Stantec

Project # 203723823

Socioeconomics and Environmental Justice

Grassy Mountain Gold Project—Malheur County, Oregon

May 2024

SOCIOECONOMICS AND ENVIRONMENTAL JUSTICE

Grassy Mountain Gold Project—Malheur County, Oregon

May 2024

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TABLE OF CONTENTS

Executive Summary vi

1 Introduction 1-1
- 1.1 Geographic Scope 1-1
- 1.2 Temporal Scope 1-1
- 1.3 Data Sources 1-3
- 1.4 Technical Approach 1-3

2 Demographic and Economic Baseline Profile 2-1
- 2.1 Demographic and Social Characteristics 2-1
  - 2.1.1 Population 2-1
  - 2.1.2 Race and Ethnicity 2-2
  - 2.1.3 Housing 2-3
  - 2.1.4 Public Safety 2-4
  - 2.1.5 Community Facilities and Services 2-5
- 2.2 Regional Economy 2-7
  - 2.2.1 Economic Setting 2-7
  - 2.2.2 Income and Poverty 2-8
  - 2.2.3 Education Level and Employment Rates 2-10
  - 2.2.4 Major Industries 2-11
- 2.3 Public Finances 2-11
  - 2.3.1 Sources of Revenue 2-11
  - 2.3.2 Expenditures 2-11
- 2.4 Environmental Justice 2-12
  - 2.4.1 Race, Ethnicity, and Minority Communities 2-14
  - 2.4.2 Poverty and Low-Income Communities 2-15
  - 2.4.3 Tribal Communities 2-15
  - 2.4.4 Traditionally Underrepresented Communities 2-15

3 Impacts 3-1
- 3.1 Employment and Income 3-1
- 3.2 Population 3-2
- 3.3 Housing 3-2
- 3.4 Public Revenue 3-3
- 3.5 Public Safety 3-3
- 3.6 Community Facilities and Services 3-4
  - 3.6.1 Healthcare, Education, and Parks and Recreation 3-4
  - 3.6.2 Water, Wastewater, Solid Waste, and Power 3-5
  - 3.6.3 Roads and Traffic 3-6
- 3.7 Environmental Justice 3-6
  - 3.7.1 Minority Communities 3-6
  - 3.7.2 Low-Income Communities 3-6

3.7.3 Tribal Communities 3-7
3.7.4 Traditionally Underrepresented Communities 3-7
3.7.5 Increased Risk or Rate of Exposure to an Adverse Environmental Hazard 3-7

4 References 4-1

LIST OF FIGURES

Figure 1-1. Project Location and Cities in Malheur County 1-2

LIST OF TABLES

Table 2-1. Population Change of the US, Oregon, and Malheur County (2020 to 2022) 2-1
Table 2-2. Population Forecast of Malheur County 2-1
Table 2-3. Demographics of the US, Oregon, and Malheur County (2022) 2-2
Table 2-4. Race and Ethnicity for the US, Oregon, and Malheur County (2022) 2-2
Table 2-5. Income and Property Values for the US, Oregon, and Malheur County (2021) 2-3
Table 2-6. Housing Occupancy Information for Malheur County (2022) 2-3
Table 2-7. Housing Sale and Rental Information for Malheur County and its Largest Cities (2023) 2-3
Table 2-8. Crime Statistics for Malheur County (2017–2019) 2-4
Table 2-9. Malheur County Education Service District (2022/2023) 2-5
Table 2-10. Malheur County Median Class Sizes Over Time 2-6
Table 2-11. Employment by Industry in Malheur County (1970–2021) 2-8
Table 2-12. Average Annual Wages by Industry in the US, Oregon, and Malheur County (2021) 2-9
Table 2-13. Income, Poverty Rate, and Homelessness for the US, Oregon, and Malheur County 2-9
Table 2-14. Labor Force and Employment Rates in the US, Oregon, and Malheur County (2021) 2-10
Table 2-15. Education Attainment for Residents of the US, Oregon, and Malheur County (2017–2021) 2-10
Table 2-16. Migrant and Seasonal Farm Worker Estimates for Malheur County 2-11
Table 2-17. Malheur County Financial Statement for Fiscal Year Ended June 30, 2022 2-12
Table 2-18. Race and Ethnicity for the US, Oregon, and Malheur County (2022) 2-14
Table 3-1. Project Impacts to Employment and Economic Activity 3-1
Table 3-2. Tax Impact from the Proposed Project 3-3

Acronyms and Abbreviations

BLM	Bureau of Land Management
DOGAMI	State of Oregon Department of Geology and Mineral Industries
EO	Executive Order
EPA	US Environmental Protection Agency
ESD	Malheur County Education Service District
gpm	gallons per minute
MSFW	Migrant Seasonal Farm Workers
ORS	Oregon Revised Statute
Project	Grassy Mountain Gold Project

Executive Summary

This socioeconomic and environmental justice analysis supports the overall analysis of potential effects of construction, operation, reclamation, and closure of an underground mining and precious metal milling operation known as the Grassy Mountain Gold Project (Project) in Malheur County, Oregon. This analysis first characterizes existing socioeconomic conditions and identifies the presence of environmental justice populations in Malheur County—the baseline profile. Potential impacts to socioeconomic conditions and environmental justice populations1 are then described and mitigation identified.

The geographic scope of the analysis is the area in which potential direct and indirect socioeconomic and environmental justice effects could occur. For this Project, the study area is Malheur County (Figure 1-1). Malheur County is located in the southeastern corner of the state of Oregon, is Oregon's second-largest county by area, and is largely rural and undeveloped. The largest cities in Malheur County (with a population over 1,000) are Ontario, Nyssa, and Vale.

The temporal scope of the analysis is the timeframe in which potential direct and indirect socioeconomic and environmental justice effects could occur. The Project would be active for approximately 10 years, which includes 2 years of pre-production (including construction activities) and 8 years of mining and processing. Additionally, 4 years of closure and reclamation are estimated, plus an additional 26 years for groundwater monitoring. This schedule may be modified based on the rate of mining and future commodities prices. If permits are granted, construction of the Project could begin in the next few years (2025–2026).

Malheur County has lower salaries and income, with a higher poverty rate, than the state of Oregon or the US as a whole. Malheur County also has a lower annual average wage for residents than Oregon state or the US as a whole (Data USA 2023; US Census Bureau 2023a, 2023b, and 2023c). Approximately 112 new workers would be directly employed during the Project. This workforce would include mine operators, process plant operators, administrative personnel, security staff, parking attendants, and health, safety, and environmental compliance personnel. The proposed Project would have a significant positive impact to employment and the economy.

Approximately 198 total new jobs would be created, through direct, indirect, and induced hiring. Indirect employment can include hotels and restaurants, while induced employment would be jobs in retail, services, and the local government.

Economic impacts would include labor income, value added, and output impacts. Labor income is the wages paid to employees. Value added impact is the increase in the county's gross domestic product from the production of extra goods and services. Output impact is the economic value of mining for the mineral.

The Project anticipates hiring local employees, but skilled mining professionals would likely need to be imported from outside the county or from neighboring states. The Project plans to implement a local-hire preference, with local contracting and purchasing where practicable, and mine-worker job training. Partnerships with local community colleges and vocational schools are planned, including with Treasure Valley Community College in Ontario, Eastern Oregon University in LaGrande, and the College of Western Idaho in Boise.

[1] An environmental justice population is a community with a high number of low-income or minority residents, as described in more detail in Section 2.4.

While it is unknown how many employees would be local versus imported, an estimate of the increase in population is between 48 and 127 people (17–45 households). Demand for homes is most likely to occur in the communities of Ontario, Nyssa, and Vale, as new residents take advantage of local infrastructure and services and available homes. The increased numbers of households would likely occupy some of the rental or for-sale homes but would not have a significant impact on housing availability in the local market.

IMPLAN software was used to determine the projected direct, indirect, and induced public revenue for the proposed Project. Since there is no local gold mining industry, IMPLAN used averages from other geographies to estimate the potential impact to the community. Revenues from the Project would be positive to the local government budgets over the lifetime of the Project. The proposed Project would also have positive tax impacts to the state and federal budgets.

No significant impacts are anticipated on public safety, healthcare, education, and parks and recreation availability for Malheur County due to the proposed Project. Likewise, no significant impacts are anticipated on water, wastewater, solid waste, and power needs due to the proposed Project.

Impacts to environmental justice communities (i.e., minority, low-income, tribal, and traditionally underrepresented communities) are anticipated to be minor and beneficial.

1 Introduction

The State of Oregon Department of Geology and Mineral Industries (DOGAMI) is analyzing the potential effects of construction, operation, reclamation, and closure of an underground mining and precious metal milling operation known as the Grassy Mountain Gold Project (Project) in Malheur County, Oregon. The Project is located in a rural part of Malheur County, about 22 miles south-southwest of the city of Vale (Figure 1-1). State environmental review of the proposed Project is being carried out by DOGAMI pursuant to the Oregon Consolidated Permit process.

Per Oregon Revised Statute (ORS) 517.760, the State of Oregon recognizes the important and essential contribution that the extraction of minerals makes to the economic well-being of the state and the nation and seeks to prevent unacceptable adverse impacts to environmental, scenic, recreational, social, archaeological, and historic resources of the state that may result from mining operations, while permitting operations that comply with the provisions set forth in ORS 517.702 (Legislative Findings) to 517.951 (Legislative Intent Not to Assume Exclusive Jurisdiction). This socioeconomic and environmental justice analysis supports the overall analysis of potential effects of the Project.

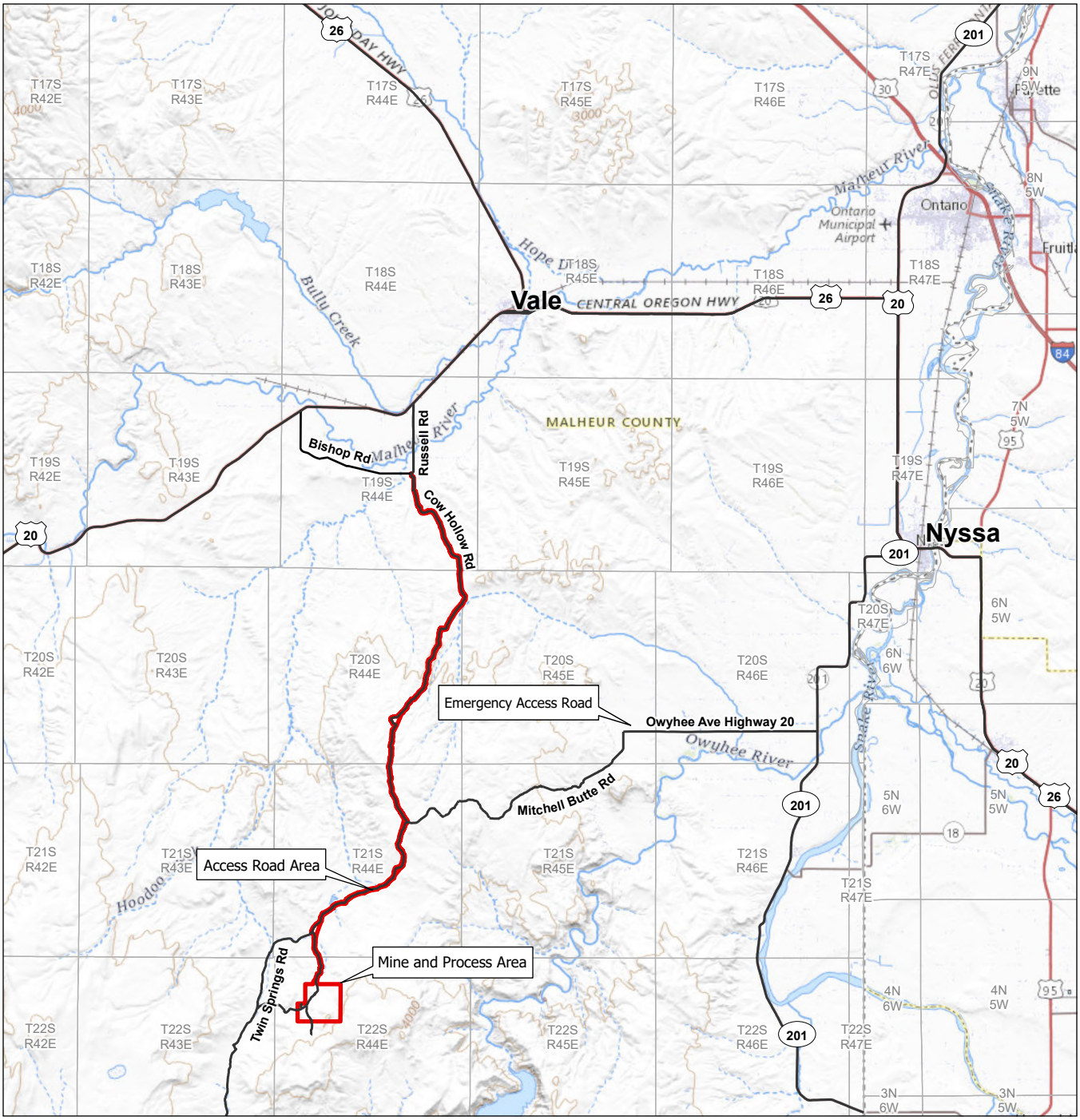
1.1 Geographic Scope

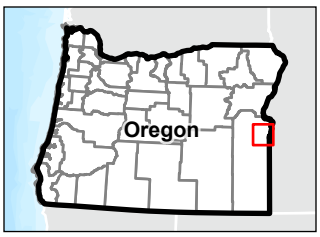
The geographic scope of the analysis is the area in which potential direct and indirect socioeconomic and environmental justice effects could occur. For this Project, the study area is Malheur County (Figure 1-1), which is located in the southeastern corner of the state. Malheur County is Oregon's second-largest county by area and is largely rural and undeveloped. Approximately 94 percent of the county is undeveloped rangeland, most of which is federally owned and administered by the Bureau of Land Management (BLM) (Malheur County 2023b).

The largest cities in Malheur County (with populations over 1,000) are Ontario, Nyssa, and Vale. Other incorporated cities include Jordan Valley and Adrian, both with populations less than 250. Unincorporated communities include Juntura, Ironside, Jamieson, Westfall, Harper, Arock, Annex, and Brogan (Figure 1-1) (Malheur County 2023b).

1.2 Temporal Scope

The temporal scope of the analysis is the timeframe in which potential direct and indirect socioeconomic and environmental justice effects could occur. The Project would be active for approximately 10 years, which includes 2 years of pre-production (including construction activities) and 8 years of mining and processing. Additionally, 4 years of closure and reclamation are estimated, plus an additional 26 years for groundwater monitoring. This schedule may be modified based on the rate of mining and future commodities prices. If permits are granted, construction of the Project could begin in the next few years (2026-2027).





Legend

- Permit Area
- Existing Roads

0 1.5 3 Miles

(At original document size of 8.5x11)
1:300,000

N

Stantec

Project Location
Malheur County, OR

Prepared by LL on 2023-10-04
TR by AU on 2023-10-10

Client/Project
DOGAMI
Grassy Mountain Gold Project
Socioeconomics and Environmental Justice Analysis

2378001753

Figure No.
1-1

Title
Project Location

Notes
1. Coordinate System: NAD 1983 UTM Zone 11N
2. Data Sources:
3. Background: USGS Topo

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1.3 Data Sources

Chapter 4 provides a full list of references used in this analysis. Key data sources included the following:

- BLM (BLM 2023)
- City of Ontario (City of Ontario 2020)
- Malheur County (Malheur County 2023a, 2023b)
- Oregon Housing and Community Services (Oregon Housing and Community Services 2019)
- US Census Bureau (US Census Bureau 2023a, 2023b, 2023c)
- US Environmental Protection Agency (EPA 2023)

1.4 Technical Approach

The socioeconomic and environmental justice analysis evaluates the potential economic and social effects of the proposed Project on the surrounding community. First, data were collected on baseline conditions, using the data sources listed in Section 1.3 above and others, to provide a detailed understanding of the existing socioeconomic conditions and trends in the study area. Environmental justice communities were identified through census information and a comparison of local populations in the study area to the larger regional population.

Next, the expected economic and social benefits and disadvantages of the Project were identified using various data sources including the proposed Plan of Operations (EM Strategies 2020), prefeasibility study (Mine Development Associates 2018), and Consolidated Permit Application (Calico Resources USA Corp 2023). The number of jobs, expected tax revenues, and other potential economic and social consequences of the proposed Project are added to the baseline conditions to identify advantages and disadvantages of construction, operation, and closure of the mine on the local community.

The economic effects (on income and employment) from the Project were estimated using the IMPLAN multipliers. Since there are no mining data for the county, IMPLAN used US data as a proxy to customize industry inputs/outputs for the county. The results used US gold ore mining industry data per worker as a proxy for Malheur County gold ore mining data to identify direct, indirect, and induced effects from changes in spending associated with the proposed Project (IMPLAN 2023). Direct effects consist of initial investment or spending in equipment, labor, materials, services, and supplies obtained for a project. Indirect effects are the changes in inter-industry purchases and sales of goods and services, such as mine suppliers hiring additional workers. Induced effects typically reflect changes in spending from workers or households as income increases or decreases due to changes in production, such as increases in restaurant spending or school attendance.

Significance criteria were developed to evaluate the importance of the effects (positive and negative) on social and economic values. If any of the criteria were met, the socioeconomic effects of the Project were deemed significant.

The significance criteria were as follows:

- There would be a Project-related long-term change in any sector of the local economy, such as a major change in employment or income;

- The Project would result in a change in population that would exceed the capacity of the affected communities to provide temporary or permanent housing;

- The effects on public sector revenue and/or expenditures would likely compromise the ability of the local governments to maintain public services and facilities at established service levels; or

- Changes generated in the social or business communities would cause important changes in organizational structures, local government, or lifestyles of the community. These may include parks, utilities, and other community infrastructure.

For the environmental justice analysis, effects would occur if environmental justice communities experienced a disproportionately high and adverse environmental or human health impact. The determination of disproportionate effects would occur if any of the following criteria are met:

- The impact is predominately borne by environmental justice communities; or

- The impact experienced by environmental justice communities is appreciably more severe or greater in magnitude than would be experienced by the general population.

The baseline conditions are provided in Chapter 2, and the results of the analysis are provided in Chapter 3.

2 Demographic and Economic Baseline Profile

2.1 Demographic and Social Characteristics

Malheur County is populated with an average of 3.2 people per square mile (US Census Bureau 2023a). Populations are mostly centered around the incorporated cities of Ontario, Vale, Nyssa, Adrian, and Jordan Valley. A number of unincorporated communities are also located within the county, such as Owyhee, which is located along the Project's secondary access route.

2.1.1 Population

As of July 2022 (the latest available information at the time of writing), the population of Malheur County was 31,879 (US Census Bureau 2023a). Malheur County's population has increased by 0.08 percent from 2020 to 2022, as shown in Table 2-1. The county grew faster than the state of Oregon, which had a 0.01 percent increase in population overall from 2020 to 2022 (US Census Bureau 2023b). Portland State University predicts that Malheur County will continue to grow between 0.4 percent and 0.8 percent per year (Table 2-2; Portland State University 2023).

Table 2-1. Population Change of the US, Oregon, and Malheur County (2020 to 2022)

Year	United States	Oregon	Malheur County
2010	331,449,520	4,237,291	31,575
2020	331,449,520	4,237,291	31,575
2022	333,287,557	4,240,137	31,879
Average annual % increase (2010–2022)	0.02%	0.01%	0.08%

Source: US Census Bureau 2023a, 2023b, 2023c

Table 2-2. Population Forecast of Malheur County

Year	Population	Average Annual % Increase
2024	32,624	0.8%
2025	32,874	0.8%
2026	33,120	0.7%
2027	33,358	0.7%
2028	33,588	0.7%
2029	33,812	0.7%
2030	34,032	0.7%
2040	35,906	0.5%
2050	37,230	0.4%

Source: Portland State University 2023

Table 2-3 summarizes the current population demographics for age and gender in the US, Oregon, and Malheur County in 2022. Malheur County has a higher percentage of males than females, as opposed to Oregon and the US, which both have roughly equal percentages of males and females. Malheur County also has a higher percentage of children under 5 years and under 18 years than the state and nation.

Table 2-3. Demographics of the US, Oregon, and Malheur County (2022)

Demographic	United States	Oregon	Malheur County
Total population in 2022	333,287,557	4,240,137	31,879
Male	49.6%	49.9%	54.3%
Female	50.4%	50.1%	45.7%
Under 5 years	5.6%	4.9%	6.3%
Under 18 years	21.7%	19.7%	25.7%
18 years to 64 years	61.0%	61.1%	57.4%
65 years and over	17.3%	19.2%	16.9%
Median age	38.8 years	39.9 years	38.0 years

Source: US Census Bureau 2023a, 2023b, 2023c

2.1.2 Race and Ethnicity

Table 2-4 presents race and ethnicity information for the US, Oregon, and Malheur County in 2016. It shows that Malheur County has a higher percentage of people who identify as white alone than Oregon and the nation and a lower percentage of black or African American than the US as a whole, although not substantially less than Oregon. The percentage of people who identify as Asian is lower in Malheur County than in both Oregon and the nation, and the percentage of people who identify as Hispanic or Latino is much higher in Malheur County than in Oregon or the nation.

Table 2-4. Race and Ethnicity for the US, Oregon, and Malheur County (2022)

Demographic	United States	Oregon	Malheur County
Total population in 2022	333,287,557	4,240,137	31,879
White alone	75.5%	85.9%	91.9%
Black or African American alone	13.6%	2.3%	1.7%
American Indian and Native Alaskan alone	1.3%	1.9%	2.0%
Asian alone	6.3%	5.1%	1.4%
Native Hawaiian and other Pacific Islander alone	0.3%	0.5%	0.2%
Two or more races	3.0%	4.3%	2.8%
Hispanic or Latino	19.1%	14.4%	35.5%
White alone, not Hispanic or Latino	58.9%	73.5%	59.2%
Foreign born	13.6%	9.8%	9.8%

Source: US Census Bureau 2023a, 2023b, 2023c

2.1.3 Housing

Table 2-5 provides information on home ownership rates and median property values for the US, Oregon, and Malheur County. It shows that the home ownership rate in Malheur County is slightly lower than that of Oregon and the nation and the mean property value of a home in Malheur County is less than half the value of homes statewide.

Table 2-5. Income and Property Values for the US, Oregon, and Malheur County (2021)

Statistic	United States	Oregon	Malheur County
Median household income, 2017–2021	$69,021	$70,804	$47,906
Home ownership rate	64.6%	63.2%	59.6%
Median property value	$244,900	$362,200	$162,100
Property value of largest share of households	$300,000–$400,000	$300,000–$400,000	$100,000–$125,000

Sources: Data USA 2023; US Census Bureau 2023a, 2023b, 2023c

Table 2-6 provides basic information on housing in Malheur County, and Table 2-7 summarizes the housing occupancy and vacancy rates. Table 2-6 shows that in 2022, the majority of homes in Malheur County were occupied, with vacancy rates of 0.7 percent of homes for sale and 1.9 percent of homes for rent.

Table 2-6. Housing Occupancy Information for Malheur County (2022)

Housing Information	Number	Percentage of Total
Housing units	11,649	100%
Occupied homes	9,952	89.2%
Vacant households	1,717	10.8%
For-sale vacancy rate	46	0.7%
Rental vacancy rate	130	1.9%

Source: Headwater Economics 2023

Table 2-7 shows that in 2023, the majority of homes for sale and rent were located in Ontario, which is the largest city in Malheur County. The table also shows that there were more homes available for rent than for sale and that there were 176 vacant homes for sale or rent.

Table 2-7. Housing Sale and Rental Information for Malheur County and its Largest Cities (2023)

Housing Information	Ontario	Nyssa	Vale	Malheur County
Number of housing units	4,931	1,081	783	11,649
Percentage of housing units in the county	42.3%	9.3%	6.7%	N/A
Number of homes for sale	9	14	15	46
Percentage of homes for sale in the county	19.6%	30.4%	32.6%	N/A
Number of homes for rent	102	13	10	130
Percentage of homes for rent in the county	78.5%	10.0%	7.7%	N/A

Source: Headwater Economics 2023

2.1.4 Public Safety

2.1.4.1 Law Enforcement

The Malheur County Sheriff provides primary law enforcement, detention, and emergency dispatch services in the county including police, medical, and fire suppression activities. The Sheriff Patrol unit has three overlapping districts: (1) the South District with two resident deputies; (2), the North District with four deputies; and (3) the Vale District with three deputies. The Ontario Police Department, Nyssa City Police Department, and Adrian Police Department also provide law enforcement services. The sheriff's office operates the Malheur County Correctional Facility in the town of Vale, with a 105-bed capacity (Malheur County 2023b). The Oregon State Police provides law enforcement on the federal and state highway system and provides support to other law enforcement agencies. Within the area of analysis, Malheur County had an estimated 18 violent crimes and 9 property crimes in 2019, the most recent year data were reported (Federal Bureau of Investigation 2023) (Table 2-8).

Table 2-8. Crime Statistics for Malheur County (2017–2019)

Year	Violent Crime	Murder and Non-negligent Manslaughter	Rape	Robbery	Aggravated Assault	Property Crime	Burglary	Larceny-Theft	Motor Vehicle Theft	Arson
2017	10	0	0	0	10	4	0	3	1	1
2018	12	0	0	0	12	4	0	2	2	0
2019	9	0	0	0	9	4	0	4	0	1

Source: Federal Bureau of Investigation 2023

2.1.4.2 Fire Protection

There are eight fire departments located in the most populated areas in Malheur County (Malheur County 2023b):

- Adrian Rural Fire Protection District, which serves Adrian;
- Jordan Valley Volunteer Fire Department, which serves Jordan Valley;
- Nyssa Fire Department, which serves Nyssa;
- City of Vale Fire Department, which serves Vale and surrounding areas;
- Vale Rural Fire District, which serves Vale and surrounding areas; and
- Ontario Fire and Rescue, which has two separate stations to serve the city of Ontario and the surrounding areas.

The BLM Oregon and Washington Fire Program manages fires across 16.1 million acres of public lands. This program is responsible for fire suppression, treatment of hazardous fuels, fire prevention, fire investigation, and fire rehabilitation on BLM-managed public lands (BLM 2023).

2.1.4.3 Emergency Medical Services

The Malheur County Sheriff Emergency Management Division provides emergency dispatch services in the county. Malheur County is served by the St. Alphonsus Medical Center, a 49-bed, acute care, not-for-profit hospital in Ontario.

2.1.5 Community Facilities and Services

2.1.5.1 Healthcare

The St. Alphonsus Medical Center in Ontario is a 49-bed, acute care, not-for-profit hospital, serving Ontario and the surrounding communities in eastern Oregon and southwestern Idaho. Other healthcare providers in the county include Valley Family Health Care, Planned Parenthood – Ontario Health Center, Treasure Valley Women's Clinic, Physician's Primary Care Center, and Malheur Memorial Health Clinic.

2.1.5.2 Education

The Malheur County Education Service District (ESD) provides supporting infrastructure to local school districts within its boundaries. The ESD includes 7 school districts in the study area, with 309 teachers and 5,325 students (Oregon Department of Education 2023). The school districts in Malheur County include Nyssa, Adrian, Ontario, Harper, Vale, Jordan Valley, and Four Rivers Community School (Table 2-9). Treasure Valley Community College is the only post-secondary education option in Malheur County and provides a public 2-year education.

The Malheur County ESD 2022/2023 class size ratio by district varies from 13:1 to 23:1; but many classes have more than 26 students (Table 2-9). Median class size over time has decreased for each district, except for Ontario, which has increased from 10 to 21 students (Table 2-10).

Table 2-9. Malheur County Education Service District (2022/2023)

District	Median Class Size	Class Size 1 to 15	Class Size 16 to 25	Class Size >26	Total Students	Total Teachers	Teacher/ Student Ratio
Nyssa	17	90	120	16	1,325	101	13:1
Adrian	11	37	17	1	267	18	15:1
Ontario	21	40	197	33	2,171	101	21:1
Harper	6	54	17	9	258	11	23:1
Vale	17	49	73	7	889	49	18:1
Jordan Valley	7	24	0	0	62	9	7:1
Four Rivers Community School	21	29	22	27	353	20	18:1

Source: Oregon Department of Education 2023

Table 2-10. Malheur County Median Class Sizes Over Time

District	2017/2018	2018/2019	2020/2021	2021/2022	2022/2023
Nyssa	19	17	12	12.5	17
Adrian	11	11	9	7	11
Ontario	10	8	6	8	21
Harper	18	19	17	18	6
Vale	23	24	21	23	17
Jordan Valley	17	18	16	17	7
Four Rivers Community School	26	22	23	26	21

Source: Oregon Department of Education 2023 (2019/2020 data are not available).

2.1.5.3 Parks and Recreation

The Malheur County Parks system consists of the fully developed Bully Creek Park plus partial facilities at Owyhee Reservoir, Beulah Reservoir, and Malheur Reservoir. All these reservoirs provide irrigation storage as their primary function (Malheur County 2023b). Other parks within Malheur County include a variety of city parks in Ontario, Vale, and Nyssa, the largest of which are Beck-Kiwanis Park in Ontario (City of Ontario 2024) and Wadleigh Park in Vale (City of Vale 2024).

The Mine and Process Area and the Access Road Area of the proposed Project support dispersed recreation and an existing road network that provides local access. Recreational opportunities include off-highway vehicle use, camping, picnicking, hiking, hunting, wildlife viewing, and rockhounding. There are no designated recreational sites within the recreation resources study area for the Project. However, there is one designated recreation site located approximately 3 miles from the study area boundary, the Twin Springs Campground, which is a primitive campsite with few amenities. Access to the campground is via Twin Springs Road within the proposed Project area (Figure 1-1). Twin Springs Road is unpaved (gravel) and passes through undeveloped land that is administered by the BLM, which manages and maintains Twin Springs Road. Twin Springs Road is most popular in the summer for access to Twin Springs Campground and is also used by hunters during hunting seasons. Winter use by farm and recreational traffic is low on Twin Springs Road. Road reconstruction, widening, and culvert placement are all proposed for the portion of Twin Springs Road within the proposed Project area.

2.1.5.4 Water and Wastewater

The Malheur County Environmental Health Department issues onsite septic system permits, runs the Licensed Facility Program and Drinking Water Program, and oversees the County Solid Waste Program. Additionally, water, wastewater, and solid waste services are provided to incorporated areas of the county as described below.

Water

The cities of Ontario, Nyssa, and Vale each operate a municipal water system for residents. The city of Ontario uses water drawn from the Snake River along with six shallow alluvial wells for supply. The city has groundwater rights for up to 6,400 gallons per minute (gpm) to be drawn from the wells and has a surface water right for up to 9,020 gpm to be withdrawn from the Snake River. The city treats well water and surface water at its water treatment facility, which has a reported treatment capacity of 10.0 million gallons per day (6,940 gpm) (City of Ontario 2020).

Wastewater

The cities of Ontario, Nyssa, and Vale each operate a wastewater treatment system for residents. The city of Ontario uses a conventional treatment system of aerated lagoons and secondary chlorination treatment (City of Ontario 2020). Effluent from the treatment process is used to irrigate forage crops during the growing season. There are 77.88 miles of sanitary sewer lines within Ontario and eight lift stations to move the wastewater to the wastewater treatment plant.

2.1.5.5 Solid Waste

Garbage, recycling, and yard waste curbside collection is provided by Ontario Sanitary Service, Inc. to Ontario, Nyssa, Vale, Adrian, Jordan Valley, Harper, Juntura, Brogan, and Farewell Bend. A transfer station and after-hours drop-off center for recycling is located in Ontario.

Malheur County holds permits from the Oregon Department of Environmental Quality for the operation of Lyle Boulevard Landfill, a small landfill 10 miles south of Vale. The landfill can accept 20 tons of waste per day.

The Clay Peak Landfill in Payette County, Idaho, also accepts waste from Malheur County.

2.1.5.6 Power and Natural Gas

Residential, commercial, and industrial customers in Malheur County are served by Idaho Power and Cascade Natural Gas.

2.1.5.7 Roads and Traffic

Roads in Malheur County in the vicinity of the proposed Project include Oregon Department of Transportation roads (i.e., US Route 20, US Route 26, and Oregon State Route 201), Malheur County roads, and BLM roads. These roads support public access, grazing, outdoor recreation, and a power line route. The access road for the Project would be an existing road that begins at the intersection of US Route 20 and Russell Road and continues south along Cow Hollow Road and Twin Springs Road until reaching the mine (Figure 1-1). Some areas of road improvements would be required, including some roadway realignments, road widening, and installation of 11 cross drain culverts. An emergency access road would be located on county-owned Mitchell Butte Road and Owyhee Avenue (Figure 1-1). Owyhee Avenue is part of the main access to Owyhee Reservoir.

2.2 Regional Economy

2.2.1 Economic Setting

Malheur County's largest employer is Ore-Ida, which is a potato-based frozen foods distributor located in Ontario, employing about 1,000 workers. Malheur County's primary employers are services related, non-services related, government, and retail (Table 2-11). The county's second-largest employer is the Oregon Snake River Correctional Institution, which is the largest facility in the Oregon Department of Corrections and employs 900 people (McConnell et al. 2015).

Notably, mining does not currently have a footprint in Malheur County, although there is a history of mining jobs in the 1970s, 1990s, and 2000s (Table 2-11).

Table 2-11. Employment by Industry in Malheur County (1970–2021)

Industry	1970	1990	2000	2001	2010	2021
Total employment (number of jobs)	12,751	15,590	18,099	17,865	17,199	17,561
Services related	5,034	7,546	9,048	9,162	9,165	9,506
Non-services related	5,893	5,740	5,571	4,447	3,536	3,845
Government	1,824	2,304	3,549	3,442	3,429	3,279
Retail trade	2,012	2,615	3,153	2,395	2,159	2,564
Farm	3,486	2,829	2,413	2,435	2,141	2,254
Healthcare and social assistance	-	-	-	1,700	1,950	2,053
Manufacturing (including forest products)	1,710	1,701	1,720	1,451	1,028	1,133
Accommodation and food services	-	-	-	1,020	1,136	1,079
Services	1,608	2,722	3,747	881	772	783
Wholesale trade	439	997	921	713	767	525
Real estate and rental and leasing	-	-	-	414	444	521
Transportation and warehousing	416	631	587	518	463	488
Construction	389	394	622	561	367	458
Professional and technical services	-	-	-	334	379	415
Administrative and waste services	-	-	-	385	363	411
Finance, insurance, and real estate	559	581	640	377	350	336
Arts, entertainment, and recreation	-	-	-	140	112	118
Information	-	-	-	162	132	87
Management of companies	-	-	-	23	26	57
Utilities	-	-	-	52	32	45
Educational services	-	-	-	48	80	24
Agricultural services, forestry, fishing, and other	290	752	741	-	-	-
Mining (including fossil fuels)	18	64	75	-	-	-

Source: Headwater Economics 2023

2.2.2 Income and Poverty

Table 2-12 presents the average annual wages by industry for the county, state, and nation in 2021. It shows that the annual average wage for residents of Malheur County is lower than in Oregon state and the US as a whole for all occupations with data available. The three most common occupations for Malheur County residents are agriculture, forestry, fishing, and hunting; retail trade; and manufacturing (Data USA 2023).

Table 2-12. Average Annual Wages by Industry in the US, Oregon, and Malheur County (2021)

Industry Type	Average Annual Wages ($)					
	United States		Oregon		Malheur County	
	Male	Female	Male	Female	Male	Female
Agriculture, Forestry, Fishing, and Hunting	$43,100	$28,000	$36,532	$27,649	$29,497	$21,667
Retail Trade	$48,200	$33,700	$35,000	$25,600	$24,119	$20,128
Manufacturing	$64,200	$53,000	$60,164	$45,933	$42,533	$29,400

Source: Data USA 2023

Table 2-13 summarizes the median household income, median property value, and poverty rates for residents in the US, Oregon, and Malheur County in 2021 and the number of people homeless in 2019. Malheur County has lower salaries and income, with a higher poverty rate. There are relatively fewer homeless people in Malheur County compared to the US and Oregon.

Table 2-13. Income, Poverty Rate, and Homelessness for the US, Oregon, and Malheur County

Statistic	United States	Oregon	Malheur County
Median Household Income	$69,021	$70,084	$47,906
Poverty Rate	11.5%	12.1%	20.0%
Point-In-Time Homelessness 2019	567,715 (37% unsheltered) 0.17% of total population	15,876 (64% unsheltered) 0.37% of total population	22 people (65% unsheltered) 0.07% of total population

Data are presented for 2021, but poverty data are for 2019.
Sources: Data USA 2023a, 2023b, 2023c; Oregon Housing and Community Services 2019

In 2021, Malheur County's poverty rate was above the state average and the national average (Table 2-13). In 2021, Malheur County had the highest poverty rate in Oregon, and the counties surrounding Malheur all had poverty levels greater than the statewide rates. The most common racial or ethnic group living below the poverty line in Malheur County is white, followed by Hispanic or Latino, which is the same for the US as a whole (Data USA 2023).

The nationwide effort to count every homeless person across the country captures both sheltered and unsheltered homeless people to provide a snapshot of homelessness in the US (Oregon Housing and Community Services 2019). According to the most recent survey, from 2015 to 2019 the number of homeless people in Oregon increased by 19 percent, and the number of persons living unsheltered increased by 37 percent. In Malheur County, the number of people experiencing homelessness decreased by approximately 85 percent from 151 people in 2017 to 22 in 2019 (Oregon Housing and Community Services 2019). Approximately 9 percent of the homeless population in Oregon are veterans.

Initiatives in Oregon and in Malheur County have been created to address poverty. Oregon Solutions is an organization housed at Portland State University that develops sustainable solutions to community-based problems that support economic, environmental, and community objectives and is built through the collaborative efforts of businesses, government, and non-profit organizations (Oregon Solutions 2023). In addition, the Oregon Prosperity Initiative works to ensure that people and families who are currently living in poverty have access to critical resources, to address the root causes of poverty, and to clear systemic barriers to increasing prosperity. Oregon Solutions worked with the Oregon Prosperity Initiative to

implement a pilot project in Malheur County using a collaborative implementation model. The grassroots initiative "Malheur County: Poverty to Prosperity" focused on a strategic five-point economic development plan for Malheur County consisting of building a career technical education school, expanding industrial land, using natural resources, retaining local business, and expanding the agriculture trade sector (Oregon Solutions 2023).

2.2.3 Education Level and Employment Rates

The economy of Malheur County employs approximately 11,400 people. From 2020 to 2021, employment in Malheur County increased at a rate of 2.27 percent, whereas national employment grew at a rate of 1.09 percent. Table 2-14 provides the total labor force and employment rates for the US, state of Oregon, and Malheur County for comparison purposes. Employment rates are defined as a measure of the extent to which available labor resources (working age population) are being used. The unemployment rate measures the share of workers in the labor force who do not currently have a job but are actively looking for work.

Table 2-14. Labor Force and Employment Rates in the US, Oregon, and Malheur County (2021)

Employment	United States	Oregon	Malheur County
Total Labor Force	148,228,309	1,900,000	11,400
Employment Rate	63.1%	62.5%	50.5%
Unemployment Rate	3.9%	4%	4.4%

Source: Data USA 2023a, 2023b, 2023c

The largest industries in Malheur County are agriculture, forestry, fishing, and hunting (1,728 people); retail trade (1,453 people); and manufacturing (1,383 people). The highest-paying industries are professional, scientific, and technical services ($53,026); utilities ($49,583); and transportation and warehousing ($48,750) (Data USA 2023). Many of these jobs are held by residents outside of Malheur County who commute to job sites. For residents of Malheur County, in 2021 the most common jobs held were in agriculture, retail, and manufacturing.

Table 2-15 presents the education attainment rates for the US, state of Oregon, and residents in Malheur County. It shows that Oregon state has the highest percentage of high school graduates and people 25 and over with higher education, whereas Malheur County has the lowest.

Table 2-15. Education Attainment for Residents of the US, Oregon, and Malheur County (2017–2021)

Education	United States	Oregon	Malheur County
High school graduate[1]	88.9%	91.5%	81.5%
Bachelor's degree or higher[1]	33.7%	35.0%	14.1%

Sources: US Census Bureau 2023a, 2023b, 2023c
[1] Percent of persons age 25+ years 2017–2021.

2.2.4 Major Industries

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 important to the regional economy, with Cow Hollow Park, Lake Owyhee State Park, Leslie Gulch, and Malheur National Forest being the main attractions.

Row crop farming has grown and continues to contribute to a strong economy in Malheur County as the agricultural industry has grown over the years. Migrant and seasonal farm workers make up a majority of the farm labor force. Migrant workers are those whose employment requires travel that prevents them from returning to their permanent place of residence the same day. The 2017 Census of Agriculture reported a total migrant farm worker count of 771 workers on 39 farms in Malheur County (McConnell et al. 2015). Table 2-16 summarizes the Malheur County estimates for migrant and seasonal farm workers. The total population of migrant and seasonal farm workers and their families constitute about a third of the county's population.

Table 2-16. Migrant and Seasonal Farm Worker Estimates for Malheur County

Geography	Total Migrant Seasonal Farm Workers (MSFW)	Migrant Workers	Seasonal Workers	Non- Farm Workers in Migrant Worker Households	Non- Farm Workers in Seasonal Worker Households	Total MSFW and Non- MSFW
Malheur County	5,981	2,003	3,977	1,511	3,000	10,492

Source: Larson 2013 as cited in McConnell et al. 2015

2.3 Public Finances

2.3.1 Sources of Revenue

Malheur County's primary source of revenue is intergovernmental transfers ($17,239,979). Those intergovernmental funds consist of the general fund ($4,980,311), road fund (3,869,271), American Rescue Plan ($2,969,029), mental health ($3,568,168), and other funds ($1,853,200). Additional sources of revenue include property taxes, followed by grants and charges for services (Table 2-17).

2.3.2 Expenditures

Malheur County's areas of expenditures include general government, social services, public safety, community services, roads, and other expenses. For the 2022 fiscal year, Malheur County had expenditures totaling $27,993,497 (Malheur County 2023a).

Table 2-17. Malheur County Financial Statement for Fiscal Year Ended June 30, 2022

Description	Total Governmental Funds
Revenues	
Property taxes	$6,867,792
Intergovernmental	$17,239,979
Grants	$3,743,879
Charges for services	$3,656,604
Investment earnings	$95,213
Other income	$370,509
Total	**$31,973,976**
Expenditures	
General government	$4,034,911
Social services	$7,428,804
Public safety and justice	$10,573,059
Community services	$1,749,955
Library services	$23,116
Roads and bridges	$3,129,193
Capital outlay	$832,243
Debt principal	$206,072
Debt interest	$16,144
Total	**$27,993,497**
Other financing	$(14,227)
Net change in fund balances	$3,966,252

Source: Malheur County 2023a

2.4 Environmental Justice

Environmental justice involves the fair treatment and meaningful involvement of all people regardless of race, age, gender, national origin, education, or income level. Executive Order (EO) 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, requires federal agencies to consider disproportionate adverse human health and environmental effects on minority and low-income populations. While this Project is being reviewed by an Oregon state agency under the Oregon Consolidated Permit process, the EO provides useful guidance in appropriately identifying and analyzing potential impacts to environmental justice populations.

EO 12898 defines a minority population as a community where:

a. the minority population (of one or multiple minority groups) of the affected area exceeds 50 percent; or

b. the minority population percentage of the affected area is meaningfully greater than the minority population percentage in the general population or other appropriate unit of geographic analysis.

For this analysis, the general population consists of Oregon state and Malheur County and is compared to the population of the affected area.

EO 12898 states that a low-income population should be identified using annual statistical poverty thresholds from the US Census Bureau's Current Population Reports, Series P-60 on Income and Poverty. A low-income community may be either a group of individuals living in geographic proximity to one another or a set of individuals (such as migrant workers) where either type of group experiences common conditions of environmental exposure or effect.

In Oregon, environmental justice is defined by the Oregon Environmental Justice Task Force as equal protection from environmental and health hazards, and meaningful public participation in decisions that affect the environment in which people live, work, learn, practice spirituality, and play. Oregon state agencies, including DOGAMI and other state agencies involved in review of this Project, are required to provide greater public participation and ensure involvement of people who may be affected by agency actions by considering the effects of the actions on environmental justice issues, holding hearings at times and in locations that are convenient, engaging in public outreach activities, and reporting annually on the agency's efforts to the Environmental Justice Task Force and governor of Oregon. According to the task force, an environmental justice community includes not only minority and low-income communities, but also tribal communities and other communities traditionally underrepresented in public processes (Environmental Justice Task Force 2023). This socioeconomic and environmental justice analysis, therefore, also identifies tribal communities and other communities traditionally underrepresented in public processes.

Another source of information on environmental justice comes from the EPA, which has developed an environmental justice mapping and screening tool called EJSCREEN based on national environmental and demographic indicators in maps and reports (EPA 2023). The results of the EJSCREEN for the Project are provided below.

For environmental justice impacts to occur, significant adverse environmental impacts attributable to a project must fall disproportionately upon an environmental justice community. While the environmental justice analysis is specifically concerned with disproportionate effects on minority and low-income communities, tribal communities, and other communities traditionally underrepresented in public processes, this socioeconomic and environmental justice analysis considers all potential social and economic effects, positive and negative, on residents within Malheur County.

2.4.1 Race, Ethnicity, and Minority Communities

Table 2-18 summarizes race and ethnicity for the US, Oregon, and Malheur County. It shows that most residents of Oregon state and Malheur County are white.

Table 2-18. Race and Ethnicity for the US, Oregon, and Malheur County (2022)

Demographic	United States	Oregon	Malheur County
Total population in 2022	333,287,557	4,240,137	31,879
White alone	75.50%	85.90%	91.90%
Black or African American alone	13.60%	2.30%	1.70%
American Indian and Native Alaskan alone	1.30%	1.90%	2.00%
Asian alone	6.30%	5.10%	1.40%
Native Hawaiian and other Pacific Islander alone	0.30%	0.50%	0.20%
Two or more races	3.00%	4.30%	2.80%
Hispanic or Latino	19.10%	14.40%	35.50%
White alone, not Hispanic or Latino	58.90%	73.50%	59.20%
Foreign born	13.6%	9.8%	9.8%
EJScreen People of Color	24.50%	14.10%	8.10%

Sources: US Census Bureau 2023a, 2023b, 2023c

For this analysis, a minority person is any person who is a member of any of the following population groups: American Indian, Alaska Native, Asian, Pacific Islander, Black, or Hispanic. Although the US Census Bureau considers Hispanic/Latino an ethnicity, not a race, a person of Hispanic or Latino descent is considered to be a minority.

Malheur County is less diverse than Oregon as a whole, except for the Hispanic or Latino population, which is substantially greater than the state of Oregon but does not exceed 50 percent.

The EJScreen People of Color category is defined as the percentage of individuals in a block group who list their racial status as a race other than white alone and/or list their ethnicity as Hispanic or Latino—that is, all people other than non-Hispanic white-alone individuals. The word “alone” in this case indicates that the person is of a single race, not multiracial.

According to the definition of minority population in EO 12898, Malheur County does not have a minority population.

Within Malheur County, there are environmental justice people of color populations above 50 percent in geographic areas around the cities of Vale (55–61 percent), Ontario (62–82 percent), and Nyssa (60–85 percent). Therefore, an analysis of potential affects to these communities is warranted.

2.4.2 Poverty and Low-Income Communities

The EJScreen low-income population is defined as the percentage of individuals whose ratio of household income to poverty level in the past 12 months was less than 2 (as a fraction of individuals for whom ratio was determined).

Malheur County has higher poverty rates and more low-income communities than Oregon as a whole. Low-income populations in Malheur County include populations in geographic areas around the cities of Vale (70–76 percent), Ontario (44–98 percent), and Nyssa (54–87 percent). These geographic areas can be considered environmental justice communities based on poverty and low-income status.

2.4.3 Tribal Communities

EJScreen estimates that the American Indian population in Malheur County is 660 individuals, or approximately 2 percent of the total population of the county. American Indian populations are centered around the cities of Vale and Ontario. The potential impacts to these communities are considered in the next chapter.

2.4.4 Traditionally Underrepresented Communities

Traditionally underrepresented communities identified in Malheur County by EJScreen include limited-English-speaking populations and populations with an education level less than high school. The limited-English-speaking population is centered around the cities of Vale, Ontario, and Nyssa. The less-than-high-school-education population is also centered around the cities of Vale, Ontario, and Nyssa. The potential impacts to these communities are considered in the next chapter.

3 Impacts

This chapter discusses the direct, indirect, and induced effects of the proposed Project to socioeconomic resources and environmental justice populations.

3.1 Employment and Income

Section 2.2.2 demonstrates that Malheur County has lower salaries and income, with a higher poverty rate than Oregon state or the US as a whole. Malheur County also has a lower annual average wage for residents than Oregon state or the US as a whole.

The proposed Project is in line with the grassroots initiative “Malheur County: Poverty to Prosperity” focused on a strategic five-point economic development plan for Malheur County consisting of building a career technical education school, expanding industrial land, using natural resources, retaining local business, and expanding the agriculture trade sector. This Project would provide the economic development opportunities described in the plan.

IMPLAN software was used to determine the projected direct, indirect, and induced employment and economic impacts for the proposed Project. Since there is no local gold industry, IMPLAN used averages from other geographies to estimate the potential impact to the community. The results used US gold ore mining industry data per worker as a proxy for Malheur County gold ore mining data to identify direct, indirect, and induced effects from changes in spending associated with the proposed Project (IMPLAN 2023).

Approximately 112 new workers would be directly employed during the Project. This workforce includes mine operators, process plant operators, administrative personnel, security staff, parking attendants, and health, safety, and environmental compliance personnel. Approximately 198 total new jobs would be created, through direct, indirect, and induced hiring (Table 3-1).

Table 3-1. Project Impacts to Employment and Economic Activity

Impact	Employment	Labor Income	Value Added	Output	Total
Direct	112	$12,906,486	$34,109,965	$70,204,305	$117,220,756
Indirect	52	$2,485,244	$4,424,720	$10,036,997	$16,946,961
Induced	34	$1,393,030	$2,523,800	$4,557,282	$8,474,112
Total	**198**	**$16,784,760**	**$41,058,485**	**$84,798,584**	**$142,641,829**

Since there is no local gold mining, skilled mining professionals are likely to be imported to the county. It is estimated that of the approximately 112 new workers that would be directly employed during the Project, approximately 45 (40 percent) would be skilled mining professionals who are likely to move into the area. In contrast, operator, mining, milling, and other support professionals are anticipated to be sourced from local labor, when possible.

Indirect and induced employment is modeled to be 52 and 33 employees, respectively. Indirect employment can include hotels and restaurants, while induced employment would be jobs in retail, services, and the local government. These indirect and induced positions are anticipated to be drawn from local labor.

The Project plans to implement a local-hire preference, with local contracting and purchasing where practicable, and mine-worker job training. Partnerships with local community colleges and vocational schools are planned, including Treasure Valley Community College in Ontario, Eastern Oregon University in LaGrande, and the College of Western Idaho in Boise.

Underground mining would occur in two 12-hour shifts per day so the mine would operate 24 hours per day, 4 days per week. Production-related mining personnel (e.g., operators, fitters, electricians, and assistants) would work a shift system of 4 days on and 3 days off in two teams.

Ore processing at the process plant would operate two shifts per day, 365 days per year. Administrative personnel would work 10 hours per day in a shift system with 4 days on and 3 days off.

Economic impact would include labor income, value added, and output impact. Labor income is the wages paid to employees. Value added impact is the increase in the county's gross domestic product from the production of extra goods and services. Output impact is the economic value of mining for the mineral. For direct impacts, labor income would be direct employee payroll, value added would be the value from mining the mineral, and output would be the mined mineral itself.

The proposed Project would have a significant positive impact to employment and the economy.

3.2 Population

The proposed Project is anticipated to increase employment by 198 total jobs, with 112 of those being directly employed by the Project (Table 3-1). The Project anticipates hiring as many local employees as possible, but an estimated 45 skilled mining professionals would likely need to be imported, along with any positions not able to be filled by local employees.

To estimate the increase in population, this analysis used the Malheur County average of 2.82 people per household (US Census Bureau 2023a). An estimated population increase would assume 45 employees would be imported and establish single-earner households. This would lead to a population increase of 127 people (45 imported jobs * 2.82 = 126.90 people). A low estimate would be that only 17 of the direct mining professional employees would be imported, for an increase in population of 48 people (17 jobs × 2.82 = 47.94). Therefore, a reasonable estimated increase in population would be between 48 and 127 people.

Malheur County's 2022 population was 31,879 people (Table 2-1). The anticipated average annual growth rate is 0.7 percent to 0.8 percent (Table 2-2, ~255 people per year). The proposed Project's increase in population of between 48 and 127 people would account for approximately one-fifth to one-half of a year of anticipated county population growth. This growth is likely to be centered on the largest cities in Malheur County: Ontario, Nyssa, and Vale. This population growth is within the anticipated range of growth in the community and is not anticipated to have a significant impact to population.

3.3 Housing

While it is unknown how many employees would be local versus imported, an estimate of increases in households would be between 17 and 45 (Section 3.2). Demand for homes is most likely to take place in the communities of Ontario, Nyssa, and Vale, as new residents are likely to take advantage of local infrastructure and services.

Table 2-7 indicates that there are 130 housing units for rent and 46 for sale in Malheur County, primarily in Ontario. This number is higher than the potential demand for housing. The new households would likely occupy some of the rental or for-sale homes but would not have a significant impact on housing availability in the local market.

3.4 Public Revenue

IMPLAN software was used to determine the projected direct, indirect, and induced public revenue for the proposed Project. Since there is no local gold mining industry, IMPLAN used averages from other geographies to estimate the potential impact to the community. The anticipated direct, indirect, and induced tax impact from the proposed Project is summarized in Table 3-2.

Table 3-2. Tax Impact from the Proposed Project

Impact	Sub-County General	Sub-County Special Districts	County	State	Federal	Total
Direct	$576,440	$1,249,794	$446,973	$2,361,640	$2,403,106	$7,037,953
Indirect	$147,586	$319,986	$114,439	$544,281	$341,544	$1,467,836
Induced	$29,947	$64,928	$23,221	$145,636	$258,341	$522,073
Total	**$753,973**	**$1,634,708**	**$584,633**	**$3,051,558**	**$3,002,991**	**$9,027,863**

While actual revenues would be subject to market conditions, these estimates are considered best estimates at this time. Sub-county (e.g., towns and cities), sub-county special district (e.g., minor civil divisions and census county divisions), county, state, and federal tax revenues are anticipated to increase from the increased economic activity. If sub-county or sub-county districts are not created, their revenues would roll up to the county.

Revenue estimates are broken out into direct, indirect, and induced revenues. Direct public revenues would occur from property taxes on the mine, government charges for services, and mineral taxes on output. Indirect revenues would occur from new employees contributing through employee income tax, sales taxes, and similar economic activity. Induced impacts would be from economic multiplier effects, such as increased retail activity from new families, which would benefit local service industries.

Table 2-17 demonstrates that Malheur County expended $27,993,497 for the fiscal year that ended on June 30, 2022. The proposed Project would have positive tax impacts to the state and federal budgets (Table 3-2). Table 3-2 demonstrates that the Malheur County total tax impact would be $584,632, with sub-county total revenues being $753,972.56 and sub-county special district revenue being $1,634,708.43. These revenues would be from direct taxes, but also include indirect revenue (e.g., supplier tax) and induced revenue (e.g., retail sales tax). This indicates that revenues from the proposed Project would be a minor, positive impact to local budgets.

3.5 Public Safety

The proposed Project would lead to an increase in population (estimated at between 48 and 127 people). An increase in the population could increase the demand on law enforcement, fire protection, and emergency medical services. However, the population increase would be one-fifth to one-half of a year of anticipated county population growth. Therefore, it is expected that the increase in population from the mine would be insignificant compared to the projected area growth unrelated to the Project (Table 2-2).

3.6 Community Facilities and Services

3.6.1 Healthcare, Education, and Parks and Recreation

3.6.1.1 Healthcare

The proposed Project would lead to an increase in employment and likely an increase in population (between 48 and 127 people). An increase in population could increase the demand for healthcare services. However, the population increase would be one-fifth to one-half of a year of anticipated county population growth. Therefore, it is expected that the increase in population from the mine would be insignificant compared to the projected area growth unrelated to the Project (Table 2-2).

3.6.1.2 Education

The proposed Project would lead to an increase in jobs and likely an increase in population (Section 3.3 estimates between 17 and 45 households). With Malheur County having an average of 2.82 people per household (US Census Bureau, 2023a), a reasonable estimate would be 0.82 new children per household. For this analysis, it is assumed each immigrated employee will be a new household, each household will have a single earner, and households will be dual parent.

The increase in households would lead to between 13.9 and 36.9 new students (17 to 45 households × 0.82 new children). A low estimate would be an increase of 24 students (29 new households × 0.82 new children = 23.78). Therefore, a reasonable estimated increase in students would be between 14 and 37 students.

This potential growth in school enrollment is likely to be centered on the largest city school districts in Malheur County: Ontario, Nyssa, and Vale.

As noted in Table 2-9, there were 5,325 students in the county for the 2022–2023 school year. The proposed Project could raise the enrollment between approximately 0.3 percent and 0.7 percent. The anticipated average annual population growth rate for the county is 0.7 percent to 0.8 percent (Table 2-2, ~255 people per year). This means the expected increase related to the Project is equal to or less than the anticipated average annual growth rate for the county.

The Malheur County ESD 2022–2023 class size ratio by district varies from 13:1 to 23:1 (Table 2-9). Median class size through time has decreased for each district, and these districts may thus have the capacity for additional students. The exception is the Ontario district, whose ratio has increased from 10 to 21 students.

An increase of 14 to 37 students would be spread over many ages and schools, so the potential increase of student to teacher ratios would most likely be small and spread over many classes. The existing schools are anticipated to accommodate the additional students with no significant impact to education for existing residents.

3.6.1.3 Parks and Recreation

The proposed Project would lead to an increase in population (between 48 and 127 people). The existing parks and recreation facilities are mostly parks and open natural areas, which would likely accommodate such an increase in population.

During the course of the proposed Project, 488 acres of land within the Mine and Process Area and the Access Road Area would be fenced off and closed to dispersed recreation until the area is reclaimed. In the event that dispersed recreation occurs in the surrounding area, the presence of mine facilities, including the tailing storage facility and process plant, may negatively impact the recreation experience due to associated visual and noise effects. However, there are plentiful opportunities for dispersed recreation in the vicinity and beyond that can continue to be used for recreation purposes. After mine closure, the fencing and aboveground facilities would be removed, reclamation of the site would occur, and the site itself would be available again for dispersed recreation. Mine closure is estimated to be a period of approximately 30 years, during which time, access restrictions may continue to limit dispersed recreation in some areas such as the covered tailings storage facility.

3.6.2 Water, Wastewater, Solid Waste, and Power

3.6.2.1 Water Needs

Water is required for mining, ore processing, fire protection, potable use, dust suppression, and various other uses. A nominal 237,000-gallon water storage tank (total volume) would be installed to address peak water demands and provide 78,000 gallons of water for fire suppression. There are three existing wells at or near the Project site, which have a combined long-term capacity of approximately 200 gpm, and two (possibly three) new water supply wells would be installed to serve as primary supply wells. Water requirements for the Project are anticipated to be provided by the Project, and no impacts are anticipated to the greater water supply.

3.6.2.2 Waste Management

There are three types of waste generated by the mine that would require management:

- Solid waste—includes garbage, ashes, paper, septic tank contents, discarded construction materials, discarded equipment, and household items.

- Hazardous waste—includes some solvents and oils, mining sludges and wastewaters, some pesticides, and used chemical products. Hazardous waste does NOT include mining overburden returned to the mine site and solid wastes from the extraction and processing of ores and minerals (e.g., tailings).

- Universal waste—includes common hazardous waste items such as batteries, some pesticides, mercury-containing equipment, lamps, and aerosol cans.

Waste reduction strategies for the mine include bulk deliveries (to avoid the use of individual containers), use of low-toxicity solvents and low-mercury fluorescent lamps, returning containers to vendors for reuse, waste segregation and container management, and managing inventory appropriately. Materials used at the mine would be reused and recycled whenever possible. Recyclable materials include cardboard, electronics, and scrap metal. Materials that cannot be managed onsite, such as liquid wastes, hazardous

wastes, certain items to be recycled or reused, and wastes prohibited from disposal in landfills, would be shipped offsite for reuse, recycle, treatment, or disposal at appropriate facilities.

Due to the proposed waste management strategies and recycling/reuse strategies, the proposed Project is anticipated to have no additional impacts to community waste disposal facilities.

3.6.2.3 Electrical Power

The mine's power demand would be approximately 5 megawatts throughout the mine life, with a reduced power demand during reclamation activities. Electrical power for the Project would be supplied via a powerline owned and maintained by Idaho Power. Since there would be a new connection to supply power to the Project site, there are no anticipated impacts to power supplies for the local community.

3.6.3 Roads and Traffic

The Transportation Baseline Report (EM Strategies 2018) included an estimate of traffic increases due to the proposed Project. The total mine traffic estimate is 149 round-trips or 298 one-way trips per week. The average daily travel is estimated at 42.6 trips going past a single point along the access road. The proposed mining operation trip generation is within the policy threshold of the Malheur County Transportation System plan as less than 400 average daily motor vehicle trips are anticipated to be generated. The proposed Project is therefore anticipated to have no impacts to Malheur County roads and transportation.

3.7 Environmental Justice

3.7.1 Minority Communities

Employment opportunities would benefit minority populations around the cities of Vale, Ontario, and Nyssa. There would be a wide range of jobs available at the Project site including administrative staff, skilled mine workers, and janitors/bus drivers. Economic and tax payments from the Project would benefit local governments, who decide how to spend the income in their communities, which may or may not benefit minority environmental justice populations, depending on where investments are made. There would not likely be negative effects to community facilities or services from Project development. Overall, impacts to environmental justice minority communities are expected to be minor and beneficial.

3.7.2 Low-Income Communities

Employment opportunities are anticipated to benefit low-income communities around the cities of Vale, Ontario, and Nyssa by creating new jobs requiring a variety of skills including administrative personnel, drivers, laboratory technicians, and mine operators, among others. Many of these jobs would not require specialized training, while some would require specialized skills or on-the-job training, and a few would require an advanced degree (e.g., geologist). Considering that the Applicant plans to implement a local-hire preference, local contracting and purchasing where practicable, and mine-worker job training, low-income environmental justice populations may benefit. Economic and tax payments from the Project would benefit local governments, who decide how to spend the income in their communities, which may or may not benefit low-income environmental justice populations, depending on where investments are made. There would not likely be negative effects to community facilities or services from Project development. Overall, impacts to low-income environmental justice communities are expected to be minor and beneficial.

3.7.3 Tribal Communities

The effects to tribal communities that are centered around the cities of Vale and Ontario would be similar to those on other environmental justice populations as described above and would be minor and beneficial.

3.7.4 Traditionally Underrepresented Communities

Similar to other environmental justice populations, impacts from the proposed Project to traditionally underrepresented communities centered around the cities of Vale, Ontario, and Nyssa are anticipated to be minor and beneficial. Employment opportunities may benefit traditionally underrepresented communities by creating new jobs that do not require the worker to be fluent in English or have a high education level, such as bus drivers, parking attendants, janitors, and security staff. Since the Applicant plans to implement a local-hire preference and mine-worker job training, traditionally underrepresented communities may benefit. Economic and tax payments from Project would benefit local governments, who decide how to spend the income in their communities. There would not likely be negative effects to community facilities or services from Project development. Overall, impacts to traditionally underrepresented communities are expected to be minor and beneficial.

3.7.5 Increased Risk or Rate of Exposure to an Adverse Environmental Hazard

Since the nearest residence to the Project site is approximately 16 miles from the Project boundary, there are no known increased risks or rates of exposure to an adverse environmental hazard (e.g., noise).

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