

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

**OREGON NATURAL HERITAGE RESOURCES
BASELINE REPORT**

MAY 2018

Prepared for:

Calico Resources USA Corp.
665 Anderson Street
Winnemucca, Nevada 89445

Prepared by:



Reno:
1650 Meadow Wood Lane
Reno, Nevada 89502
Phone: (775) 826-8822 | Fax: (775) 826-8857

Elko:
835 Railroad Street
Elko, Nevada 89801
Phone: (775) 753-9496 | Fax: (775) 826-8857

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LIST OF ABBREVIATIONS AND ACRONYMS

BLM	Bureau of Land Management
ONHA	Oregon Natural Heritage Area
OPRD	Oregon Parks and Recreation Department
Project	Grassy Mountain Mine Project

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1 INTRODUCTION

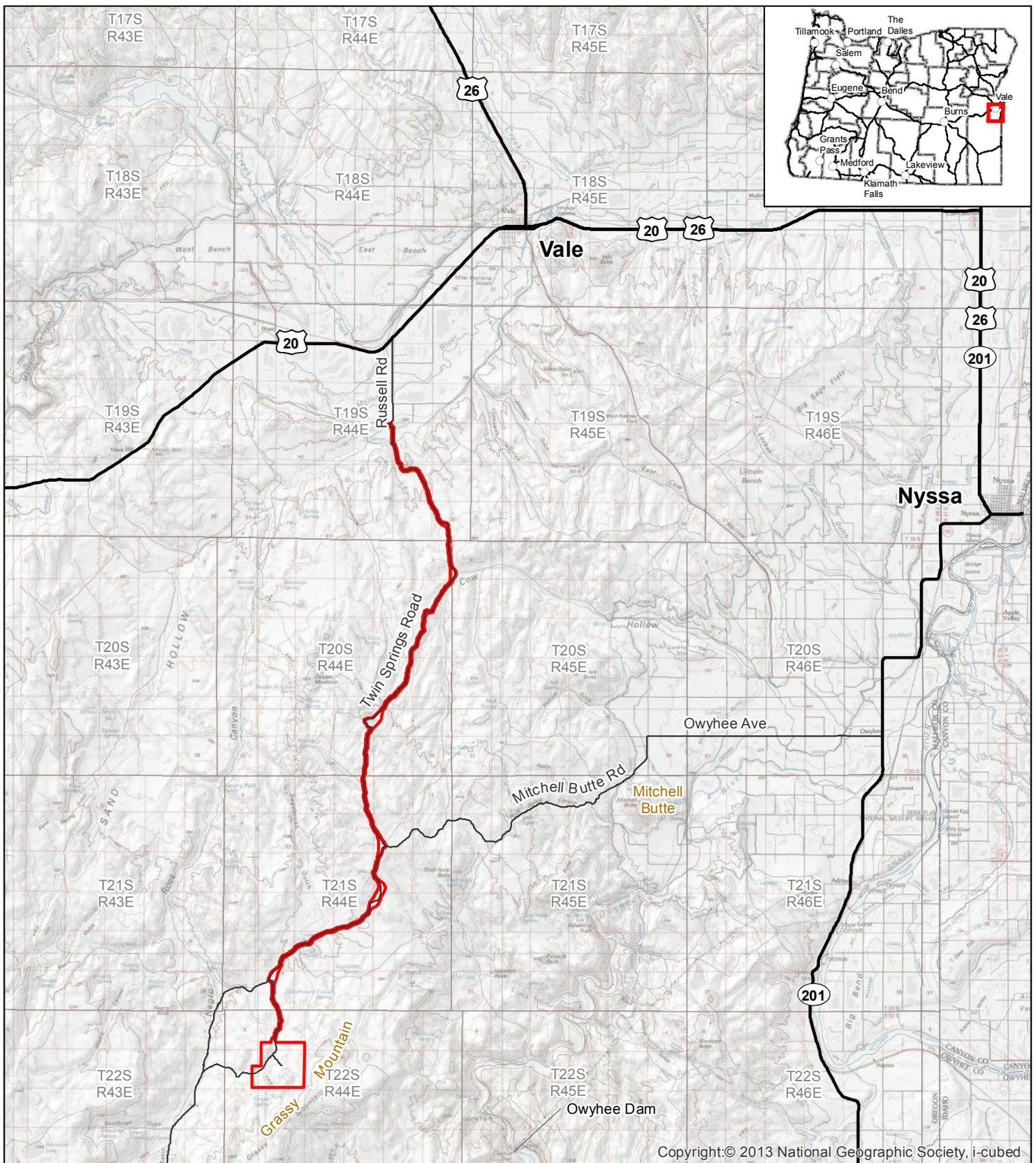
The purpose of the Oregon Natural Heritage Areas (ONHAs) baseline study is to document any ONHAs near the Grassy Mountain Mine Project (Project). This baseline report will be included in the Consolidated Permit Application (Oregon Administrative Rule 632-037-0055) submitted to the Oregon Department of Geology and Mineral Industries.

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 Bureau of Land Management (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, 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.

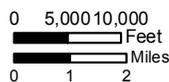


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Explanation

- Permit Area
- Existing Road

Projection: UTM Zone 11 North, NAD83, meters



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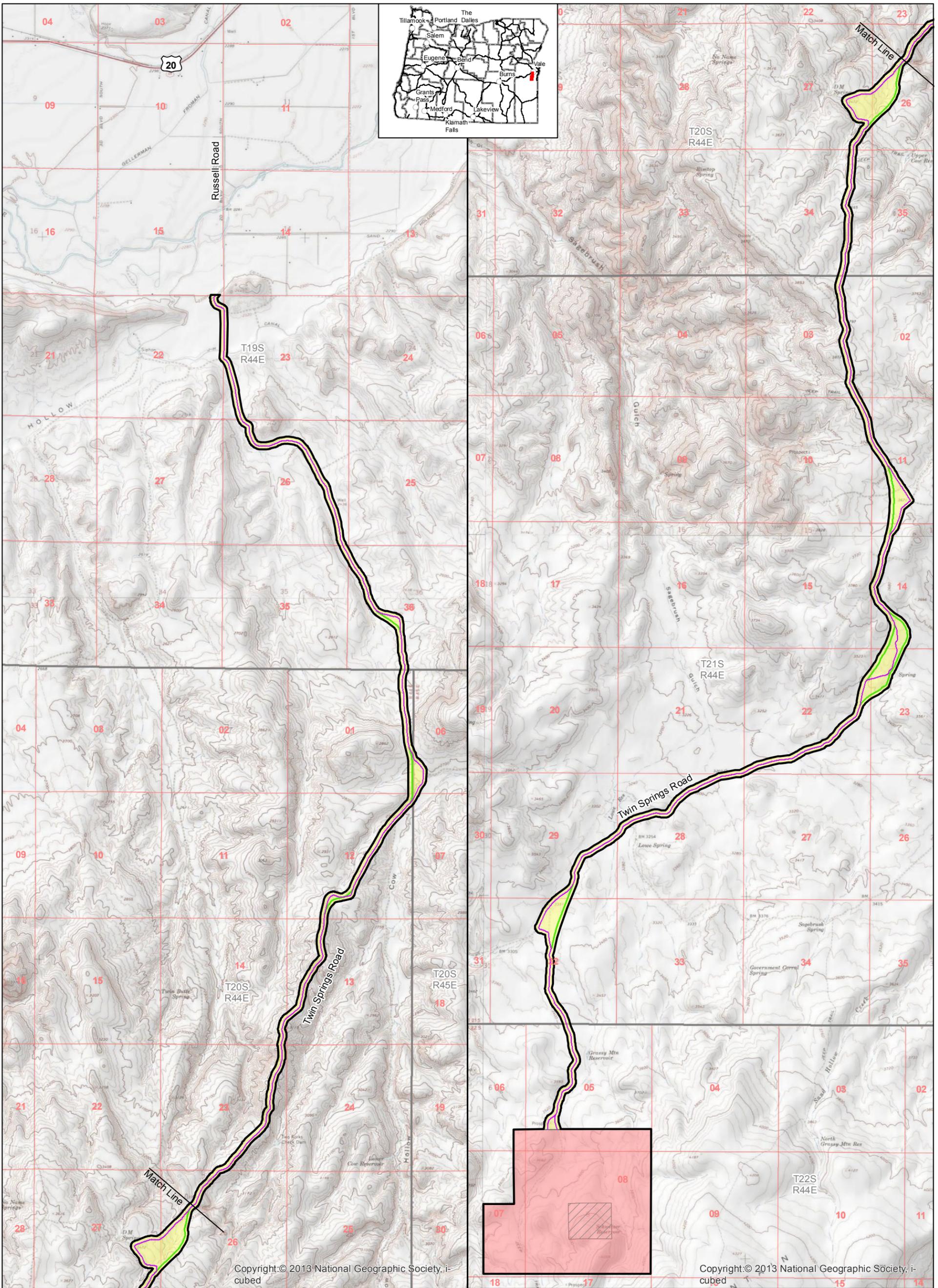
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Location Map

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	

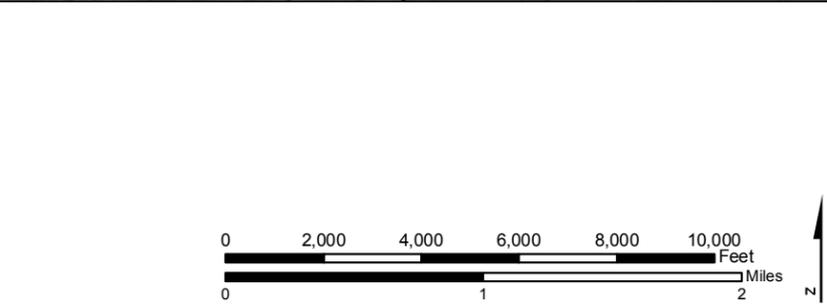




Explanation

- 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, Klamath Spring, Oregon	
File Name: 3672G_GrassyMtn_BL_Fig02_PermitArea.mxd	

3 REGULATORY FRAMEWORK

3.1 State

3.1.1 Oregon Natural Areas Program

The Oregon Legislature established the Oregon Natural Areas Program in 1979 to protect high quality native ecosystems and rare plant and animal species. The program is managed by the Oregon Parks and Recreation Department (OPRD) and is guided by the Natural Heritage Advisory Council. In 2010, the Council adopted the Oregon Natural Areas Plan, a report that defines the full range of Oregon's natural heritage and guides the selection of priority areas for the establishment of natural areas. The Oregon Biodiversity Information Center (ORBIC), originally called the Oregon Natural Heritage Program, helped develop the Oregon Natural Areas Plan and assists the OPRD by maintaining natural areas records, providing scientific advice, and coordinating with regional and national natural areas programs.

The goals of the Oregon Natural Areas Program are to:

1. Create a discrete and limited system of natural areas representing the full range of Oregon's natural heritage resources. These areas are to be used for scientific research, education, and nature interpretation;
2. Establish a process and means for public and private sector voluntary cooperation in the development of a system of natural areas; and
3. Provide advice to managers of natural areas on the management and use of such areas and provide information concerning the conservation of natural heritage resources and special species to the state, federal, and local agencies that manage lands within Oregon.

4 STUDY METHODOLOGY

4.1 Literature Review

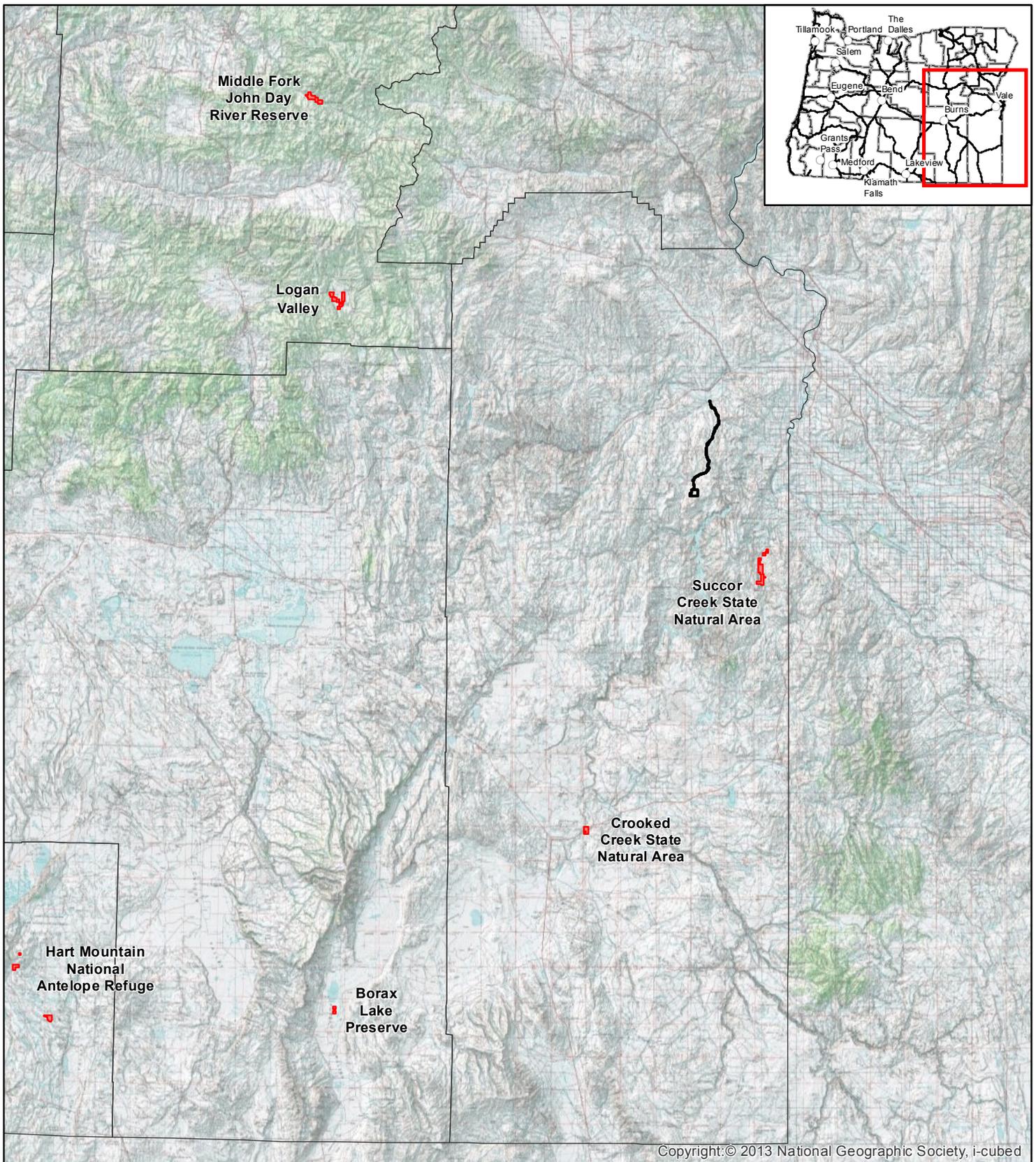
The baseline characterization outlined in this report has been taken from the Oregon State Register of Natural Heritage Resources documented in the Oregon Natural Areas Plan (OPRD 2015) and associated location data.

4.2 Field Studies

Field studies were not necessary for this baseline study per the *Environmental Baseline Study Work Plans* (EM Strategies, Inc. 2017).

5 BASELINE CHARACTERIZATION

The June 2015 Oregon State Register lists 113 natural heritage resources. The closest natural heritage resource to the Permit Area is the Succor Creek State Natural Area approximately 16 miles from the Permit Area. The next closest is the Crooked Creek State Natural Area approximately 61 miles from the Permit Area (Figure 3).



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Explanation

-  Permit Area
-  Oregon Natural Heritage Resources

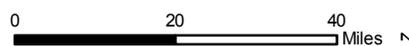
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Oregon Natural Heritage Resources
in the Permit Area Vicinity

Figure 3

Projection: UTM Zone 11 North, NAD83, meters



Date:	05/17/2018	Drawn By:	GSL
Revised:		Project No.:	3672
Base Map:			
File Name:	3672GX_GrassyMtn_BL_Fig03_ONHR.mxd		



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Oregon Parks and Recreation Department (OPRD). 2015. *Oregon Natural Areas Plan 2015*. http://inr.oregonstate.edu/sites/inr.oregonstate.edu/files/2015_or_natural_areas_plan.pdf. Accessed May 10, 2018.

7 CONTACTS

Richard DeLong
EM Strategies, Inc.
1650 Meadow Wood Lane
Reno, Nevada 89502
(775) 826-8822
rich@emstrats.com

8 LIST OF PREPARERS

EM Strategies, Inc.
Catherine Lee – Report Preparation
Jim Branch – GIS Figure Creation
Rich DeLong – Technical Review
Ellen Farley – Editorial Review