

CALICO RESOURCES USA CORP.  
GRASSY MOUNTAIN MINE PROJECT  
MALHEUR COUNTY, OREGON

**GRAZING MANAGEMENT  
BASELINE REPORT**

JANUARY 2018

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GRAZING MANAGEMENT BASELINE REPORT**

**TABLE OF CONTENTS**

<b>1</b>	<b>INTRODUCTION .....</b>	<b>1</b>
<b>2</b>	<b>RESOURCE STUDY AREA .....</b>	<b>1</b>
<b>3</b>	<b>REGULATORY FRAMEWORK.....</b>	<b>4</b>
<b>3.1</b>	<b>Bureau of Land Management .....</b>	<b>4</b>
<b>4</b>	<b>STUDY METHODOLOGY .....</b>	<b>4</b>
<b>4.1</b>	<b>Literature Review.....</b>	<b>4</b>
<b>4.2</b>	<b>Field Studies.....</b>	<b>4</b>
<b>5</b>	<b>BASELINE CHARACTERIZATION.....</b>	<b>4</b>
<b>5.1</b>	<b>Existing Grazing Allotments .....</b>	<b>4</b>
<b>5.2</b>	<b>Active Grazing Preferences .....</b>	<b>8</b>
<b>5.3</b>	<b>Current Grazing Practices and Management Strategies.....</b>	<b>9</b>
<b>5.4</b>	<b>Water Supply Considerations .....</b>	<b>10</b>
<b>5.5</b>	<b>Potential Monitoring and Mitigation Measures .....</b>	<b>11</b>
<b>5.6</b>	<b>Potential Conflicts with Mining and Reclamation Activities .....</b>	<b>11</b>
<b>6</b>	<b>BIBLIOGRAPHY.....</b>	<b>11</b>
<b>7</b>	<b>CONTACTS.....</b>	<b>12</b>
<b>8</b>	<b>LIST OF PREPARERS .....</b>	<b>12</b>

**LIST OF TABLES**

<b>Table 1:</b>	<b>Pasture Allotments.....</b>	<b>6</b>
<b>Table 2:</b>	<b>Grazing Preferences .....</b>	<b>8</b>
<b>Table 3:</b>	<b>Study Area Pastures Water Supply .....</b>	<b>10</b>

**LIST OF FIGURES**

<b>Figure 1:</b>	<b>Location Map .....</b>	<b>2</b>
<b>Figure 2:</b>	<b>Permit Area Map .....</b>	<b>3</b>
<b>Figure 3:</b>	<b>Grazing Management Study Area.....</b>	<b>5</b>
<b>Figure 4:</b>	<b>BLM Grazing Allotments and Pastures in the Study Area .....</b>	<b>7</b>

**LIST OF ATTACHMENTS**

<b>Attachment A:</b>	<b>Grazing Management Baseline Study, June 2015</b>
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## LIST OF ABBREVIATIONS AND ACRONYMS

BLM	Bureau of Land Management
HDR	HDR Engineering, Inc.
NEPA	National Environmental Policy Act
OAR	Oregon Administrative Rule
Project	Grassy Mountain Mine Project
RAS	Rangeland Administration System

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GRAZING MANAGEMENT BASELINE REPORT**

## **1 INTRODUCTION**

The purpose of this grazing management baseline report is to describe existing Bureau of Land Management (BLM) grazing allotments, active grazing preferences, current grazing practices, and management strategies within the Grassy Mountain Mine Project (Project) grazing management study area. Grazing is not a specific category addressed under the existing environment section for baseline data (Oregon Administrative Rule [OAR] 632-037-0055); however, it is considered important under the National Environmental Policy Act (NEPA), particularly as related to vegetation surveys and requirements to develop a wildlife mitigation plan as described in OAR 635-420-0030. This baseline report will be used to support a NEPA evaluation for future mine site activities, and will be included in the Consolidated Permit Application submitted to the Oregon Department of Geology and Mineral Industries.

Grazing allotments are areas of public and unfenced private land used by permittees for livestock grazing. Grazing within these allotments is permitted and administered by the BLM. The information contained in this report will be used to determine if there would be any impacts to range conditions or grazing activities, and whether there would be any conflicts with existing grazing management strategies.

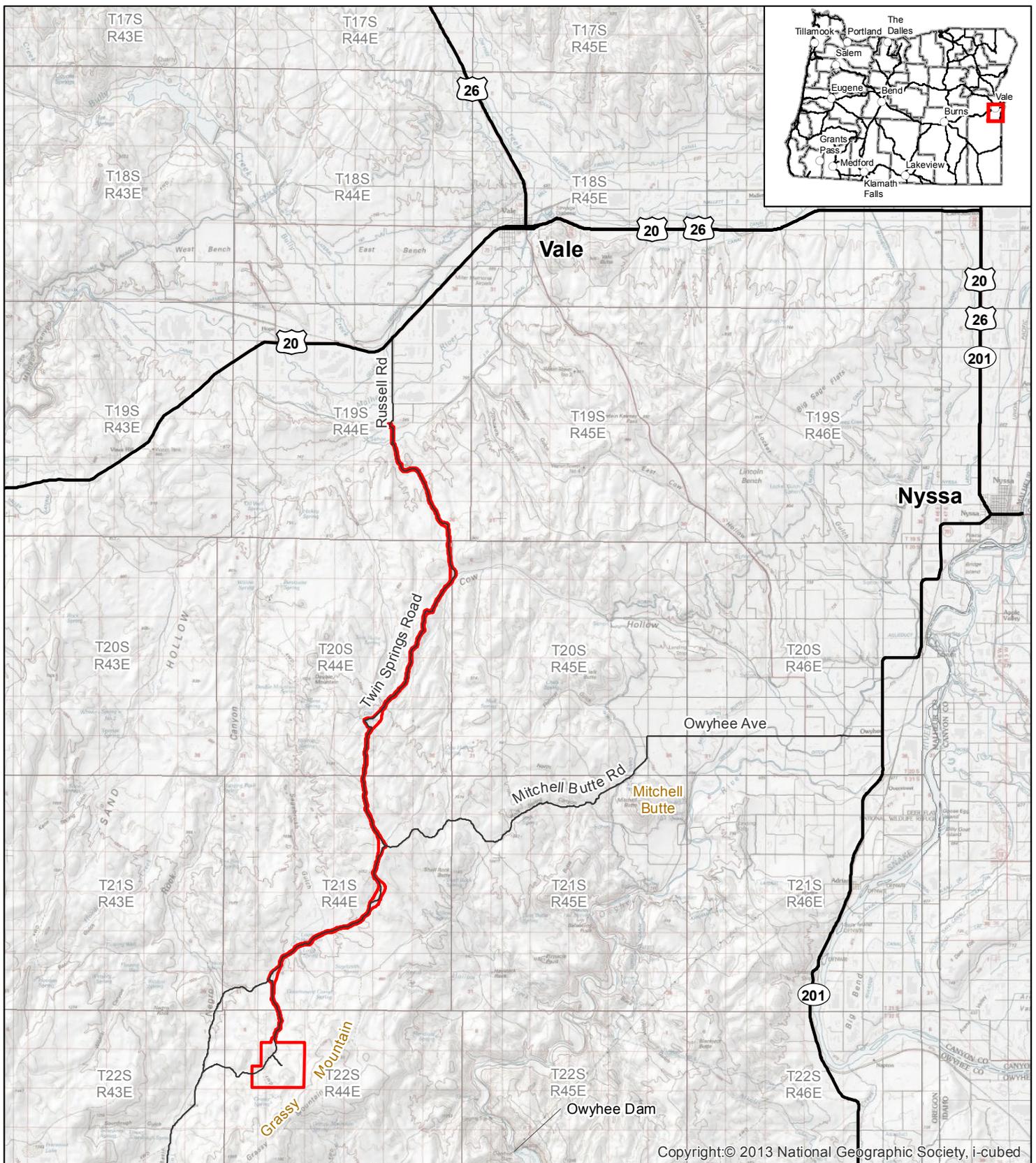
A large portion of the text and data used in this report has been taken from the June 2015 *Grazing Management Baseline Study* prepared for the Project by HDR Engineering, Inc. (HDR). Additional or updated information has been added where necessary to accommodate the current permit area. The additional/updated information includes: 1) expansion/description of the Permit Area; 2) revising the allotments and pastures to accommodate the revised study area; and 3) Contacts and Preparers. The June 2015 HDR report is included as Attachment A to this report.

## **2 RESOURCE STUDY AREA**

The Project is located in Malheur County, Oregon, approximately 22 miles south-southwest of Vale (Figure 1), and consists of two areas: the Mine and Process Area and the Access Road Area (Permit Area) (Figure 2).

The Mine and Process Area is located on three patented lode mining claims and unpatented lode mining claims that cover an estimated 886 acres. These patented and unpatented lode mining claims are part of a larger land position that includes 419 unpatented lode mining claims and nine mill site claims on lands administered by the BLM (Figure 2). All proposed mining would occur on the patented claims, with some mine facilities on unpatented claims. The Mine and Process Area is in all or portions of Sections 5 through 8, Township 22 South, Range 44 East (T22S, R44E) (Willamette Meridian).

The Access Road Area is located on public land administered by the BLM, and private land controlled by others (Figure 2). A portion of the Access Road Area is a Malheur County Road named Twin Springs Road. The Access Road Area extends north from the Mine and Process Area to Russell Road, a paved Malheur County Road. The Access Road Area is in portions of Section 5, T22S, R44E, Sections 3, 10, 11, 14, 15, 21 through 23, 28, 29, and 32, T21S, R44E, Sections 1, 12 through 14, 23, 26, 27, and 34, T20S, R44E, Sections 6 and 7, T20S, R45E, and Sections 22,



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**Explanation**

- █ Permit Area
- Existing Road

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**GRASSY MOUNTAIN MINE PROJECT**

**Location Map**

Projection: UTM Zone 11 North, NAD83, meters

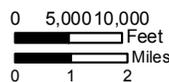
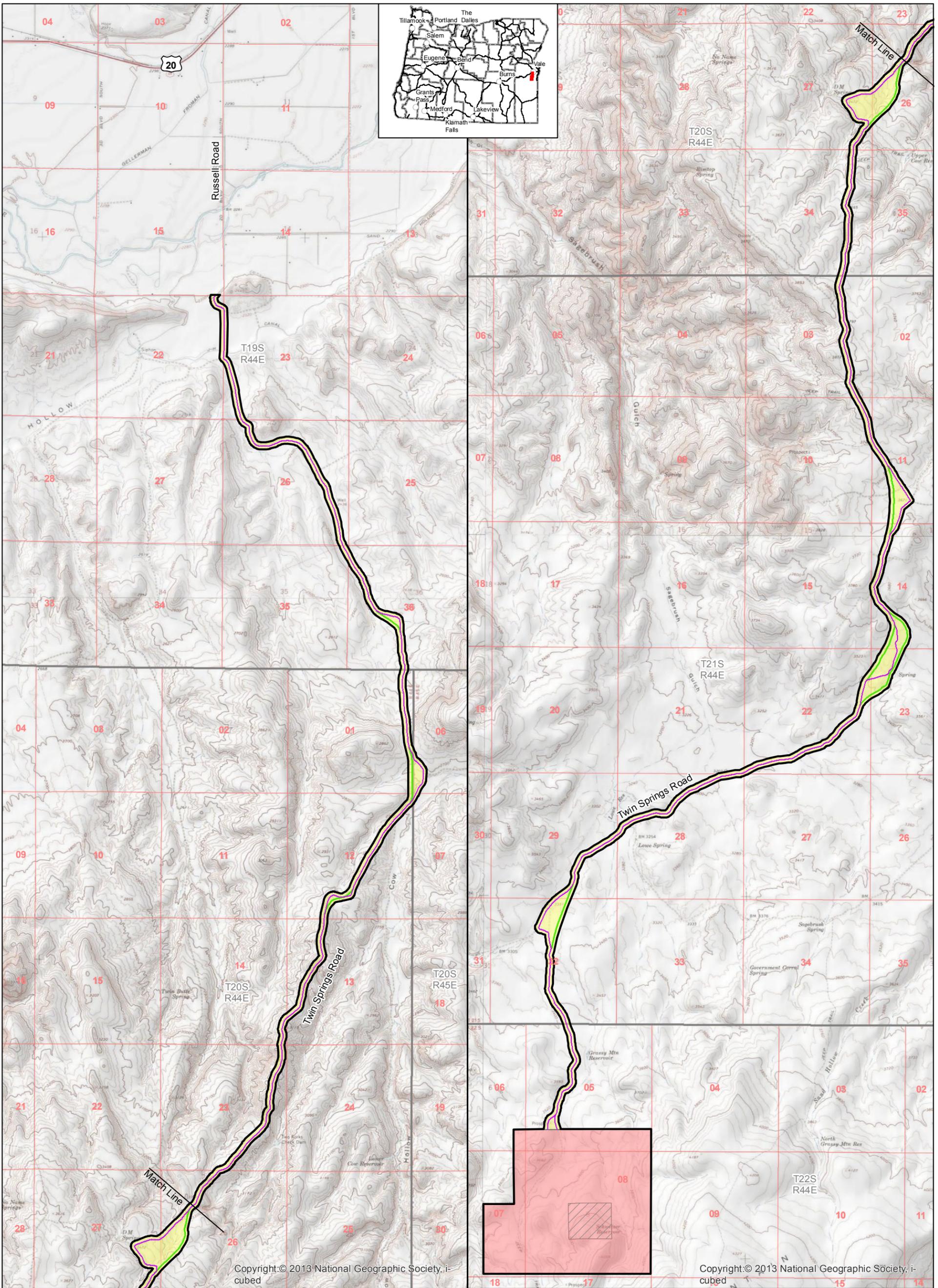


Figure 1

Date: 12/19/2017	Drawn By: JDB
Revised:	Project No.: 3672
Base Map: USGS 100K quads: Boise, Brogan, Vale, Weiser	
File Name: 3672G_GrassyMtn_BL_Fig01_Location.mxd	

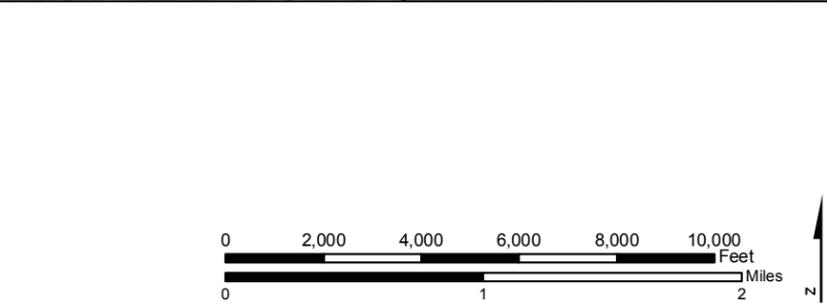




**Explanation**

- Permit Area
- Mine and Process Area
- Access Road Area
- Patented Lode Claims
- Proposed Access Road
- Possible Road Realignment

Projection: UTM Zone 11 North, NAD83, meters



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**GRASSY MOUNTAIN MINE PROJECT**  
**Permit Area Map**

Figure 2

Date: 12/19/2017	Drawn By: JDB
Revised:	Project No.: 3672
Base Map: USGS 7.5 Minute Topographic Map, Grassy Mountain, Kane Spring, Oregon	
File Name: 3672G_GrassyMtn_BL_Fig02_PermitArea.mxd	

23, 26, 35, and 36, T19S, R44E (Willamette Meridian). The width of the Access Road Area is 300 feet (150 feet on either side of the access road centerline) to accommodate possible minor widening or re-routing, and a potential powerline adjacent to the access road. There are several areas shown that are significantly wider than 300 feet on the Permit Area Map (Figure 2), which are areas where the final alignment has not yet been determined. The final engineering of the road will be consistent throughout, and within the Permit Area. The Access Road Area also includes a buffer on either side of the proposed road width for the collection of environmental baseline data. The road corridor will be 40 feet wide, which includes a 24-foot wide road travel width (12 feet on either side of the road centerline), four-foot wide shoulders on each side of the road, minimum one-foot wide ditches on each side of the road, and appropriate cut and fill. The Access Road Area totals approximately 876 acres. The Grazing Management Study Area (Study Area) includes the Access Road Area and a two-mile buffer around the Mine and Process Area (Figure 3).

### **3 REGULATORY FRAMEWORK**

#### **3.1 Bureau of Land Management**

The Secretary of the Interior approved *Standards for Rangeland Health and Guidelines for Livestock Grazing Management for Public Lands* administered by the BLM in Oregon and Washington on August 12, 1997. The purpose of these standards and guidelines is to ensure that BLM's grazing management helps preserve or restore rangeland function and health (43 Code of Federal Regulations 4180). BLM NEPA regulations also address direct and indirect impacts and the need to discuss measures to mitigate adverse environmental impacts (42 United States Code Section 4332(2)(C) [elec.2010], involving both environmental assessments and environmental impact statements).

### **4 STUDY METHODOLOGY**

#### **4.1 Literature Review**

The majority of the baseline characterization outlined in this report has been taken from the June 2015 HDR report (Attachment A). Additional or updated information has been added where necessary to accommodate for the revision in the Permit Area and Study Area. References used for this report are included in Section 6, Bibliography.

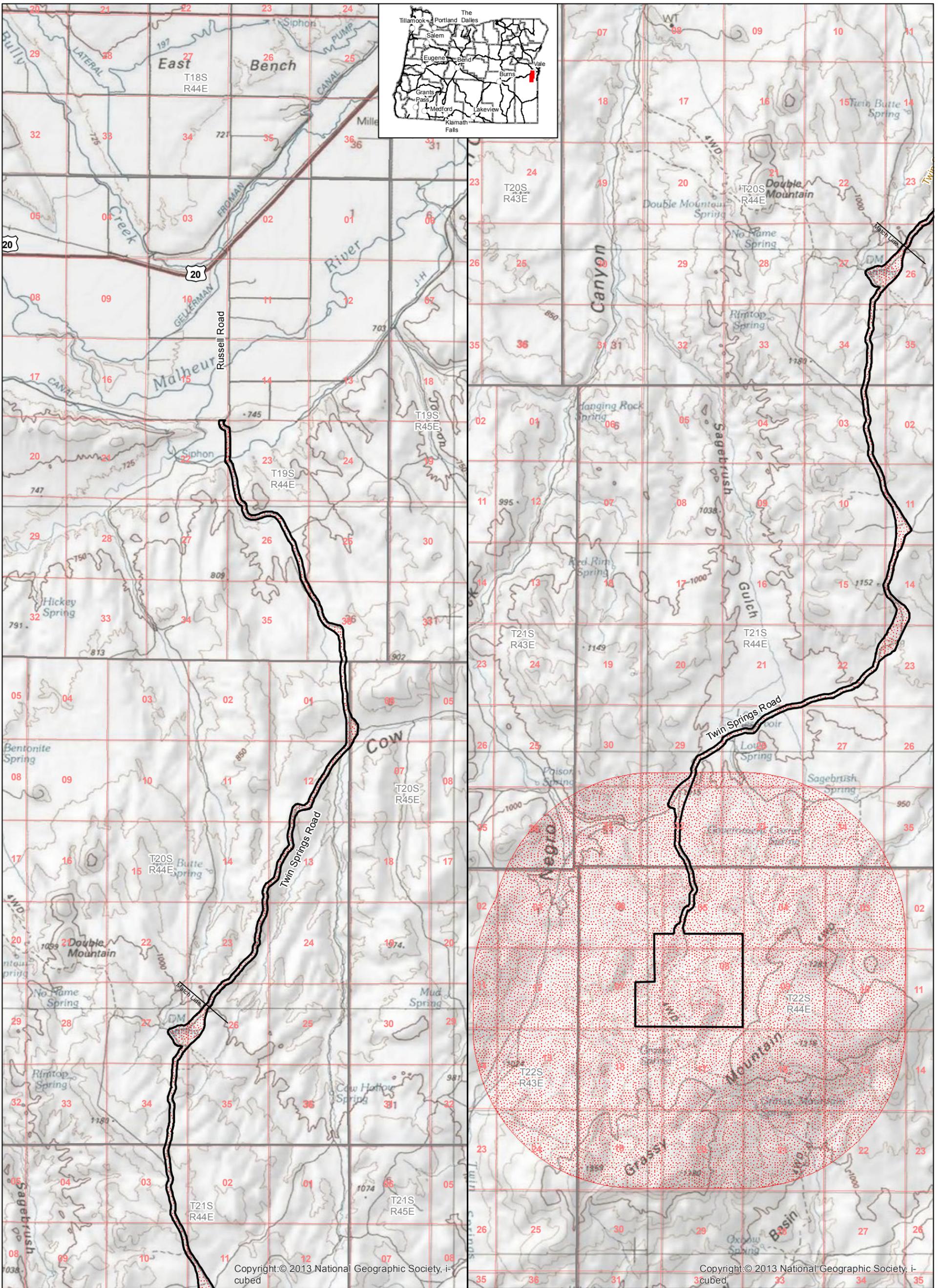
#### **4.2 Field Studies**

No field studies occurred for this resource.

### **5 BASELINE CHARACTERIZATION**

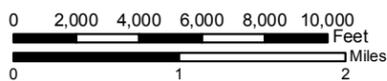
#### **5.1 Existing Grazing Allotments**

The BLM administers livestock grazing in three allotments in the Study Area. Each allotment contains multiple pastures, and each allotment has defined authorized livestock grazing levels and management objectives specific to the individual pastures. The three allotments that occur within the Study Area are Dry Creek (10411), Nyssa (10403), Sourdough (10404). The Nyssa Allotment includes four pastures and six enclosures or exclosures that occur partly or wholly within the Study



**Explanation**  
 [Black Outline] Permit Area  
 [Red Dotted Area] Grazing Management Study Area

Projection: UTM Zone 11 North, NAD83, meters



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 GRASSY MOUNTAIN MINE PROJECT  
 Grazing Management Study Area  
 and Permit Area

Figure 3

Date: 12/19/2017	Drawn By: JDB
Revised:	Project No.: 3672
Base Map: USGS 100k quad: Vale	
File Name: 3672G_GrassyMtn_BL_GM_Fig03_StudyArea.mxd	



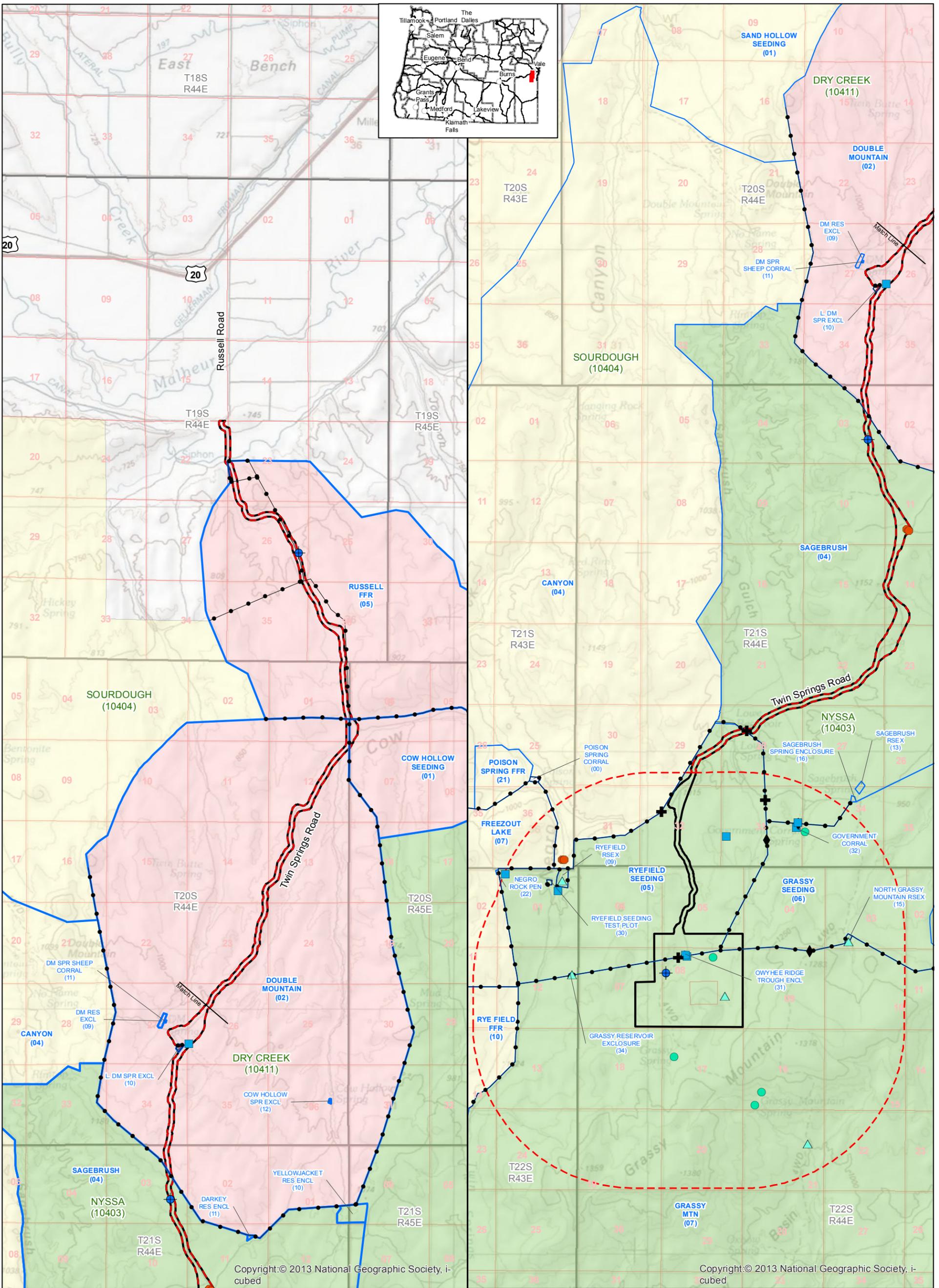
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Area. The Sourdough Allotment includes three that occur partly or wholly within the Study Area. The Dry Creek Allotment includes three pastures and one exclosure that occur partly within the Study Area (BLM 2017a). These allotments and their pastures are described in Table 1 and are shown in Figure 4.

**Table 1: Pasture Allotments**

Allotment Number	Allotment Name	Pasture Number	Pasture Name	Grazing System	Management Strategy	Total Pasture Acres	Pasture Acres within Study Area
10403	Nyssa	4	Sagebrush	Deferred	Improve	11,877.2	544.5
10403	Nyssa	5	Ryefield Seeding	Deferred rotation	Improve	3,720.3	3,471.3
10403	Nyssa	6	Grassy Mountain Seeding	Deferred rotation	Improve	3,035.5	1,771.4
10403	Nyssa	7	Grassy Mountain	Deferred	Improve	29,764.2	8,099.1
10403	Nyssa	9	Ryefield Reservoir Exclosure	Riparian exclosure	Improve	19.7	19.7
10403	Nyssa	15	North Grassy Mountain Reservoir Enclosure	Reservoir enclosure	Improve	4.3	4.3
10403	Nyssa	30	Ryefield Seeding Test Plot	Management exclosure	Improve	2.4	2.4
10403	Nyssa	31	Owyhee Ridge Trough Enclosure	Reservoir enclosure	Improve	1.8	1.8
10403	Nyssa	32	Government corral	Reservoir enclosure	Improve	0.2	0.2
10403	Nyssa	34	Grassy Reservoir Exclosure	Reservoir enclosure	Improve	1.2	1.2
10404	Sourdough	4	Canyon	Deferred rotation	Maintain	21,121.1	624.9
10404	Sourdough	7	Freezeout Lake	Deferred rotation	Maintain	22,214.8	443.5
10404	Sourdough	10	Rye Field Fenced Federal Range	Custodial area	Maintain	1,439.7	372.4
10411	Dry Creek	1	Cow Hollow Seeding	Deferred rotation	Maintain	1,598.5	17.5
10411	Dry Creek	2	Double Mountain	Deferred rotation	Maintain	12,639.6	285.1
10411	Dry Creek	5	Russell Fenced Federal Range	Custodial area	Maintain	5,386.0	146.0
10411	Dry Creek	10	Little DM Spring Exclosure	Riparian exclosure	Maintain	3.1	1.3



<b>Explanation</b>		<b>BLM Grazing Allotments</b>		<b>Rangeland Improvements</b>		<b>Water Features</b>	
Permit Area	Dry Creek (10411)	Cattleguard	Nyssa (10403)	Fence-Gate	Reservoir - Includes ponds	Trough	Spring Development
Grazing Management Study Area	Sourdough (10404)	Sign		Fence	Well - Water		
BLM Pasture							

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Projection: UTM Zone 11 North, NAD83, meters

0 2,000 4,000 6,000 8,000 10,000 Feet  
0 1 2 Miles

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GRASSY MOUNTAIN MINE PROJECT  
BLM Grazing Allotments and Pastures in the Study Area

Date: 12/19/2017 Drawn By: JDB  
Revised: Project No.: 3672  
Base Map: USGS 100k quad: Vale  
File Name: 3672G\_GrassyMtn\_BLM\_Fig04\_Allotments.mxd

EM STRATEGIES

Figure 4

Grazing system definitions:

Deferred: Delay of livestock for an adequate period of time to provide for plant reproduction, establishment of new plants, or restoration of vigor of existing plants.

Deferred rotation: Any grazing system which provides for a systematic rotation of the deferment among pastures.

Riparian enclosure: areas adjacent to water that are fenced to exclude livestock grazing.

Reservoir enclosure: grazed reservoir enclosure, fenced to allow livestock access from more than one pasture.

Management enclosure: area excluded from livestock grazing to protect other resource values such as recreation sites, wildlife guzzlers, wells, disposal sites, or otherwise not suitable for grazing.

Custodial area: areas where the grazing system is not defined and resource values are protected, such as fenced federal range.

Management category definitions: Improve – improve current unsatisfactory resource(s) conditions; Maintain – Maintain current unsatisfactory resource(s) conditions.

Source: BLM 2017a

Excluding the enclosures and exclosures, the main pastures within the Study Area include the following:

- Grassy Mountain, Ryefield Seeding, and Grassy Seeding of the Nyssa Allotment;
- Canyon, Freezout Lake and Rye Field Fenced Federal Range of the Sourdough Allotment; and
- Double Mountain and Russell Fenced Federal Range of the Dry Creek Allotment.

**5.2 Active Grazing Preferences**

According to the BLM’s Rangeland Administration System (RAS) (BLM 2017b), preference to graze livestock within the Nyssa Allotment is shared by seven entities. Also, according to the RAS, preference to graze livestock within the Sourdough Allotment is shared by three entities, and for the Dry Creek Allotment preference is shared by two entities. Preferences for grazing both cattle and sheep are given for each allotment (BLM 2017b). For each of these allotments, these entities with grazing preferences and their allotted animal unit months and season for grazing are summarized in Table 2.

**Table 2: Grazing Preferences**

Operator	Authorized Active Use (AUMs)	Season
<i>Nyssa Allotment</i>		
Donna Cleaver	106 cattle	04/01 to 10/31
Michael J Hess	1,688 cattle	04/01 to 10/31
Frank Shirts Jr.	534 sheep	04/01 to 05/04
Christian & Ann Bennight	1,260	04/01 to 10/30
Irl & Teresa Widmer	140 cattle	04/01 to 10/30
Juan Ayarza	70 cattle	04/01 to 10/31
Gary Cleaver	2,085 cattle	04/01 to 10/31
<i>Sourdough Allotment</i>		
Ten Mile Ranch Inc.	5,901 cattle	03/01 to 03/31; 11/01 to 02/28; 11/01 to 11/30; and 04/01 to 10/31
Frank Shirts Jr.	266 sheep	04/11 to 05/05
Calvin V. Haueter	371 cattle	04/01 to 10/30
<i>Dry Creek Allotment</i>		
Ten Mile Ranch Inc.	4,786 cattle	10/01 to 03/31; 11/01 to 02/28; and 04/01 to 04/30
Frank Shirts Jr.	266 sheep	05/01 to 05/22

Source: BLM 2017b

### 5.3 Current Grazing Practices and Management Strategies

In the Study Area, the BLM administers livestock grazing allotments according to three management categories (BLM 2002). These categories help prioritize the use of public funds by focusing efforts on allotments with greater potential for improvement and more resource conflicts. The three categories are defined as follows:

- *Improve* category allotments are managed to improve current unsatisfactory resource conditions and will receive the highest priority for funding and management actions.
- *Maintain* category allotments are managed to maintain current satisfactory resource conditions and will be actively managed to ensure that resource values do not decline.
- *Custodial* category allotments include a high percentage of private land and are managed custodially while protecting existing resource values.

The management strategies for each of the pastures within the Study Area are shown in Table 1. Within the Study Area, pastures in the Nyssa Allotment are in the Improve category, whereas pastures in the Sourdough and Dry Creek Allotments are in the Maintain category (BLM 2017a).

Grazing systems are established in each allotment according to the requirements for growth and maintenance of key vegetation species and other valued resources to meet the management strategies. The key species for each of the allotments are bluebunch wheatgrass for native range fields and crested wheatgrass for seeded fields (HDR 2015). The grazing systems for the pastures in each allotment are briefly summarized in Table 1. The available allotment management plans are provided in Appendix B of the June 2015 HDR report (Attachment A).

All of the reservoir features in the Nyssa Allotment and one feature in the Dry Creek Allotment are fenced as either enclosures or exclosures to provide or prevent cattle access to the water features. One pasture in the Nyssa Allotment, the Ryefield Seeding Test Plot, is designated as a management exclosure, which means the area is excluded from livestock grazing to protect other resource values (BLM 2017a).

The remaining pastures in the Nyssa, Sourdough, and Dry Creek allotments are designated as having deferred systems or deferred rotation grazing systems. Deferred systems refer to a delay of livestock for an adequate period of time to provide for plant reproduction, establishment of new plants, or restoration of vigor of existing plants. Deferred rotation refers to any grazing system that provides for a systematic rotation of deferment among pastures (BLM 2017a). In the Nyssa Allotment, the Ryefield Seeding and Grassy Seeding pastures alternate between spring and fall grazing, and the Sagebrush and Grassy Mountain pastures have grazing deferred annually on an alternating schedule (grazing from July 16 to September 15 in odd years and from July 16 to September 15 in even years in the Sagebrush pasture; grazing from July 16 to September 30 in odd years and from June 16 to September 15 in even years in the Grassy Mountain pasture) (BLM 2006).

In the Sourdough Allotment, the Canyon and Freezeout Lake pastures have grazing deferred annually on a 3-year schedule. The Canyon pasture schedule allows grazing from September 1 to October 31 in years 1 and 3 and from April 1 to May 31 in year 2. The Freezeout Lake pasture

schedule allows grazing from July 1 to October 31 in years 1 and 3 and from June 1 to October 31 in year 2 (BLM 2006).

In the Dry Creek Allotment, the Cow Hollow Seeding and Double Mountain pastures can be grazed from January 1 to March 31 (BLM 2006).

#### 5.4 Water Supply Considerations

The water supplies, where this information is available, for the pastures that occur within the Study Area are shown in Table 3. Generally, pastures are supplied with water from a variety of reservoirs, seeps, springs, and occasionally streams. The Owyhee Ridge Well and the Gulf Oil Well also provide water for some pastures (BLM 2006). Water supply features for which data exist are shown on Figure 4.

**Table 3: Study Area Pastures Water Supply**

Allotment Number	Allotment Name	Pasture Number	Pasture Name	Water Supply
10403	Nyssa	4	Sagebrush	Lone Willow; Shellbark Spring; Sagebrush Spring and Reservoir; springs in Sagebrush Gulch; Red Rim Well; Double Mountain Well
10403	Nyssa	5	Ryefield Seeding	Owyhee Ridge Well; a trough near Ryefield Reservoir from Gulf Oil Artesian Well; Grassy Mountain Reservoir
10403	Nyssa	6	Grassy Mountain Seeding	Government Corral Spring; Sagebrush Spring; North Grassy Mountain Reservoir; seeps and springs in eastern portion of pasture
10403	Nyssa	7	Grassy Mountain	Developed springs; one well; Owyhee Reservoir (limited use)
10403	Nyssa	9	Ryefield Reservoir Enclosure	Annual winter/spring surface flow from precipitation; overflow from pipeline originating at Gulf Oil Well. Excluded from livestock use in 1972.
10403	Nyssa	15	North Grassy Mountain Reservoir Enclosure	Provides access to water within the reservoir from Grassy Mountain Seeding and/or Grassy Mountain pastures when available.
10403	Nyssa	30	Ryefield Seeding Test Plot	Likely constructed in 1966 and excluded from livestock grazing since construction.
10403	Nyssa	31	Owyhee Ridge Trough Enclosure	Owyhee Ridge Well (when livestock are grazing Grassy Mountain or Ryefield Seeding pastures)
10403	Nyssa	34	Grassy Reservoir Enclosure	Provides access to water within reservoir from Ryefield Seeding and/or Grassy Mountain pastures when available

Allotment Number	Allotment Name	Pasture Number	Pasture Name	Water Supply
10404	Sourdough	4	Canyon	Stream in Negro Rock Canyon; a few springs
10404	Sourdough	7	Freezeout Lake	Several reservoirs developed at springs
10411	Dry Creek	1	Cow Hollow Seeding	Troughs along Mud Spring Pipeline; well near the corrals in the northeast corner of the pasture
10411	Dry Creek	2	Double Mountain	Two troughs along Mud Spring Pipeline; developed springs
10411	Dry Creek	10	Little DM Spring Exclosure	Water is piped outside the exclosure fence to a trough east of the spring and across Twin Springs Road

Source: BLM 2006

### 5.5 Potential Monitoring and Mitigation Measures

The only applicable mitigation measure would be to install fencing around the mine facilities to prevent injury or mortality of livestock.

### 5.6 Potential Conflicts with Mining and Reclamation Activities

As the mine and process facilities are developed, these areas would be fenced off from grazing, which would minimize potential conflicts with grazing livestock. Although pastures are fenced, roads through pastures are not; therefore, traffic to and from the site may encounter and potentially conflict with grazing livestock on or near roads. Fences, gates and cattle guard features for which data exists are shown in Figure 4. Impacts from mining to surface and/or ground water quality or quantity could potentially affect livestock water supplies (HDR 2015).

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HDR, Inc. (HDR). 2015. *Grazing Management Baseline Study*. June 2015.

## **7 CONTACTS**

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Richard DeLong – Technical Review  
Ellen Farley – Editorial Review

**ATTACHMENT A**

**Grazing Management Baseline Study – June 2015**



**Grazing Management Baseline Study**

# Grassy Mountain Exploration Project

Calico Resources USA Corporation



*Malheur County, Oregon*

**June 2015**





# Table of Contents

<b>1</b>	<b>Introduction .....</b>	<b>1-1</b>
1.1	Purpose of Report.....	1-1
1.2	Background.....	1-1
1.3	Project Area Description .....	1-1
1.4	Organization of Report.....	1-2
<b>2</b>	<b>Resource Study Area .....</b>	<b>2-1</b>
<b>3</b>	<b>Regulatory Framework .....</b>	<b>3-1</b>
<b>4</b>	<b>Study Methodology .....</b>	<b>4-1</b>
4.1	Literature Review .....	4-1
4.2	Field Studies .....	4-1
<b>5</b>	<b>Baseline Characterization.....</b>	<b>5-1</b>
5.1	Existing Grazing Allotments .....	5-1
5.2	Active Grazing Preferences .....	5-1
5.3	Current Grazing Practices and Management Strategies .....	5-5
5.4	Water Supply Considerations.....	5-6
5.5	Potential Conflicts with Mining Activities.....	5-7
5.6	Summary .....	5-7
<b>6</b>	<b>Bibliography .....</b>	<b>6-1</b>
<b>7</b>	<b>Contacts.....</b>	<b>7-1</b>

## List of Figures

Figure 1.	Project Location Map .....	1-3
Figure 2.	Property Map Detail .....	1-5
Figure 3.	Grazing Study Area.....	2-3
Figure 4.	BLM Grazing Allotments and Pastures in the Study Area.....	5-3

## List of Tables

Table 1.	Pasture Allotments .....	5-2
Table 2.	Grazing Preferences .....	5-5
Table 3.	Study Area Pastures Water Supply .....	5-6

## Appendices

Appendix A: Allotment Photos

Appendix B: BLM Allotment Management Plans

## Abbreviations/Acronyms

<b>Term</b>	<b>Definition</b>
BLM	Bureau of Land Management
Calico	Calico Resources USA Corporation
CFR	Code of Federal Regulations
GIS	geographical information systems
HDR	HDR, Inc.
NEPA	National Environmental Policy Act
OAR	Oregon Administrative Rule

# 1 Introduction

## 1.1 Purpose of Report

The purpose of the grazing management baseline study is to characterize existing grazing allotments, active grazing preferences, the current grazing practices, and management strategies within the Grassy Mountain Project area in Malheur County, Oregon. Grazing allotments are areas of public and unfenced private land used by permittees for livestock grazing. Grazing within these allotments is permitted and administered by the Bureau of Land Management (BLM).

While grazing is not a specific category addressed under the existing environment section for baseline data in Oregon Administrative Rule [OAR] 632-037-0055, it is considered important under the National Environmental Policy Act (NEPA), particularly as it relates to vegetation and wildlife. The baseline study will be used to support future mine permitting.

## 1.2 Background

Calico Resources USA Corporation (Calico), a minerals exploration company and wholly-owned subsidiary of Calico Resources Corporation, engages in the acquisition, exploration, and development of mineral properties. Calico holds 100-percent interest in the Grassy Mountain Project. The project involves over 9,300 acres of unpatented mining claims administered by the U.S. Department of the Interior, BLM; 3 patented lode mining claims, which cover about 61 acres; 6 association placer claims; and 9 mill site claims. All proposed mining would occur on the patented claims. Calico leases an additional 1,380 acres of fee land. A proposed access road connecting the proposed mine and mill involves about 74 acres of unpatented land. Up to 134 additional acres of fee land would accommodate processing facilities, administration, maintenance, and a tailings storage facility. The mine and processing area are linked by an existing road on BLM-managed land.

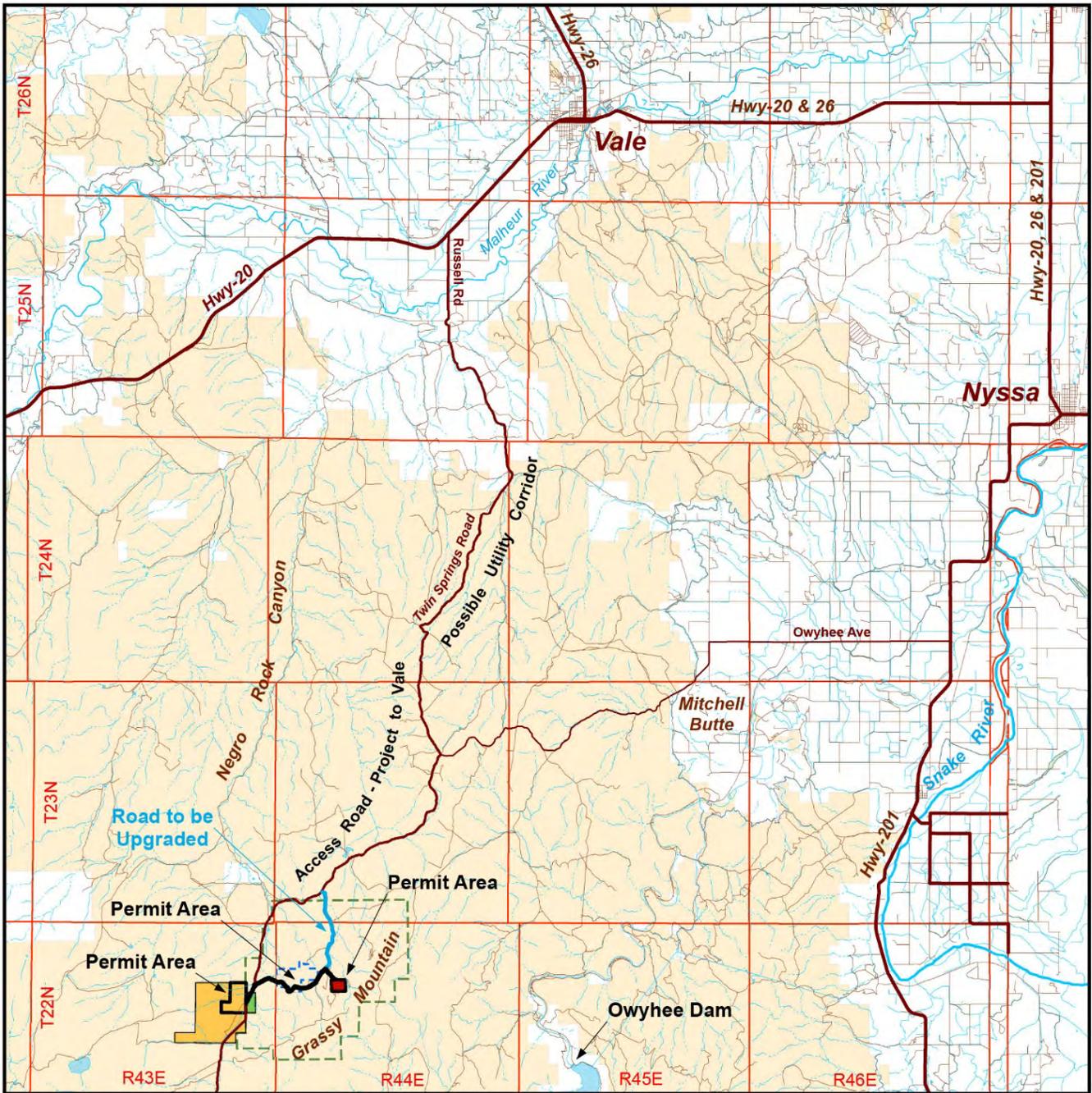
## 1.3 Project Area Description

As shown in **Figure 1**, the Grassy Mountain project is located in Malheur County, Oregon, about 25 miles south-southwest of the City of Vale. The project area, shown in **Figure 2**, encompasses portions of Section 32, Township 21 South, Range 44 East; Sections 1 and 12, Township 22 South, Range 43 East; Sections 5, 6, 7, and 8, Township 22 South, Range 43 East. The project is accessed via Highway 20, west from Vale, to Russell Road. The site is approximately 25 miles south up Russell Road and Twin Springs Road.

Much of the BLM-administered rangeland in eastern Oregon is grazed by livestock. There are nearly 14 million acres of rangeland in Oregon. The Vale District of BLM is the largest grazing district.

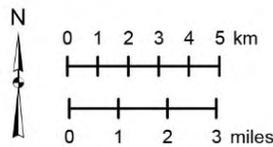
## 1.4 Organization of Report

- Chapter 1 explains the purpose of the baseline study and provides background information on the project and project area.
- Chapter 2 provides an overview of the grazing study area.
- Chapter 3 discusses the regulatory environment pertaining to grazing management.
- Chapter 4 summarizes the methodology used to characterize existing grazing.
- Chapter 5 reviews the affected environment as it relates to grazing.
- Chapter 6 lists this study's bibliography.
- Chapter 7 includes pertinent contact information related to this study.



**Property Explanation**

- Patented Claims
- Fee - surface & minerals
- Fee - minerals only
- BLM administered lands
- Calico unpatented claims
- other unpatented claims



**Grassy Mountain Project  
Malheur Co, Oregon**

**Location Map  
January 2015**

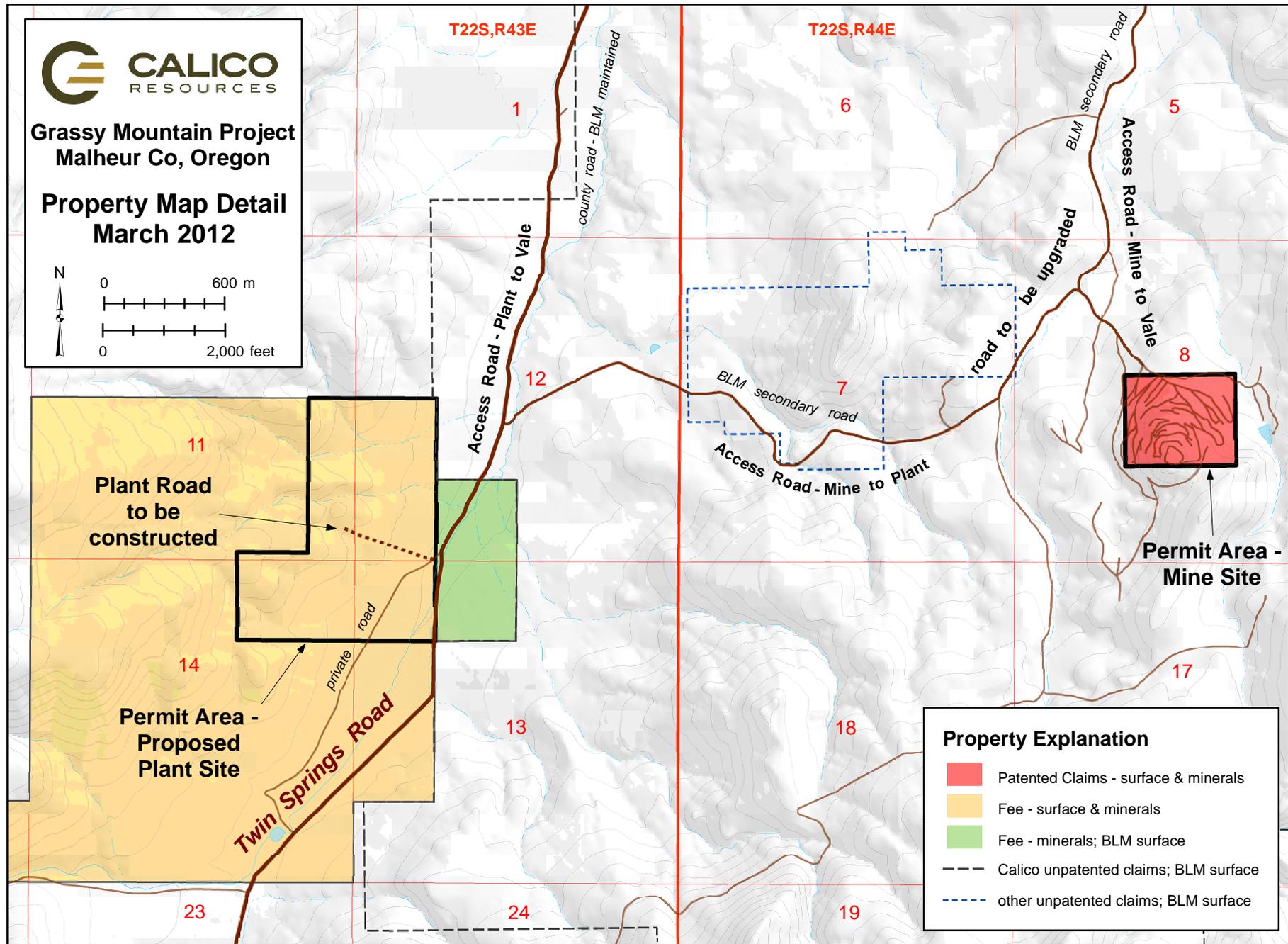
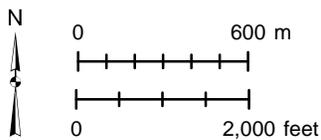
Figure 1. Project Location Map





**Grassy Mountain Project  
Malheur Co, Oregon**

**Property Map Detail  
March 2012**



Property Explanation	
<span style="color: red;">■</span>	Patented Claims - surface & minerals
<span style="color: orange;">■</span>	Fee - surface & minerals
<span style="color: green;">■</span>	Fee - minerals; BLM surface
- - -	Calico unpatented claims; BLM surface
- - - -	other unpatented claims; BLM surface

Figure 2. Property Map Detail



## 2 Resource Study Area

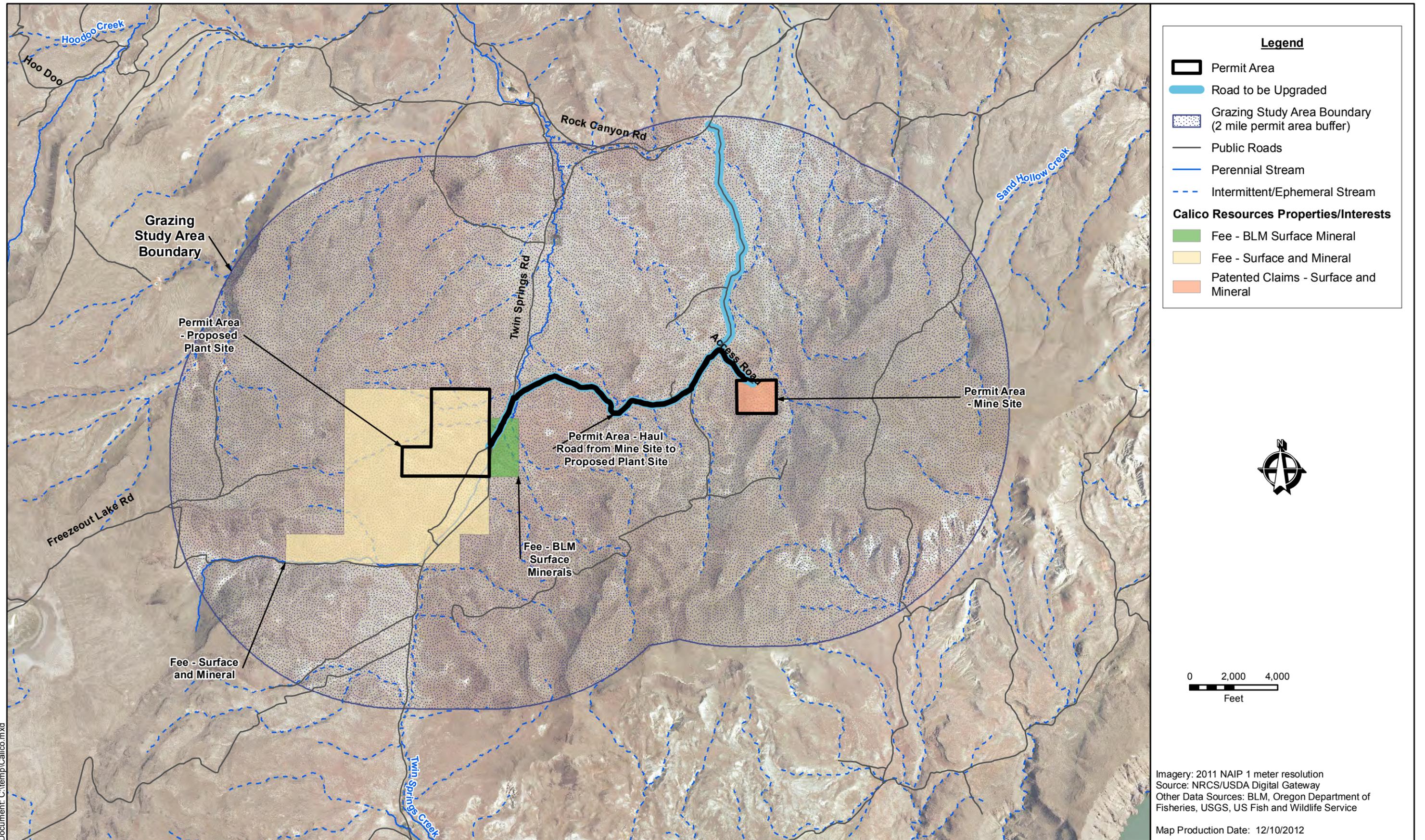
The proposed project is located on three patented lode mining claims that cover an estimated 62 acres. The 3 patented lode claims are part of a larger land position defined as 3 patented lode claims; 419 un-patented lode claims (managed by BLM); and 1,300 acres of the land, including 6 associated placer claims all controlled by Calico.

The proposed mining activities would potentially directly and indirectly affect up to 270 acres of land. This includes the proposed mine area, processing facilities and tailings disposal, and haul road between the mine area and processing facility. More specifically, those 270± acres in the project area are defined as follows:

- Mine permit area – 62 acres
- Processing facility and tailings disposal area – 134 acres
- Access road area – 74 acres

The grazing study area is shown in **Figure 3**. The study area includes the permit area and a 2-mile buffer area extending in each direction from the permit area boundary.





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Imagery: 2011 NAIP 1 meter resolution  
 Source: NRCS/USDA Digital Gateway  
 Other Data Sources: BLM, Oregon Department of Fisheries, USGS, US Fish and Wildlife Service  
 Map Production Date: 12/10/2012

**Figure 3. Grazing Study Area**  
**Calico Resources, Grassy Mountain Project**  
**Malheur County, OR**



### 3 Regulatory Framework

The Secretary of the Interior approved *Standards for Rangeland Health and Guidelines for Livestock Grazing Management for Public Lands* administered by the BLM in Oregon and Washington on August 12, 1997. The purpose of these standards and guidelines is to ensure that BLM's grazing management helps preserve or restore rangeland function and health (43 Code of Federal Regulations [CFR] 4180). BLM NEPA regulations also address direct and indirect impacts and the need to discuss measures to mitigate adverse environmental impacts (42 United States Code [U.S.C.] Section 4332(2)(C) [elec.2010], involving both environmental assessments and environmental impact statements).



## 4 Study Methodology

HDR, Inc. (HDR) obtained information from BLM to determine the number of existing grazing allotments within the project area, and HDR obtained information on the condition of existing BLM grazing allotments from the BLM's Vale District Office geographical information system (GIS) data and through review of BLM documents.

### 4.1 Literature Review

- BLM, Vale District Office. 1989. *Freezeout Allotment Management Plan*.
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### 4.2 Field Studies

No specific field studies were undertaken; however, grazing effects to terrestrial vegetation are documented in the *Draft Terrestrial Vegetation Baseline Study* (HDR 2014) and *Draft Terrestrial Vegetation Baseline Study Addendum #1* (HDR 2015).



## 5 Baseline Characterization

### 5.1 Existing Grazing Allotments

BLM administers livestock grazing in three allotments in the study area. Each allotment contains multiple pastures, and each allotment has defined authorized livestock grazing levels and management objectives specific to the individual pastures. The three allotments that occur within the study are Nyssa (allotment number 10403), Sourdough (10404), and Dry Creek (10411). The Nyssa Allotment includes three pastures and five enclosures or exclosures that occur partly or wholly within the study area. The Sourdough Allotment includes three pastures and one reservoir enclosure that occur partly or wholly within the study area. The Dry Creek Allotment includes one pasture that occurs partly within the study area (BLM 2015). These allotments and their pastures are described in **Table 1** and are shown in **Figure 4**.

Excluding the enclosures and exclosures, the main pastures within the study area include the following:

- Ryefield Seeding, Grassy Seeding and Grassy Mountain of the Nyssa Allotment;
- Canyon, Freezeout Lake and Rye Field Fenced Federal Range of the Sourdough Allotment; and
- South Freezeout of the Dry Creek Allotment.

The permit areas are wholly contained within just two pastures: the mine area and access road are in the Grassy Mountain pasture of the Nyssa Allotment, and the processing facility and tailings disposal area are in the Rye Field Fenced Federal Range pasture of the Sourdough Allotment (BLM 2015). Pictures of the pastures in the study area, where they were available, are shown in Appendix A.

### 5.2 Active Grazing Preferences

According to the 2006 Dry Creek Geographic Management Area Assessment/Evaluation (BLM), preference to graze livestock within the Nyssa Allotment is shared by six entities. According to the same document, preference to graze livestock within the Sourdough Allotment is shared by three entities, and for the Dry Creek Allotment preference is shared by two entities. Preferences for grazing both cattle and sheep are given for each allotment (BLM 2006). For each of these allotments, these entities with grazing preferences and their allotted animal unit months and season for grazing are summarized in **Table 2**.



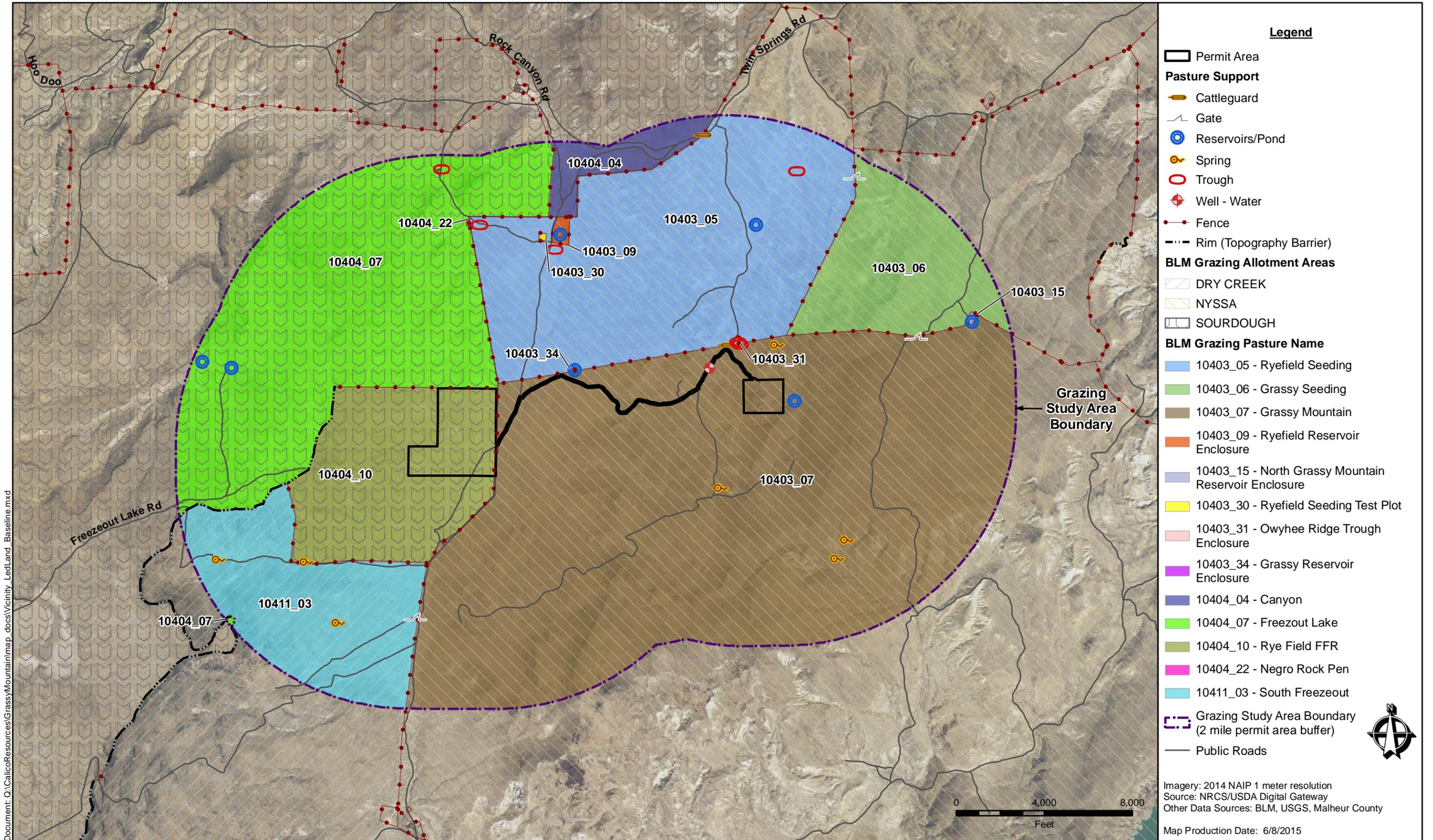
**Table 1. Pasture Allotments**

Allotment Number	Allotment Name	Pasture Number	Pasture Name	Grazing System	Management Strategy	Total Pasture Acres	Pasture Acres within Study Area
10403	Nyssa	5	Ryefield Seeding	Deferred rotation	Improve	3,720	3,156
10403	Nyssa	6	Grassy Seeding	Deferred rotation	Improve	3,035	1,073
10403	Nyssa	7	Grassy Mountain	Deferred	Improve	29,764	7,773
10403	Nyssa	9	Ryefield Reservoir Enclosure	Riparian enclosure	Improve	20	20
10403	Nyssa	15	North Grassy Mountain Reservoir Enclosure	Reservoir enclosure	Improve	4	4
10403	Nyssa	30	Ryefield Seeding Test Plot	Management enclosure	Improve	2	2
10403	Nyssa	31	Owyhee Ridge Trough Enclosure	Reservoir enclosure	Improve	2	2
10403	Nyssa	34	Grassy Reservoir Enclosure	Reservoir enclosure	Improve	1	1
10404	Sourdough	4	Canyon	Deferred rotation	Maintain	21,121	291
10404	Sourdough	7	Freezeout Lake	Deferred rotation	Maintain	22,215	3,518
10404	Sourdough	10	Rye Field Fenced Federal Range	Custodial area	Maintain	1,440	1,440
10404	Sourdough	22	Negro Rock Pen	Reservoir enclosure	Maintain	1	1
10411	Dry Creek	3	South Freezeout	Deferred rotation	Maintain	13,025	1,433

**Grazing System Definitions:** *Custodial* = areas where the grazing system is not defined and resource values are protected, such as fenced federal range. *Deferred* = delay of livestock grazing on an area for an adequate period of time to provide for plant reproduction, establishment of new plants, or restoration of vigor of existing plants. *Deferred Rotation* = any grazing system which provides for a systematic rotation of the deferment among pastures. *Management Enclosure* = area excluded from livestock grazing to protect other resource values such as recreation sites, wildlife guzzlers, wells, disposal sites, or other not suitable for grazing. *Reservoir Enclosure* = grazed reservoir enclosure, fenced to allow livestock access from more than one pasture. *Riparian Enclosure* = areas adjacent to water that are fenced to exclude livestock grazing.

**Management Category Definitions:** *Improve* = improve current unsatisfactory resource(s) condition. *Maintain* = maintain current satisfactory resource(s) condition.

Source: BLM 2015



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**Figure 4. BLM Grazing Allotments and Pastures in the Study Area**  
**Calico Resources, Grassy Mountain Project**  
**Malheur County, OR**





**Table 2. Grazing Preferences**

Operator	Authorized Active Use (AUMs)	Season
<b><i>Nyssa Allotment</i></b>		
Gary Cleaver	2,191 cattle	4/1 to 10/31
Christian and Ann Bennight	1,120 cattle	4/1 to 10/31
Jeff Hess	1,617 cattle	4/1 to 10/31
Vernon and Velma Widmer	350 cattle	4/1 to 10/31
Juan Ayarza	70 cattle	custodial
Frank Shirts, Jr.	534 sheep	4/1 to 5/3
<b><i>Sourdough Allotment</i></b>		
P Bar Grazing Association	5,852 cattle	4/1 to 10/31
Calvin Haueter	371 cattle	4/1 to 10/31
Frank Shirts, Jr.	266 sheep	4/1 to 10/31
<b><i>Dry Creek Allotment</i></b>		
Dry Creek Grazing Association	4,661 cattle	10/1 to 3/31
Frank Shirts, Jr.	266 sheep	4/1 to 5/3

Source: BLM 2006

### 5.3 Current Grazing Practices and Management Strategies

In the study area, BLM administers livestock grazing allotments according to three management categories. These categories help prioritize the use of public funds by focusing efforts on allotments with greater potential for improvement and more resource conflicts. The three categories are defined as follows (BLM 2001):

- **Improve** category allotments are managed to improve current unsatisfactory resource conditions and will receive the highest priority for funding and management actions.
- **Maintain** category allotments are managed to maintain current satisfactory resource conditions and will be actively managed to ensure that resource values do not decline.
- **Custodial** category allotments include a high percentage of private land and are managed custodially while protecting existing resource values.

The management strategies for each of the pastures within the study area are shown in **Table 1**. Within the study area, pastures in the Nyssa Allotment are in the improve category, whereas pastures in the Sourdough and Dry Creek Allotments are in the maintain category (BLM 2015).

Grazing systems are established in each allotment according to the requirements for growth and maintenance of key vegetation species and other valued resources to meet the management strategies. The key species for each of the allotments are bluebunch wheatgrass for native range fields and crested wheatgrass for seeded fields (BLM 1989, 1999, and 2002). The grazing systems for the pastures in each allotment are defined in the allotment management plans

(BLM 1989, 1999, and 2002) and are briefly summarized in **Table 1**. The available allotment management plans are provided in Appendix B.

Generally, reservoir features in the Nyssa and Sourdough allotments are fenced as either enclosures or exclosures to provide or prevent cattle access to the water features. One pasture in the Nyssa allotment, the Ryefield Seeding Test Plot, is designated as a management exclosure, which means the area is excluded from livestock grazing to protect other resource values. One pasture in the Sourdough allotment, Rye Field Fenced Federal Range, is designated as a custodial area, which refers to an area where the grazing system is not defined and resource values are protected (BLM 2015).

The remaining pastures in the Nyssa, Sourdough, and Dry Creek allotments are designated as having deferred rotation grazing systems. This refers to any grazing system that provides for a systematic rotation of deferment among pastures (BLM 2015). In the Nyssa Allotment, the Ryefield Seeding and Grassy Seeding pastures alternate between spring and fall grazing, and the Grassy Mountain pasture has grazing deferred annually on an alternating schedule (grazing from July 16 to September 30 in odd years and from June 16 to September 15 in even years (BLM 2006).

In the Sourdough Allotment, the Canyon and Freezeout Lake pastures have grazing deferred annually on a 3-year schedule. The Canyon pasture schedule allows grazing from July 1 to October 31 in years 1 and 3 and from June 1 to October 31 in year 2. The Freezeout Lake pasture schedule allows grazing from September 1 to October 31 in years 1 and 3 and from April 1 to May 31 in year 2. In the Dry Creek Allotment, the South Freezeout pasture can be grazed from December 1 to December 31 (BLM 2006).

## 5.4 Water Supply Considerations

The pasture water supplies, where this information is available, for the pastures that occur within the study area are shown in **Table 3**. Generally, pastures are supplied with water from a variety of reservoirs, seeps, springs, and occasionally streams. The Owyhee Ridge Well and the Gulf Oil Well also provide water for some pastures (BLM 2006). Water supply features for which data exist are shown in **Figure 4**.

**Table 3. Study Area Pastures Water Supply**

Allotment Number	Allotment Name	Pasture Number	Pasture Name	Water Supply
10403	Nyssa	5	Ryefield Seeding	Owyhee Ridge Well; trough near Ryefield Reservoir from Gulf Oil Artesian Well; Grassy Mountain Reservoir
10403	Nyssa	6	Grassy Seeding	Government Corral Spring; Sagebrush Spring; North Grassy Mountain Reservoir; seeps and springs in eastern portion of pasture
10403	Nyssa	7	Grassy Mountain	Developed springs; well; Owyhee



**Table 3. Study Area Pastures Water Supply**

Allotment Number	Allotment Name	Pasture Number	Pasture Name	Water Supply
				Reservoir (limited use)
10403	Nyssa	9	Ryefield Reservoir Enclosure	Overflow from Gulf Oil Well; livestock excluded since 1972
10403	Nyssa	15	North Grassy Mountain Reservoir Enclosure	Provides water for Grassy Seeding and/or Grassy Mountain pastures when water is available
10403	Nyssa	30	Ryefield Seeding Test Plot	Likely constructed in 1966 and livestock excluded since construction
10403	Nyssa	31	Owyhee Ridge Trough Enclosure	Water piped from Owyhee Ridge Well; provides water for Grassy Mountain or Ryefield Seeding pastures
10403	Nyssa	34	Grassy Reservoir Enclosure	Provides water for Ryefield Seeding and/or Grassy Mountain pastures when water is available; recent climatic conditions have seldom resulted in water held by this reservoir
10404	Sourdough	4	Canyon	Stream in Negro Rock Canyon; several springs
10404	Sourdough	7	Freezeout Lake	Several reservoirs developed at springs
10404	Sourdough	10	Rye Field Fenced Federal Range	No information on water given; predominantly private land managed custodially by the permittee
10404	Sourdough	22	Negro Rock Pen	No information on water given; small livestock gathering pen
10411	Dry Creek	3	South Freezeout	Spring developments; stock water reservoirs; Dry Creek

Source: BLM 2006

## 5.5 Potential Conflicts with Mining Activities

As the mine site and processing facilities are developed, these areas would be fenced off from grazing, which would minimize potential conflicts with grazing livestock. Although pastures are fenced, roads through pastures are not; therefore, traffic to and from the site may encounter and potentially conflict with grazing livestock on or near roads. Fences, gates and cattle guard features for which data exists are shown in **Figure 4**. Impacts from mining to surface and/or groundwater quality or quantity could potentially affect livestock water supplies.

## 5.6 Summary

Three BLM-administered grazing allotments occur within the grazing study area: Nyssa, Sourdough and Dry Creek. The permit area lies wholly within two pastures: Grassy Mountain pasture of the Nyssa Allotment, and Rye Field Federal Fenced Range of the Sourdough Allotment. This study reviews the grazing preferences, practices, management strategies, and

water supplies of pastures within the study area. It is anticipated that the mine site and processing facilities would be fenced off from grazing to minimize conflict.

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1989. *Final Report: Soil, Vegetation, and Wildlife Resources of the Grassy Mountain Project Area*. December.

### ODA [Oregon Department of Agriculture]

1997. *Noxious Weed Policy and Classification System*.  
Link: <http://www.oregon.gov/ODA/PLANT/WEEDS/Pages/lists.aspx>





## 7 Contacts

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A

Allotment Photos





Photo 1. Nyssa Allotment, Ryefield Seeding Pasture. April 2015.



Photo 2. Nyssa Allotment, Grassy Seeding Pasture. April 2015.



Photo 3. Nyssa Allotment, Grassy Mountain Pasture. April 2015.



Photo 4. Nyssa Allotment, Ryefield Reservoir Enclosure. April 2015.



Photo 5. Sourdough Allotment, Canyon Pasture. April 2015.

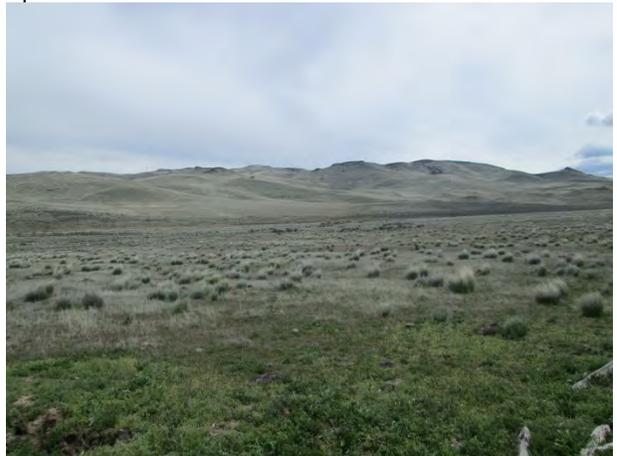


Photo 6. Sourdough Allotment, Freezout Lake Pasture. April 2015.

Appendix A: Grazing Pasture Site Photos



Photo 7. Sourdough Allotment, Rye Field Fenced Federal Range. April 2015.



Photo 8. Sourdough Allotment, South Freezout Pasture. April 2015.



# B

## BLM Allotment Management Plans

- Dry Creek
- Nyssa
- Sourdough





# United States Department of the Interior

## BUREAU OF LAND MANAGEMENT

Vale District Office  
100 Oregon Street  
Vale, Oregon 97918  
<http://www.or.blm.gov/Vale/>

### **DRY CREEK ALLOTMENT MANAGEMENT PLAN**

#### INTRODUCTION

Dry Creek Allotment is located approximately 10 miles southwest of Vale, Oregon (figure 1). The topography consists of rolling hills and rocky rim-land with watersheds in the northern pastures of the allotment flowing north to Malheur River and in the southern pastures flowing south to Dry Creek. Malheur River flows east to Snake River. Dry Creek flows east to Owyhee Reservoir/River and Snake River. Boundaries of the allotment, divided into two land units by Sourdough Allotment, are approximately defined by Dry Creek to the south, Cow Hollow and the Twin Springs Road to the east, agricultural land adjacent to Malheur River to the north, and Freezeout Ridge to the west. Vegetation is dominated by cool season sagebrush/bunchgrass communities. Portions of one pasture have been seeded to crested wheatgrass to stabilize soils and restore forage productivity to poor condition rangelands.

All allotments within Harper Basin Management Unit (0400) were classified as "I" (Improve) category allotments for management in the January 1984 Southern Malheur Rangeland Program Summary (RPS). By agreement, Harper Basin Management Unit was divided to form separate allotments in 1984, at which time Freezeout Allotment was reclassified as an "M" allotment as documented in the 1986 Northern Malheur Rangeland Program Summary Update. Freezeout Allotment was divided to form Dry Creek and Sourdough allotments in 2002 following more than ten years of management as areas-of use. Livestock grazing authorization within Harper Basin Management Unit was set at 38,539 AUMs within the RPS. Livestock grazing authorization within Freezeout Allotment was set at 11,655 AUMs by the allotment division agreement. Custodial use in Chalk Butte Allotment (00128) was divided from Freezeout Allotment in 1990, with 65 AUMs of use permitted. With the division of Freezeout Allotment in 2002, Dry Creek Allotment has 5,052 AUM's of active grazing authorization. No grazing authorization for use in Dry Creek Allotment is currently held in suspension. Preference to graze livestock within the community allotment is shared by the following operators:

<u>Operator</u>	<u>Authorized Active Use</u>	<u>Season of Use</u>
Probert Family Trust	4,786 AUMs cattle	10/1 to 3/31
Frank Shirts, Jr.	266 AUMs sheep	4/1 to 5/3
<b>Total</b>	<b>5,052 AUMs</b>	

The 147,162 acre community allotment is currently divided into four pastures with planned grazing defined in this AMP and a number of small enclosures/exclosures and custodially managed pastures as follow:

<b>Pasture</b>	<b>BLM</b>	<b>Other Federal</b>	<b>Private</b>	<b>State</b>	<b>Total</b>
Cow Hollow Seeding <sup>1</sup>	1,549	0	Trace	0	1,549
Double Mountain <sup>1</sup>	12,425	0	240	0	12,665
South Freezeout <sup>1</sup>	12,610	147	14	0	12,771
Hurley Spring <sup>1</sup>	33,075	0	505	74	33,654
Russell FFR <sup>2</sup>	963	0	4,480	0	5,443
Freezeout Creek FFR <sup>2</sup>	487	0	1,652	0	2,139
Twin Spring Reservoir Enclosure <sup>3</sup>	13	0	0	0	13
Double Mountain Botanical Exclosure <sup>4,5</sup>	Mapped as part of Double Mountain Pasture				
DM Spring and Reservoir Exclosure <sup>4,5</sup>	Mapped as part of Double Mountain Pasture				
Little DM Spring Exclosure <sup>4,5</sup>	Mapped as part of Double Mountain Pasture				
Twin Spring Exclosure <sup>4</sup>	18	0	0	0	18
<b>Total</b>	<b>61,140</b>	<b>147</b>	<b>6,891</b>	<b>74</b>	<b>68,252</b>
<sup>1</sup> Pastures with planned livestock grazing defined in this AMP <sup>2</sup> Custodially managed pastures <sup>3</sup> Enclosures available for livestock use <sup>4</sup> Enclosures where livestock use is excluded <sup>5</sup> Enclosures not delineated in the BLM GIS system, thus no acreage is presented					

Dry Creek, east of the state blocks, was found administratively suitable with a tentative wild river designation as a part of the National Wild and Scenic Rivers System (NWSR) within the Proposed Southeastern Oregon Resource Management Plan and Final Environmental Impact Statement dated April 2001. Outstanding Remarkable Values (ORVs) for which it may be recommended for inclusion in the NWSR System are geology, fish, hydrology, and wildlife. Similarly, Dry Creek Gorge Area of Critical Environmental Concern (ACEC) is recommended for designation within that document based on its special status redband trout and habitat, candidate Columbia spotted frogs and habitat, scenic values, and geologic values. Dry Creek

Wilderness Study Area is included in portions of South Freezeout and Hurley Springs pastures.

Additional special status plants and animals identified within Freezeout Allotment include, Biddle's lupine, Malheur forget-me-not, Mulford's milkvetch and sage grouse.

## OBJECTIVES

Guidance from the Northern Malheur Management Framework Plan and the Southern Malheur Rangeland Program Summary requires that livestock grazing systems be determined based on the ecological condition of the pastures within the allotment, riparian considerations and wildlife habitat requirements as follow:

Native range pastures are to be managed for general eco-site condition improvement. The long term objective (more than 15 years) is to attain late (good) or climax (excellent) condition on the majority of the area in pastures that are in middle (fair) condition and middle condition in pastures that are now in early (poor) condition.

Crested wheatgrass seedings will be grazed closely, with a maximum utilization level of 65 percent of the current years growth.

Specific resource management objectives within Dry Creek Allotment are as follow:

### Cow Hollow Seeding Pasture

Present Condition: Good (Seeding)

Land Use Plan Objective:

-Maintain seeding condition and productivity.

AMP Objectives:

-Maintain the good condition classification of seeded portions of Cow Hollow Seeding Pasture as measured through the recorded change in cover and dominance of crested wheatgrass.

-Improve the ecological condition of upland native plant communities within Cow Hollow Seeding Pasture. Trend toward change in ecological condition will be measured through a change in the cover and dominance of native perennial bunchgrass species (primarily bluebunch wheatgrass) and change in shrub cover recorded at approximate five to ten year intervals.

### Double Mountain Pasture

Present Condition: Middle (Seeding: Good)

Land Use Plan Objective:

-Improve ecological condition.

AMP Objectives:

-Improve the ecological condition of upland native plant communities within Double Mountain Pasture from middle to late. Trend toward change in ecological condition will be measured through a change in the cover and dominance of native perennial bunchgrass species (primarily blue bunch wheatgrass) and change in shrub cover recorded at approximate five to ten year intervals.

-Maintain the good condition classification of seeded portions of Double Mountain Pasture as measured through the recorded change in cover and dominance of crested wheatgrass.

**South Freezeout Pasture**

Present Condition: Middle

Land Use Plan Objective:

-Improve ecological condition.

AMP Objectives:

-Improve the ecological condition of upland vegetation communities within South Freezeout Pasture to late ecological condition. Trend toward change in ecological condition will be measured through a change in the cover and dominance of native perennial bunchgrass species (primarily blue bunch wheatgrass) and change in shrub cover recorded at approximate five to ten year intervals.

-In accordance with the Bureau's Wetland and Riparian Initiative for the 1990's, improve the condition of riparian vegetation communities adjacent to Dry Creek to functioning condition within 5 years.

**Hurley Spring Pasture**

Present Condition: Late

Land Use Plan Objective:

-Maintain ecological condition.

AMP Objectives:

-Maintain the late ecological condition of native vegetation communities in Hurley Spring Pasture. Trend in ecological condition will be measured through change in recorded cover and dominance of native perennial bunchgrass species, primarily blue bunch wheatgrass.

-In accordance with the Bureau's Wetland and Riparian Initiative for the 1990's, improve the condition of riparian vegetation communities adjacent to Dry Creek to functioning condition within 5 years.

**KEY SPECIES AND PHENOLOGY**

Grazing schedules will be established based on the requirements for growth and maintenance of vigor of key vegetation species and other valued resources. The key species for native upland plant communities is bluebunch wheatgrass. The key species for the nonnative seeded portions of pastures is crested wheatgrass. Approximate phenological dates for bluebunch wheatgrass development in Dry Creek Allotment are as follow:

Begin growth	3/15 to4/1
Six inch leaf growth	4/15 to5/1
Flowering	5/15 to7/1
Seed set	7/1 to7/15
Seed dissemination	7/15 to8/1

Approximate phenological dates for crested wheatgrass development in Dry Creek Allotment are one to two weeks earlier than those identified for bluebunch wheatgrass.

### PLANNED GRAZING USE

The Southern Malheur RPS identified some tools intended to facilitate meeting land use plan objectives. Additionally, the Proposed Southeastern Oregon Resource Management Plan identified potential impacts of livestock grazing. In addition to the intensity of grazing, livestock impacts to upland vegetation communities are dependent on the frequency of use during critical periods of the growth cycle. Periodic year-long rest or deferment of grazing during the growing season (4/1 to 7/15) is required to improve and maintain the vigor of native upland bunchgrass/sagebrush communities. Successful grazing of upland pastures will allow periodic deferment during active plant growth and prior to seed set. The degree of localized defoliation and physical impacts to upland vegetation communities during scheduled livestock use is directly related to the intensity of livestock management provided by the livestock operator. The deferred rotation grazing schedules for grazed pastures of Freezeout Allotment identified in the RPS were intended to meet objectives to improve or maintain vegetation community health and vigor as well as sustain most resource values. Additionally, the RPS set maximum allowable utilization limits of 50 percent on native range and from 50 to 65 percent on seeded range as tools intended to maintain vegetation community health and vigor. Those maximum allowable levels of grazing utilization are carried forward to this activity plan. An allotment evaluation completed in 1988 identified a need to better define the scheduled grazing use in Freezeout Allotment to potentially meet land use plan objectives.

Planned grazing is as follows:

Probert Family Trust (662 cattle)

Private and FFR	4/1 to 8/30	(Custodial)
Hurley Springs	9/1 to 11/31	16.7 acres per AUM
South Freezeout	12/1 to 12/31	19.0 acres per AUM
Double Mountain/Cow Hollow Seeding	1/1 to 3/31	7.0 acres per AUM

Frank Shirts Jr will continue to be authorized to graze seven bands of sheep in Malheur Resource Area, some of which will use Dry Creek Allotment with a stipulation that all bands continue to move without bedding in any location more than once while camps are to be moved at least every five days and not placed within one-quarter mile of water sources.

### GRAZING SCHEDULE RATIONALE

The above grazing schedule limits use of pastures containing known riparian communities (Hurley Spring-Dry Creek; South Freezeout-Dry Creek) to fall, winter, or early spring. Cattle are more likely to distribute use away from riparian communities and into upland communities during these periods of use during cooler climatic conditions than during traditional late spring and summer use of public lands. Channel stabilizing vegetation will be less impacted by

livestock use than would occur during mid-summer, a period when the majority of growth occurs and cattle tend to concentrate in these communities for water, shade and forage. Scheduled non-growing season use will need to ensure that adequate residual herbaceous and woody riparian vegetation remains on site to dissipate hydraulic energy of peak stream flows during spring runoff and mid-summer storms.

Use of upland native vegetation communities on public land will be limited to periods outside the active growing season which begins in early March and continues through late June. Soil moisture will remain through the majority of the growing season to allow regrowth of native bunchgrass species following use, maintaining vigor and health.

Use of seeded pastures will be deferred to a period outside the active growing season in all years allowing healthy crested wheatgrass communities to maintain vigor. Native bunchgrass communities within seeded pastures are also expected to maintain health and vigor with deferment of use to periods outside the active growing season.

### GRAZING SCHEDULE FLEXIBILITY

Flexibility is provided to allow 7 days before and after the scheduled move dates between public land pastures to allow time to complete moves and provide for adverse weather conditions. Authorization would be provided to allow trailing through Sourdough and Nyssa allotments, adjacent to Twin Spring Road, to complete the move to Hurley Springs Pasture approximately 10/1 and from South Freezeout Pasture about 12/31, so long as any over-night stops do not occur on public land outside Dry Creek Allotment without prior BLM approval.

Additionally, Probert Family Trust is authorized to continue to graze scattered tracts of public land intermixed with private land as follows, so long as grazing use is not detrimental to public land resource values:

Russell FFR	custodial use	99 AUM's
Freezeout Creek FFR	custodial use	26 AUM's

### RANGE IMPROVEMENTS

The permittees authorized to graze livestock within Dry Creek Allotment have maintenance responsibility for all rangeland improvements with the exception of land treatments involving vegetation manipulation and designated enclosures constructed for purposes other than livestock management. Periodic damage to fences caused by snow loading, wildlife, livestock, normal weathering and seasonal high stream flows require frequent inspection and repair by the permittees to prevent unscheduled livestock moves between this allotment and adjoining private and federal lands. Gates left open by users of the public land continue to provide livestock access to and from the allotment during periods when livestock are present. Livestock management remains the responsibility of the permitted livestock operators. Existing rangeland improvements

within Dry Creek Allotment are listed as follow:

<b>Project</b>	<b>Number</b>	<b>Twsp</b>	<b>Rng</b>	<b>Sec</b>	<b>Subdivision</b>
<i>Permittee Maintenance responsibility</i>					
Cow Hollow Drift Fence	720017	20S	44E	1	SWSE
Sourdough Spring	720106	22S	43E	22	NWNE
Little Washboard Reservoir	720141	23S	42E	11	NENE
Washboard Reservoir	720156	23S	42E	15	NWSW
Dry Creek Reservoir #1	720371	23S	42E	22	NESW
Dry Creek Reservoir #2	720373	23S	42E	30	NESW
Keeney Creek Reservoir #1	720375	23S	42E	18	SESE
Cow Hollow Fence	720447	20S	44E	16	NWNE
Two Forks Check Dam	720504	20S	44E	23	SESE
Up Cow Hollow Check Dam	720506	21S	44E	1	NENE
Bull Shirt Spring #1	720582	22S	43E	22	NESE
Hurley Reservoir	720830	23S	42E	29	SESE
Twin Spring Reservoir	720962	22S	43E	35	NWNE
East Spring	721378	23S	43E	5	SESW
Lower Hurley Spring	721382	23S	42E	27	SESW
Slim & Fatty Spring	721389	23S	41E	24	NWNE
Up Sourdough Spring	721411	22S	43E	16	SESE
Lower Cow Reservoir	721501	20S	44E	24	SESE
Upper Cow Reservoir	721502	20S	44E	35	NWNW
Canyon Reservoir	721503	20S	45E	30	SWSW
DM Spring	721540	20S	44E	27	NWSE
Cow Hollow Seeding Protective Fence	721630	20S	45E	19	NENW
Twin Butte Spring	721717	20S	44E	14	SWNW
Zippo Reservoir	721995	20S	44E	13	SWNE
Fossil Reservoir	721996	20S	44E	25	SWSW
Easy Reservoir	721997	21S	44E	2	NENW
Cry Creek Division Fence	723662	23S	41E	35	SWSW
Ingram Spring	723779	24S	42E	11	NWSE
Long Draw Reservoir	723867	23S	43E	3	NWSE
South Sheep Creek Reservoir	724177	23S	42E	13	SENE
Upper Sheep Creek Reservoir	724178	22S	42E	34	SWSW
South Williamson Fence	724248	20S	44E	2	NWNE

Double Mountain Check Dam	724257	21S	44E	1	NWSW
Robbins Reservoir	724820	22S	43E	31	NESE
George Russell Well	724989	20S	45E	5	NWSE
Russell Corral	724990	20S	45E	5	NWSE
Bull Spring	725419	22S	43E	27	NENW
Bull Shirt Spring #2	725485	22S	43E	27	NENW
Freezeout Fence	725565	22S	43E	10	SWSE
Double Mountain Spring/Pipeline	725978	20S	44E	27	SENW
Little Double Mountain Spring/Pipeline	725980	20S	44E	27	SESE
<b><i>Bureau of Land Management Maintenance Responsibility</i></b>					
Poison Basin Cattleguard	721600	21S	43E	36	SESE
Cow Hollow Cattleguard #3	721620	20S	45E	6	NWSW
Keeney Creek Cattleguard #1	721654	23S	42E	8	NWSE
Keeney Creek Cattleguard #2	721655	23S	42E	8	SWSW
Twin Spring Cattleguard	721873	22S	43E	35	SWNE
Twin Spring Protective Fence	721920	22S	43E	35	SWNE
Wallrock Cattleguard	723841	24S	42E	14	SWSW
Sand Hollow Cattleguard	724251	19S	45E	7	SWNE
Double Mountain Brush Control	724288	20S	44E	15	NWNW
DM Reservoir	724666	20S	44E	27	SWNE
DM Spring Wildlife Fence	725559	20S	44E	27	NWSE
Double Mountain HACR Exclosure	725573	20S	44E	13	SWNW
Little DM Exclosure	725981	20S	44E	27	SESE
DM Exclosure	726254	20S	44E	27	NWSE

## BILLING PROCEDURES

This Allotment Management Plan is the annual authorization to graze cattle within Dry Creek Allotment. No billing or receipt will be issued prior to use. The operators will annually receive a grazing application (form 4130-3a) prior to the scheduled grazing season. The application will be the operator's opportunity to change the basic scheduled livestock grazing for the upcoming year or apply for non-use. All applications, changed or unchanged, must be signed and returned to the Vale District Office prior to the operators earliest scheduled turnout date. The completed application signed by the BLM Field Manager will be the operator's annual authorization to

graze cattle upon public lands within Dry Creek Allotment. After the fact billing will be based on the operator's reported actual use. The operator's actual use record must be received by the Vale District BLM within 15 days of the end of scheduled grazing for the season. A billing notice based on those data provided will be issued within 15 days of receipt of the actual use record. Payment of grazing fees must be made within 15 days of the due date of any billing notice to avoid late fee assessment in accordance with regulation (43 CFR 4130.7-1).

Paid billing is the annual authorization to graze sheep within Dry Creek Allotment. The operators will annually receive a grazing application (form 4130-3a) prior to the scheduled grazing season. The application will be the operator's opportunity to change the basic scheduled livestock grazing for the upcoming year or apply for non-use. All applications, changed or unchanged, must be signed and returned to the Vale District Office prior to the operators earliest scheduled turnout date.. A billing notice based on those data provided will be issued upon receipt of the application. Payment of grazing fees must be made prior to the initiation of grazing use in accordance with regulation (43 CFR 4130.7-1). The operator is required to provide an actual use statement to the Vale District BLM within 15 days of the end of scheduled grazing for the season. These data will be used to verify grazing bills and as a record of actual use for monitoring purposes.

### MONITORING / EVALUATION

Allotment evaluation within this "M" category allotment will be scheduled approximately every ten years in association with Dry Creek Geographic Management Area or as needed to determine progress toward meeting identified management objectives. Changes in authorized grazing use within Dry Creek Allotment may be made periodically as supported by monitoring over time in accordance with procedures identified in regulation (43 CFR 4110.3 and 43 CFR 4180) . BLM will conduct the following monitoring studies in the allotment to provide data for periodic evaluations:

#### Utilization

Utilization data will be gathered annually on the key forage species in each grazed pasture after

livestock have been removed. The Key Forage Plant Method will be used and appropriate records maintained to calculate average annual carrying capacity. Utilization limits set in the RPS will not be exceeded in any year and may be adjusted as the result of monitoring to ensure management objectives will be met.

#### Actual Use

Accurate actual use records by pasture will be kept by the operator on forms furnished by BLM. These records will be submitted to BLM within 15 days of the close of the authorized grazing season. Data will be used for the computation/verification of billings and to calculate average annual carrying capacity.

#### Climate

The Owyhee Dam and Vale NOAA weather stations will be the sources of climate data used in allotment evaluations. A forage crop index will be calculated annually using the regression relationship between crop year precipitation and herbaceous production published by the Oregon Agricultural Experiment Station (Station Publication 659).

#### Ecological Condition

The present ecological condition class of upland vegetation communities in each pasture was determined in 1980 by using an inventory based on range site classification and was presented in the Southern Malheur Grazing Management program EIS. For native pastures, the condition class designated is the ecological condition class representing the majority of the pasture. The condition of pastures seeded to introduced non-native species such as crested wheatgrass does not fit an ecological classification. In order to determine if a pasture has met a condition class management objective when management of the allotment is evaluated, the condition class for each range site in the pasture will have to be redetermined using appropriate methodology.

Riparian system function will be determined according to accepted BLM standards as outlined in TR 1737-15 1998 or TR1737-16 1999.

Upland trend data will be gathered from permanently established line intercept studies, photographed 3X3 trend plots, carrying capacity calculated from actual use and utilization data, and professional judgement in each pasture. Measurement of trend toward meeting ecological condition classification objectives will be assessed based on the assumption that an increase in the dominance and cover of late seral native bunchgrass species, primarily bluebunch wheatgrass, will indicate improvement in ecological condition. Similarly, recorded change in crested wheatgrass dominance and cover will indicate trend toward condition change in seedings. These data will indicate whether observed change is toward or away from ecological condition objectives.

Riparian management pastures and enclosures will be monitored using low level color infra-red imagery, ground photographic plots, and/or water quality samples. Data derived from these studies will be used to determine riparian site trend and function.

#### S&G Assessments

Periodic assessments of rangeland health will be completed to assure that management actions are consistent with Standards for Rangeland Health and Guidelines for Livestock Management for Public Lands in Oregon and Washington (June 1997). Grazing permits are subject to modification as necessary to achieve compliance with these standards and guidelines (43 CFR 4180).

AGREEMENT

We, the undersigned do hereby agree to and accept the Dry Creek Allotment Management Plan. We understand that the grazing privileges authorized in this document are subject to the provisions of the Code of Federal Regulations (CFR 4100) which defines regulations for the orderly administration of grazing use on the public lands. It is also agreed that the terms and conditions of this agreement shall be incorporated into grazing permits to make use within Dry Creek Allotment, and shall be binding upon the permittee, heirs, executors, administrators, successors in interest or assigns.

Dan Probert Trustee

Dan Probert, Probert Family Trust

3-14-02

Date

Frank Shirts Jr.

Frank Shirts Jr.

4-2-02

Date

Tom Dabbs

Tom Dabbs  
Acting Field Manager  
Malheur Resource Area

4-3-02

Date

NYSSA ALLOTMENT MANAGEMENT PLAN  
(10403)

INTRODUCTION

Nyssa Allotment is located approximately 20 miles south of Vale and 10 miles west of Adrian, Oregon (figure 1). The topography consists of rolling hills and rocky rim-land with watersheds flowing north to Malheur River, east to Owyhee River, and south to Dry Creek. Boundaries of the allotment are defined by Dry Creek to the south, Owyhee River to the east and a common boundary with Freezeout Allotment to the north and west. Vegetation is dominated by cool season sagebrush/bunchgrass communities. Portions of six pastures have been seeded to crested wheatgrass to stabilize soils and restore forage productivity to poor condition rangelands.

All allotments within Harper Basin Management Unit (0400) were classified as "T" category allotments for management in the Southern Malheur Rangeland Program Summary (RPS). Nyssa Allotment remains classified as an "T" allotment. Livestock grazing authorization within Harper Basin Management Unit was set at 38,539 AUMs within the RPS. By agreement, Harper Basin Management Unit was divided to form separate allotments in 1984. Livestock grazing authorization within Nyssa Allotment was set at 5882 AUMs by that agreement. No grazing authorization is currently held in suspension. Preference to graze livestock within the community allotment is shared by the following operators:

<u>Operator</u>	<u>Authorized Active Use</u>	<u>Season</u>
Gary Cleaver	2191 AUMs cattle	4/1 to 10/31
Christian and Ann Bennight	1120 AUMs cattle	4/1 to 10/31
Jeff Hess	1617 AUMs cattle	4/1 to 10/31
Vernon and Velma Widmer	350 AUMs cattle	4/1 to 10/31
Adah Schweitzer	70 AUMs cattle	custodial
Frank Shirts	<u>534 AUMs sheep</u>	4/1 to 5/3
Total	5882 AUMs	

Permitted use for all cattle operators is between 4/1 and 10/31 annually while permitted use for the one sheep operator is 4/1 to 5/3.

The 76,955 acre community allotment is currently divided into nine pastures and a number of small enclosures as follow:

Pasture	BLM	Other Federal	Private	Total
North Mud Spring	5,067	0	255	5,322
South Mud Spring	3,057	0	0	3,057
North Rock Creek	7,992	160	0	8,152
South Rock Creek	6,496	821	1	7,318
Sagebrush	12,175	0	0	12,175
Rye Field Seeding	3,752	0	0	3,752
Grassy Seeding	2,971	0	0	2,971
Grassy Mountain	25,551	4,733	85	30,369
FFR	992	0	182	1,174
Ryefield Res Ex	4	0	0	4
Mud Spring Res Ex	3	0	0	3
North Grassy Mountain Res Enclosure	12	0	0	12
Rock Creek Riparian Stream Enclosure (Owyhee River Corridor)	258	2,130	256	2,644
Sagebrush Res Ex	2	0	0	2
Total	68,332	7,844	779	76,955

Shortly after division of the Harper Basin Management Unit in 1984, an allotment management plan (AMP) was developed and implemented for Nyssa Allotment. Grazing by cattle was divided into two overlapping areas-of-use. Neither sheep grazing authorization held by Frank Shirts nor the cattle grazing authorization held by Adah Schweizer were addressed in that AMP. As a result of two pasture divisions since 1984 and completion of an allotment evaluation in 1989, a revised grazing schedule was implemented in 1989. A second evaluation was completed in 1994 with recommendations to once again revise the grazing to better address multiple-use management and sustaining of resources within upland and riparian vegetation communities as well as other identified values. Livestock operators expressed a desire to redefine the boundaries of each area-of-use without overlap in pastures. This could serve as an initial step toward division of the large community allotment into two smaller community allotments.

The Owyhee River below the Dam was found administratively suitable with a tentative

recreational river designation as a part of the National Wild and Scenic Rivers System (NWSR) within the Draft Southeastern Oregon Resource Management Plan dated October 1998. Outstanding Remarkable Values (ORVs) for which it may be recommended for inclusion in the NWSR System are scenery, recreation, geology, fish, wildlife, and special status plants.

## OBJECTIVES

Guidance from the Northern Malheur Management Framework Plan and the Southern Malheur Rangeland Program Summary requires that livestock grazing systems be determined based on the ecological condition of the pastures within the allotment, riparian considerations and wildlife habitat requirements as follow:

Native range pastures are to be managed for general eco-site condition improvement. The long term objective (more than 15 years) is to attain late (good) or climax (excellent) condition on the majority of the area in pastures that are in middle (fair) condition and middle condition in pastures that are now in early (poor) condition.

Crested wheatgrass seedings will be grazed closely, with a maximum utilization level of 65 percent of the current years growth.

Specific resource management objectives within Nyssa Allotment are as follow:

### North Mud Spring Seeding Pasture

Present Condition: Late (Seeding: Good)

Land Use Plan Objective:

-Maintain late ecological condition (Maintain seeding condition and productivity).

AMP Objectives:

-Maintain the late ecological condition of native portions of North Mud Spring pasture. Trend in ecological condition will be measured through change in recorded cover and dominance of native perennial bunchgrass species, primarily bluebunch wheatgrass.

-Maintain the good condition classification of seeded portion of North Mud Spring pasture as measured through the recorded change in cover and dominance of crested wheatgrass.

### South Mud Spring Seeding Pasture

Present Condition: Late (Seeding: Good)

Land Use Plan Objective:

-Maintain late ecological condition (Maintain seeding condition and productivity.)

AMP Objectives:

-Maintain the late ecological condition of native portions of South Mud Spring pasture. Trend in ecological condition will be measured through change in

recorded cover and dominance of native perennial bunch grass species, primarily blue bunch wheatgrass.

-Maintain the good condition classification of the seeded portion of South Mud Spring pasture as measured through the recorded change in cover and dominance of crested wheatgrass.

#### Sagebrush Pasture

Present Condition: Middle

Land Use Plan Objective:

-Improve to late ecological condition.

AMP Objectives:

-Improve the ecological condition of upland plant communities within Sagebrush pasture from middle to late within 15 years. Trend toward change in ecological condition will be measured through a change in the cover and dominance of native perennial bunch grass species (primarily blue bunch wheatgrass) and change in shrub cover recorded at approximate five year intervals.

#### North Rock Creek Pasture

Present Condition: Early

Land Use Plan Objective:

-Improve to middle ecological condition.

AMP Objectives:

-Improve the ecological condition of upland plant communities within North Rock Creek pasture from early to middle within 15 years. Trend toward change in ecological condition will be measured through a change in the cover and dominance of native perennial bunch grass species (primarily bluebunch wheatgrass) and change in shrub cover recorded at approximate five year intervals.

-In accordance with the Bureau's Wetland and Riparian Initiative for the 1990's, improve the condition of riparian vegetation communities adjacent to Rock Creek to functioning condition<sup>1</sup> within 5 years.

#### South Rock Creek Pasture

Present Condition: Early

Land Use Plan Objective:

-Improve to middle ecological condition.

AMP Objectives:

- Improve the ecological condition of upland plant communities within South Rock Creek pasture from early middle within 15 years. Trend toward change in ecological condition will be measured through a change in the cover and dominance of native perennial bunch grass species (primarily blue bunch wheatgrass) and change in shrub cover recorded at approximate five year intervals.

- Improve the health and vigor of significant riparian communities associated with moist springs and small tributaries of Owyhee River.

#### Grassy Mountain Pasture

Present Condition: Late

Land Use Plan Objective:

- Maintain late ecological condition.

AMP Objectives:

- Maintain the ecological condition of upland plant communities within Grassy Mountain pasture in late ecological condition. Trend toward change in ecological condition will be measured through a change in the cover and dominance of native perennial bunch grass species (primarily blue bunch wheatgrass) and change in shrub cover recorded at approximate five year intervals.

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#### Grassy Seeding (Cherry Creek Pasture)

Present Condition: Late (Seeding: Good)

Land Use Plan Objective:

- Maintain late ecological condition (Maintain seeding condition and productivity.)

AMP Objectives:

- Maintain the late ecological condition of native portions of Grassy Seeding pasture. Trend in ecological condition will be measured through change in recorded cover and dominance of native perennial bunch grass species, primarily blue bunch wheatgrass.
- Maintain the good condition classification of the seeded portion of Grassy Seeding pasture as measured through the recorded change in cover and dominance of crested wheatgrass.

#### Ryefield Seeding Pasture

Present Condition: Late (Seeding: Good)

Land Use Plan Objective:

- Maintain late ecological condition (Maintain seeding condition and productivity.)

AMP Objectives:

- Maintain the late ecological condition of native portions of Ryefield Seeding pasture. Trend in ecological condition will be measured through change in recorded cover and dominance of native perennial bunch grass species, primarily blue bunch wheatgrass.
- Maintain the good condition classification of the seeded portion of Ryefield Seeding pasture as measured through the recorded change in cover and dominance of crested wheatgrass.

#### Rock Creek Riparian Stream Enclosure (Owhyee River)

Present Condition: Early (uplands)

Land Use plan Objective:

-Improve to middle ecological condition

AMP Objectives:

-Improve the ecological condition of upland plant communities within Rock Creek Stream Riparian enclosure from early to middle within 15 years. Trend toward change in ecological condition will be measured through a change in the cover and dominance of native perennial bunch grass species (primarily bluebunch wheatgrass) and change in shrub cover recorded at approximate five year intervals.

-In accordance with the Bureau's Wetland and Riparian Initiative for the 1990's, improve the condition of riparian vegetation communities adjacent to the Owyhee River to functioning condition within 5 years. Improve and maintain riparian vegetation communities through livestock exclusion except for spring and fall cattle trailing between base property and the public land grazing allotments.

-Manage public land uses within the corridor adjacent to Owyhee River below the Dam to protect and enhance the outstanding remarkable values for which this river was found administratively suitable for potential designation by Congress as a part of the National Wild and Scenic Rivers System.

Fenced Federal Range (Adah Schweitzer custodial pasture)

Present Condition: unknown

Land Use Plan Objective:

-Improve ecological condition

AMP Objective:

-Manage as custodial public lands with enclosed private lands. Livestock management actions will be consistent with improving the ecological condition of upland vegetation communities.

Mud Springs Enclosures

Present Condition: unknown

Land Use Plan Objective:

-Improve riparian habitat

AMP Objectives:

- Improve and maintain riparian vegetation communities associated with Mud Spring and Mud Spring Reservoir through livestock exclusion.

Sagebrush Reservoir Enclosure

Present Condition: unknown

Land Use Plan Objective:

-Improve riparian habitat

AMP Objectives:

Improve and maintain riparian vegetation communities associated with Sagebrush Reservoir through livestock exclusion.

Ryefield Reservoir Enclosure

Present Condition: unknown

Land Use Plan Objective:

-Improve riparian habitat

AMP Objectives:

-Improve and maintain riparian vegetation communities associated with Ryefield Reservoir through livestock exclusion.

KEY SPECIES AND PHENOLOGY

Grazing schedules will be established based on the requirements for growth and maintenance of vigor of key vegetation species and other valued resources. The key species for native upland plant communities is blue bunch wheatgrass. The key species for the seeded portions of pastures is crested wheatgrass. Approximate phenological dates for blue bunch wheatgrass development in Nyssa Allotment are as follow:

Begin growth	3/15 to4/1
Six inch leaf growth	4/15 to5/1
Flowering	5/15 to7/1
Seed set	7/1 to7/15
Seed dissemination	7/15 to8/1

Approximate phenological dates for crested wheatgrass development in Nyssa Allotment are one to two weeks earlier than those identified for blue bunch wheatgrass.

PLANNED GRAZING USE

The Southern Malheur RPS identified some tools intended to facilitate meeting land use plan objectives. In addition to the intensity of grazing, livestock impacts to upland vegetation communities are dependent on the frequency of use during critical periods of the growth cycle. Periodic year-long rest or deferment of grazing during the growing season (4/1 to 7/15) is required to improve and maintain the vigor of native upland bunchgrass/sagebrush communities. Successful grazing of upland pastures will allow periodic deferment during active plant growth and prior to seed set. The degree of localized defoliation and physical impacts to upland vegetation communities during scheduled livestock use is directly related to the intensity of livestock management provided by the livestock operator. The deferred rotation grazing schedules for grazed pastures of Nyssa Allotment identified in the RPS were intended to meet objectives to improve or maintain vegetation community health and vigor as well as sustain most

resource values. Additionally, the RPS set maximum allowable utilization limits of 50 percent on native range and from 50 to 65 percent on seeded range as tools intended to maintain vegetation community health and vigor.

Allotment evaluations completed in 1989 and 1994 identified a need to better define the scheduled grazing use in Nyssa Allotment to potentially meet land use plan objectives. Two areas-of-use will be maintained in Nyssa Allotment to support active grazing authorizations of cattle operators. A similar two year deferred rotation grazing schedule will be implemented in each area-of-use. Pastures used in the southern area-of-use by Gary Cleaver will include South Rock Creek, Grassy Seeding, Ryefield Seeding and Grassy Mountain. Gary Cleaver will use Rock Creek Riparian Pasture (Owyhee River corridor) annually in the spring and again in the fall to trail cattle between private land and public land in Nyssa, Black Jack, and Lower Owyhee allotments. The Owyhee River below the Dam has been found administratively suitable for designation as a part of the National Wild and Scenic Rivers System (NWSRS), with a tentative recreational river classification. To better ensure that outstanding remarkable values of the river corridor are protected and enhanced, trailing of any group of cattle will be limited to one day within the river corridor, be restricted to the road and adjacent areas disturbed during road construction and maintenance, be stipulated to avoid livestock access to grounds and developed facilities at Snively Hot Spring and Lower Owyhee Watchable Wildlife Areas, and be stipulated to avoid cattle access to sandy benches adjacent to Owyhee River and other identified habitats suitable for supporting special status plant species.

Pastures used in the northern area-of-use by Christian Bennight, Jeff Hess, Vernon Widmer and Gerald Williams will include North Rock Creek, North Mud Spring, South Mud Spring and Sagebrush.

A two year deferred rotation grazing schedule will be implemented as identified on the following page. Maximum allowable utilization limits of 50 percent in native vegetation communities and 65 percent in non-native seeded vegetation communities set in the Southern Malheur RPS will not be exceeded with livestock use.

### Southern Area-of-Use Grazing Schedule

Pasture	Year 1 (‘99, ‘01, ..)	Year 2 (‘00, ‘02, ..)
South Rock Creek	4/1 - 4/30	4/1 - 4/30
Rye Field Seeding	5/1 - 7/15	9/15 - 10/31
Grassy Mountain	7/16 - 9/31	6/16 - 9/15
Grassy Seeding	10/1 - 10/31	5/1 - 6/15
Rock Creek Riparian (Owyhee River corridor) spring and fall trailing		

### Northern Area-of-Use Grazing Schedule

Pasture	Year 1 (‘99, ‘01, ..)	Year 2 (‘00, ‘02, ..)
North Rock Creek	4/1 - 4/30	4/1 - 4/30
North Mud Spring Seeding	5/1 - 7/15	9/16 - 10/31
South Mud Spring seeding	9/16 - 10/31	5/1 - 7/15
Sagebrush	7/16 - 9/15	7/16 - 9/15

Adah Schweitzer’s authorized active grazing will be maintained in the Schweitzer Custodial Pasture as has occurred in recent years. Sheep grazing will occur in native pastures of the allotment as identified in turnout statements issued annually prior to the grazing season. A primary consideration in the management of sheep, which are herded daily, is to avoid repeat grazing of any site. Terms and conditions will include the requirement that camps be moved at least every five days and sheep be bedded in no location more than once per grazing season.

### GRAZING SCHEDULE RATIONALE

The above grazing schedule limits use of pastures containing significant riparian communities (North and South Rock Creek) to early spring only. Cattle are more likely to distribute use away from riparian communities and into green upland communities during April use than during other periods of the grazing season. With use of riparian communities limited to spring only, channel stabilizing vegetation will not be impacted by livestock use during mid-summer, a period when the majority of growth occurs and cattle tend to concentrate in these communities for water, shade and forage. Residual herbaceous and woody riparian vegetation will remain on site to dissipate hydraulic energy of peak stream flows during mid-summer storms and spring run-off. Within these two pastures with early seral upland conditions, limiting the majority of use to early-spring only will encourage grazing within cheatgrass dominated communities. Soil moisture should remain in most years after 5/1 to allow regrowth of native bunchgrass species, maintaining their vigor and health.

Use of seeded pastures will be deferred until after seed set in alternate years allowing healthy

crested wheatgrass communities to maintain vigor. Native bunchgrass communities within seeded pastures, primarily Grassy Seeding, are in late seral condition and are also expected to maintain health and vigor with deferment of use until after seed set in alternate years. Sagebrush and Grassy Mountain pastures will be grazed after seed set in all years and are expected to improve in vigor and productivity.

Livestock trailing through Rock Creek Riparian Pasture (the Owyhee River corridor) in the spring and fall to move cattle between private land and public land in Nyssa, Blackjack, and Lower Owyhee allotments will limit impacts to riparian resources and outstanding remarkable values for which Owyhee River below the Dam was found administratively suitable for inclusion in the NWSRS.

### GRAZING SCHEDULE FLEXIBILITY

Turn out of cattle onto public land of Nyssa Allotment will occur no earlier than April 1 to minimize soil compaction from concentrated trampling. Sheep turn out may be as early as March 20 in years with early herbaceous growth and range readiness provided conscientious livestock management occurs. The first move of cattle within the allotment from riparian pastures to spring use seeded pastures will be completed prior to May 1 to ensure maintenance of health and vigor of riparian and upland native vegetation. The above grazing schedule includes flexibility to make moves to subsequently scheduled pastures at any time after July 15 due to livestock management needs or public land resource needs. Move dates that vary more than 7 days from the defined schedule should be coordinated with BLM range staff in a timely manner. No more than one pasture within each area of use will be used at one time. By written application, cattle use may extend to November 30, resulting from reduced livestock numbers during the active growing season (5/1 to 7/15) and provided active authorized use is not exceeded. Similarly, sheep use may begin as early as 3/20 based on range-readiness as determined by BLM and may extended to 5/30 provided active authorized use is not exceeded. The maximum allowable utilization levels set in the RPS will be maintained at 50 percent on native vegetation communities and 65 percent on non-native seeded vegetation communities unless more restrictive limits are determined to be necessary to meet management objectives.

### RANGE IMPROVEMENTS

The permittees authorized to graze livestock within Nyssa Allotment have maintenance responsibility for all rangeland improvements with the exception of land treatments involving vegetation manipulation and designated enclosures constructed for purposes other than livestock management. Periodic damage to fences caused by snow loading, wildlife, livestock, normal weathering and seasonal high stream flows require frequent inspection and repair by the permittees to prevent unscheduled livestock moves between this allotment and adjoining private and federal lands. Gates left open by users of the public land continue to provide livestock access

to and from the allotment during periods when livestock are present. Livestock management remains the responsibility of the permitted livestock operators. Existing rangeland improvements within Nyssa Allotment are listed as follow:

Project	Number	Twsp	Rng	Sec
Lone Willow Spring	0059	21S	44E	24
Shell Bark Spring	0066	21S	44E	13
Lowe Spring	0070	21S	44E	28
Lowe Spring Tank	0089	21S	44E	28
Owyhee Cattle Assn Drift Fence	0101	20S	45E	15
Elbow Drift Fence	0198	23S	43E	13
Lowe Reservoir	0285	21S	44E	28
Grassy Reservoir	0286	22S	43E	12
Cow Skull Spring	0440	22S	45E	5
Schweizer Reservoir	0445	22S	44E	8
Grassy Spring #1	0458	22S	44E	17
Grassy Mtn Reservoir	0459	22S	44E	5
Oxbow Reservoir	0677	22S	44E	21
Mendiola Spring	0678	22S	44E	1
Holy Land Cattleguard	0726	21S	44E	11
Owyhee Siphon Drift Fence	0956	21S	44E	14
Twin Spring Reservoir	0962	22S	43E	35
Chalk Spring	1041	20S	45E	21
Up Cow Hollow Cattleguard	1115	21S	44E	3
Shell Rock Cattleguard	1204	21S	45E	6
Twin Springs	1226	22S	43E	35
Sagebrush Spring	1236	21S	44E	34
North Grassy Mtn Reservoir	1265	22S	44E	3
O T Spring	1396	21S	44E	35
Deer Butte Spring	1486	21S	45E	20
Leaky Reservoir	1494	20S	45E	18
Chalk Reservoir	1495	20S	40E	18

Mud Reservoir	1496	20S	45E	29
North Reservoir	1497	20S	45E	32
Rock Creek Reservoir	1498	21S	45E	6
Darkey Reservoir	1499	21S	44E	11
Yellow Jacket Reservoir	1500	21S	44E	1
Ryefield Seeding	1530	21S	44E	28
Rock Spring Cattleguard	1535	21S	45E	4
Ryefield Fence	1613	22S	43E	12
Red Rim Cattleguard	1644	21S	44E	32
Lowe Spring Cattleguard	1645	21S	44E	28
O T Cattleguard	1646	21S	44E	33
McKnight Mtn Cattleguard	1647	22S	43E	12
Ox Yoke Spring	1745	22S	44E	33
Mud Spring	1834	20S	45E	29
Mud Spring Wildlife Fence	1839	20S	45E	29
Frog Pond Cattleguard	1863	22S	43E	35
Sourdough Cattleguard #1	1887	23S	43E	1
Darkey Rock Creek Division Fence	1912	20S	44E	33
Rock Creek Reservoir	1998	20S	45E	33
Fletcher Reservoir	1999	20S	45E	28
Fletcher Gulch Reservoir	2000	20S	45E	27
Shellrock Butte Division Fence	2085	21S	44E	26
Lowe Cattleguard	2113	21S	44E	24
Deer Butte Cattleguard	2114	21S	45E	7
Frog Pond Spring	2161	22S	43E	35
Oxbow Spring	2162	22S	44E	28
Grassy Mtn Division Fence	2164	21S	44E	25
Whiskey Spring	2168	22S	44E	31
Haystack Butte BC	3681	21S	45E	4
Keg Spring	3770	22S	44E	24
Shack Spring	3771	22S	44E	24
Schweizer Spring	3803	20S	45E	17

Ryefield Reservoir	3869	22S	43E	1
Sourdough Basin Division Fence	4250	23S	44E	18
Government Corral Spring Pipeline	4295	21S	44E	34
Rimtop Spring	4517	20S	44E	33
Dam Spring	4518	21S	45E	18
Mud Spring Pipeline	4522	20S	45E	30
Haystack Butte Spring	4525	21S	45E	19
Rock Creek Canyon Spring	4569	21S	45E	5
Ryefield Res Fence	4609	22S	43E	1
Grassy Mtn Seeding	4657	21S	44E	35
Ridgeline Fence	4691	20S	45E	17
Grassy Mtn Seeding Fence	4693	22S	44E	4
Owyhee Ridge Windmill	4702	22S	44E	8
Oxbow Basin Windmill	4703	22S	44E	33
Ridgeline Fence Cattleguard	4707	20S	45E	18
Sagebrush Reservoir	4726	21S	44E	27
Sagebrush Res Fence	4727	21S	44E	27
Owyhee Ridge Well Pipeline	4731	22S	44E	8
Double Mtn Well	4962	21S	44E	3
Sagebrush Burn	5453	21S	44E	22
Oxbow Watergap Fence	5522	23S	43E	1
Rock Springs Watergap	5523	21S	45E	4
Rock Creek Division Fence	5529	21S	45E	30
Rock Creek Division Cattleguard	5530	21S	45E	30
Mud Spring Seeding Cattleguard	5531	20S	45E	29
Mud Spring Seeding Division Fence	5532	20S	45E	30
Ryefield Spring	5533	22S	44E	8
Grassy Mtn Spring	5603	22S	44E	16
Angel Cattleguard	5774	22S	45E	8
Rock Creek Riparian Fence	5773	21S	45E	8

The following pipelines are proposed to improve livestock distribution:  
Double Mountain Well Pipeline  
Twin Springs Pipeline

## BILLING PROCEDURES

This Allotment Management Plan is the annual authorization to graze livestock within Nyssa Allotment. No billing or receipt will be issued prior to use. The operators will annually receive a grazing application (form 4130-3a) prior to the scheduled grazing season. The application will be the operator's opportunity to change the basic scheduled livestock grazing for the upcoming year or apply for non-use. All applications, changed or unchanged, must be signed and returned to the Vale District Office prior to the operators earliest scheduled turnout date. The signed application will be the operator's annual authorization to graze livestock upon public lands within Nyssa allotment.

After the fact billing will be based on the operator's reported actual use. The operator's actual use record must be received by the Vale District BLM within 15 days of the end of scheduled grazing for the season. A billing notice based on those data provided will be issued within 15 days of receipt of the actual use record. Payment of grazing fees must be made within 15 days of the due date of any billing notice to avoid late fee assessment in accordance with 43 CFR 4130.7-1.

## MONITORING / EVALUATION

Allotment evaluation within this "I" category allotment will be scheduled approximately every five years or as needed to determine progress toward meeting identified management objectives. Changes in authorized grazing use within Nyssa Allotment may be made periodically as supported by monitoring over time in accordance with procedures identified in regulation (43 CFR 4110.3 and 43 CFR 4180) . BLM will conduct the following monitoring studies in the allotment to provide data for periodic evaluations:

### Utilization

Utilization data will be gathered annually on the key forage species in each grazed pasture after livestock have been removed. The Key Forage Plant Method will be used and appropriate records maintained to calculate average annual carrying capacity. Utilization limits set in the RPS will not be exceeded in any year and may be adjusted as the result of monitoring to ensure management objectives will be met.

### Actual Use

Accurate actual use records by pasture will be kept by the operator on forms furnished by BLM. These records will be submitted to BLM within 15 days of the close of the authorized grazing season. Data will be used for the computation of billings and to calculate average annual carrying capacity.

### Climate

The Owyhee Dam NOAA weather station will be the source of climate data used in allotment evaluations. A forage crop index will be calculated annually using the regression relationship between crop year precipitation and herbaceous production published by the Oregon Agricultural Experiment Station (Station Publication 659).

### Ecological Condition

The present ecological condition class of upland vegetation communities in each pasture was determined in 1980 by using an inventory based on range site classification and was presented in the Southern Malheur Grazing Management program EIS. For native pastures, the condition class designated is the ecological condition class representing the majority of the pasture. The condition of pastures seeded to introduced non-native species such as crested wheatgrass does not fit an ecological classification. In order to determine if a pasture has met a condition class management objective when management of the allotment is evaluated, the condition class for each range site in the pasture will have to be redetermined using appropriate methodology.

Riparian system function will be determined according to accepted BLM standards as outlined in TR 1737-9 1993.

### Trend

Upland trend data will be gathered from permanently established line intercept studies, photographed 3X3 trend plots, carrying capacity calculated from actual use and utilization data, and professional judgement in each pasture. Measurement of trend toward meeting ecological condition classification objectives will be assessed based on the assumption that an increase in the dominance and cover of late seral native bunch grass species, primarily bluebunch wheatgrass, will indicate improvement in ecological condition. Similarly, recorded change in crested wheatgrass dominance and cover will indicate trend toward condition change in seedings. These data will indicate whether observed change is toward or away from ecological condition objectives.

Riparian management pastures and enclosures will be monitored using low level color infra-red imagery, ground photographic plots, and/or water quality samples. Data derived from these studies will be used to determine riparian site trend and function.

### S&G Assessments

Periodical assessments of rangeland health will be completed to assure that management actions are consistent with Standards for Rangeland Health and Guidelines for Livestock Management for Public Lands in Oregon and Washington (June 1997). Grazing permits are subject to modification as necessary to achieve compliance with these standards and guidelines (43 CFR 4180).

**AGREEMENT**

We, the undersigned do hereby agree to and accept the Nyssa Allotment Management Plan. We understand that the grazing privileges authorized in this document are subject to the provisions of the Code of Federal Regulations (CFR 4100) which defines regulations for the orderly administration of grazing use on the public lands. It is also agreed that the terms and conditions of this agreement shall be incorporated into grazing permits to make use within Nyssa Allotment, and shall be binding upon the permittee, heirs, executors, administrators, successors in interest or assigns.



Christian and Ann Bennight

3-1-99

Date



Jeff Hess

3-1-99

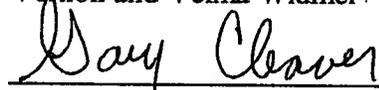
Date



Vernon and Velma Widmer.

3-1 99

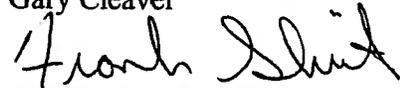
Date



Gary Cleaver

3-1-99

Date



Frank Shirts

4/4-99

Date



Roy L. Masinton

Field Office Manager

Malheur Resource Area

4/9/99

Date

Revised Feb 1989I. INTRODUCTION

The allotment lies southwest of Vale, Oregon within the boundaries of the Harper Basin Planning Unit. The allotment consists of 132,210 federal acres, 144 Bureau of Reclamation acres and 1,467 private acres. The allotment is a community allotment with eleven pastures and six users. Map in the allotment file shows the pastures. The following table identifies pastures and acreages.

	BLM	Other	Private	Total
<u>Pasture</u>	<u>Acres</u>	<u>Acres</u>	<u>Acres</u>	<u>Acres</u>
Double Mtn.	12,466	0	224	12,690
Sand Hollow Sdg.	3,309	0	73	3,382
Canyon	22,087	0	320	22,407
Hurley Spring	32,492	0	480	32,972
Freezeout Lake	24,459		50	24,509
South Freezeout	12,480	144	0	12,624
North Kane Springs	10,100	0	200	10,300
South Kane Springs	9,017	0	0	9,017
Cow Hollow Sdg.	1,560	0	0	1,560
West Sand Hollow Sdg.	880		120	1,000
Double Mountain Sdg.	960	0	0	960
Fenced Federal	<u>2,400</u>	<u>0</u>	<u>0</u>	<u>2,400</u>
	132,210	144	1,467	133,542

The topography consist of rolling hills and long rocky ridges with drainages running north into Malheur River, and some drainages running east into the Owyhee River.

II. AMP OBJECTIVES

A. GUIDANCE FROM THE LAND USE PLAN

1. Grazing systems will be determined on the ecological condition of the pastures within this allotment riparian considerations and wildlife habitat requirements.
2. For native range pastures in this allotment which are in late (good) condition would be managed to maintain this condition. For native range pastures which are to be managed for general ecosite condition improvement, the long term objective (more than 15 years) is to attain late (good) or climax (excellent) condition on the majority of the area in pastures that are now in middle (fair) condition.

B. SPECIFIC ALLOTMENT OBJECTIVES

1. Sand Hollow Seeding Freezeout Lake, South Freezeout, Double Mtn. Seeding, West Sand Hollow Seeding, and Cow Hollow Seeding.

Present Condition: Late

Short Term Objective: Maintain Ecosite Condition

2. Double Mountain, North and South Kane Springs and Canyon Pastures

Present Condition: Middle

Short Term Objective: Improve to late condition class within 15 years

3. Hurley Springs Pasture

Present Condition: Late condition except for area around Dry Creek is in middle condition.

Short Term Objective: Maintain ecosite condition and also improve condition around Dry Creek for riparian to late condition class within 15 years.

III. KEY SPECIES AND PHENOLOGY

The key species for the allotment will be bluebunch wheatgrass for native range fields and crested wheatgrass for seeded fields. Shown below are the important phenological dates:

Begin growth	3/15-4/01
6" leaf growth	4/15-05/01
Flower	05/15-07/01
Seed SET	07/01-07/15
Seed Dissemination	07/01-08/01

IV. PLANNED GRAZING USE

A. GRAZING SYSTEM

Russell - Morton

<u>Pasture</u>	<u>Year 1988-1991</u>	<u>Years 1989-1992</u>	<u>Years 1990-1993</u>
Double Mtn.	04/01-06/30	07/01-10/31	07/01-10/31
Cow Hollow Sdg.	04/01-06/30	07/01-10/31	07/01-10/31
S. Freezeout Lake	07/01-10/31	04/01-06/30	07/01-10/31
Hurly Springs	07/01-10/31	07/01-10/31	04/01-10/31

Bishop - Haueter

<u>Pasture</u>	<u>Year 1988-1991</u>	<u>Years 1989-1992</u>	<u>Years 1990-1993</u>
Canyon Field	04/01-05/31	09/01-10/31	09/01-10/31
Sand Hollow Sdg.	06/01-06/30	09/01-10/31	04/01-06/15
W. Sand Hollow Sdg.	06/01-06/30	07/01-10/31	04/01-06/15
Double Mtn. Sdg.	06/01-06/30	07/01-10/31	04/01-06/15
N. Kane Springs	07/01-10/31	04/01-06/30	06/16-07/01
S. Kane Springs	07/01-10/31	04/01-06/30	07/01-10/31
Freezeout Lake	06/01-10/31	07/01-10/31	07/01-10/31

B. AUTHORIZED USE

The preference by operator for the allotment is as follows:

<u>Operator</u>	<u>Active Outside AUMs</u>	<u>Fenced Federal AUMs</u>	<u>Total Active Federal AUMs</u>	<u>Exch. of Use AUMs</u>	<u>Total AUMs</u>	<u>Authorized Animal Units</u>
Bishop Brothers	5,852	49	5,901	0	5,901	836
Russell L & L	3,050	100	3,150	49	3,199	436
Richard Russell	420	0	420	0	420	60
Mark Morton	1,190	0	1,190	0	1,190	170
Calvin Haueter	371	0	371	0	371	53
Fine Sheep Co.	532	0	532	0	532	Sheep
Vada Morton	<u>0</u>	<u>91</u>	<u>91</u>	<u>0</u>	<u>91</u>	<u>0</u>
	11,415	240	11,655	49	11,704	1,555

The above total active federal AUMs were allocated in the Freezeout Mountain Allotment, in the 1986 Rangeland Program Summary (RPS).

C. FLEXIBILITY

The normal grazing season starts 04/01 and ends 10/31. Turnout before 04/01 must be authorized by the BLM. If turnout is authorized before 04/01, and operators turnout the full authorized numbers, the cattle must be removed the same number of days before 10/31.

If the operators desire winter use (November-December) they must run less cattle in April, May and June to compensate for the winter use.

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If the operators feel a move should be made to another pasture before its scheduled date, the BLM should be notified and a decision can be made.

The critical grazing period for the vegetation is 05/01-07/01. The operators can adjust their number of cattle to meet their needs in those pastures scheduled for use after 07/01.

If the operators desire a deviation from the authorized grazing system the BLM should be notified and a decision made.

V. RANGE IMPROVEMENTS

PROPOSED PROJECTS

<u>Project Name</u>	<u>Units</u>	<u>Location</u>	<u>Work to be Done</u>
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VI. BILLING PROCEDURES

The Allotment Management Plan is the annual authorization to graze livestock. Therefore, no billing or receipt will be issued prior to use.

The operator's actual use record must be forwarded to the BLM District Office, Vale, Oregon, within 15 days after closure of the authorized grazing period. One billing notice, based on the operator's actual use record, will be prepared and issued within two weeks after the operator's actual use record is received. Payment of grazing fees must be made within 15 days after receiving the billing.

If grazing use is to be made different than specified in this plan, a timely application must be filed in accordance with standard billing procedures.

The operator has the maintenance responsibility for all new projects with the exception of land treatments involving vegetative manipulation.

VII. MONITORING EVALUATION

A. **CONDITION**

The present condition class designation for each pasture was determined in 1980 by using an inventory base don range site classification. For each pasture the condition class designated is the condition class representing the majority of the pasture. In order to determine if a pasture has meet a condition class objective at any given time the condition classes for each range site in a pasture will have to be redetermined using appropriate methodology.

B. **TREND**

Trend data will be gathered from permanently established studies in each key area. This information will give some indication whether the vegetation condition is moving toward or away from our ecological condition objectives.

C. **UTILIZATION**

Utilization will be gathered on the key species in each grazed pasture after the livestock have been moved. The Key Forage Plant Method will be used and appropriate records maintained.

D. ACTUAL USE

Actual use records will be kept by the operators on forms furnished by the BLM. These records will be given to the BLM within 15 days of the end of the authorized grazing season.

E. CLIMATE

The Owyhee Dam weather station will be the source of climatic data used in the allotment evaluations.

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Range Forage Index from Squaw Butte Experiment Station will be used to adjust utilization levels.

F. EVALUATION

Periodic evaluations of monitoring data will be done to determine if resource objectives are being met and if any changes should be made.

AGREEMENT

We, the undersigned, do hereby agree to and accept the Allotment Management Plan. We understand that the grazing privileges so authorized herein are subject to the provisions of the Code of Federal Regulations (CFR 4110) which deal with grazing use on the public lands. It is also agreed that the terms and conditions of this agreement shall be binding upon the permittee, their respective heirs, executors, administrators, successors in interest or assigns.

This plan may be updated or modified periodically to accomplish the objectives set forth in the plan. All changes will be made with the concurrence of the range users and Bureau of Land Management.

Bishops Bros by John J Bishop 2/22/89  
Name Date

Russell Lundt & Lucie Blane B. Russell 2-22-89  
Name Date

Mark Morton 2-22-89  
Name Date

Calvin Haueter 2-22-89  
Name Date

William R Spring \_\_\_\_\_  
Name Date

Jeff Samarea manager 2/23/89  
Name Date

Fred Shelby Manager Oct 24-95  
Name Date

\_\_\_\_\_  
Name Date