2012-13 RELIEF GRAZING ON THE UPTON MOUNTAIN ALLOTMENT

ENVIRONMENTAL ASSESSMENT
DOI-BLM-OR-B050-2013-0005-EA

Bureau of Land Management
Burns District Office
28910 Hwy 20 West
Hines, Oregon 97738

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TABLE OF CONTENTS

Chapter I. Purpose and Need for Action 1

A. Introduction 1
B. Purpose and Need for Action 3
C. Decision Factors 4
D. Decision to be Made 4
E. Conformance with Land Use Plan 4
F. Relationship to Laws, Regulations, and Policies and Other Plans 5

Chapter II. Alternatives, Including the Proposed Action 5

A. No Action Alternative 5
B. Proposed Action 6
C. Alternatives Considered but not Analyzed in Detail 6
D. Actions Common to All Alternatives 7

Chapter III. Affected Environment and Environmental Consequences 8

A. Identification of Affected Elements of the Human Environment 8

1. Noxious Weeds 9
2. Upland Soils, Vegetation, and Biological Crusts 12
3. Special Status Species - Fauna 18
4. Wildlife 20
5. Grazing Management 22

B. Cumulative Effects Analysis 25

C. Consultation and Coordination 26

1. List of Preparers 26
2. Persons, Groups, or Agencies Consulted 26

D. References Cited 27

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CHAPTER I. PURPOSE AND NEED FOR ACTION

A. Introduction

In the summer of 2012 over 1,000,000 acres burned in wildfires in southeastern Oregon. Much of this was BLM land in grazing allotments. Some BLM grazing allotments have vegetation that could be used by ranchers who lost parts or all of their allotments due to fire without jeopardizing that allotment's management goals or plans. Some allotments on the Burns District have grazing systems that include rested or deferred use pastures. Some allotments that burned in past fires now have successful seedings dominated by crested wheatgrass. Some allotments have a mixture of desirable vegetation intermixed with exotic invasive annual grasses. Such allotments have the potential for grazing outside their planned use that could provide relief to permittees whose allotments burned this year.

The Upton Mountain Allotment burned in the 2007 Bartlett Mountain Fire. It was reseeded with a mixture of non-native and native grasses (crested wheatgrass (*Agropyron cristatum*) (Agcr), bluebunch wheatgrass (*Pseudoroegneria spicata*) (Pssp), and Idaho fescue (*Festuca idahoensis*) (Feid)) (EA # OR-07-025-071). The current plant composition is dominated by crested wheatgrass, Sandberg bluegrass (*Poa secunda*), bluebunch wheatgrass, bottlebrush squirreltail (*Elymus elymoides*), but also medusahead rye (*Taeniatherum caput-medusae*) and cheatgrass (*Bromus tectorum*) (Upton Mtn trend plots 1,2,4,7; 2009 monitoring). Unburned areas are scattered throughout the allotment accounting for approximately 10% of the area. They have residual shrub steppe plant communitites with low sagebrush (*Artemisia arbuscula*), Wyoming big sagebrush (*Artemisia tridentata wyomingensis*), Sandberg bluegrass, bluebunch wheatgrass, Thurber's needlegrass (*Achnatherum thurberianum*) (Acth),other native grasses, a few forbs, and medusahead rye and cheatgrass as common species (Upton Mtn trend plots 3,5,6,8; 2009 monitoring).

The Upton Mountain Allotment is in eastern Harney County near Drewsey and south of highway US 20 (Map 1). The Upton Mountain Allotment has one permittee and three pastures. The grazing permit was recently transferred, and 2012 is the second year of use by the current permittee. The authorized grazing use for 2012 is shown in Table 1.

Map 1 **Upton Mountain Allotment Vicinity**

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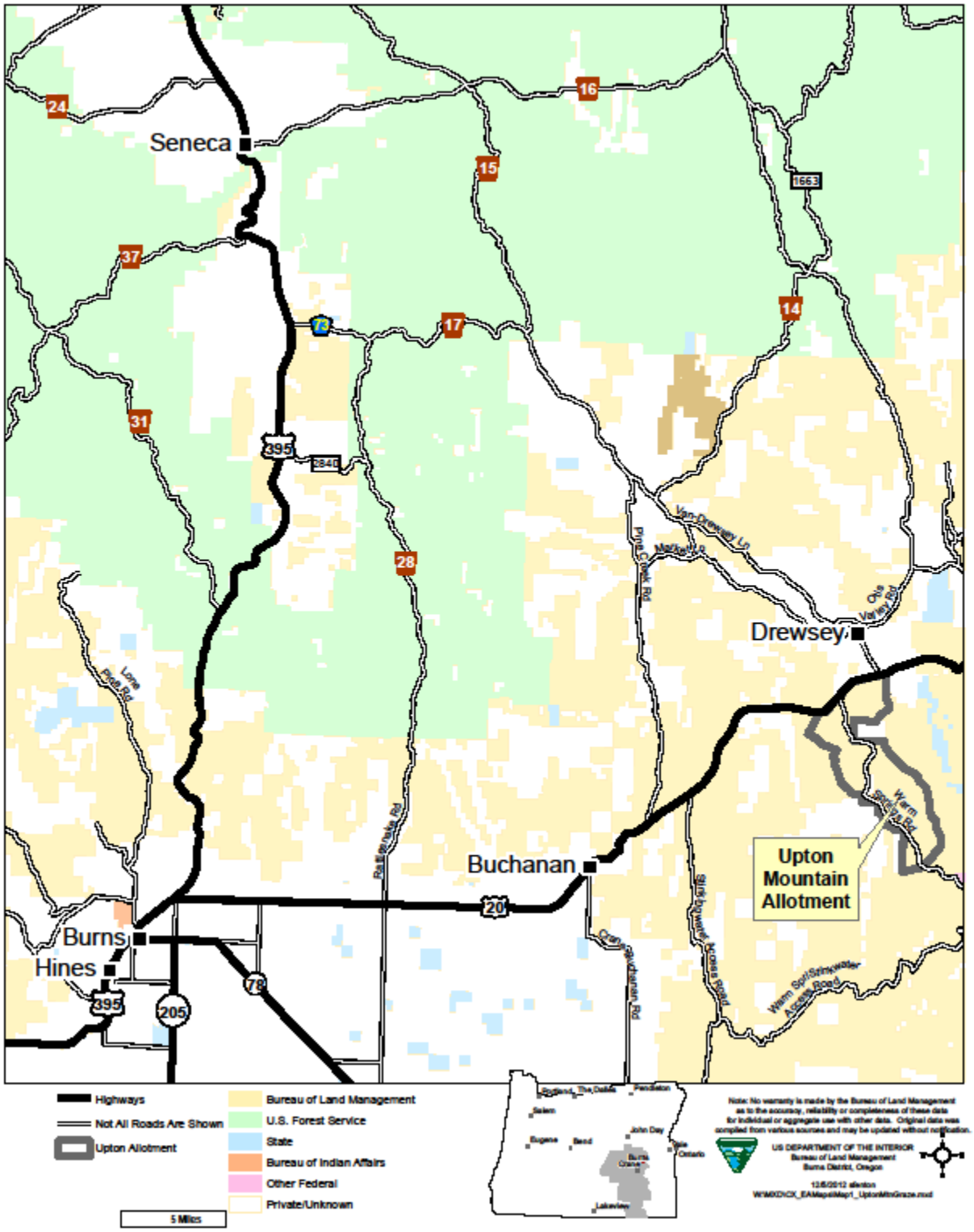


Table 1. 2012 Upton Mountain Allotment Permitted Use

Pasture	Number	Season of Use	AUMs	Acres
North Bartlett	350 cows	4/1-4/30	350	3,646
South Bartlett	350 cows	5/1-5/31	350	2,663
Upton Mountain	450 cows	9/30-11/30	900	7,098
TOTAL			1600	13,407

The 2012 actual use and key species utilization for the spring use pastures are shown in Table 2.

Table 2. 2012 Upton Mountain Spring Pasture Actual Grazing Use and Utilization (6/18/2012).

Pasture	Number	Season of Use	AUMs	Acres	Key Species Utilization
North Bartlett	344 cows	4/4-4/28	287	3,646	Pssp 13% Feid/Acth 13%
South Bartlett	344 cows	4/28-6/6	425	2,663	Pssp 25% Agcr 33%
Upton Mountain			(888)	7,098	
TOTAL			1600	13,407	

(The season of use for the Upton Mountain Pasture is this fall. Actual use has yet to be submitted.)

B. Purpose and Need for Action

Starting with the Miller Homestead Fire Burns BLM has received questions about relief forage for permittees whose allotments burned. The permittee on the Upton Mountain Allotment requested that BLM reevaluate the carrying capacity of the allotment and activate suspended use. Providing relief forage would be a way to assess the carrying capacity and impacts of increased use and provide some assistance to burned out permittees.

The purposes of the action are to determine whether additional grazing use can be authorized on the Upton Mountain Allotment and conform to the Three Rivers RMP, the Upton Mountain Allotment AMP, the Oregon/Washington Standards for Rangeland Health, BLM's grazing regulations, and all other applicable laws and policies.

There are three needs for the action. Determine if additional livestock forage is available on the Upton Mountain Allotment that could be used this fall/winter by another permittee(s) whose allotment burned in 2012 that would not jeopardize the permittee's planned grazing use. Assess whether the long term (permanent) carrying capacity on the Upton Mountain Allotment is greater than the current permitted use. Conduct livestock grazing in ways that help control medusahead rye and cheatgrass.

C. Decision Factors

Decision factors are additional questions or statements used by the decision maker to choose between alternatives that best meet project goals and resource objectives. These factors generally do not include satisfying legal mandates, which must occur under all alternatives. The following Decision Factors will be relied upon by the Authorized Officer in selecting a course of action from the range of fully analyzed alternatives that best achieves the goals and objectives of the project:

a. Would additional grazing use reduce crested wheatgrass wolf plants, medusahead thatch and annual grass litter, and annual grass production and cover?
b. Would authorizing additional relief grazing be compatible with the current planned grazing use on the allotment?
c. How would proposed changes in livestock use affect other resource uses and values on the Upton Mountain Allotment and nearby areas?

D. Decision to Be Made

BLM will determine whether or not to provide relief grazing on the Upton Mountain Allotment and if so the number of livestock and season of use that would be used and the management that would be required. If implemented the monitoring information would be used in a subsequent analysis and decision to decide whether to increase the allotment's permitted use.

E. Conformance with Land Use Plans

The Proposed Action and No Action Alternatives were not specifically identified, but are in conformance with the "Management Objectives" for the Upton Mountain Allotment in the Three Rivers Resource Management Plan (RMP), September 1992.

The proposed action is designed to improve erosion condition on the allotment by managing for more cover of perennial bunchgrasses and less cover of invasive annual grasses.

The proposed action is designed to improve habitat conditions for sage-grouse and improve rangeland condition by using grazing to reduce the amount of invasive annual grass and decadent crested wheatgrass litter/fuel in the two northern pastures, reducing the chances for another large fire, allowing sage-grouse habitat conditions and rangeland condition to gradually improve (Appendices 111).

Providing relief forage to a permittee(s) from another allotment is one way to test what the current, post fire rehabilitation livestock carrying capacity of the Upton Mountain Allotment is using a specific number of AUMs and season of use.

Currently the Upton Mountain Allotment does not meet the "Constraint" identified in the RMP. "Ensure that substantial vegetation conversions (burning, spraying, chaining,

seeding, etc.) do not reduce the variety of plant species or communities in abundance necessary for their continued existence and normal functioning" (Appendices 111). Due to the Bartlett Mountain fire many of the allotments big sagebrush plant communities have been converted to crested wheatgrass (seeded as part of fire rehabilitation), meduashead, and cheatgrass (increased or invaded as a result of the fire) dominated plant communities. One of the "Needs" for the proposed action is to implement actions that assist succession of the existing plant communities towards desired plant communities in order to conform to this constraint.

F. Relationship to Laws, Regulations, Policies, and other Plans

The proposed action has been designed to conform to the following laws and guidance for management of BLM lands within the Burns District:

- Taylor Grazing Act (43 U.S.C 315 - 1934)
- National Environmental Policy Act (42 U.S.C. 4321-4347)1970
- Federal Land Policy and Management Act (43 U.S.C. 1701, 1976)
- Public Rangelands Improvement Act (43 U.S.C. 1901. 1978)
- Standards for Rangeland Health and Guidelines for Livestock Grazing Management for Public Lands Administered by the Bureau of Land Management in the States of Oregon and Washington (1997)
- Greater Sage-Grouse and Sagebrush-Steppe Ecosystems Management Guidelines (BLM - 2000)
- Bureau of Land Management National Sage-Grouse Habitat Conservation Strategy (2004)
- Noxious Weed Management Program EA (1998)
- Greater Sage-Grouse Conservation Assessment and Strategy for Oregon (ODFW, April 2011)
- Antiquities Act of 1906
- Archaeological Resources Protection Act (ARPA) of 1979
- National Historic Preservation Act (NHPA) of 1966

CHAPTER II. ALTERNATIVES, INCLUDING THE PROPOSED ACTION

A. No Action Alternative

The No Action Alternative is to not authorize additional grazing use on the Upton Mountain Allotment as relief forage for a permittee(s) whose allotment(s) burned during the 2012 fire season.

B. Proposed Action

The Proposed Action is to authorize up to 700 AUMs of livestock grazing use on the North or North and South Bartlett Mountain Pastures within the period of November 1, 2012 to March 31, 2013 for one or several BLM grazing permittees whose allotment(s) burned during the 2012 fire season.

Project Design Features

1. The Upton Mountain Allotment permittee must agree to additional use including the livestock management stipulations.
2. Maximum utilization on perennial plants will be 50% of the available forage at turn out.
3. The user must supply sufficient water to ensure distribution across the pasture(s).
4. The user may supplement protein and minerals, but may not supplement forage amount. (This item may be modified to sustain livestock in the event of a heavy snow storm.)
5. The user must regularly communicate with the permittee and BLM (about once a week) to ensure that facilities are working, cows are in correct locations and maintaining acceptable condition, and discuss how things are going.

C. Alternatives Considered but Not Analyzed in Detail

Because the proposed action in this EA involves changing the amount of grazing use, there are many uninformative potential alternatives. The only alternatives analyzed are ones which address all the needs for the action; provide relief forage, assess whether additional forage is available on a long term basis, conduct livestock grazing in ways that help control medusahead rye and cheatgrass. Less and no livestock use do not address these needs so are not analyzed.

Alternatives that would provide relief grazing on the Upton Mountain Allotment to a permittee from another allotment in ways that required the Upton Mountain permittee make other arrangements to substitute for his normal grazing use on Upton Mountain are not analyzed. Any relief grazing must be compatible with the normal grazing use on the allotment.

In some years all the forage that is available at the April 1 turn out date grew in the previous growing season. As a result fall or winter use on the North Bartlett Pasture needs to leave enough forage to support the planned spring grazing. For this reason greater utilization levels were not analyzed. Utilization studies and allotment inspections showed that even in a dry year, 2012, the grazed grasses fully regrew and completed their annual life cycles post livestock use.

Grass physiology limits the number of reasonable alternatives. In the Great Basin grazing systems where dormant plants are grazed or where actively growing grazed perennial grasses can fully regrow before being grazed again by livestock result in long

term productive sustainable plant communities. In the Upton Mountain Allotment these goals are being achieved differently on each pasture. In North Bartlett the plants fully regrow and complete their annual life cycles in the spring and summer following grazing. In South Bartlett the plants begin growth before grazing use. In warm years they will complete their annual life cycles before grazing. In cool wet years the grazed plants will fully regrow post grazing. In Upton Mountain the plants grow and complete their annual life cycles before fall grazing occurs. In North Bartlett and Upton Mountain Pastures in most years livestock grazing occurs on dormant plants. In most years grazing in South Bartlett overlaps the forage plants active growth period. Trend monitoring shows that grazed plants grow or regrow in enough years to maintain forage plant productivity and health.

One issue in the Upton Mountain Allotment is invasive annual grasses. Both medusahead rye and cheatgrass are abundant on the allotment. Grazing management of cheatgrass is easier than grazing management of medusahead, because cheatgrass is palatable from fall through spring greenup. Cheatgrass is palatable except when it is purple, awned seeds are on the plant, and when other forage plants are green and palatable. The result is cheatgrass can be targeted for grazing from late fall through spring. Medusahead concentrates silica which makes it less palatable than many other forage species. The medusahead thatch layer protects seedlings and young plants from grazing. Because of the silica the medusahead thatch layer is more persistent than many other forms of plant litter. Targeted grazing of medusahead in Harney County has been effective on new spring growth and possibly in the summer. This result has been unpredictable. For medusahead and cheatgrass the objectives of targeted grazing are to reduce seed production and thereby reduce the next growing season's production, the amount of seed in the soil seed bank, and reduce annual grass thatch and litter. Also the proposed use would reduce the amount of fire fuel produced by annual grasses. Because one of the goals of the proposed action is annual grass management using livestock grazing, additional use during times of the year when neither medusahead nor cheatgrass are palatable to livestock are not analyzed.

D. Actions Common to All Alternatives

Selection of an alternative in this EA would not change the planned grazing use by the permittee. This means that the permittee's cattle would be authorized to use 1,615 AUMs of forage beginning April 1, 2013 with two months of use by 350 cattle in the North and South Bartlett Pastures and fall grazing in the Upton Mountain Pasture regardless of the decision arising from this EA.

Selection of an alternative in this EA would not change the Burns District's noxious weed control program. This includes targeting medusahead in the project area as well as throughout the District.

CHAPTER III. AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

A. Identification of Affected Elements of the Human Environment

An Interdisciplinary Team (IDT) has reviewed and identified issues and resources affected by the alternatives. The following table summarizes the results of that review. Affected resources are in bold.

Resources/Issues		**If Not Affected, why? If Affected, Reference Applicable EA Section**
Cultural Resources	No affect	The Bartlett Mtn fire ES/R seeding area was surveyed in 2007 prior to drill seeding. The proposed action would not further impact the sites that were found. As a result of fires the Upton Mountain Allotment is no longer used by Native Americans for plant gathering.
Noxious Weeds (Executive Order 13112)	**Affected**	See Chapter III, A., 1.
Migratory Birds (Executive Order 13186)	No affect	The dominant recent impact was the Bartlett Mtn fire. The proposed action would occur when most migratory birds have (or soon will) migrate from the area. The proposed action may slightly improve migratory bird habitat values by reducing the chances of repeat fires and improving the potential for restoration of native plants in the North and South Bartlett Mountain pastures. Utilization maintained at levels near 50% or less would not measurably affect breeding or brood rearing habitat for birds returning to the allotment.
BLM SSS (Wildlife) and Habitat	**Affected**	*greater sage-grouse* – **Affected**. Chapter III, A., 3. *other SSS* – Not present or habitat not present or not measurably affected.
Water Quality (Surface and Ground)	No affect	The recent impact was the Bartlett Mtn fire. The proposed action may slightly, and in the long term, increase the cover of perennial vegetation, slightly reducing erosion and benefitting surface water quality.
Wetlands/Riparian Zones (Executive Order 11990)	No Affect	There are two perennial water locations (springs) with hydric herbaceous vegetation present in the North and South Bartlett Pastures. The proposed action would have little to no effect on these springs as they are both excluded from livestock grazing.
Soils/Biological Crusts	**Affected**	See Chapter III, A., 2.
Upland Vegetation	**Affected**	See Chapter III, A., 2.
Visual Resources	No affect	The project area is in a VRM class IV area which means management actions can be the main visual impact. The casual visitor is unlikely to notice differences between the alternatives.
Wildlife	**Affected**	Chapter III, A., 4.
Air Quality (Clean Air Act)	No Affect	Dust produced from livestock movement and management would not be measurable.
Resources/Issues		**If Not Affected, why? If Affected, Reference Applicable EA Section**
Environmental Justice	No Affect	The proposed action would not have disproportionately

Resources/Issues			If Not Affected, why? If Affected, Reference Applicable EA Section
(Executive Order 12898)			high and adverse human health or environmental effects on minority populations and low-income populations as such populations do not exist within the project area.
Grazing Management		**Affected**	Chapter III, A., 5.
Recreation		No Affect	No changes to the general recreational setting, opportunities, or access would occur.
Social and Economic Values		No Affect	
American Indian Traditional Practices		No Affect	Since the Bartlett Mtn fire Native Americans no longer collect plant materials in the project area.
Areas of Critical Environmental Concern (ACECs)		Not Present	
Flood Plains (Executive Order 13112)		Not Present	
Hazardous or Solid Waste		Not Present	
Paleontological Resources		Not Present	
Prime or Unique Farmlands		Not Present	
Lands and Realty		Present	Not affected.
Wildlife/ Threatened or Endangered (T/E) Species or Habitat	Fish	Not Present	No fish-bearing streams flow through the pasture. These streams are not tributary to streams which support populations of T/E Fish species.
	Wildlife	Not Present	No Federal T/E animal species are known or suspected to occur in the project area.
	Plants	Not Present	No Federal T/E plant species are known or suspected to occur in the project area.
Wildlife/BLM SSS and Habitat	Fish	Not Present	No fish-bearing streams are in the project area.
	Plants	No affect	Prince's plume and Liebig's clover occur in the allotment. The proposed action may slightly benefit both species by reducing competition and the potential for fires by controlling Taca and Brte.
Wild and Scenic Rivers		Not Present	
Wilderness/Wilderness Study Areas/ Parcels with Wilderness Characteristics		Not Present	

1. Noxious Weeds

The analysis of potential effects to noxious weeds is tiered to the Proposed Three Rivers RMP/FEIS (BLM 1991) and contained in the following RMP sections: Pages 2-53 and 3-7. It also tiers to the National and Oregon Weed EISs (BLM 2007 and BLM 2010).

Affected Environment

The BLM weed database currently lists the following weeds in the Upton Mountain Allotment:

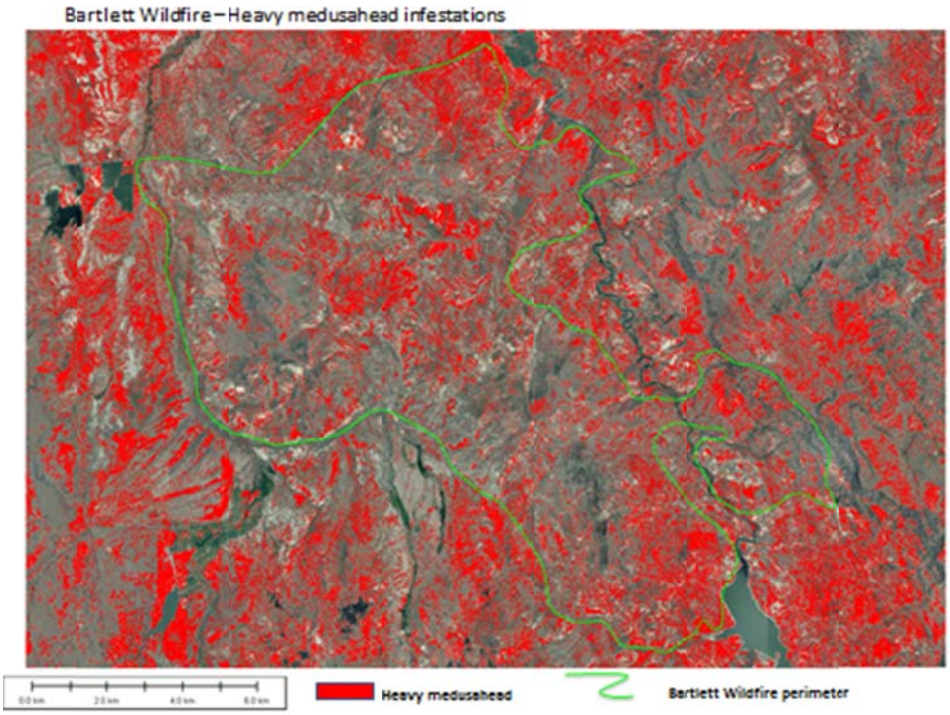
Table 3. Noxious Weeds on the Upton Mountain Allotment, 2012.

Noxious Weed Species Upton Mtn Allotment	Number of Sites	Acres
Canada thistle	13	.6
Bull thistle	5	1.96
Scotch thistle	139	185.52
Mediterranean Sage	16	38.84
Whitetop	18	12.22
Halogeton	2	7.03
Field bindweed	1	0.09
Medusahead rye	74	227.03
Black henbane	8	0.049
Perennial Pepperweed	1	.003
Dalmatian toadflax	3	0.01
Totals	***280***	***473.37***

Medusahead is a big problem on the east side of the Burns District. Lower elevations in the Malheur and South Malheur River watersheds have large infestations. Lower elevations on the north and east sides of the Steens have large infestations. In addition medusahead is abundant throughout the Stinkingwater Mountains and many areas north of Highway 20. The current project area is a small part of this landscape scale issue.

Burns BLM is working with OSU to develop procedures for photographic inventory of medusahead. Figure 1 is a photo of the Bartlett Mountain Fire from this study. The entire Upton Mountain Allotment is within the fire perimeter. While this method is still being developed the photo gives the impression of the extent of medusahead that one gets when on the allotment.

Figure 1.



In addition to the proposed action noxious weeds are being treated with herbicides. In the past the herbicide active ingredients 2,4-D, dicamba, picloram, and glyphosate were used to their best effect, in compliance with the label directions. In the past medusahead was mainly treated along roads with glyphosate. In the fall of 2012 BLM started spraying some larger areas of medusahead and cheatgrass with the herbicide imazapic.

The permittee has started a grazing test on the Upton Mountain Pasture in conjunction with University of Nevada, Reno (UNR) to winter graze cheatgrass and medusahead to try and reduce thatch and litter, cover, seed production, their composition in the plant community, competition with desirable plants, and interrupt the annual grass fire cycle (Perryman and Stringham, 2012). UNR has been testing this idea on cheatgrass since 2006 (Schmelzer and Perryman, 2009). This test is being conducted in the Upton Mountain Pasture and is not part of the current project.

Environmental Consequences

No Action Alternative

Selection of this alternative would mean that the proposed extra fall/winter grazing use in the North and South Bartlett Mountain Pastures would not occur. The opportunity to remove some medusahead and cheatgrass and

reduce seed production in the next growing season would not be taken. The chance to reduce the addition of invasive annual grass seed to the soil seed bank would not be taken. The existing annual grass thatch and litter would not be reduced by additional grazing and trampling. Fire fuels would continue to increase. Other noxious weed management actions on the allotment, herbicide spraying and fall grazing trial, would continue.

Proposed Action

The proposed action would be one step in managing medusahead and cheatgrass on the North and South Bartlett Pastures. The main impact of fall/winter grazing on annual grasses is reduced fuel levels and reduced seed production resulting in less cover.

Dormant cheatgrass and to a lesser degree medusahead are palatable throughout, or at times, during the fall and winter. Following rains or snow the dormant annual grasses absorb moisture and increase in palatability. The mixture of higher protein shrubs, high fiber perennial grasses, and high volume annual grasses allows cows to eat more of the annual grasses than at other stages of their life history when not green. Cheatgrass is also fairly nutritious and palatable during the winter (Schmelzer and Perryman, 2009 and Perryman and Bruce, 2010) which allows the cows to eat more of the intermixed medusahead with the cheatgrass.

Medusahead and cheatgrass are winter annuals. During fall and winter when soil moisture is present and the soil temperature is above 40° F medusahead and cheatgrass seeds will germinated and sprout. This new growth is the most palatable life history stage of medusahead and cheatgrass, and can be the most palatable forage present in late fall through winter. It is also the most vulnerable to grazing. Cattle will focus their grazing on these green plants. Because there are no native plants in the Upton Mountain Allotment that are actively growing at this time of year, there is no potential for unintended attraction to green native species. Each plant that germinates and is grazed is not contributing fuel to the next fire season or seed to the soil seed bank.

2. Upland Soils, Vegetation, and Biological Soil Crusts

The primary potential impacts of the alternatives are on vegetation which in turn would affect soils and biological soil crusts (BSC). Secondary effects of the potential vegetation affects include wildlife habitat values, watershed function, and special status species habitat conditions. Current discussion and analysis of potential effects to upland soils, vegetation, and biological soil crusts are tiered to the Proposed Three Rivers RMP/FEIS

(BLM 1991) and contained in the following RMP sections: Pages 2-51 through 2-55 and 3-7 through 3-8.

Affected Environment

Prior to introduction of exotic invasive winter annual grasses, the estimated period between fires in dryer Wyoming big sagebrush plant communities in the Great Basin may typically have been around 75 years. This interburn period was long enough for the slow recovering sagebrush plants to eventually reestablish and again become the dominant shrub species in the late successional plant communities. Invasive winter annual grasses completely changed this situation. Following a fire medusahead and cheatgrass can germinate and produce leaves in the fall and winter immediately after the fire. These plants will produce seed as soon as spring arrives, in some years before the native perennial plants break dormancy. One reason why later successional sagebrush plant communities are resistant to large fires is the plants are relatively widely spaced. The unvegetated interspaces restrict fire spread. Once medusahead or cheatgrass invade a sagebrush community they gradually fill in the plant interspaces. The medusahead and cheatgrass litter carry fire across the interspaces between perennial plants. Repeated fires with five to 10 years between fires prevent reestablishment of sagebrush. If an area reburns repeatedly the native perennial grasses are no longer able to recover and medusahead and cheatgrass replace the native perennial plants in the community. Eventually the site supports an annual grass – fire plant community with few, mainly annual, often non-native species. At this stage most of the values associated with the sagebrush – steppe plant community are lost. The replacement annual grass – fire plant community is much simpler, provides fewer resource values, and supports fewer wildlife species. These communities are no longer sage-grouse habitat. Stopping or interrupting the decline from sagebrush – steppe to annual grass – fire plant communities by reducing annual grass litter and standing dead material in perennial bunchgrasses is one of the needs for the proposed action.

The soils on the Upton Mountain Allotment are a complex mixture of several soil series. Generally these soils are clayey (NRCS 2006). The topography is rolling, so accelerated erosion can occur on bare slopes. Average annual precipitation is in the nine to 12 inch range, so accelerated erosion that happens generally occurs following larger snowmelt events or heavy thunderstorms. More perennial plant cover reduces accelerated erosion by interrupting water flow patterns. More annual grass cover increases the chances for accelerated erosion in years of poor annual grass production, because there are not enough plants to interrupt water flowing downhill.

The two dominant species in most of the ecological sites within Upton Mountain are Wyoming big sagebrush (*Artemisia tridentata ssp.* wyomingensis) and bluebunch wheatgrass (*Pseudoroegneria spicata*). As a result of the Bartlett Mountain fire, reseeding, and the response of the preexisting vegetation to the fire, the common species today are crested wheatgrass (*Agropyron cristatum)*, Sandberg bluegrass (*Poa secunda*), bluebunch wheatgrass, bottlebrush squirreltail (*Elymus elymoides*), medusahead rye (*Taeniatherum caput-medusae*), cheatgrass (*Bromus tectorum*), and rabbitbrush (*Ericameria* spp.). Basin wildrye (*Leymus cinereus*) occurs in some areas.

Biologic soil crusts are highly specialized organisms that occupy nutrient-poor zones between vegetation clumps in many types of upland arid land vegetation communities (not including riparian soils), and function as living mulch by retaining soil moisture and discouraging annual weed growth (Belnap 2001). The most common BSCs of upland soils in the project are tall and short mosses, which are visible under the shrub canopies and less common, but present, in the interspaces are gelatinous and crustose lichens. Impacts to soil crusts on clay and silt-clay soils are generally greater when soils are wetter and decline as soils surface dries (BLM TR 1737-20). The current April and May authorized grazing period in the North and South Bartlett Pastures occurs while upland soils have available soil moisture. In the Upton Mountain Pasture during the fall use period soils can be dry, moist, frozen, and may be all three on different days.

The largest recent impact to vegetation, soils, and BSC in the Upton Mountain Allotment and adjoining areas was the 2007 Bartlett Mountain fire (32,312 acres) and fire rehabilitation. Before the Bartlett Mountain Fire there were two other smaller fires on the South Bartlett Pasture (Map 2). The Bartlett Fire burned 1,871 acres in 1996. The Warm Springs Fire burned 68 acres in 2002. Repeated fires within a few years of each other can lead to crossing the threshold between a sagebrush-steppe plant community and an annual grass - fire plant community. BLM's trend data does not show that this threshold has been crossed in the South Bartlett Pasture, but repeated fires in the same locations increase the chances.

Following the Bartlett Mountain Fire accelerated erosion occurred indicated by sediment flows onto and cuts across the Warm Springs Road and deposition in some draws. Where the fire burned hot the BSC was burned. While medusahead and cheatgrass were present to common before the fire, the fire released both species. Seeded crested wheatgrass and bluebunch wheatgrass were successful. In addition bluebunch wheatgrass, Sandberg bluegrass, and bottlebrush squirreltail recovered well in places. Most of the unburned spots appear to be on shallower soils with scattered vegetation which may have been a factor in their

Map 2 **Upton Mountain Allotment Fire Locations**

2012-13 RELIEF GRAZING ON THE UPTON MOUNTAIN ALLOTMENT
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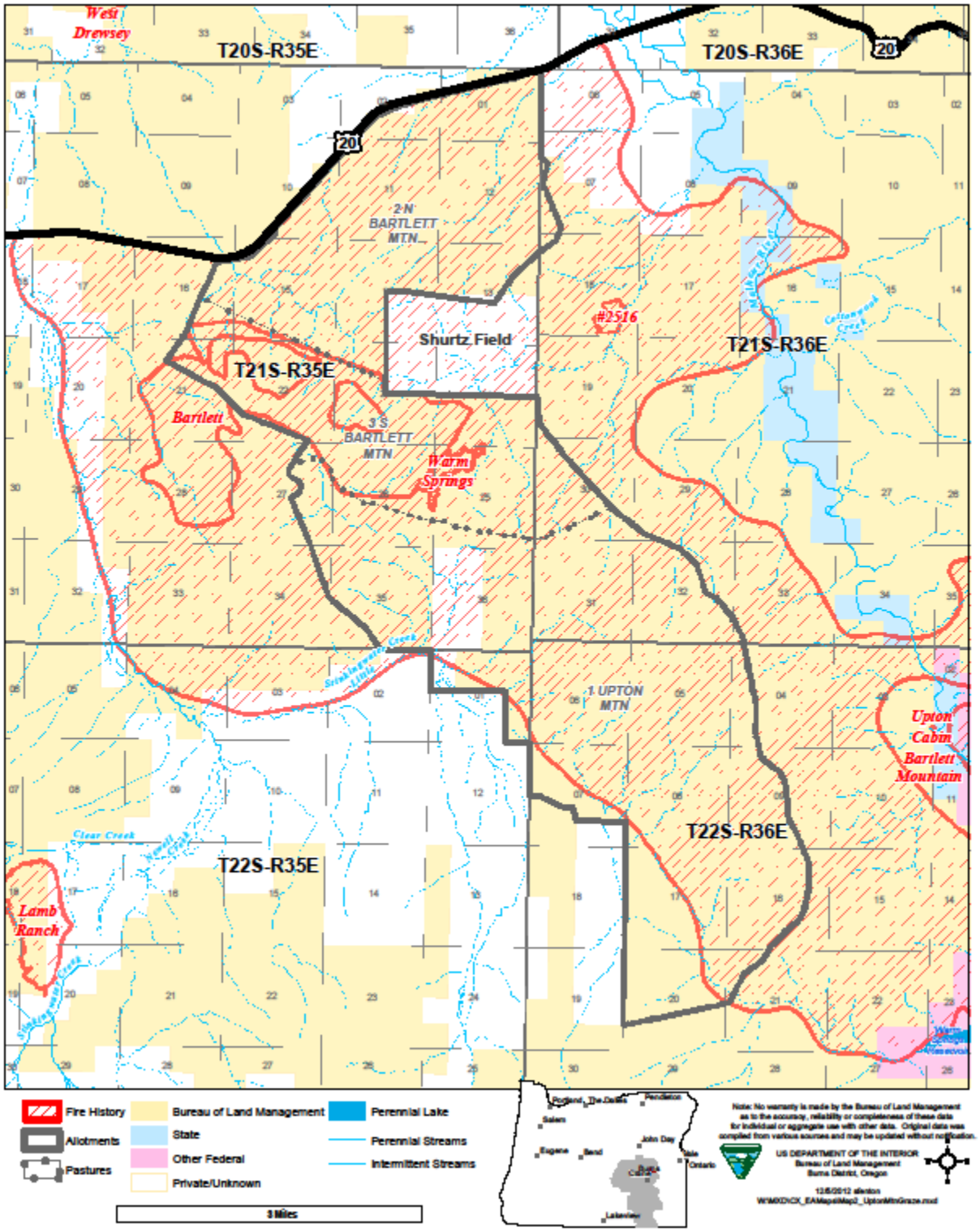


not burning during the fire. Today these areas have low sagebrush (*Artemisia arbuscula*), Sandberg bluegrass, other perennial grasses, a mixture of forbs, with some medusahead and cheatgrass in the plant interspaces.

The post fire vegetation management has been conservative. The allotment was rested from livestock grazing for two years. In 2010 the permittee did not use his full AUMs. He used 437 out of 1,615 permitted AUMs and only used the North and South Bartlett Pastures. The planned use is one month of spring/early summer use each on North and South Bartlett Mountain Pastures and fall use on Upton Mountain Pasture. The result on the spring use pastures is many plants are not grazed each year. When crested wheatgrass is perennially ungrazed it becomes a "wolf" plant. As the standing dead material oxidizes it changes from tan to grey. The standing dead stems become increasingly course with time and poke the cows in the face when they graze. Wolf plants are tall, stemy, often grey with less and less annual production. Unless something happens to these plants they can persist in this low production status until they die. Because it is standing, and not in contact with the soil, the dead material decomposes more slowly. At this point there is a large unproductive plant occupying a space instead of a productive, possibly native plant. Wolf plants are also more flammable, because of the amount of standing dead material they contain. Several management actions can correct wolf plants. Trampling knocks down the dead material and opens up the plant canopy leading to production of new leaves and culms. The dead material now on the ground decomposes contributing to the nutrient cycle. Winter grazing when most of the forage is dormant, especially following rain or snow, will result in some grazing of wolf plants. All the perennial grasses are dormant in winter so cattle exhibit less preference. Following snow or rain dormant grasses absorb some moisture making them softer. Grazing stimulates production of new leaves in the next growing season increasing palatability.

Another thing that can happen with fall/winter grazing on the Upton Mountain Allotment is the combination of high fiber crested wheatgrass and bluebunch wheatgrass and abundant annual grasses results in increased use of all. The mechanism for this is cows try to balance their nutritional requirements for protein, carbohydrates, fiber, and volume. To do this they mix forages (Provenza, et.al., 2012). The mixture of crested wheatgrass, annual grasses, and shrubs allows them to balance their winter dietary needs for carbohydrates, protein, and volume by mixing forages. Cheatgrass has been found to have up to seven percent crude protein during the winter (Schmelzer and Perryman, 2009 and Perryman and Bruce, 2010). This is high for any grass species at this time of year. Cows will also eat more dormant bluebunch wheatgrass in the winter in this situation. When medusahead and cheatgrass green up during the

winter the cows will search for it as well as eat more dormant bluebunch wheatgrass and wolfy crested wheatgrass to balance the high moisture, low fiber, higher protein green annual grasses. When a cow's dietary needs are being met, she eats more. Annually grazing crested wheatgrass plants prevents wolf plant formation.

Environmental Consequences

No Action Alternative

Selection of the no action alternative would result in the maintenance or increase in the number of crested wheatgrass wolf plants, because the same plants would continue being grazed each year. This would happen, because livestock grazing pressure is light enough that cows only have to graze their favorite locations and plants, leaving most crested wheatgrass plants in both spring pastures ungrazed. While grazing alone cannot control the medusahead and cheatgrass, the current light use on annual grasses during the most palatable life stages of the other forage species would do little to control annual production of these weeds. The no action alternative would continue the very uneven grazing use patterns across the North and South Bartlett Pastures, result in the ongoing development of crested wheatgrass wolf plants, and maintain or increase the cover of medusahead and cheatgrass. In combination this means increasing fuel loads and declining palatability and productivity of crested wheatgrass, bluebunch wheatgrass, and the other perennial native bunchgrasses. The fuel buildup sets the stage for the next fire.

The impacts to vegetation described above lead to slower recovery of the BSC and greater chances for accelerated erosion compared to the Proposed Action. BSC does not recover, because the spaces between perennial plants where they could reestablish are filled with invasive annual grasses. In poor Taca or Brte production years the perennial plant interspaces have bare ground facilitating overland flow erosion. Good Taca and Brte production years increase the chances of another large fire creating large areas of bare soil susceptible to accelerated erosion for one to several years.

Proposed Action

The proposed action addresses the following needs on the North and South Bartlett Pastures, uneven grazing, crested wheatgrass wolf plants, annual grass production, and fuel loads. It would also facilitate reestablishment of BSC.

Establishment or expansion of perennial bunchgrasses (including crested wheatgrass) and shrubs would lead to the recovery of BSC. BSC live in

plant interspaces and under the shrubs. BSC do not, or very slowly, reestablish on annual grass infested areas, because they are in the plant interspaces and under the shrubs. BSC recovery is expected to take years to decades in the absence of additional fires. Along with the current grazing management on the North and South Bartlett Mountain Pastures fall/winter grazing of medusahead, cheatgrass, wolfy crested wheatgrass, and dormant bluebunch wheatgrass would help increase the coverage of bunchgrasses. As described under "existing environment" grazing the annual grasses in the fall/winter prevents the grazed plants from producing seed. Fall/winter use would result in use of dormant crested wheatgrass and bluebunch wheatgrass plants reducing the number of wolf plants. Grazing selectivity is reduced, because all the perennial bunchgrasses are dormant and relatively unpalatable. Drinking water is more common due to rain and snow melt allowing cows to eat less palatable forages. The grazed perennial bunchgrasses would be more productive in the following spring/summer resulting in some bunchgrass expansion and replacement of annual grasses.

The more the area is occupied by perennial bunchgrasses the lower the chances of another large fire for two reasons. The open plant interspaces in bunchgrass and eventually sagebrush – steppe plant communities reduces the chance of fire spread. Productive crested wheatgrass (few wolf plants) is less flammable than many other species, because it has some green tissue through much of the summer. For the native Wyoming big sagebrush – grass plant communities to recover from burning requires decades without fire. Reducing annual grass production, fuels, and cover and increasing bunchgrass site occupancy contribute to longer fire return intervals.

3. Special Status Species (SSS) – Fauna

Current discussion and analysis of potential effects to SSS - Fauna are tiered to the Proposed Three Rivers RMP/FEIS (BLM 1991) and contained in the following RMP sections: Pages 2-56 through 2-65.

Affected Environment

***Greater Sage-Grouse (Centrocercus urophaisanus)* –** Greater sage-grouse (sage-grouse) are sagebrush obligates, entirely dependent on sagebrush for survival (Connelly et al. 2004). The North and South Bartlett Mountain Pastures are "core" habitat (Hagen 2011). The Bartlett Mountain fire eliminated large expanses of sagebrush in the allotment and led to the rapid expansion of medusahead and cheatgrass. Invasive annual grasses are one of the major threats to sage-grouse on the Burns District (Hagen 2011). Despite the fire, there remains a monitored active lek in the Shurtz Field (private land between North and South Bartlett Mountain

Pastures) (Map 2). The high count for males attending the lek dropped following the fire, but has been relatively stable each spring since the fire. The average count pre-burn was 32. The average since the fire has been 13. The permittee reports seeing sage grouse in the spring in the North and South Bartlett Pastures when checking cows.

Table 4. Lek Counts*, Shurtz Field Lek, 2003-2012.

2003	2004	2005	2006	2007	FIRE	2008	2009	2010	2011	2012
29	32	42	30	25	7/6/07	12	17	16	15	6

*Burns monitoring data

The 32,312 acre Bartlett Mountain fire eliminated large expanses of sagebrush habitat, affecting year round habitat for at least three leks and two lek complexes. The number of males counted at leks and lek complexes within three miles of the fire have been relatively stable to increasing since 2008 (lek count data on file, Burns District). The restoration actions following the fire have not prevented expansion of medusahead and cheatgrass in the allotment or surrounding area. Other weed treatments in the area would continue, which will help slow and in some cases control the expansion and spread within the allotment and adjacent areas burned in the fire.

The sage-grouse habitat values in the project area were largely eliminated by the Bartlett Mountain fire. Elimination of most of the big sagebrush greatly reduced the area's value as sage-grouse winter range and nesting habitat. However sage-grouse habitat values remain as indicated by ongoing, although reduced, use of the Shurtz Field lek and regular observations of sage-grouse on the allotment in spring and early summer.

Environmental Consequences

No Action Alternative

No additional fall/winter grazing would occur in the northern two pastures of the allotment. Livestock grazing would not be used as a tool to remove new growth or residual growth of medusahead or cheatgrass, which could potentially help reduce competition for resources with native plants. Fuel loads due to annual grasses and ungrazed perennial bunchgrasses would continue to increase. Selection of this alternative would not measurably affect sage-grouse or sage-grouse habitat following implementation, but this alternative would also not allow for evaluation of an additional method of control for medusahead or cheatgrass in this heavily infested area. This alternative may help improve the potential for restoration of suitable sagebrush habitat for sage-grouse over the long-term (10+ years) providing the area does not burn again.

Proposed Action

This alternative would authorize livestock grazing to occur in the fall/winter when medusahead and cheatgrass are palatable, which puts more pressure and stress on these plants and reduces their ability to produce seed and compete for resources with native plants in the following spring and summer. Native plant species in the project area are not green and actively growing in the winter; therefore, livestock would not focus on these species. The proposed action would not eliminate the annual grass threat to sage-grouse, but it would provide an additional tool to help manage medusahead and cheatgrass in the two northern pastures of this allotment. At a minimum, this would help improve the potential to restore these two pastures to functional habitat for sage-grouse. Between the two alternatives, the Proposed Action would reduce the chances of a next fire by reducing the amount of medusahead, cheatgrass, and crested wheatgrass fuel in the two pastures.

4. Wildlife

Current discussion and analysis of potential effects to wildlife are tiered to the Proposed Three Rivers RMP/FEIS (BLM 1991) and contained in the following RMP sections: Pages 2-66 through 2-101.

Affected Environment

The Bartlett Mountain wild fire and subsequent rehabilitation efforts have altered the existing habitat from one dominated by native sagebrush - steppe communities to a mixture of native bunchgrasses, seeded crested wheatgrass, and invasive annual grasses. Numerous wildlife species are still present within the allotment during at least some portion of the year, but the loss of structural and native species diversity typically results in a decrease in the number of individuals and diversity of species that utilize the allotment.

Winter is often a critical period for big game animals. Approximately half the North and South Bartlett Mountain pastures combined are classified as winter range for mule deer (*Odocoileus hemionus*). No winter habitat is classified for Rocky mountain elk (*Cervus elaphus*), but this species may also occur in the allotment in some winters. The Three Rivers RMP (BLM 1992) allocated 6 AUMs to deer, 0 AUMs for elk and 0 AUMs to antelope in this allotment. No formal wildlife or wildlife habitat monitoring has occurred in the allotment.

Several other game and non-game species may occur in the allotment throughout the year, although some species hibernate or greatly reduce activity through the colder periods. Some of the common species expected to occur include American badger (*Taxidea taxus*), coyote (*Canis latrans*),

bobcat (*Lynx rufus*), black-tailed jackrabbit (*Lepus californicus*), gopher snake (*Pituophis catenifer*), Ord's kangaroo rat (*Dipodomys ordii*), and various other mammals and reptiles.

The establishment and expansion of annual grasses, particularly medusahead and cheatgrass, throughout the allotment following the wildfire is a serious threat to habitat. The 32,312 acre Bartlett Mountain fire eliminated large expanses of sagebrush and native bunchgrass vegetation in and adjacent to the allotment, decreasing the quality and extent of habitat available for many wildlife species, especially larger animals that utilized the structural diversity for hiding and hunting cover. Other weed treatments in the area would continue as authorized, which will help slow or control their continued expansion in the allotment and adjacent areas burned in the fire.

Environmental Consequences

No Action Alternative

No additional fall/winter grazing would occur in the northern two pastures of the allotment, and there would be no impact or competition from livestock and associated management activities on wildlife or their habitat. Livestock grazing would not be used as a tool to remove new growth or residual growth of medusahead or cheatgrass, which could help reduce competition for resources with native plants in the allotment during the following growing season. Selection of this alternative would not measurably affect wildlife or their habitat following implementation, but this alternative would also not allow for evaluation of a potential additional method to help control medusahead or cheatgrass in this heavily infested area.

Proposed Action

This alternative would authorize livestock grazing to occur in the fall/winter when medusahead and cheatgrass are palatable, which puts more grazing pressure and stress on these plants and affects their ability to produce seed and compete for resources with native plants in the following spring and summer. Native species do not green up in the winter; therefore, livestock would not focus grazing use solely on the native species. The proposed action would not eliminate the threat to wildlife habitat, but it would provide an additional tool to help manage medusahead and cheatgrass in the two northern pastures of this allotment. At a minimum, this would help improve the potential to restore these two pastures to functional habitat for wildlife, including wintering habitat for mule deer.

5. Grazing Management

Affected Environment

Livestock grazing management would be the vegetation management tool used in the proposed actions. Table 5 shows the current permitted use on the Upton Mountain Allotment. This would be the authorized grazing use for the No Action Alternative. Table 6 shows the total proposed use, both current permitted use plus additional fall/winter relief grazing. This would be the authorized grazing use for the Proposed Action.

Table 5. Upton Mountain Allotment; Current Permitted Grazing Use

Pasture	Number	Season of Use	AUMs	Acres
North Bartlett	350 cows	4/1-4/30	350	3,646
South Bartlett	350 cows	5/1-5/31	350	2,663
Upton Mountain	450 cows	9/30-11/30	900	7,098
TOTAL			1600	13,407

Table 6. Upton Mountain Allotment; Current Permitted Grazing Use PLUS Proposed Additional Relief Winter Grazing*

Pasture	Number	Season of Use	AUMs	Acres
North Bartlett	350 cows	4/1-4/30	350	3,646
NB addition	200 cows	11/1-12/31	400	
South Bartlett	350 cows	5/1-5/31	350	2,663
SB addition	200 cows	1/1-2/15	300	
Upton Mountain	450 cows	9/30-11/30	900	7,098
TOTAL			2,300	13,407

*Because there is not an applicant, these values are an example that adds up to 700 AUMs. The actual additional use could be different, but would occur between November 1, 2012 and March 31, 2013 and be 700 AUMs or less.

Environmental Consequences

No Action Alternative

The livestock use on the allotment would be similar to what has been implemented for the past two years. Three hundred fifty cattle would use the North and South Bartlett Pastures for the months of April and May, respectively. Both pastures are adequately watered, partly because the ponds usually have water in the spring (Map 3). Each is relatively small and rolling. Since the Bartlett Mountain fire and reseeding the forage throughout each pasture is relatively homogenous. Homogeneous forage, rolling terrain, and well distributed water means that all parts of the pastures are utilized. The fall/winter use in the Upton Mountain Pasture would continue according to the permit and include targeted grazing of medusahead and cheatgrass augmented by protein supplement

to increase consumption of the annual grasses. This management would continue under the No Action Alternative.

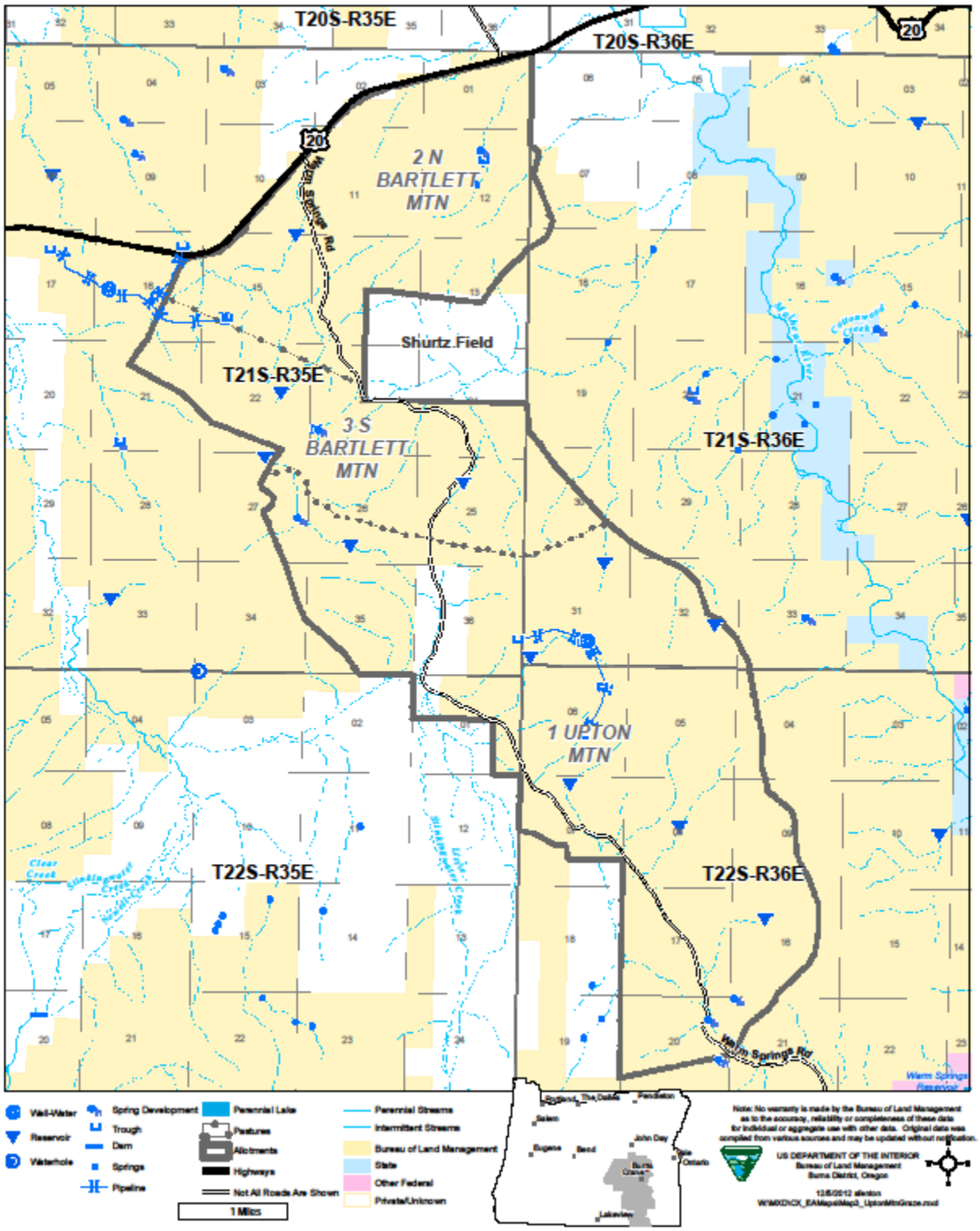
Proposed Action

Everything described in the preceding paragraph would continue under the Proposed Action Alternative. In addition livestock would be authorized to graze the North or North and South Bartlett Pastures during the fall and winter for up to 700 AUMs. As described in the Noxious Weeds and Upland Soils, Vegetation, and Biological Soil Crusts sections there are two goals for this action: control annual grass production, seed production, and fuel levels; and reduce the amount of aerial litter on crested wheatgrass and bluebunch wheatgrass. The reasons this would work were described in the previous sections. To accomplish this would require some specific livestock management actions.

The livestock management key to successful implementation is relatively uniform cattle distribution and grazing pressure across the pastures. Dependable drinking water is located throughout both pastures. If needed the user would be allowed to haul water to troughs and ponds along the Warm Springs Road. The other key to even distribution would be supplementation with minerals and/or protein. The role of protein supplement was described above. It could be placed in areas with more annual grass or to attract

Map 3 Upton Mountain Allotment Water Locations

2012-13 RELIEF GRAZING ON THE UPTON MOUNTAIN ALLOTMENT
EA - DOI-BLM-OR-B050-2013-0005-EA



livestock to specific locations. Mineral supplement would be used to facilitate more even utilization across the pastures.

Because this would be winter use, the livestock owner needs to be prepared to protect his livestock in the case of severe storms. This would be implemented on a case by case basis. Because winter grazing of the annual grasses, crested wheatgrass, and bluebunch wheatgrass are the goals of the proposed action, supplementing forage amount would generally not be approved. A winter storm with heavy snowfall that required feeding hay for a short period of time to maintain livestock health or survival would be the exception. The other winter weather factor that could affect livestock would be extended cold weather. The unknown factor would be how well the drinking water holds up. Ice may need to be chopped on ponds. The well would need to be checked frequently to ensure it continues to operate. The owner of the livestock would be required to ensure these steps are taken. Ongoing communication with the permittee (who lives near the allotment) and BLM would reduce the chances of some unfortunate circumstance arising due to weather.

B. Cumulative Effects Analysis

As the Council on Environmental Quality (CEQ), in guidance issued on June 24, 2005, points out, the "environmental analysis required under NEPA is forward-looking," and review of past actions is required only "to the extent this review informs agency decision-making regarding the proposed action." Use of information on the effects on past action may be useful in two ways according to the CEQ guidance. One is for consideration of the proposed action's cumulative effects, and secondly as a basis for identifying the proposed action's effects.

The CEQ stated in this guidance that "[g]enerally, agencies can conduct an adequate cumulative effects analysis by focusing on the current aggregate effects of past actions without delving into the historical details of individual past actions." This is because a description of the current state of the environment inherently includes the effects of past actions. The CEQ guidance specifies that the "CEQ regulations do not require the consideration of the individual effects of all past actions to determine the present effects of past actions." Our information on the current environmental condition is more comprehensive and more accurate for establishing a useful starting point for a cumulative effects analysis, than attempting to establish such a starting point by adding up the described effects of individual past actions to some environmental baseline condition in the past that, unlike current conditions, can no longer be verified by direct examination.

The second area in which the CEQ guidance states that information on past actions may be useful is in "illuminating or predicting the direct and indirect effects of a proposed action." The usefulness of such information is limited by the fact that it is anecdotal only, and extrapolation of data from such singular experiences is not generally accepted as a reliable predictor of effects.

However, "experience with and information about past direct and indirect effects of individual past actions" have been found useful in "illuminating or predicting the direct and indirect effects" of the Proposed Action in the following instances: the basis for predicting the effects of the Proposed Action and its alternatives is based on the general accumulated experience of the resource professionals in the agency with similar actions.

The environmental consequences discussion described all expected effects including direct, indirect and cumulative on resources from enacting the proposed alternatives. Direct and indirect effects plus past actions become part of the cumulative effects analysis; therefore, use of these words may not appear. The EA described the current state of the environment (Affected Environment by resource, Chapter III) which included the effects of past actions. In addition, the Introduction Section of this EA, specifically the Purpose of and Need for Action, identifies past actions creating the current situation.

Reasonably Foreseeable Future Actions (RFFA), also relevant to cumulative effects, include those Federal and non-Federal activities not yet undertaken, but sufficiently likely to occur, that a Responsible Official of ordinary prudence would take such activities into account in reaching a decision. These Federal and non-Federal activities that must be taken into account in the analysis of cumulative impacts include, but are not limited to, activities for which there are existing decisions, funding, or proposals identified by the bureau. These RFFAs must fall within the geographic scope and timeframe of the analysis being prepared. Continued noxious weed control, livestock grazing, sage-grouse, and wildlife use are known RFFAs. The potential impacts of and to these uses and values were discussed in the applicable parts of this EA.

C. Consultation and Coordination

1. List of Preparers

   Bill Dragt, Supervisory Natural Resource Specialist

2. Persons, Groups, or Agencies Consulted

   Oregon Department of Fish and Wildlife
   Drewesy Field Ranch, Upton Mountain Allotment Permittee
   Dr. Berry Perryman, UNR
   Jon Wilker, Gund Ranch, UNR

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