

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

**SOCIOECONOMICS
BASELINE REPORT**

FEBRUARY 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

**CALICO RESOURCES USA CORP.
GRASSY MOUNTAIN MINE PROJECT
SOCIOECONOMICS BASELINE REPORT**

TABLE OF CONTENTS

1	INTRODUCTION	1
2	RESOURCE STUDY AREA	1
3	REGULATORY FRAMEWORK.....	4
3.1	State Guidance.....	4
4	STUDY METHODOLOGY	4
4.1	Literature Review.....	4
5	BASELINE CHARACTERIZATION.....	6
5.1	General Economic Conditions.....	6
5.2	General Social Conditions	7
5.2.1	History and Background	7
5.2.2	Social Activities	8
5.2.3	General Social Demographics.....	8
5.3	Population Trends and Demographic Characteristics	8
5.3.1	General Population Information	8
5.3.2	Race and Ethnicity	11
5.3.3	Migrant and Seasonal Farmworkers	11
5.3.4	Income and Poverty	12
5.4	Existing Socioeconomic Environment of Malheur County	13
5.4.1	Household Income in Malheur County.....	16
5.4.2	Malheur County Employment.....	18
5.4.3	Malheur County Tax Base	19
5.5	Malheur County Public Services	20
5.5.1	Water, Sewer, and Solid Waste	20
5.5.2	Fire Protection.....	21
5.5.3	Law Enforcement and the Criminal Justice System	21
5.5.4	Schools and Education.....	22
6	BIBLIOGRAPHY.....	23
7	CONTACTS.....	27
8	LIST OF PREPARERS	27

LIST OF TABLES

Table 1:	Demographic Characteristics of Oregon, Malheur County, and Study Area Communities.....	10
Table 2:	Migrant and Seasonal Farmworker Estimates for Malheur County.....	11
Table 3:	Median and Mean Household Incomes for Malheur County	12
Table 4:	Basic Housing Characteristics and Home Prices	13
Table 5:	Housing Specifics	14
Table 6:	Total Personal Income in the Study Area, 2007 to 2016	17

Table 7: Median Earnings by Industry for the Past 12 Months for Malheur County and the Cities of Ontario, Nyssa, Vale, Adrian, and Jordan Valley 17

Table 8: Employment by Sector in Malheur County 19

Table 9: Malheur County 2015/2016 Revenues and Expenditures 20

Table 10: 2016-2017 School Enrollment 22

LIST OF FIGURES

Figure 1: Location Map 2

Figure 2: Permit Area Map 3

Figure 3: Socioeconomics Study Area 5

Figure 4: Population Trends for Malheur County, Oregon, 1900 to 1910..... 9

Figure 5: New Foreclosure Filings by Type 16

LIST OF ABBREVIATIONS AND ACRONYMS

BEA	Bureau of Economic Analysis
BLM	Bureau of Land Management
DHS	Department of Human Services
ESD	Education Service District
HDR	HDR Engineering, Inc.
MCSO	Malheur County Sheriff's Office
MSFWs	migrant and seasonal farmworkers
OAR	Oregon Administrative Rules
ODE	Oregon Department of Education
OED	Oregon Employment Department
OSP	Oregon State Police
Project	Grassy Mountain Mine Project
SNAP	supplemental nutrition assistance program
Study Area	Socioeconomics Study Area
U.S.	United States
US 20	United States Highway 20
Zillow	Zillow, Inc.

**CALICO RESOURCES USA CORP.
GRASSY MOUNTAIN MINE PROJECT
SOCIOECONOMICS BASELINE REPORT**

1 INTRODUCTION

The purpose of the socioeconomic baseline study is to characterize existing socioeconomic conditions at the Grassy Mountain Mine Project (Project) in Malheur County, Oregon. The baseline study will be used to support future mine permitting. The baseline study will enable the Project's potential direct and indirect effects on the County's population to be measured, taking key socioeconomic aspects into account. This baseline report will be used to support a National Environmental Policy Act 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.

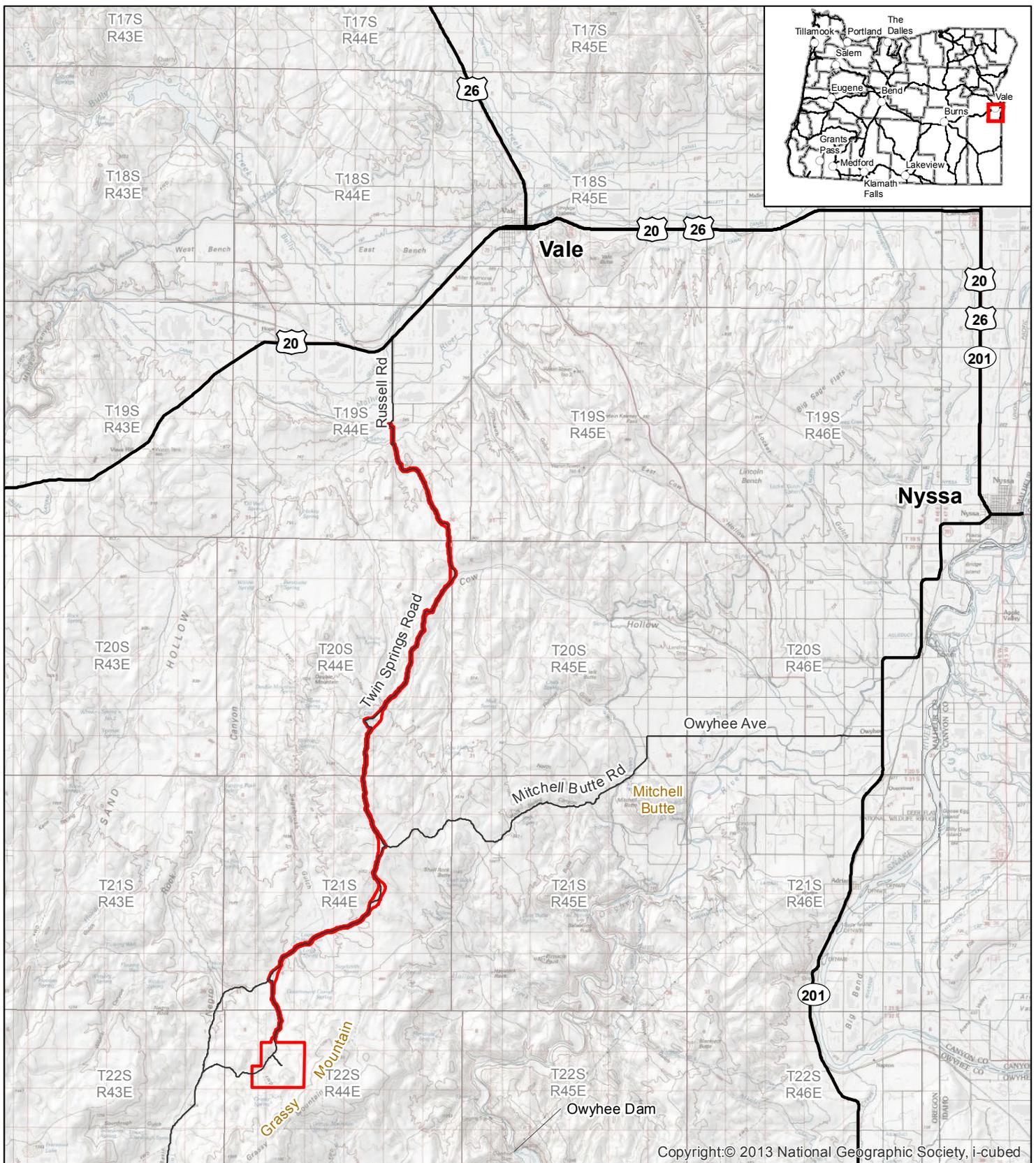
The format of this report follows the format of the July 2015 *Socioeconomic Baseline Study* prepared for the Project by HDR Engineering, Inc. (HDR) (HDR 2015). Most of the background information is the same as the July 2015 HDR report, while updated information has been added where necessary. The updated information includes: 1) expansion/description of the permit area; 2) updates of socioeconomic data with different or more recent available data; and 3) Contacts and Preparers.

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

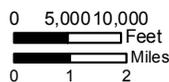


Copyright:© 2013 National Geographic Society, i-cubed

Explanation

- Permit Area
- Existing Road

Projection: UTM Zone 11 North, NAD83, meters



CALICO RESOURCES USA CORP.

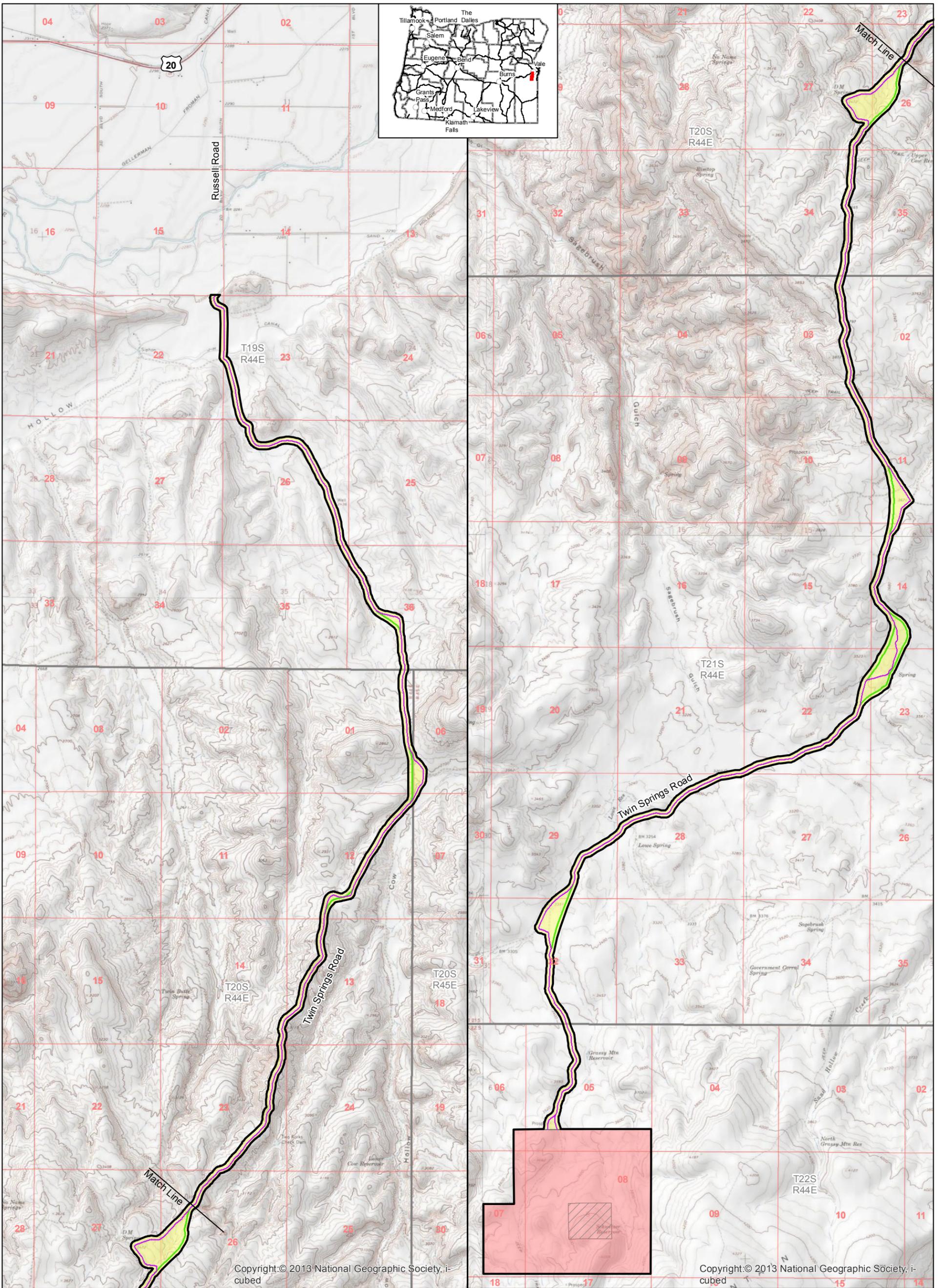
GRASSY MOUNTAIN MINE PROJECT

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	

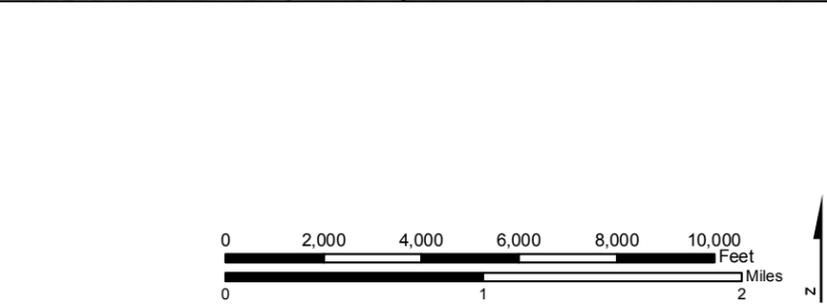




Explanation

- 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



CALICO RESOURCES USA CORP.
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	

one-foot wide ditches on each side of the road, and appropriate cut and fill. The Access Road Area totals approximately 876 acres.

The study area is defined as the geographical area in which the potential direct and indirect socioeconomic effects of the Project are realized. The purpose of documenting the socioeconomic setting of the study area is to provide an understanding of the social and economic forces that have shaped the area and to provide a frame of reference necessary to estimate the social and economic effects of the Project. Figure 3 shows the Socioeconomics Study Area (Study Area). The Study Area for socioeconomic conditions is Malheur County, which includes the cities of Vale, Nyssa, Ontario, Adrian, Jordan Valley, and other unincorporated communities.

Malheur County is Oregon's second largest county in area but is largely undeveloped. The County is in the southeastern corner of the State of Oregon and is crossed by two major rivers, the Snake River and the Malheur River. Ninety-four percent of the County is undeveloped rangeland, most of which is federally-owned and administered by the BLM. Developed areas along the Snake and Malheur Rivers support agricultural production areas and agriculture-focused communities.

3 REGULATORY FRAMEWORK

3.1 State Guidance

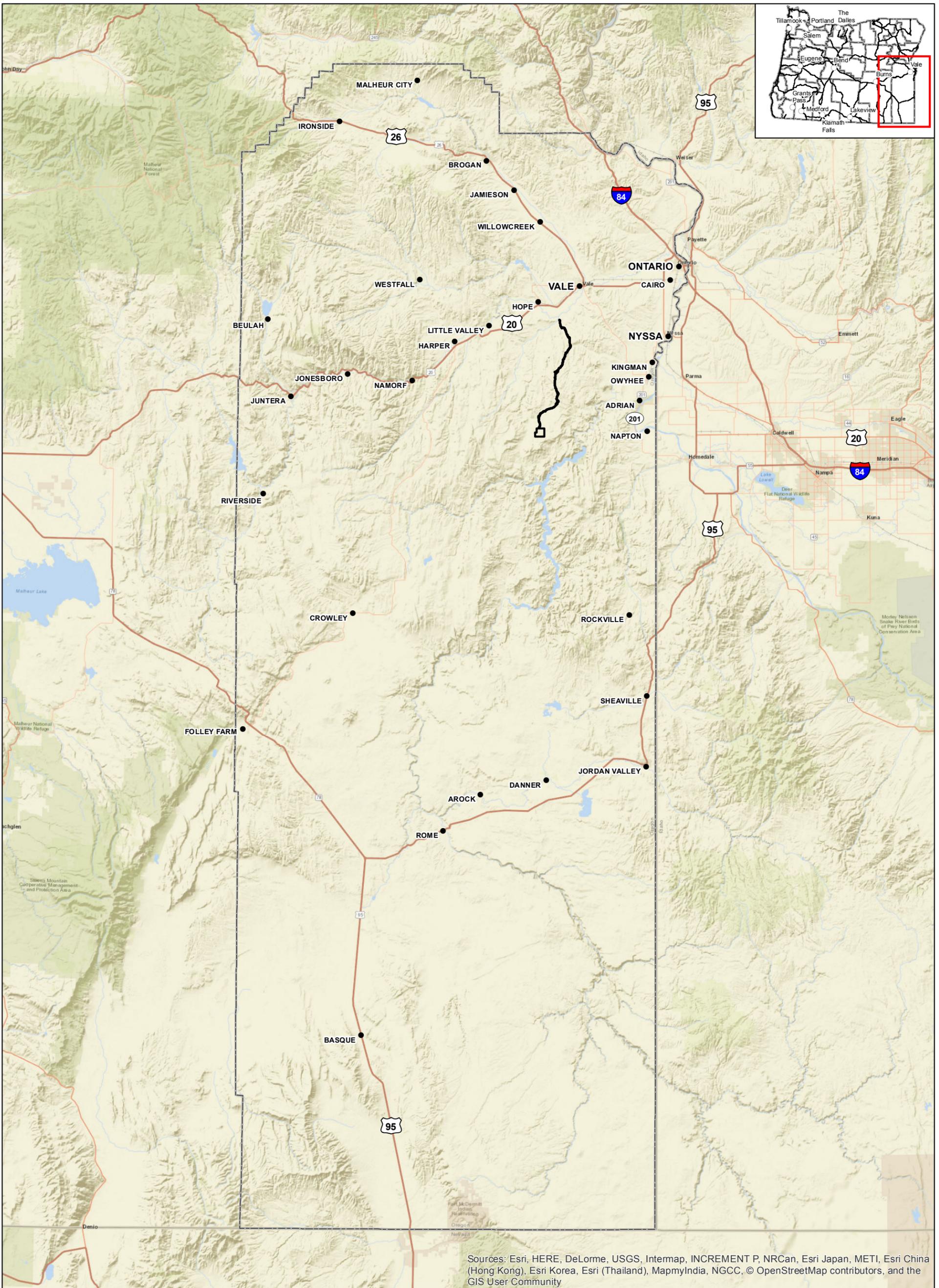
Oregon Administrative Rules (OAR) Section 632 Division 37 describes the process for consolidated permitting of mining operations. The State of Oregon would have to authorize the Project consistent with the consolidated process. Division 37 requires an applicant to describe the baseline socioeconomic conditions (OAR 632-037-0055[1][o]) and requires an independent socioeconomic impact analysis (OAR 632-037-0090):

- Concurrent with the development of an environmental evaluation, the Department [of Geology and Mineral Industries] shall direct staff or hire a third-party contractor to prepare a socioeconomic impact analysis. The analysis shall include but not be limited to an identification of the major and reasonably foreseeable socioeconomic impacts on individuals and communities located in the vicinity of the proposed mine resulting from mine construction and operation. Such identification shall include the short and long-term impacts on population, economics, infrastructure and fiscal structure. The Department shall make the analysis available to the public upon request.
- Upon completion of the socioeconomic impact analysis, the Department shall distribute a copy of the analysis to each local government within the vicinity of the proposed mine and affected agencies.

4 STUDY METHODOLOGY

4.1 Literature Review

The majority of the baseline characterization in this report has been taken from the July 2015 HDR report. Additional or updated information has been added where necessary. References used for this report are included in Section 6, Bibliography.



Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

Explanation

- Mine Permit Area
- Socioeconomics Study Area (Malheur County)

CALICO RESOURCES USA CORP.

GRASSY MOUNTAIN MINE PROJECT

Socioeconomics Study Area

Figure 3

Projection: UTM Zone 11 North, NAD83, meters



Date:	01/18/2018	Drawn By:	JDB
Revised:		Project No.:	3672
Base Map:			
File Name:	3672G_GrassyMtn_BL_SE_Fig03_StudyArea.mxd		



5 BASELINE CHARACTERIZATION

5.1 General Economic Conditions

The primary industries in Malheur County are agriculture, livestock, food processing, fruit and vegetable farming, tourism, and recreation. Malheur County's largest employer is Ore-Ida. This facility is a potato-based frozen foods distributor located in Ontario, employing approximately 1,000 workers. Oregon Snake River Correctional Institution, the largest facility in the Oregon Department of Corrections, employs 900 people, and is the County's second largest employer. Idaho residents hold a substantial share of the jobs in Malheur County. Due to this commuting pattern, the federal government recognizes Idaho's Payette County plus Oregon's Malheur County as a single labor market known as the Ontario Micropolitan Statistical Area.

The northeastern corner of Malheur County, also known as Western Treasure Valley, is primarily used for farming, which makes up a large portion of the economy in the County. Oregon's no tax policy for retail merchandise serves the County well. The County has a fairly large level of employment in the retail sector, with Ontario serving as a retail center for many surrounding communities. Tourism is also a major factor that holds a considerable amount of weight in the regional economy, with Cow Hollow Park, Lake Owyhee State Park, Leslie Gulch, and Malheur National Forest being the main attractions.

In 2010, the United States (U.S.) Census Bureau reported a population of 31,312. Population estimates for 2016 were 30,551, a decrease of approximately 761 (U.S. Census Bureau 2016a). Between 1990 and 2010, Malheur County's population, real personal income, and employment decreased, then increased by 2010. This pattern is similar to the State of Oregon and other counties in the region (U.S. Bureau of Economic Analysis [BEA] 2016a, 2017).

When the Owyhee Reservoir was built in 1939, it created a consistent and abundant water source for irrigation. This allowed local farmers to expand operations into the entire Western Treasure Valley, an extremely fertile farming area. Row crop farming has grown and continues to contribute to a strong economy in Malheur County. The amount of Mexican American migrant workers has grown considerably, as the agricultural industry has increased over the years, and make up a majority of the farm labor force.

Agriculture remains important to Malheur County, but agriculture's relative share of the economy has fallen over time as farming and ranching have suffered from the volatility in the price of their respective goods. In recent decades, agricultural employment declined steeply even as farm and ranch personal income increased. Regionally, agriculture accounted for approximately 12 percent of the total earnings by industry in 2015 (BEA 2016b), representing approximately 11 percent of the total employment (BEA 2016c). Those industries that have seen a relatively steady increase since 2001 in employment figures and earnings include wholesale trade and accommodation and food services. All other industries have seen stagnation or decline (BEA 2016b, 2016c).

5.2 General Social Conditions

5.2.1 History and Background

Malheur County is largely rural, with the population concentrated in the northern part of the County. The larger cities in Malheur County are proximate to more urbanized areas in Idaho, including the cities of Nampa and Boise. While residents of northern Malheur County have a rural lifestyle, they are near goods and services in western Idaho.

Malheur County's social life reflects its rural nature. A good portion of the population is, in some way, involved with agriculture, while others are employed by shops and large processing plants and other industries involved with agriculture. Historically, many of the immigrants to Malheur arrived precisely due to the large amounts of available rangeland.

The County seat, Vale, is located where U.S. Highway 20 (US 20) and US 26 intersect. These two highways are principal access routes for this part of eastern Oregon and for nearby western Idaho. Ontario (2016 population 11,089; U.S. Census Bureau 2016a) is the largest city in the County and is the most eastern city of any size in the state, sitting on the Idaho border and inside the Mountain time zone.

Historically, Malheur County was first settled by miners and stockmen in the early 1860s. Discovery of gold in 1863 spurred interest in the area, which also resulted in the establishment of settlements and stock ranches and the influx of immigrants to the region. In the 1890s, Basque settlers came to the region, engaging mostly in sheep ranching. The County's population has increased steadily since its settlement, with brief periods of decline and rebound since the mid-1980s (Oregon Secretary of State 2017).

Nyssa is the location of the first farm labor camp set up for Japanese Americans during World War II. There was a need for laborers to work the beet fields in Malheur County due to the depletion of labor from the armed services draft. Local officials appealed to have a few hundred of the recently detained Japanese Americans in Portland sent to Nyssa from the detention center in Portland, to work the fields. Malheur County continues to be home to a significant Japanese American community (Densho Encyclopedia 2017).

During the last four decades, Malheur County's population, employment, and real personal income have fluctuated. In 2016, the population of Malheur County was estimated at 30,551 (U.S. Census Bureau 2016a). Malheur County has a low-density population, with a density of approximately 3.1 people per square mile. Current population projections indicate that two of Malheur County's incorporated cities have fewer than two hundred persons: Adrian at 154 people and Jordan Valley at 153 people (U.S. Census Bureau 2016a).

Malheur County residents are proud of the County's relationship to the Oregon Trail, rock hounding, and ranching way of life. The City of Vale was the first stop in the state for travelers using the Oregon Trail to go west. Locals refer to the City of Nyssa as the thunderegg capital of the world.

5.2.2 Social Activities

The Malheur County Fair and Rodeo began in 1909 as the Ontario Corn Festival and has become one of the premier county fairs in the Pacific Northwest. The fair has an annual gate count of approximately 20,000 people. The fair showcases a diverse array of the region's accomplishments, including, agricultural, cultural, and homemaking products (Malheur County Fair Grounds 2017).

Aside from the County fair, social and public events are limited to what is offered in each specific community. The City of Ontario, as it is the most populated community in the County, is the site for many major events including the America's Global Village Festival, the Japanese-American Obon Festival, the Winter Wonderland Parade, the October Faire, the Ontario Aire Faire, and the Basque Dinner & Dance (Ontario Area Chamber of Commerce 2017).

5.2.3 General Social Demographics

Malheur County has a slightly higher percentage of people 18 years of age and younger than the State as a whole, but its proportion of residents age 65 and older is about the same as the State. Females make up a smaller proportion of the population than the State as a whole. The County is not very racially diverse; 86 percent of residents are white. Median household incomes are substantially lower in Malheur County than in the State as a whole, and median values of owner-occupied homes are lower in Malheur County than the State. Approximately 38 percent of residents have a high school diploma and approximately 34 percent have completed some college. The rates of residents having a high school diploma are higher than the State as a whole, but the rates of residents having completed some college are lower than the State as a whole. The rate of college graduates is lower than the State as a whole (U.S. Census Bureau 2016b).

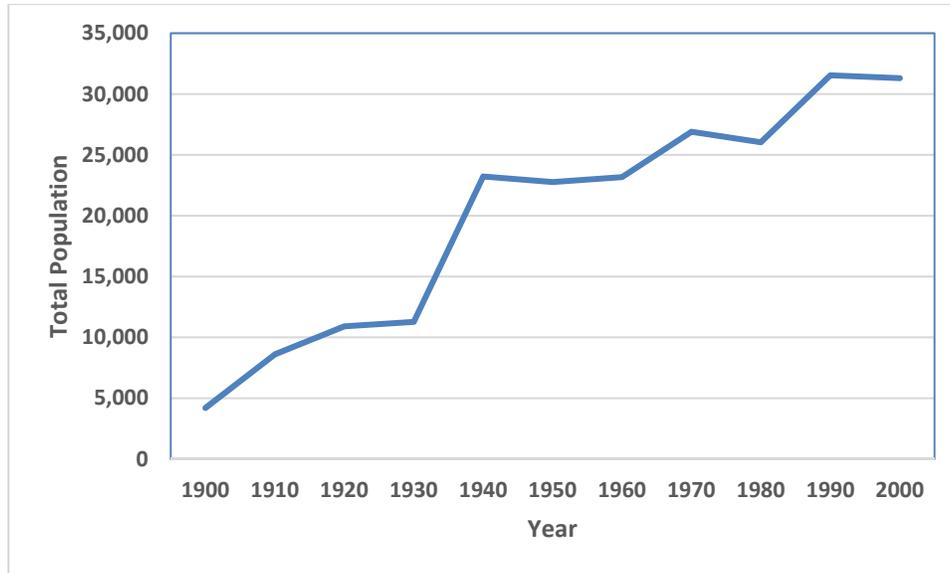
Most residents speak English at home. Approximately 24 percent of the County's residents primarily speak a foreign language, with Spanish the most prevalent. Approximately 32 percent of County residents identify themselves as being of Hispanic or Latino ethnicity (regardless of race). This rate is higher than the State, which reports a Hispanic or Latino proportion as approximately 12 percent of the total population.

5.3 Population Trends and Demographic Characteristics

5.3.1 General Population Information

Malheur County is one of the state's largest counties, by area, but is sparsely populated. The County's population centers consist mostly of its incorporated cities (Ontario, Vale, Nyssa, Adrian, and Jordan Valley). Several unincorporated communities are also located within the County.

Malheur County's population has grown slowly and includes periods of net population gain and loss. Table 1 shows the County's population changes between 1900 and 2010.



Source: U.S. Census Bureau 1996, U.S. Census Bureau 2016c

Figure 4: Population Trends for Malheur County, Oregon, 1900 to 1910

The population of Malheur County steadily increased from 1900 through 1930, then saw a large increase of approximately 75 percent by 1940. Between 1950 and 1960, there was a small decrease, then the population began to increase again in 1970. Between 1980 and 1990, the population saw another small decrease of approximately three percent. The 2000 decennial census showed a rebound with the population increasing by approximately 21 percent. The 2010 decennial census reported a County population of 31,312, which is an overall decrease of approximately 0.7 percent from the 2000 census estimate. Between April 1, 2010, which is the baseline date for the 2010 census, and July 1, 2016, 873 people left Malheur County. The 2016 U.S. Census Bureau population estimate shows a decline in population to 30,439, which is approximately a three percent decrease from the 2010 decennial census estimate (U.S. Census Bureau 1996, 2016a, 2017).

Table 1 summarizes the current, basic population demographics for Oregon, Malheur County, and the cities of Ontario, Nyssa, Vale, Adrian, and Jordan Valley.

The population trend of the County, showing a 2.5 percent decrease in population overall since 2010, is dissimilar to the State, which had a 2.8 percent increase since 2010 (U.S. Census Bureau 2016a). Demographics of Malheur County differ from the State with respect to gender (a higher percent of males than females live in the County than in the State), and age (a higher population of residents less than 18 years of age live in the County than in the State and the County’s median age is slightly lower). The cities of Ontario, Nyssa, and Vale have a lower median age than the County and State which results in higher proportions of people who are under age 18. Adrian and Jordan Valley have a considerably higher median age than the County and State. Ontario, Nyssa, Vale, and Adrian are similar to the State in that they all have a higher proportion of females than males. Jordan Valley is similar to the State in that they both have a higher proportion of males than females. Adrian and Jordan Valley have lower proportions of residents under the age of 18, and Jordan Valley has the highest proportion of residents aged 65 and older (U.S. Census Bureau 2016a).

Table 1: Demographic Characteristics of Oregon, Malheur County, and Study Area Communities

Demographic	Oregon		Malheur County		Ontario		Nyssa		Vale		Adrian		Jordan Valley	
	Estimate	%	Estimate	%	Estimate	%	Estimate	%	Estimate	%	Estimate	%	Estimate	%
Total Population	3,939,233	--	30,551	--	11,089	--	3,189	--	1,850	--	154	--	153	--
Male	1,948,453	49	16,697	55	5,312	48	1,544	48	910	49	60	39	82	54
Female	1,990,780	51	13,854	45	5,777	52	1,645	52	940	51	94	61	71	46
Median age (years)	39.1	--	36.1	--	32.8	--	27.4	--	33.1	--	48.5	--	57.6	--
Under 18 years	860,351	22	7,623	25	3,162	29	1,132	35	579	31	28	18	24	16
18 years to 64 years	2,472,005	63	18,133	59	6,137	55	1,669	52	969	52	99	64	78	51
65 years and over	606,877	15	4,795	16	1,790	16	388	12	302	16	27	18	51	33
One Race	3,776,440	96	29,326	96	10,501	95	3,088	97	1,822	98	153	99	153	100
White	3,352,941	85	26,170	86	9,014	81	2,800	88	1,692	91	132	86	153	100
Black or African American	72,837	2	380	1	61	0.6	40	1	7	0.4	0	0	0	0
American Indian and Alaska Native	46,258	1	238	0.8	65	0.6	12	0.4	26	1	0	0	0	0
Asian	156,695	4	501	2	246	2	14	0.4	8	0.4	9	6	0	0
Native Hawaiian and Other Pacific Islander	15,042	0.4	12	0.04	3	0.03	0	0	0	0	0	0	0	0
Some other race alone	132,667	3	2,025	7	1,112	10	222	7	89	5	12	8	0	0
Two or more races	162,793	4	1,225	4	588	5	101	3	28	2	1	0.6	0	0
Hispanic or Latino (of any race)	485,646	12	9,987	33	4,427	40	2,016	63	496	27	41	27	9	6
Foreign Born	388,685	10	3,358	11	1,201	11	519	16	226	12	24	16	3	2

Source: U.S. Census Bureau 2016a, 2016d

5.3.2 Race and Ethnicity

As Table 1 shows, most residents of Malheur County and the cities of Ontario, Nyssa, Vale, Adrian, and Jordan Valley are white. The racial minority in Ontario, Nyssa, Vale, and Adrian that comprises the largest proportion of non-white people is some other race. The U.S. Census Bureau considers people who identify as Hispanic or Latino to be ethnic minorities, not racial minorities. However, when Hispanic or Latino people have to choose a race for a census, they often choose some other race or two or more races. The proportions of residents that identify as some other race or two or more races are higher in the County and in the City of Ontario than the State as a whole. The proportion of people who identify as some other race in Vale is approximately two percent greater than the State. Jordan Valley is the only community in the Study Area that does not have any person identify as a race other than white. Only one person in Adrian identifies as two or more races. The City of Nyssa has the largest percentage of people who identify as Hispanic or Latino (U.S. Census Bureau 2016a).

Approximately 11 percent of County and Ontario residents, 16 percent of Nyssa and Adrian residents, 12 percent of Vale residents, and two percent of Jordan Valley residents are foreign born. Of these, approximately 86 percent of foreign born people in the County come from Mexico or Central America (the countries of Costa Rica, El Salvador, Honduras, and Nicaragua). The corresponding rate for the State of Oregon is approximately 43 percent (U.S. Census Bureau 2016d). English is the primary language spoken at home in Malheur County with approximately 76 percent of the population speaking English. Spanish is the primary language that is spoken after English, with approximately 22 percent of the County residents being Spanish speakers. Of that 22 percent, approximately ten percent do not speak English well. The remaining 1.5 percent of the population speaks a language other than English or Spanish (U.S. Census Bureau 2016e).

5.3.3 Migrant and Seasonal Farmworkers

Information about the numbers of migrant and seasonal farmworkers (MSFWs) in Malheur County is available in the Oregon Update Migrant and Seasonal Farmworker Enumeration Profiles Study (Larson Assistance Services 2013). The report includes estimates for total MSFWs, migrant workers, seasonal workers, and non-farmworkers in migrant and seasonal worker households. Table 2 summarizes the Malheur County estimates for MSFWs. More recent information is not available.

Table 2: Migrant and Seasonal Farmworker Estimates for Malheur County

Total MSFW	Migrant Workers	Seasonal Workers	Non-Farmworkers in Migrant Worker Households	Non-Farmworkers in Seasonal Worker Households	Total MSFW and non-MSFW
5,981	2,003	3,977	1,511	3,000	10,492

Source: Larson Assistance Services 2013

Using the U.S. Census Bureau’s County population estimate for 2013 (30,898), approximately 19 percent of County residents were MSFWs and approximately 15 percent were non-farmworkers

who lived in the same households as MSFWs. The total population of MSFWs and non-MSFWs comprised approximately 34 percent of the County’s population.

The 2012 Census of Agriculture (U.S. Department of Agriculture 2012) reported a total migrant farmworker count of 771 workers on 39 farms in Malheur County. The Census of Agriculture defines a migrant worker as someone whose employment requires travel that prevents the worker from returning to his or her permanent place of residence the same day. The Census of Agriculture also reports unpaid farmworkers who are agricultural workers not on the payroll who performed activities or work on a farm or ranch. The 2012 Census of Agriculture estimates that the County had 1,226 unpaid workers. Some of these unpaid workers could be MSFWs who are day laborers and paid by a third party.

5.3.4 Income and Poverty

Table 3 summarizes the annual mean and median incomes for the State of Oregon, Malheur County, and the cities in the Study Area.

Table 3: Median and Mean Household Incomes for Malheur County

Geography	Dollars			
	Median Income	Difference from State	Mean Income	Difference from State
Oregon	51,243	--	69,040	--
Malheur County	35,418	-15,825	48,070	-20,970
Ontario	27,760	-23,483	40,575	-28,465
Nyssa	40,586	-10,657	47,029	-22,011
Vale	34,950	-16,293	42,930	-26,110
Adrian	37,083	-14,160	48,500	-20,540
Jordan Valley	33,333	-17,910	47,949	-21,091

Source: U.S. Census Bureau 2016f

All the cities in the Study Area and Malheur County have lower median and mean incomes when compared to the State. Ontario and Vale have the biggest negative differences from the State for median and mean incomes. Nyssa has the lowest difference in median income from the State, while Adrian has the lowest difference in mean income. Personal income for the Ontario, Oregon-Idaho Micropolitan Statistical Area increased by approximately five percent from 2014 to 2015, continuing a trend that started in 2009, after dropping by almost five percent (BEA 2016d).

In 2015, Malheur County had the highest poverty rate in Oregon, at 24.9 percent. The counties surrounding Malheur all have poverty levels greater than the statewide rate of 15.2 percent (Harney – 16.3; Grant – 16.4; Baker – 15.3) (U.S. Census Bureau 2016f). The Oregon Department of Human Services (DHS) reports that Malheur County has two poverty hotspots in Ontario and one in Vale. Among the three hotspots, Ontario East had the highest poverty rate, the fourth lowest high school completion rate, and the fifth highest percentage of households headed by single mothers. The Ontario Southwest area had the fifth highest rate of child welfare involvement among all Oregon hotspots (DHS 2017a).

The DHS reported approximately 8,356 individuals per month received supplemental nutrition assistance program (SNAP) benefits in 2017 (January through October), in Malheur County. Out

of the 8,356 individuals, DHS reported approximately 863 individuals were over age 60, and approximately 1,142 monthly recipients were under age 5 (DHS 2017b).

5.4 Existing Socioeconomic Environment of Malheur County

Table 4 summarizes the basic housing characteristics of Malheur County.

Table 4: Basic Housing Characteristics and Home Prices

Metric	Number	Percent of Total
<i>Housing Units¹</i>		
Total	11,629	--
Occupied Housing Units	10,286	88.5
Owner-Occupied	6,145	59.7 (of occupied)
Renter-Occupied	4,141	40.3 (of occupied)
Vacant Housing Units	1,343	11.5
Homeowner Vacancy Rate ²	2.5	--
Rental Vacancy Rate ³	4.3	--
Average Household Size	--	
Owner-Occupied	2.68	--
Renter-Occupied	2.53	--
<i>Location of Housing Units¹</i>		
Ontario	4,744	40.8 (of County total)
Nyssa	1,112	9.6 (of County total)
Vale	730	6.3 (of County total)
Adrian	77	0.7 (of County total)
Jordan Valley	135	1.2 (of County total)
<i>Homes for Sale⁴</i>		
Total	94	--
Ontario	59	62.8
Vale	17	18.1
Nyssa	14	14.9
Adrian	1	1.1
Jordan Valley	1	1.1
<i>Home Price Range⁴</i>		
Up to \$82,999	13	13.8
\$83,000 to \$109,999	16	17.0
\$110,000 to \$149,999	15	16.0
\$150,000 to \$189,999	13	13.8
\$190,000 to \$289,999	14	14.9
\$290,000 to \$549,999	13	13.8
\$550,000 and up	10	11.7

¹Source: U.S. Census Bureau 2016g

²The proportion of the homeowner inventory that is vacant and for sale.

³The proportion of the rental inventory that is vacant and for rent.

⁴landwatch.com 2017

The County has 11,629 housing units, with 88.5 percent occupied and 11.5 percent vacant. These rates are similar to those for the State as a whole. Of the occupied households in the County, 59.7 percent are owner-occupied, and 40.3 percent are renter-occupied. Owner-occupied homes have a slightly higher average household size than renter-occupied units. Approximately 40 percent of all housing units are in Ontario (U.S. Census Bureau 2016g).

In the fall of 2017, there were approximately 94 homes for sale in Malheur County, with Ontario having the most with 59 homes, followed by Vale with 17, Nyssa with 14, and one each for Adrian and Jordan Valley. The remaining two homes were in other small towns in the Study Area. The cost of homes ranges from less than \$82,999 to \$71,999 to \$550,000 and up. The home price range with the largest percentage (17 percent) is \$110,000 to \$149,999, and the home price range with the smallest percentage (11.7 percent) is \$550,000 and up (landwatch.com 2017). The current property tax rate (December 2016) is \$10.72, which is the rate per \$1,000 of real market value for residential homes and land (Sperling’s Best Places 2017).

Table 5 summarizes housing specifics for the County.

Table 5: Housing Specifics

Metric	Number	Percent of Total
Housing Units	11,629	
<i>Year Structure Built</i>		
Built 2014 or later	0	0
Built 2010 to 2013	65	0.6
Built 2000 to 2009	855	7.4
Built 1990 to 1999	1,503	12.9
Built 1980 to 1989	1,453	12.5
Built 1970 to 1979	2,694	23.2
Built 1960 to 1969	1,089	9.4
Built 1950 to 1959	1,192	10.2
Built 1940 to 1949	1,353	11.6
Built 1939 or earlier	1,425	12.2
<i>Year Householder Moved into Unit</i>		
Moved in 2015 or later	199	1.9 (of occupied)
Moved in 2010 to 2014	3,032	29.5 (of occupied)
Moved in 2000 to 2009	3,774	36.7 (of occupied)
Moved in 1990 to 1999	1,470	14.3 (of occupied)
Moved in 1980 to 1989	861	8.4 (of occupied)
Moved in 1979 and earlier	950	9.2 (of occupied)
<i>Home Value, Owner-Occupied Units (6,145 units)</i>		
Less than \$50,000	815	13.3
\$50,000 to \$99,999	1,387	22.6
\$100,000 to \$149,999	1,366	22.2
\$150,000 to \$199,999	1,017	16.5
\$200,000 to \$299,999	858	14.0
\$300,000 to \$499,999	471	7.7
\$500,000 to \$999,999	190	3.1
\$1,000,000 or more	41	0.7
<i>Gross Rent, Occupied Units Paying Rent (3,638 units)</i>		
Less than \$500	1,148	31.6
\$500 to \$999	2,298	63.2
\$1,000 to \$1,499	118	3.2
\$1,500 to \$1,999	33	0.9
\$2,000 to \$2,499	41	1.1
\$2,500 to \$2,999	0	0
\$3,000 or more	0	0
<i>Type of Housing Unit</i>		
1-unit, detached	7,353	63.2
1-unit, attached	208	1.8

Metric	Number	Percent of Total
2 units	647	5.5
3 or 4 units	403	3.5
5 to 9 units	304	2.6
10 to 19 units	240	2.1
20 or more units	406	3.5
Mobile home	2,068	17.8
Boat, RV, van, etc.	0	0

Source: U.S. Census Bureau 2016g

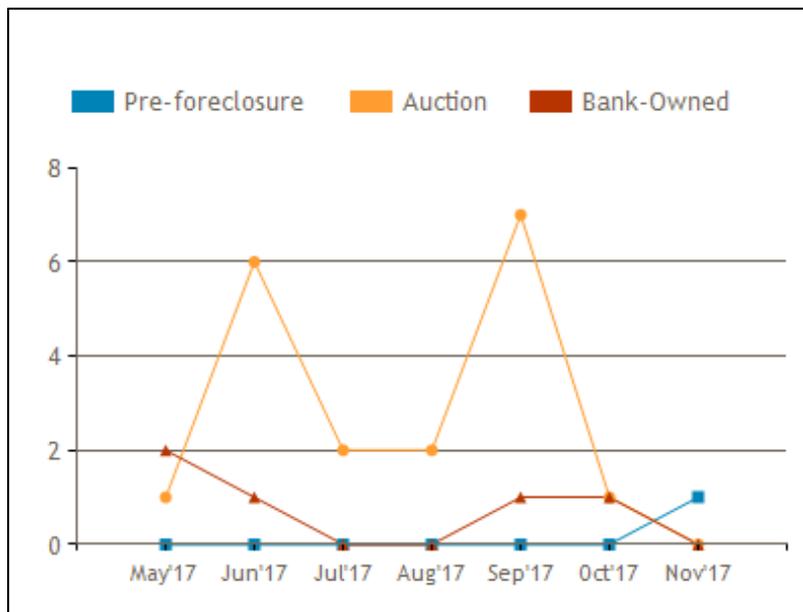
The peak period for new home building was the period of 1970 through 1979, which was when approximately 23 percent of all homes in the County were constructed. Statewide construction also peaked during this time. Construction in the County and the State has declined overall since then, and the last housing units to be built occurred between 2010 and 2013 (U.S. Census Bureau 2016g). These construction data indicate a rapid decline in the housing market and confidence levels people may have in the foreseeable future of the housing market in Malheur County.

Single family housing units are the most common type of housing in the County, comprising approximately 65 percent of the total. Multifamily housing units make up approximately 17 percent and mobile homes comprise approximately 18 percent of the total units in the County.

The Housing Authority of Malheur County oversees affordable housing assistance in Malheur and Harney Counties. The housing authority provides assistance through Section 8 Housing Choice Voucher, Family Self-Sufficiency, Housing Choice Voucher Homeownership, and Low-Rent Public Housing programs. There are 17 low-income housing apartment complexes which contain 406 affordable apartments in Malheur County. There are 129 project-based Section 8 subsidized apartments in Malheur County. There are 395 other low-income apartments that don't have rental assistance but are still considered to be affordable housing for low-income families (Affordable Housing Online 2017).

At the end of the first quarter of 2017, approximately 12.7 percent of Malheur County homes had negative equity (the rate for Oregon was 5.4 percent) and 5.5 percent of homeowners were delinquent on mortgage (the rate for Oregon was 3.4 percent) (Zillow, Inc. [Zillow] 2017a). The foreclosure rate of Malheur County (1:6,416) is lower than that for the State (1:3,135) (RealtyTrac 2017). Figure 5 shows recent foreclosure trends.

The median age of Malheur County real estate is 41 years, which is only four years older than the national median age of 37 (Sperling's Best Places 2017). Over half of the householders in the County and statewide have been in the same home since the 2000 through 2009 period. When compared to the state, Malheur County has a higher proportion of long-time householders in the same home (since 1980 or earlier) (U.S. Census Bureau 2016g). The median home sale price peaked in February 2009 at \$174,100 (Zillow 2017b). Most owner-occupied homes in the County are valued between \$50,000 and \$99,999, with the median home value being \$127,000. These values are significantly lower than the same metrics for the state as a whole. The statewide median value is over \$100,000 more at \$237,300 (U.S. Census Bureau 2016h).



Source: RealtyTrac 2017

Figure 5: New Foreclosure Filings by Type

The median rent for Malheur County (\$604) is lower than the state median (\$907). Most renters (approximately 63 percent) in the County pay between \$500 and \$999 per month. Statewide, most renters (about 51 percent) also pay between \$500 and \$999 per month. When compared to statewide renters, a larger proportion of Malheur County renters pay less than \$500 per month (approximately 32 percent for County renters compared to approximately nine percent of statewide renters) (U.S. Census Bureau 2016g).

In general, Malheur County residents spend less of their annual monthly income on housing when compared to Oregon as a whole. For Malheur County households that earn between \$35,000 and \$49,000 annually (the range within which the median and mean incomes fall):

- Approximately 56 percent of all occupied housing units in Malheur County spend less than 20 percent of their income on housing where the statewide rate is approximately 28 percent;
- Approximately 19 percent spend between 20 and 29 percent of their income on housing where the statewide rate is approximately 15 percent; and
- Approximately 23 percent spend 30 percent or more of their income on housing where the statewide rate is approximately 18 percent (U.S. Census Bureau 2016g).

5.4.1 Household Income in Malheur County

Total personal income in the Study Area has been steadily increasing over the last ten years (Table 6), with the exception of three drops in income in 2009, 2013, and 2016.

Table 6: Total Personal Income in the Study Area, 2007 to 2016

2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
684,158	724,071	704,449	721,943	738,193	800,726	799,477	857,783	910,900	904,459

Source: BEA 2016a

Table 7 displays the median earnings by industry for 2016 in the Study Area.

Table 7: Median Earnings by Industry for the Past 12 Months for Malheur County and the Cities of Ontario, Nyssa, Vale, Adrian, and Jordan Valley

Industry	Median Earnings by Geography (dollars)					
	Malheur County	Ontario	Nyssa	Vale	Adrian	Jordan Valley
Agriculture, forestry, fishing and hunting	22,423	22,567	20,966	17,344	18,333	*
Mining, quarrying, and oil and gas extraction	29,698	*	*	*	*	61,250
Construction	31,010	31,111	30,500	2,500-	*	*
Manufacturing	31,140	33,301	40,921	21,964	24,688	*
Wholesale Trade	16,938	13,731	27,981	19,643	*	*
Retail Trade	16,161	12,781	15,700	25,000	35,417	21,250
Transportation and warehousing	26,750	37,639	16,750	36,875	36,875	*
Utilities	31,838	24,881	*	*	*	*
Information	35,977	*	*	*	*	*
Finance and insurance	33,100	32,670	*	*	*	*
Real estate and rental and leasing	17,014	14,688	12,083	*	*	*
Professional, scientific, and technical services	45,461	53,297	46,250	47,500	*	*
Management of companies and enterprises	*	*	*	*	*	*
Administrative and support and waste management services	26,071	25,417	21,429	*	*	*
Educational services	25,956	14,306	17,083	18,654	38,750	*
Health care and social assistance	23,750	20,923	30,602	19,773	*	*
Arts, entertainment, and recreation	25,085	20,250	*	*	*	*

Industry	Median Earnings by Geography (dollars)					
	Malheur County	Ontario	Nyssa	Vale	Adrian	Jordan Valley
Accommodation and food services	15,070	16,548	4,420	4,821	19,000	*
Other services, except public administration	10,625	2,500-	11,087	30,833	24,688	*
Public administration	44,886	47,778	50,662	57,798	*	*

Source: U.S. Census Bureau 2016i

*Indicates that either no sample observations or too few sample observations were available to compute an estimate, or a ration of medians cannot be calculated because one or both of the median estimates falls in the lowest interval or upper interval of an open-ended distribution.

A “-“ following a median estimate means the median falls in the lowest interval of an open-ended distribution.

5.4.2 Malheur County Employment

For 2016, the U.S. Census Bureau estimated that the total civilian labor force (people aged 16 years and older and able to work) in Malheur County was approximately 11,936 people. Of these people, most of the unemployed individuals were age 16 to 19 years; approximately 28 percent of this population was estimated to be unemployed. People aged 20 to 24 years had the second highest unemployment rate, with approximately 18 percent of them being unemployed. For people living in poverty, the unemployment rate was approximately 31 percent in 2016. For disabled persons, approximately 21 percent were unemployed in 2016 (U.S. Census Bureau 2016j).

Malheur County October 2017 labor market information from the Oregon Employment Department (OED) shows that over-the-year employment increasing for manufacturing, professional/business services, retail trade, and mining/logging/construction services. The trends show reductions in private education/health services and local government (OED 2017a). In 2016, the average annual wage was \$33,851, which is the lowest of the three southeastern Oregon counties (Grant, Harney, and Malheur) (OED 2017b).

Unemployment has been steadily declining for the last five years in Malheur County (OED 2017c). At the end of 2016, Malheur County's seasonally adjusted unemployment rate was 5.6 percent (OED 2017c). Without seasonal adjustment, the County's 2016 unemployment rate was also 5.6 percent, which is higher than the statewide non-seasonally adjusted rate of 4.9 percent. In general, unemployment rates have been holding steady or dropping statewide and in the County since 2009. None of Oregon's counties have had an increase in unemployment since 2014 (OED 2017c). Compared to 2015, the rate of unemployment in Malheur County dropped 0.8 percentage point. The state reported that 12,080 people were on a payroll in September 2017, which is an increase of 230 people since September 2016 (OED 2017c). Table 8 summarizes the 2015 employment by sector for Malheur County. The table includes Oregon for comparative purposes.

Table 8: Employment by Sector in Malheur County

Employment Sector	Oregon		Malheur County	
	Number	Percentage	Number	Percentage
Agriculture, forestry, fishing and hunting	38,549	3.6	1,118	19.0
Mining, quarrying, and oil and gas extraction	1,195	0.1	30	0.5
Construction	63,919	6.0	330	5.6
Manufacturing	165,428	15.5	797	13.5
Wholesale trade	41,448	4.0	321	5.5
Retail trade	123,086	11.6	639	10.9
Transportation and warehousing	42,363	4.0	114	1.9
Utilities	12,866	1.2	223	3.8
Information	22,125	2.1	30	0.5
Finance and insurance	54,237	5.1	159	2.7
Real estate and rental and leasing	23,468	2.2	116	2.0
Professional, scientific, and technical services	79,202	7.4	243	4.1
Management of companies and enterprises	879	0.1	0	0
Administrative and support and waste management services	40,618	3.8	87	1.5
Educational services	76,936	7.2	396	6.7
Health care and social assistance	157,902	14.8	608	10.3
Arts, entertainment, and recreation	17,051	1.6	84	1.4
Accommodation and food services	55,763	5.2	431	7.3
Other services (except public administration)	46,891	4.4	161	2.7
Public administration (government)	67,103	6.3	732	12.4

D = not shown to avoid disclosure of confidential information, but the estimates for this item are included in the totals.
Source: U.S. Census Bureau 2016k

As shown in Table 8, the County’s largest private sector employment subsector by proportion of jobs is agriculture, forestry, fishing and hunting. Manufacturing jobs also make up a large portion of County employment at approximately 13.5 percent of the total. According to the data in Table 7, people in agriculture, forestry, fishing and hunting earned approximately \$22,423 annually. People working in professional, scientific, and technical services are the highest paid workers in the County with median annual earnings of \$45,461 in 2015 (U.S. Census Bureau 2016i).

5.4.3 Malheur County Tax Base

Malheur County provides support for several types of services through its general fund, road fund, and other governmental funds. Table 9 summarizes the County’s 2015/2016 total governmental revenues and expenditures.

Table 9: Malheur County 2015/2016 Revenues and Expenditures

Revenues and Expenditures	Amount
<i>Revenues</i>	
Property Taxes	\$5,184,262
Intergovernmental	\$10,358,482
Grants	\$1,455,983
Charges for Services	\$3,280,863
Investment Earnings (losses)	\$25,402
Other Income	--
Total Revenues	\$20,304,992
<i>Expenditures</i>	
General Government	\$2,138,782
Social Services	\$4,440,733
Public Safety and Justice	\$8,971,148
Community Services	\$1,275,252
Library Services	\$22,327
Roads and Bridges	\$2,329,187
Capital Outlay	\$224,484
Debt Service (Principal and Interest)	\$112,103
Total Expenditures	\$19,514,016

Source: Malheur County 2016

5.5 Malheur County Public Services

This section summarizes the availability and quantity of public services as part of the “affected environment” current conditions in the Study Area. Projections for the life of the mine costs will be developed as part of the “environmental consequences” analysis section of the environmental evaluation required under 632-037-0085, Division 37, Consolidated Permitting of Mining Operations.

5.5.1 Water, Sewer, and Solid Waste

The County does not provide water and sewer services.

For unincorporated areas of the County, the Environmental Health Department issues on-site septic system permits, runs the Licensed Facility Program and Drinking Water Program, and oversees the County Solid Waste Program.

Malheur County holds permits from the Oregon Department of Environmental Quality for the operation of one small landfill (Lytle Boulevard Landfill), approximately ten miles south of Vale. A private contractor conducts the daily operation (Malheur County 2017). It is a very small landfill and is only permitted to accept 20 tons per day. The landfill is usually close to that number on a yearly basis, averaging about 19 tons per day. The estimated lifespan of the landfill is about 50 years. A large part of solid waste from the County is disposed of in Idaho at Clay Peak Landfill in Payette County.

Ontario Sanitary Service, Inc., a family-owned company, provides residential and commercial garbage collection and recycling services to the City of Ontario, as well as rural Malheur County areas. The Ontario Sanitary Service Transfer Station provides for the transfer of refuse from Ontario to the Clay Peak Landfill in Idaho.

The City of Ontario provides domestic water, wastewater, and storm drain services to its residents. The City of Nyssa provides domestic water and wastewater services to its residents. The City of Vale provides domestic water, wastewater, and garbage collection services to its residents.

5.5.2 Fire Protection

Fire protection in Malheur County consists of the following districts, departments, and agencies:

- Ontario Fire & Rescue;
- Nyssa Fire Department;
- Vale Fire & Ambulance;
- Adrian Rural Fire Protection District;
- Jordan Valley Volunteer Fire Department; and
- BLM.

The BLM has been integrated with the US Forest Service since 1995 for fire and aviation management in the Pacific Northwest and is managed cooperatively between the two agencies and in close collaboration with the Pacific Northwest Wildfire Coordinating Group. This group includes the five federal wildland fire agencies, two state forestry agencies, and two state fire marshal associations. The interagency jurisdiction covers both Oregon and Washington and includes ten BLM districts, 19 National Forests, and the Columbia Gorge National Scenic Area (BLM 2017).

For the Vale District, which is the BLM district within which the proposed Project is located, the BLM provides fire protection using 17 engines and a tactical tender which are located at seven guard stations throughout the district, including a station in Vale. The district also hosts an exclusive use air attack plane and helicopter with a helitack crew of nine people from June to October.

5.5.3 Law Enforcement and the Criminal Justice System

The Malheur County Sherriff's Office (MCSO) is the primary provider of law enforcement services to residents of Malheur County. The Ontario Police Department and Nyssa Police Department also provide law enforcement services to residents in those jurisdictions. The Oregon State Police (OSP) is a multi-disciplined organization that enforces traffic laws on state roadways, investigates and solves crime, conducts post-mortem examinations and forensic analysis, and provides background checks and law enforcement data. The OSP also regulates gaming, the handling of hazardous materials and fire codes, and educates the public on fire safety and enforce fish, wildlife, and natural resource laws (OSP 2016).

The MCSO includes the following divisions: 9-1-1 Dispatch; Civil; Criminal; Emergency Management; Jail; Parole and Probation; and Search & Rescue. The Criminal Division is comprised of the Patrol, Marine, Sheriff's Emergency Response Team, and Investigations units. The Patrol unit includes the North District and South District, and contracts with the City of Vale to provide law enforcement services in the Vale District. The Marine unit patrols approximately 57 square miles of waterways in Malheur County (MCSO 2017).

5.5.4 Schools and Education

5.5.4.1 Elementary and Secondary Education

The Malheur Education Service District (ESD) provides a supporting infrastructure to the local school districts. The Malheur ESD supports ten local school districts containing 27 schools. These include eight high schools, three middle schools, nine elementary schools, and seven schools that service kindergarten through eighth grade (Malheur ESD 2017).

Table 10 shows the enrollment numbers in each district broken down by school, as reported by the Oregon Department of Education (ODE).

Table 10: 2016-2017 School Enrollment

School	Enrollment
Adrian School District No. 61	285
Adrian High School	85
Adrian K-8	200
Annex School District No. 29	88
Arock School District No. 81	15
Four Rivers Community School	280
Harper School District No. 66	99
Huntington School District No. 16J	77
Jordan Valley School District No. 3	71
Jordan Valley High School	46
Jordan Valley Elementary School	21
Rockville Elementary School	4
Juntura School District No. 12	2
Nyssa School District No. 26	1,162
Nyssa High School	326
Nyssa Middle School	260
Nyssa Elementary School	549
Nyssa SD 26	27
Ontario School District No. 8C	2,432
Ontario High School	671
Ontario Middle School	347
Aiken Elementary School	305
Alameda Elementary School	403
Cairo Elementary School	149
May Roberts Elementary School	375
Pioneer Elementary School	137
Ontario SC 8C	45
Vale School District No. 84	948
Vale High School	280
Vale Middle School	129
Vale Elementary School	435
Willowcreek Elementary School	89
Vale SD 84	15

Source: ODE 2017

6 BIBLIOGRAPHY

- Affordable Housing Online. 2017. *Affordable Housing in Malheur County*. <https://affordablehousingonline.com/housing-search/Oregon/Malheur-County>. Accessed December 22, 2017.
- Bureau of Economic Analysis (BEA). 2016a. *CA25 Total Full-Time and Part-Time Employment by SIC Industry*. <https://www.bea.gov/iTable/iTable.cfm?reqid=70&step=1&isuri=1&acrdrn=7#reqid=70&step=30&isuri=1&7022=11&7023=7&7024=sic&7033=-1&7025=4&7026=41045&7027=2000,1990&7001=711&7028=-1&7031=41000&7040=-1&7083=levels&7029=11&7090=70>. Accessed December 22, 2017.
- _____. 2016b. *CA5N Personal Income by Major Component and Earnings by NAICS Industry*. <https://www.bea.gov/iTable/iTable.cfm?reqid=70&step=1&isuri=1&acrdrn=7#reqid=70&step=30&isuri=1&7022=10&7023=7&7024=naics&7033=-1&7025=4&7026=41045&7027=2015&7001=710&7028=-1&7031=41000&7040=-1&7083=levels&7029=32&7090=70>. Accessed November 10, 2017.
- _____. 2016c. *CA25N Total Full-Time and Part-Time Employment by NAICS Industry*. <https://www.bea.gov/iTable/iTable.cfm?reqid=70&step=1&isuri=1&acrdrn=7#reqid=70&step=30&isuri=1&7022=11&7023=7&7024=naics&7033=-1&7025=4&7026=41045&7027=2015,2010,2001&7001=711&7028=-1&7031=41000&7040=-1&7083=levels&7029=33&7090=70>. Accessed November 10, 2017.
- _____. 2016d. *CA30 Economic Profile*. <https://www.bea.gov/iTable/iTable.cfm?reqid=70&step=1&isuri=1&acrdrn=7#reqid=70&step=30&isuri=1&7022=12&7023=7&7024=non-industry&7033=-1&7025=6&7026=36620&7027=2016&7001=712&7028=-1&7031=6&7040=-1&7083=levels&7029=12&7090=70>. Accessed December 22, 2017.
- _____. 2017. *CA4: Personal Income and Employment by Major Component*. <https://www.bea.gov/iTable/iTable.cfm?reqid=70&step=1&isuri=1&acrdrn=7#reqid=70&step=30&isuri=1&7022=49&7023=7&7024=non-industry&7033=-1&7025=4&7026=xx&7027=2016,2010,2000,1990&7001=749&7028=-1&7031=41000&7040=-1&7083=percentchange&7029=49&7090=70>. Accessed December 21, 2017.
- Bureau of Land Management (BLM). 2017. *Oregon/Washington Fire and Aviation Management*. <https://www.blm.gov/programs/public-safety-and-fire/fire-and-aviation/regional-info/oregon-washington>. Accessed December 22, 2017.
- Densho Encyclopedia. 2017. Nyssa, Oregon (detention facility) webpage. [http://encyclopedia.densho.org/Nyssa,%20Oregon%20\(detention%20facility\)/](http://encyclopedia.densho.org/Nyssa,%20Oregon%20(detention%20facility)/). Accessed December 22, 2017.
- HDR Engineering, Inc. (HDR). 2015. *Socioeconomic Baseline Study*. July 2015.

- LandWatch. 2017. LandWatch website.
<https://www.landwatch.com/default.aspx?ct=r&q=Malheur+County+Oregon&type=13,13>. Accessed November 14, 2017.
- Larson Assistance Services. 2013. *Oregon Update Migrant and Seasonal Farmworker and Enumeration Profiles Study*.
http://www.ohdc.org/uploads/1/1/2/4/11243168/2013_update_to_msfw_enumeration_studies_report.pdf. Accessed December 21, 2017.
- Malheur County. 2016. *Report on Audited Basic Cash Basis Financial Statements and Supplemental Information*.
<http://www.malheurco.org/wp-content/uploads/Departments/Admin/Malheur%20County%202016%20Audit%20Submitted.pdf>. Accessed November 20, 2017.
- _____. 2017. Malheur County website. <http://www.malheurco.org/>
- Malheur County Fair Grounds. 2017. Malheur County Fair Grounds website.
<http://www.malheurcountyfair.com/>. Accessed December 21, 2017.
- Malheur County Sheriff's Office (MCSO). 2017. Malheur County Sheriff's Office website.
<http://sheriff.malheurco.org/>. Accessed December 5, 2017.
- Malheur Education Service District (Malheur ESD). 2017. Malheur Education Service District website. <http://www.malesd.k12.or.us/home>. Accessed December 5, 2017.
- Ontario Area Chamber of Commerce. 2017. The Ontario Community webpage.
<http://ontariochamber.com/our-community/>. Accessed December 21, 2017.
- Oregon Department of Education (ODE). 2017. *Student Enrollment Reports*.
http://www.oregon.gov/ode/reports-and-data/students/Documents/fallmembershipreport_20162017.xlsx. Accessed December 5, 2017.
- Oregon Department of Human Services (DHS). 2017a. *DHS County Quick Facts: Malheur County*. <http://www.oregon.gov/DHS/ABOUTDHS/DataDocuments/County-QuickFacts-2017.pdf>. Accessed November 14, 2017.
- _____. 2017b. *SNAP County Tables by FIPS Jan2017 - Dec2017*.
<http://www.oregon.gov/DHS/ASSISTANCE/Branch%20District%20Data/SNAP%20County%20Tables%20by%20FIPS%20Jan2017%20-%20Dec2017.xls>. Accessed November 14, 2017.
- Oregon Employment Department (OED). 2017a. *Labor Market Information: Southeast Oregon Economic Indicators*. October 2017.
<https://www.qualityinfo.org/documents/10182/96541/Southeast+Oregon+Indicators?version=1.35>. Accessed November 20, 2017.

- _____. 2017b. *Employment and Wages by Industry: Industry Summary Report*. <https://www.qualityinfo.org/ed-ewind/?at=1&t1=0~4104000045~00~0~0000~00~00000~2016~00>. Accessed November 20, 2017.
- _____. 2017c. *Local Area Unemployment Statistics*. <https://www.qualityinfo.org/ed-uesti/?at=1&t1=4101000000,4104000045~unemprate~y,n~2000~2017>. Accessed November 20, 2017.
- Oregon Secretary of State. 2017. *Malheur County History webpage*. <http://sos.oregon.gov/archives/records/county/Pages/malheur-history.aspx>. Accessed December 22, 2017.
- Oregon State Police (OSP). 2016. *5-Year Strategic Roadmap 2016-2021*. <http://www.oregon.gov/osp/docs/5-Year%20strategic%20roadmap.pdf>. Accessed December 5, 2017.
- RealtyTrac. 2017. *Oregon Real Estate Trends & Market Info*. <http://www.realtytrac.com/statsandtrends/foreclosuretrends/or>. Accessed November 14, 2017.
- Sperling's Best Places. 2017. *Oregon State*. <https://www.bestplaces.net/housing/state/oregon>. Accessed November 14, 2017.
- U.S. Census Bureau. 1996. *Population of States and Counties of the United States: 1790 to 1990*. March 1996. <https://www.census.gov/population/www/censusdata/PopulationofStatesandCountiesoftheUnitedStates1790-1990.pdf>. Accessed November 10, 2017.
- _____. 2016a. *2011-2015 American Community Survey 5-Year Estimates: ACS Demographic and Housing Estimates*. https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_15_5YR_DP05&prodType=table. Accessed November 13, 2017.
- _____. 2016b. *2011-2015 American Community Survey 5-Year Estimates: Educational Attainment*. https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_16_5YR_S1501&prodType=table. Accessed December 22, 2017.
- _____. 2016c. *Intercensal Estimates of the Resident Population for Counties and States: April 1, 2000 to July 1, 2010*. <https://www.census.gov/data/datasets/time-series/demo/popest/intercensal-2000-2010-counties.html>. Accessed November 10, 2017.
- _____. 2016d. *2011-2015 American Community Survey 5-Year Estimates: Place of Birth for the Foreign-Born Population in the United States*. https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_15_5YR_B05006&prodType=table. Accessed November 13, 2017.

- _____. 2016e. *2011-2015 American Community Survey 5-Year Estimates: Language Spoken at Home*.
https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_15_5YR_S1601&prodType=table. Accessed November 13, 2017.
- _____. 2016f. *2011-2015 American Community Survey 5-Year Estimates: Selected Economic Characteristics*.
https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_15_5YR_DP03&prodType=table. Accessed November 13, 2017.
- _____. 2016g. *2011-2015 American Community Survey 5-Year Estimates: Selected Housing Characteristics*.
https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_15_5YR_DP04&prodType=table. Accessed November 14, 2017.
- _____. 2016h. *2015 Poverty and Median Household Income Estimates – Counties, States, and National*. Small Area Income and Poverty Estimates (SAIPE) Program. Release date December 2016.
- _____. 2016i. *2011 – 2015 American Community Survey 5-Year Estimates: Industry by Sex and Median Earnings in the Past 12 Months (in 2016 Inflation-Adjusted Dollars) for the Civilian Employed Population 16 Years and Over*.
https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_16_5YR_S2413&prodType=table. Accessed February 6, 2018.
- _____. 2016j. *2011-2015 American Community Survey 5-Year Estimates: Employment Status*.
https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_15_5YR_S2301&prodType=table. Accessed November 20, 2017.
- _____. 2016k. *2011-2015 American Community Survey 5-Year Estimates: Industry by Sex for the Full-Time, Year-Round Civilian Employed Population 16 Years and Over*.
https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_16_5YR_S2404&prodType=table. Accessed February 19, 2018.
- U.S. Department of Agriculture. 2012. *Census Volume 1, Chapter 2: County Level Data*.
https://www.agcensus.usda.gov/Publications/2012/Full_Report/Volume_1,_Chapter_2_County_Level/Oregon/st41_2_007_007.pdf. Accessed November 13, 2017.
- Zillow, Inc. (Zillow). 2017a. *Zillow Data: Negative Equity 2017 Q1 Summary*.
http://files.zillowstatic.com/research/public/NESummary_2017Q1_Public.csv. Accessed December 22, 2017.
- _____. 2017b. *Median Sale Price*.
http://files.zillowstatic.com/research/public/County/Sale_Prices_County.csv. Accessed December 22, 2017.

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