to \$96 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/AUM in 2011. Average private

pasture cost in Idaho in 2010 was \$12.60/AUM and average local hay prices were \$64/AUM. Therefore the forage substitution cost annually would range from \$11.25 to \$62.65 per AUM.

#### Environmental Consequences:

##### *Alternative A – No Action*

Alternative A would result in no changes in the mandatory terms and conditions for livestock grazing in Patetzik Creek and Southwest Allotments. There would be no impact from Alternative A which is the baseline for addressing economic and social values.

##### *Alternative B – Proposed Action*

The economic and social impact from Alternative B would be the same as Alternative A.

##### *Alternative C – Preferred Alternative*

Alternative C would result in changes in the mandatory terms and conditions for livestock grazing in Southwest Allotment, but there would be no net change to the number of AUMs the permittee would be authorized to graze. Therefore, the economic and social impact from Alternative B would be the same as Alternative A.

##### *Alternative D – No Grazing*

Under Alternative D, the authorized use would be reduced by 1,951 AUMs for the next ten years. The forage substitution cost to the permittees under Alternative D would range from approximately \$21,949 to \$122,230 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 \$150,227 to \$187,296.

## **Recreational Use**

#### Affected Environment:

There is little or no recreational use on Southwest Allotment.

Camping and hunting are the primary recreation activities within the Patetzik Creek Allotment. There are five dispersed sites located within a ¼ mile radius of each other and are located off a well-traveled maintained road in the northern portion of the allotment. The dispersed sites are primitive with no permanent facilities or amenities. There are visitor-constructed rock fire rings, and obvious flat areas used for camping, with little regulatory signing. The dispersed camping sites are located adjacent to the Caribou-Targhee National Forest boundary.

Hunting typically occurs in the northern pastures of Patelzik Creek Allotment. The area generally is snow-covered until late spring or early summer, making access difficult. The dispersed camping sites experience the most use in the fall during hunting season. Visitor use for the dispersed camping sites is approximately 1,346 visits in 2011.

#### Environmental Consequences:

##### *Alternative A – No Action*

The dispersed camping sites are located in Upper Pasture B of Patelzik Creek Allotment. Under Alternative A, the grazing rotation allows livestock grazing for 14 days in June and 31 days in August, rotating between months every other year. There are no impacts to hunters since the livestock are in the southern portion of the allotment by fall, where little hunting use occurs. The small portion of recreation visitors that are camping in the dispersed sites during the grazing season would interact with livestock. These interactions would impact recreation visitors when livestock dwell in the dispersed camping sites, with livestock impacting the aesthetics of the camping area.

##### *Alternative B – Proposed Action*

Alternative B proposes to change the grazing rotation and season of use to allow livestock in Upper Pasture B each year for 22 days in August. This proposal would provide consistency for visitors, where they know the potential for interaction with livestock would occur every year at the same time. There would be no impacts to hunters since livestock are in the southern portion of the allotment by fall. Compared to Alternative A, this proposal would have similar impacts on recreation visitors camping in the dispersed camping sites.

##### *Alternative C – Preferred Alternative*

Alternative C proposes the same changes to the grazing rotation on Patelzik Creek Allotment as Alternative B. Compared to Alternatives A and B, this proposal would have similar impacts on recreation visitors camping in the dispersed camping sites.

##### *Alternative D – No Grazing*

Alternative D proposes to discontinue grazing for ten years within the Patelzik Creek Allotment. There would be no impacts to recreation visitors from livestock grazing during that time.

## CHAPTER 4 – CUMULATIVE EFFECTS

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.

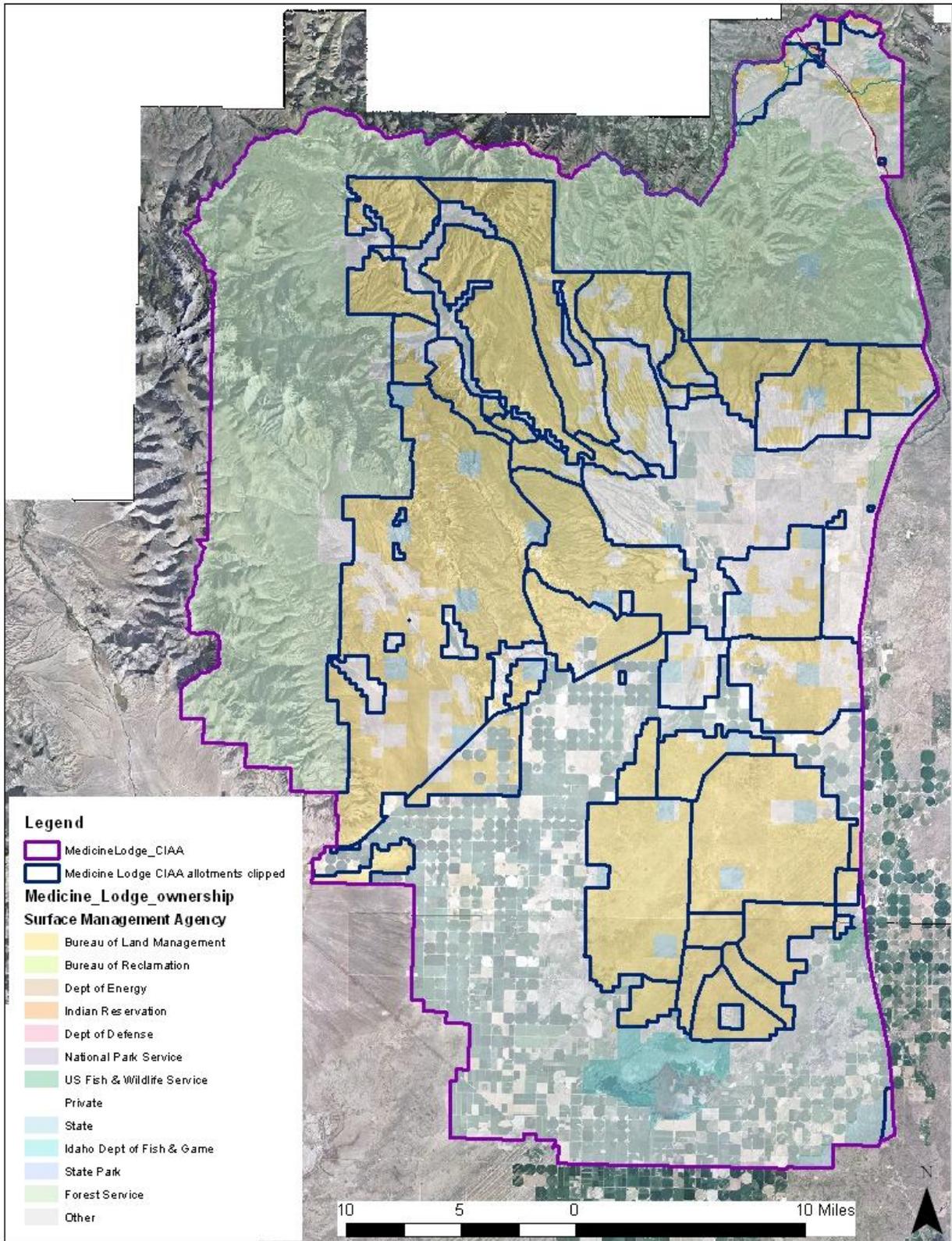
The Cumulative Impact Assessment Area (CIAA) for this analysis includes Medicine Lodge, the front range of the Beaverhead Mountains, and the Table Butte area (Figure 5). This area is called the Medicine Lodge CIAA. The CIAA consists of approximately 758,310 acres located in portions of Jefferson and Clark Counties. Unless otherwise noted, this landscape unit defines the bounds of the cumulative analysis for the resources affected by the alternatives. This landscape unit was selected as the unit of analysis based on 4<sup>th</sup> level hydrologic unit boundaries within the USFO area, then modified using major highways and ownership boundaries to create a continuous unit of associated land uses and plant communities. Mesa Allotment is located in the southern portion of this CIAA, and makes up less than one percent of the total acres and less than one percent of the BLM acres in the CIAA (Table 16).

**Table 16. Surface Management Status within the Medicine Lodge CIAA.**

<b>Ownership</b>	<b>Acres</b>
Bureau of Land Management	261,499 acres
Private Property	273,790 acres
U.S. Forest Service	192,233 acres
Idaho Department of Lands	18,565 acres
Idaho Fish and Game Lands	11,020 acres
Camas National Wildlife Refuge Lands	1,203 acres

Except for the areas that have been cultivated for agriculture, this landscape unit includes a large continuous, ecologically unique landscape consisting of a substantial proportion of vegetation influenced by sandy to loamy soil textures, punctuated by lava flows with basin, Wyoming, and mountain big sagebrush, low sagebrush, black sagebrush, and threetip sagebrush vegetative communities. The southern portions of the CIAA around Table Butte are dominated by sandy soils. These sandy ecological sites are dominated by basin big sagebrush with an understory of needle-and-thread and Indian ricegrass. As the sandy substrates give way to gravelly outwash plains and loamy soils to the north, the basin big sagebrush gives way to low sagebrush, black sagebrush, and Wyoming big sagebrush vegetation, with an understory of bluebunch wheatgrass. The northeast portion of the CIAA has a substantial component of threetip sagebrush vegetation over loamy or gravelly loam soils, with an understory of bluebunch wheatgrass, needle-and-thread, and Indian ricegrass. The north and west portions of the CIAA are dominated by mountain big sagebrush vegetation on loamy soils, with an understory of Idaho fescue and bluebunch wheatgrass, which yields to forested vegetation at higher elevations.

**Figure 5: Medicine Lodge Cumulative Impact Assessment Area.**



A number of general habitat types or classifications are found across the CIAA. Table 17 lists the acres within each cover classification based on the landscape classification map used for the USFO Analysis of Management Situation (AMS).

**Table 17. Habitat Types or Vegetation Classifications within the Medicine Lodge CIAA.**

Habitat Type / Vegetation Classification	Acres
Agriculture	130,217 acres
Annual Grasslands	3,893 acres
Bedrock-Cliffs-Scree	4,796 acres
Forest	62,174 acres
Perennial Grasslands	75,067 acres
Riparian-Wetland, including open water	28,149 acres
Sagebrush and Desert Shrublands	431,520 acres
Shrublands, including juniper and mountain mahogany	8,784 acres
Urban and industrial/excavation areas	13,242 acres

This area ranges widely in its actual and available precipitation coinciding with the range in soil textures and elevation gradient from the south end to the north and west ends of this CIAA. The lowest precipitation areas occur near Montevideo, Mud Lake, Terreton, and Hamer, at 8-10 inches of precipitation per year. The highest precipitation areas in the CIAA occur on the north and west edges of the CIAA, on the Beaverhead Mountains and Black Mountain. This uppermost edge of the CIAA receives 24-28 inches of precipitation per year. About 39 percent of the CIAA receives 12 inches or less per year, about 23 percent of the CIAA receives between 12 and 16 inches of precipitation per year, about 22 percent of the CIAA receives between 16 and 20 inches of precipitation per year, and about 15 percent of the CIAA receives more than 20 inches of precipitation per year.

### Past and Present Actions

Past and present actions that have occurred in the watershed have impacted the environment to varying degrees. These actions include agricultural development, infrastructural development, vegetation management, wildfire, and livestock grazing (Table 18). Although these actions probably do not account for all of the impacts that have or are likely to occur in the Medicine Lodge CIAA, GIS analysis, agency records, and professional judgment suggest that they have contributed to the vast majority of cumulative impacts that have occurred in the assessment area.

**Table 18. Past and Present Actions within the Medicine Lodge CIAA.**

Type of Activity	Past and Present Actions
<i>Agricultural Development</i>	
<i>Cultivated crop agriculture, both dryland and irrigated</i>	130,217 acres

Type of Activity	Past and Present Actions
<b>Urban Development</b>	
<i>Buildings and other structures, concrete and asphalt pads</i>	13,242 acres
<b>Infrastructural Developments</b>	
<i>Roads- paved, maintained gravel, and 2-track</i>	2,083 miles with a 12 foot right of way, affecting 3,030 acres. Road density is 1.8 road miles/mile <sup>2</sup> in CIAA
<i>Railroads</i>	10 miles of track with a 200 foot right of way, affecting 242 acres.
<i>High Voltage Transmission Lines</i>	47 miles with a 200 foot right of way, affecting 1,139 acres.
<i>Mineral Material Sites</i>	13 active pits with a 40 acre footprint each, affecting 520 acres.
<i>Communication Towers</i>	6 towers with ¼ acre right of way each, affecting 1.5 acres.
<i>Recreation Facilities</i>	Two designated campsites on BLM lands, affecting 10 acres One developed campground on USFS lands, affecting 10 acres Four developed trailheads on USFS lands, affecting 4 acres About 20 dispersed campsites on BLM lands, affecting about 40 acres About 170 dispersed campsites on USFS lands, affecting about 120 acres About 15 dispersed campsites on private lands, affecting 30 acres  Total Disturbance: About 214 acres
<i>Range Improvements</i>	Fences: 738 miles Assuming 4 feet of disturbance along fence lines, there are 358 acres disturbed as a result of the existing fence lines in the CIAA.  Troughs: 137 Assuming ½ acre of direct soil disturbance and vegetation removal per trough, there are 69 acres disturbed as a result of watering troughs in the CIAA.  Total disturbance: 427 acres
<b>Wildfire</b>	
<i>33 Recorded Wildfires between 1980 – 2011</i>	76,507 acres
<i>5 Wildfire Rehabilitation Projects</i>	49,940 acres
<b>Vegetation Management</b>	
<i>Non-Native Grass Seeding</i>	8,435 acres
<i>Sagebrush Seeding</i>	14,998 acres
<i>Prescribed Fire</i>	25,967 acres
<i>Chemical Brush Thinning</i>	0 acres
<i>Mechanical Brush Thinning</i>	1,990 acres
<b>Invasive Species</b>	
<i>Noxious weeds</i>	9,517 acres
<i>Annual grasses</i>	3,893 acres
<b>Livestock Grazing</b>	
<i>Number of Allotments</i>	46 BLM grazing allotments comprising 320,830 acres. 24 active USFS grazing allotments comprising 172,674 acres.

Type of Activity	Past and Present Actions
<p><i>Rangeland Health Assessments (BLM Allotments)</i></p>	<ul style="list-style-type: none"> <li>• 262,956 allotment acres (82%) are currently meeting all Idaho Standards for Rangeland Health.</li> <li>• 1,790 allotment acres (1%) are currently making significant progress towards meeting Standards.</li> <li>• 51,726 allotment acres (15%) currently not meeting one or more Standards, current livestock grazing management is a causal factor. All allotments not meeting one or more standards because of livestock grazing management problems have seen changes to the livestock grazing management during the last ten years to ensure the allotments would make significant progress towards meeting the standards. Reductions in AUMs were made on 31,240 acres not meeting one or more standards in 2009 and 2011.</li> <li>• 4,960 allotment acres (2%) are not meeting one or more Standards, but not due to current livestock grazing management.</li> </ul>

Agricultural development has a long history in the area. Today, irrigated agricultural development dominates the south half of the CIAA, and is a substantial and important use of the assessment area. Before the private lands were irrigated for agricultural use, they were dominated by sagebrush vegetation, and used for grazing livestock. There are several irrigation wells and canals that irrigate crops, hay fields, and pastures within the CIAA. The agricultural development on the private lands in the south half of the CIAA has resulted in blocks of public land separated by several miles of irrigated crop fields, with little connectivity to adjacent blocks of public land. The north half of the CIAA contains agricultural development, but not at the levels seen in the south half of the CIAA. The north half of the CIAA contains a large continuous block of public land with connectivity to public and USFS lands to the north, west, and east.

Urban and infrastructure development has increased over time, and a substantial portion of the CIAA has been developed for agricultural activities, roads, railroads, irrigation, power lines, and small buildings. Some permanent residential development exists near Terreton, Mud Lake, Montevue, Small, Dubois, and Spencer. Most of this development is associated with farming and ranching in the area. The Montevue-Hamer Road is a developed gravel road maintained by Jefferson County that connects the communities of Montevue to Hamer. State Highway 22 runs in an east-west direction across the CIAA. Other developed county roads cross the lands on all sides of the Medicine Lodge area, providing access to public land. There is a railroad line running between Montana and Idaho Falls that runs through the northeast corner of the CIAA, and a large (230 kV) power line that crosses through Medicine Lodge valley and turns west through the CIAA.

Livestock grazing has a long history in the region dating back to the late 1800s. Livestock grazing remains a primary use in the CIAA, although at lower levels of use than the first half of the 20<sup>th</sup> century. Ranching and livestock grazing are generally dispersed activities with areas of more intensive use near water and livestock handling facilities. Livestock grazing remains a primary use of the CIAA. There are occasional fences, water tanks, and troughs used to manage livestock grazing across the landscape.

Recreation use of the area has increased over time. Recreation use in the CIAA is primarily a dispersed activity with areas of more intensive use along Medicine Lodge Creek and several smaller creeks in the valley. Fishing, hunting, and summer trail use on the National Forest trail system are the main recreational pursuits in the CIAA. The Medicine Lodge area is popular with big game and upland bird hunters, as there are relatively large populations of elk, moose, deer, antelope, and sage grouse in the area. A BLM dispersed campground has been developed along a portion of Medicine Lodge Creek, and the landowner that owns much of the Medicine Lodge Creek riparian zone allows dispersed camping, fishing, and hunting at several access points along the valley. The U.S. Forest Service maintains a developed campground in Medicine Lodge, at the Webber Creek trailhead. Numerous undeveloped and dispersed camp sites are present in the valley as well. Common recreation pursuits include fishing, camping, hunting, hiking, and motorized vehicle use.

The Medicine Lodge area is important habitat for elk, deer, moose, antelope, and sage grouse. There is also designated bighorn sheep habitat (112,121 acres) on the west side of the CIAA. Several of the streams in the Medicine Lodge area provide habitat for Yellowstone cutthroat trout, a BLM sensitive species.

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 432,362 acres of PPH within the Medicine Lodge 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 PPHs (Makela and Major 2011). There are approximately 59,045 acres of PGH within the CIAA.

The U.S. Fish and Wildlife Service identified primary and secondary threats to greater sage-grouse in 2010. Primary threats include fragmentation of sagebrush habitats due to: conversion of habitat for agriculture or urbanization, inadequate regulatory mechanisms, infrastructure (roads, power lines, energy development, etc.), invasive species and wildfire. Secondary threats included: climate change, collisions (with fence, power lines, etc.), conifer invasion, contaminants, disease (West Nile virus), poorly managed livestock grazing, hunting, mining, predation, prescribed fire/vegetation treatments and water developments (USFWS 2010).

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 affect sage grouse habitats by removing vegetation through foraging or changing species composition under poor management practices (Connelly and Braun 1997). The PPH and PGH areas occur on about seven percent of the area of public lands identified as not meeting ISRH and livestock grazing was identified as a factor.

## **Reasonably Foreseeable Future Actions**

Reasonably foreseeable future actions include continuation of the past and present actions as described above, and the possible expansion of power line corridors. The level and character of livestock grazing and agricultural development are anticipated to remain consistent into the foreseeable future. Recreational use is expected to continue to increase. Motorized recreation has continued to increase in popularity in Idaho and there is local access to a number of designated motorized trails. The potential exists for expansion of the BLM dispersed campground to address resource impacts from dispersed campsites along the creek. The BLM has planned a cheatgrass reduction project in two areas to reduce the amount of cheatgrass that has colonized areas where heavy equipment worked during the 2003 Deep Fire. The BLM is also planning a conifer thinning project on the foothills of the Beaverhead Mountains to improve sagebrush communities and aspen stands.

Infrastructure development is anticipated to continue to increase in the foreseeable future. The existing power line route through Medicine Lodge valley was considered in 2008 as an alternative route for the Mountain States Transmission Intertie 500 kV Project (MSTI), but this route was dropped from consideration. The current proposed MSTI route would travel over Monida Pass, then cross east to west near Highway 22 for a total of 44 miles of new power line within the CIAA.

Besides the MSTI Project, there are no other known primary threats such as conversion of sage grouse habitat for agriculture or urbanization, or infrastructure (roads, energy development, etc.) proposed on public lands in the CIAA. In addition, no such plans or proposals are known for nearby lands under other ownership (private, NPS, USFS, DOE or State of Idaho lands) in the CIAA. Invasive species and wildfire continue to be primary threats that cannot be anticipated in frequency or intensity. Impacts associated with wildfire are the greatest threat (USFWS 2010) to sage grouse in the CIAA. Managing for healthy habitats in the CIAA provides the most protection against invasive species and resiliency to disturbances such as wildfire.

## **Impacts Associated with Past, Present, and Foreseeable Future Actions**

Past and present actions have resulted in varying degrees of impact to the resources considered in the analysis. Observable impacts are higher for agricultural development and infrastructure which have resulted in direct habitat loss and fragmentation on most of the private lands in the CIAA. These actions have altered the native vegetation and introduced non-natural elements of form, line, and color that have altered and would continue to alter the characteristics of the visual landscape.

Today, irrigated agricultural development is found on a substantial portion of the CIAA, and is a substantial and important use of the assessment area. Before the private lands were irrigated for agricultural use, they were dominated by sagebrush vegetation, and used for grazing livestock. This has resulted in a direct loss of about 130,217 acres of sagebrush habitat in the CIAA in the last 30 to 40 years. Although many species of wildlife forage in the agricultural fields at

different times of the year, the loss of large blocks of sagebrush habitat has reduced the connectivity of the remaining sagebrush habitats within the CIAA.

Urban and infrastructure development has increased over time, and a portion of the CIAA has been developed for agricultural activities, roads, railroads, irrigation, power lines, and small buildings. These developments have resulted in a direct loss of about 18,175 acres of sagebrush habitat, and a loss of connectivity between remaining sagebrush habitats within the CIAA. These structures have increased the perching habitat for avian predators in the area. The proposed MSTI route would impact 1,067 additional acres within the CIAA. The existing roads and trails create a small amount of soil compaction and erosion, and may be vectors for the spread of noxious weeds. However, they provide access for the public to large expanses of public lands for hunting and all-terrain vehicle riding in the CIAA.

Documented fires have impacted approximately 76,507 acres or ten percent of the CIAA from 1980 to the present. Although wildfires have repeatedly burned in the area, there are two areas with reduced sagebrush cover relative to site potential. The first is the Deep Fire area, which burned in 2003. The mountain big sagebrush vegetation in the Medicine Lodge area recovers relatively quickly after fires. The largest burn previous to the Deep Fire burned the Indian Creek bench in 1981. Within about 20 years, the sagebrush cover in the burned area matched the amount of sagebrush cover in adjacent unburned areas, and the fire scar was no longer apparent on the ground or in aerial images. The second area is around Camas Butte, which burned in 1986 and in 2000. The basin big sagebrush vegetation has been slow to return to these burned areas. Sagebrush seed was aerially applied to the areas burned in 2000 during post-fire rehabilitation activities. A pilot project funded by the Idaho Office of Species Conservation included planting sagebrush plugs on these burned areas in 2011 to increase the sagebrush cover in important sage grouse habitats.

Periods of extended drought likewise impact the CIAA. Based on climatic data collected near Hamer, Idaho, precipitation has been reported below the long-term average in 9 of the past 20 years, with 7 of those 9 years reporting greater than 20 percent below average. Climatic data collected near the U.S. Sheep Experiment Station north of Dubois, Idaho found that precipitation was below the long-term average in 9 of the past 20 years, with 4 of those 9 years reporting greater than 20 percent below average.

Unmanaged livestock (horses, cows, and sheep) grazing in the first half of the 20<sup>th</sup> century resulted in altered ecological conditions in the riparian areas and the uplands in Medicine Lodge CIAA. As livestock grazing became more carefully managed in the area, the ecological health of the rangelands and riparian areas improved. Today, about 78 percent of the riparian acres on public lands in the Medicine Lodge CIAA are either in PFC or making significant progress towards PFC. About 83 percent of the upland acres in the CIAA are being maintained or improved to ensure the proper functioning of ecological processes and continued productivity and diversity of native plant species. These healthy uplands are providing suitable habitat to support a wide variety of wildlife species, including several game and nongame species, special status species and migratory birds. About 15 percent of the public land acres in the CIAA have recently completed the grazing permit renewal process, and substantial changes to the livestock

grazing management were made to allow the upland vegetation and wildlife habitat to improve and make progress towards the proper functioning of ecological process and improved productivity and diversity of native plant species.

Within the planning area, sage grouse are a migratory species occupying hundreds of square miles annually and sometimes making seasonal movements that exceed 40 miles. The health of the species is directly tied to maintaining habitat diversity and quality. Altered fire regimes influenced by non-native cheatgrass, loss of sagebrush cover due to wildfires, and habitat fragmentation from roads, development, and agriculture are a cumulative influence on the species. Proposals for energy corridors further threaten habitats. Livestock grazing occurs on the vast majority of sagebrush lands range-wide (Knick et al. 2003, Connelly et al. 2004.); however there is little information directly linking livestock management practices to sage grouse population levels (Braun 1987, Connelly and Braun 1997, Mosely 2001). The implementation of improved grazing management practices since the 1950's has improved or maintained healthy vegetative conditions on nearly all the remaining rangelands in the CIAA.

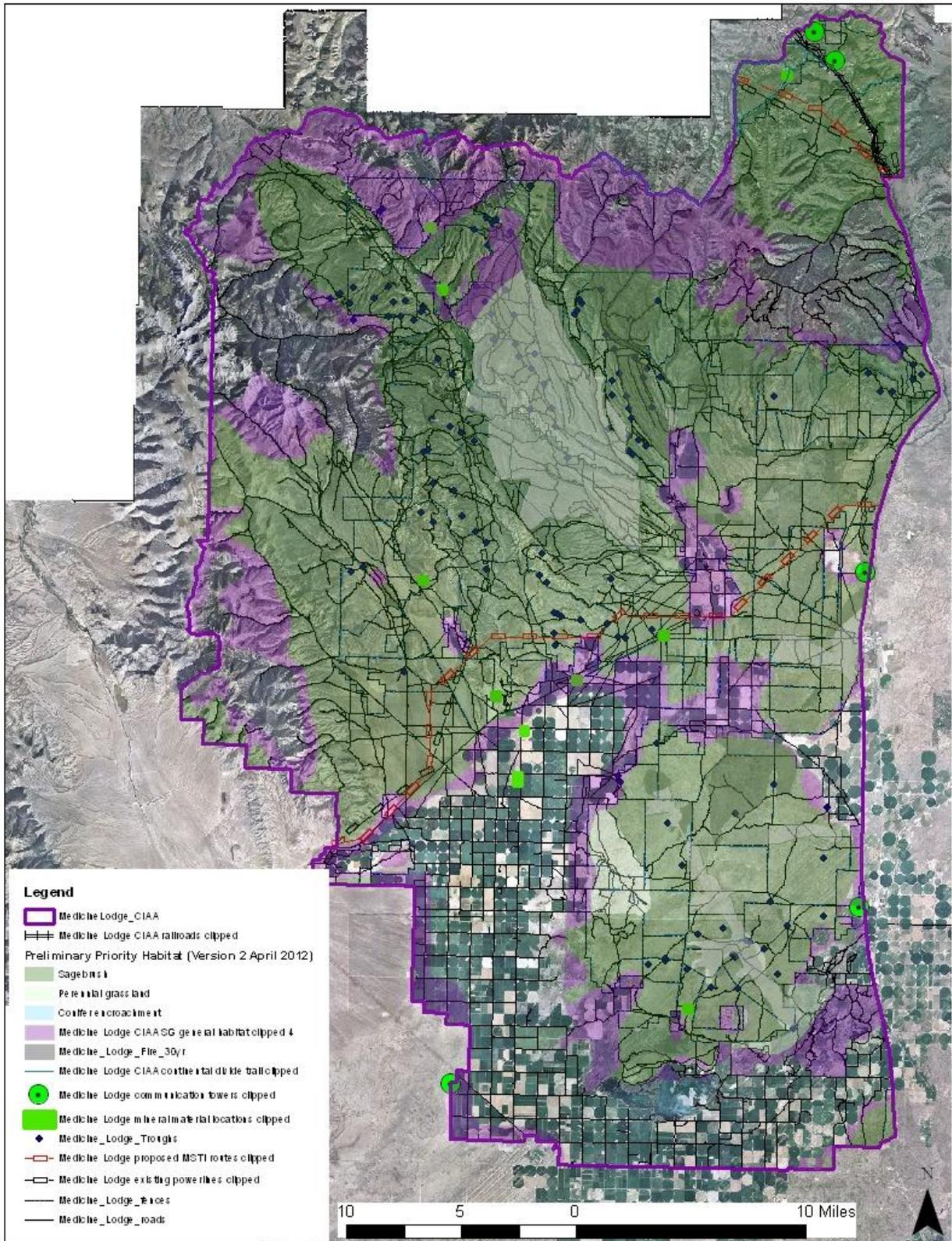
The U.S. Fish and Wildlife Service (USFWS) identified primary and other threats to Greater sage-grouse in its 12-Month Findings for Petitions to List the Greater Sage-Grouse as Threatened or Endangered (USFWS 2010). The primary cause of sage grouse population decline identified by the USFWS was fragmentation of sagebrush habitats due to: habitat conversion for agriculture or urbanization, infrastructure within sagebrush habitats (power lines, 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, power lines, 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). Table 19 and Figure 6 include the known impacts occurring within sage grouse PPH and PGH areas within the Medicine Lodge CIAA.

**Table 19. Known Impacts within Sage Grouse PPH and PGH in the CIAA.**

<b>Impact</b>	<b>PPH Acres Affected</b>	<b>% of PPH Acres in the CIAA</b>	<b>PGH Acres Affected</b>	<b>% of PGH Acres in the CIAA</b>
Agricultural Development	2,233	0.1%	19,158	32.4%
Urban Development	2,551	0.1%	8,907	15.1%
Infrastructure*	2,689	0.1%	713	1.2%
Range Improvements*	288	<0.1%	73	0.1%
Wildfire	21,630	5.0%	9,148	15.5%
Invasive species*	4,792	1.1%	3,522	6.0%
Livestock Grazing*	42,903	9.9%	4,435	7.5%

\*Note: Infrastructure is a combination of roads, power lines, and communication tower right-of-ways. Range Improvements is a combination of fences and water trough sites. Invasive species includes noxious weed sites and annual grass dominated areas. Livestock grazing impacts include those acres that are not meeting the Idaho Standards of Rangeland Health and livestock grazing management is a causal factor. Substantial changes to the livestock grazing management, including stocking rate reductions and changes to seasons and/or duration and timing of use have been made in the last ten years to ensure these acres will make significant progress towards meeting the Standards.

**Figure 6. Sage grouse PPH and PGH areas and Primary Impacts to PPH and PGH.**



Wildfire and development (agricultural and urban) provide the greatest cumulative impact to sage grouse within the CIAA. When combined with all other identified impacts, about 16 percent of PPH and PGH in the CIAA have been disturbed by one or more activities. 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.

Impacts to sage grouse caused by livestock grazing were likely greatest during the time that unregulated grazing occurred, from the late 1800s into the early 1900s. The Taylor Grazing Act (1934) was the foundational law for livestock management on public lands, and although it was intended to regulate livestock use, it also benefited sage grouse habitat within the CIAA. Since then other laws, improved science, improved management cooperation (interagency and with private landowners) and improving adaptive management have provided further protection for sage grouse habitats. The acres shown as impacted by livestock grazing in Table 19 were determined to not be meeting one or more of the Idaho Standards for Rangeland Health during the last ten years. As a result of that determination, substantial changes to the livestock grazing management have been made on those acres, including stocking rate reductions, changes in the season of use, and/or changes in the timing or duration of grazing use. All the changes were made in order to ensure that the acres not meeting standards would make significant progress towards meeting the standards.

Key sage grouse habitats are large scale, intact sagebrush steppe areas that provide sage grouse habitat (Sather-Blair et al. 2000). Within the Medicine Lodge CIAA there are approximately 397,836 acres of Key sage grouse habitat, which is approximately 53 percent of the CIAA. There are also 69,534 acres (nine percent of the 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). About 38 percent of the CIAA (290,940 acres) is not considered Key or Restoration habitat for sage grouse.

## **Contribution of the Alternatives to the Cumulative Impacts in the CIAA**

### *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 there would be no new structural developments which would contribute no change to the collective impact relative to non-natural elements of form, line, and color within the landscape. The number of road miles within the area would not increase as a result of implementing Alternative A. The amount of suitable habitat for wildlife species that occur in the CIAA would

remain about the same. The actions described in Alternative A would not substantially alter the current or expected future conditions of natural resources in the CIAA.

#### *Alternative B – Proposed Action*

Alternative B would also contribute very little to the collective impact associated with past, present and reasonably foreseeable future actions. Livestock use would remain at current levels, and there would be no new structural developments which would contribute no change to the collective impact relative to non-natural elements of form, line, and color within the landscape. The number of road miles within the area would not increase as a result of implementing Alternative B. The amount of suitable habitat for wildlife species that occur in the CIAA would remain about the same. The actions described in Alternative B would not substantially alter the current or expected future conditions of natural resources in the CIAA.

#### *Alternative C – Preferred Alternative*

Alternative C would also contribute very little to the collective impact associated with past, present and reasonably foreseeable future actions. Livestock use would be reduced slightly with the adjustment to the public land percentage in Southwest Allotment. There would be no new structural developments which would contribute no change to the collective impact relative to non-natural elements of form, line, and color within the landscape. The number of road miles within the area would not increase as a result of implementing Alternative C. The amount of suitable habitat for wildlife species that occur in the CIAA would remain about the same. The actions described in Alternative C would not substantially alter the current or expected future conditions of natural resources in the CIAA.

#### *Alternative D – No Grazing*

The cumulative impacts of Alternative D would be the same as the cumulative impacts of Alternative A. Removing livestock grazing from Patelzik Creek and Southwest Allotments for ten years would not change number of BLM acres in the CIAA being improved to ensure the proper functioning of ecological processes and continued productivity and diversity of native plants. The number of road miles within the area would not increase as a result of implementing Alternative D. The amount of suitable habitat for wildlife species that occur in the CIAA would remain about the same. The actions described in Alternative D would not substantially alter the current or expected future conditions of natural resources in the CIAA.

## 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 allotments. Standard 1 (*Watersheds*), 2 (*Riparian and Wetland Vegetation*), 3 (*Stream Channel and Floodplains*), 4 (*Native Plant Communities*), 5 (*Seeded Plant Communities*), 7 (*Water Quality*) and 8 (*Threatened, Endangered, and Sensitive Species Habitat*) would be met, meaning that the existing soil and site stability, hydrologic function, and biotic integrity would be maintained, resulting in healthy plant communities, riparian areas, and wildlife habitat.

Alternative B would be expected to impart neutral or beneficial impacts to the allotments. The ecological condition would be expected to remain stable on both allotments. Changes in grazing season on Southwest would have little effect on the crested wheatgrass seedings, and would be expected to remain in satisfactory condition. Alternative B would have no adverse economic consequences for the permittees. On Patelzik Creek, the management direction in Alternatives B and C, along with terms and conditions limiting riparian vegetation disturbance would allow the riparian-wetland areas that are currently in PFC to remain so, and would allow the FAR reaches to continue making progress towards PFC. These alternatives would protect riparian-wetland areas to a greater extent compared to Alternative A, but to a lesser extent compared to Alternative D. Patelzik Creek Allotment would be expected to continue to meet Standards 1, 2, 3, 4, 5, 7, and 8 and provide healthy plant communities, riparian areas, and wildlife habitat. Southwest Allotment would be expected to continue to meet Standards 1, 4, 5, and 8 as well.

Alternative C would be expected to impart neutral or beneficial impacts to the allotments. The ecological condition in Patelzik Creek and Southwest Allotments would be expected to remain stable or improve slightly. Patelzik Creek Allotment would be expected to continue to meet Standards 1, 2, 3, 4, 5, 7, and 8 and provide healthy plant communities, riparian areas, and wildlife habitat. Southwest Allotment would be expected to continue to meet Standards 1, 4, 5, and 8 as well.

Alternative D would impart some beneficial impacts to the allotments. The allotments would be expected to continue to meet Standards 1, 2, 3, 4, 5, 7, and 8 and provide healthy upland plant communities, riparian areas, and wildlife habitat. However, removing livestock grazing from the allotment would increase herbaceous cover and vigor, which would likely slow the increase of sagebrush cover on the seeded areas. The increase in herbaceous plant cover and litter cover associated with no livestock use may result in increased risk of wildfire in the allotments. Alternative D would also have adverse economic consequences for the permittee. Implementation of Alternative D would result in costs to the permittee of about \$22,000 to \$187,000 per year for the ten year period.

None of the alternatives would contribute to the collective impact associated with past, present and reasonably foreseeable future actions. Whether or not livestock use remains at current levels or is removed for ten years, there would be no change to the collective impact relative to non-natural elements of form, line, and color within the landscape. The number of road miles within the area would not increase as a result of implementing any of the alternatives. The amount of

suitable habitat for wildlife species that occur in the CIAA would remain about the same. The actions described in the alternatives would not substantially alter the current or expected future conditions of natural resources in the CIAA.

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

### **Persons and Agencies Consulted**

L&M Cattle Co. – Permittee  
Shively Brothers – Permittee  
Idaho State Department of Agriculture  
Idaho State Department of Fish and Game  
Idaho State Department of Lands  
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  
Western Watersheds Project

### **List of Preparers**

Juley Hankins Smith: Vegetation/Invasive Nonnative Species/Soils/Economic and Social Values  
Bret Herres: Economic and Social Values  
Dawn Loomis: Wildlife/TES Animals/Migratory Birds  
Theresa Mathis: Wildlife/TES Animals/Migratory Birds  
Devin Englestead: Wildlife/TES Animals/Migratory Birds  
Deena Teel: Wetland and Riparian Zones  
Dan Kotansky: Floodplains/Water Quality  
Arn Burglund: Fisheries/TES Fish  
Shannon Bassista: Recreation  
Melissa Guenther: Cultural Resources

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## APPENDIX A – PATELZIK CREEK ALLOTMENT DETERMINATION

### SECTION 1 – IS A DETERMINATION REQUIRED?

X 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 – MAKE A DETERMINATION

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

The determination document must include at a minimum:

1. Documentation of causal factors (other than livestock grazing) including identifying the evidence used to reach conclusions on which activities are causal factors for not achieving the Standard (H-4180-1 page III-13).
  
2. Answers to the grazing related questions below. (H-4180-1 page III-14)
  - a. Is it more likely than not that existing grazing management practices or levels of grazing use are significant factors in failing to achieve the Standards or conform to the guidelines? (YES/NO)

Rationale:

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

Guidelines that are not in conformance:

3. Date determination is made and signature of authorized officer:

\_\_\_\_\_  
Authorized Officer Date

\_\_\_\_\_  
Date

## APPENDIX B – SOUTHWEST ALLOTMENT DETERMINATION

### SECTION 1 – IS A DETERMINATION REQUIRED?

X 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 – MAKE A DETERMINATION

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

The determination document must include at a minimum:

1. Documentation of causal factors (other than livestock grazing) including identifying the evidence used to reach conclusions on which activities are causal factors for not achieving the Standard (H-4180-1 page III-13).
  
2. Answers to the grazing related questions below. (H-4180-1 page III-14)
  - a. Is it more likely than not that existing grazing management practices or levels of grazing use are significant factors in failing to achieve the Standards or conform to the guidelines? (YES/NO)

Rationale:

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

Guidelines that are not in conformance:

3. Date determination is made and signature of authorized officer:

\_\_\_\_\_  
Authorized Officer Date

\_\_\_\_\_  
Date