3.9. SOCIOECONOMICS

This chapter presents the socioeconomic resources within the proposed Project area and evaluates potential impacts to these resources. Socioeconomic resources include population and demographics, employment and income, economic activities, housing, public services and infrastructure, and health and quality of life.

3.9.1. Analysis Methods

Baseline information used in the following sections to document and describe the socioeconomic resources of the analysis area was obtained from federal and state government sources available online and the Project "Draft Hard Rock Mining Impact Plan" (Sandfire 2018). Other sources include the U.S. Census Bureau; U.S. Bureau of Labor Statistics; U.S. Bureau of Economic Analysis; Montana Census and Economic Information Center; Montana Department of Labor & Industry; County Health Rankings, and Meagher County. In all cases, the most recent, consistent, and reliable data were used in the analysis.

3.9.1.1. Analysis Area

The socioeconomic analysis area (see **Figure 3.9-1)** was based on various factors that may influence the location and magnitude of potential socioeconomic impacts. Some factors include Project location, employment and purchasing, fiscal impacts to local governments, workforce influx, and accommodation. In addition, the analysis area was influenced by comments received during the public scoping process.

The Project is located entirely within Meagher County approximately 15 miles north of White Sulphur Springs and within 110 miles of other population centers including Belgrade, Bozeman, Great Falls, Harlowton, Helena, Livingston, Stanford, and Townsend. As such, the socioeconomic analysis area for the Project includes Meagher County, City of White Sulphur Springs, and School District #8 White Sulphur Springs K-12. It includes a broader region of influence, including Broadwater, Cascade, Gallatin, Judith Basin, Lewis and Clark, Park, and Wheatland counties where job opportunities and economic benefits may extend, and may extend even farther depending on where Project goods and services are purchased.

3.9.2. Affected Environment

3.9.2.1. Population and Demographics

Meagher County's primary population center and only incorporated community is the City of White Sulphur Springs. Three unincorporated communities are located in Meagher County: Lennep, Martinsdale, and Ringling.

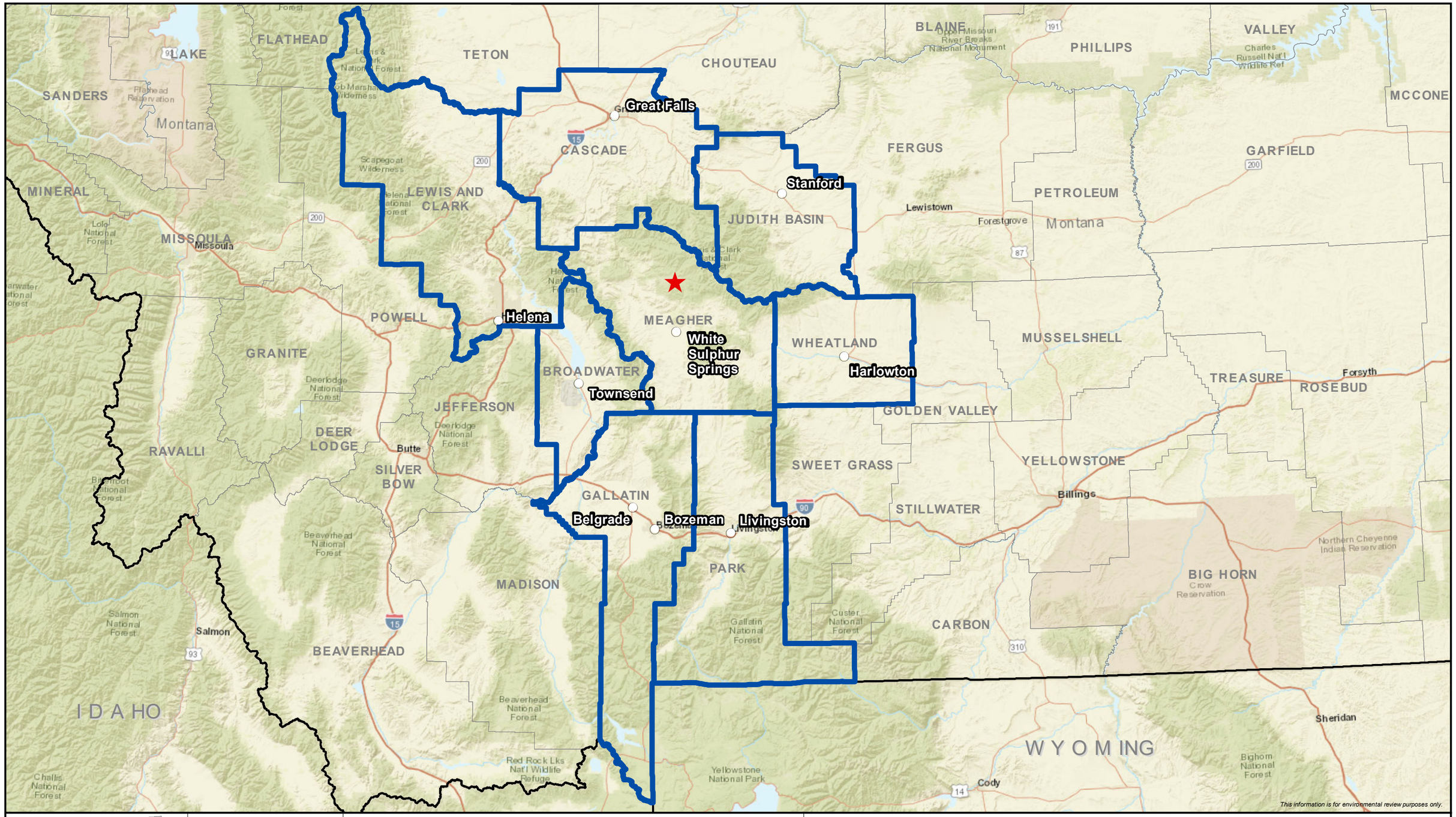

Figure 3.9-1
Black Butte Copper Project
Socioeconomic Analysis Area
Meagher County, Montana

MPLS M:\Clients\M-O\MTDEQ_ArcGIS\2018\03\Socioeconomic_Areas_Socioeconomic_Areas.mxd | REVISED: 03/26/2018 | SCALE: 1:1,750,000 when printed at 11x17

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Table 3.9-1 provides a summary of population and demographic measures for Meagher County and surrounding counties in the socioeconomic analysis area, with data for the state of Montana shown for comparative purposes. Meagher County population has increased by nearly 4 percent over the last decade, which is similar to population growth over that same period for Montana (U.S. Census Bureau 2010; U.S. Census Bureau 2016). Gallatin County population has experienced the highest increase in population (9.4 percent) and Judith Basin County has experienced the greatest decline in population (-4.4 percent) of the socioeconomic analysis area counties. Meagher County has an aging population with a median age of approximately 48.6, compared to Montana's median age of 39.8. The median age in all other socioeconomic analysis area counties is higher than the state except for Cascade County and Gallatin County.

Table 3.9-1
2016 Selected Population and Demographic Measures

County	2016 Population Estimate	2010 Census	Population Change (2010 to 2016*)	Median Age	Percent White	Percent Minority
Meagher County	1,960	1,891	3.6	48.6	98%	2%
White Sulphur Springs	999	939	6.4	42.2	99%	1%
Broadwater County	5,692	5,612	1.4	46.7	97%	4%
Townsend	1,941	1,878	3.4	40.8	93%	7%
Cascade County	82,049	81,327	0.9	38.0	92%	8%
Great Falls	59,479	58,505	1.7	38.7	91%	9%
Gallatin County	97,958	89,513	9.4	33.2	97%	3%
Bozeman	41,761	37,280	12.0	27.9	95%	5%
Belgrade	7,874	7,389	6.6	32.6	96%	5%
Judith Basin County	1,981	2,072	-4.4	52.0	99%	1%
Stanford	368	401	-8.2	53.7	98%	2%
Lewis and Clark County	65,989	63,395	4.1	41.2	96%	4%
Helena	30,102	28,190	6.8	41.6	96%	4%
Park County	15,843	15,636	1.3	46.4	99%	1%
Livingston	7,210	7,044	2.4	41.3	99%	1%
Wheatland County	2,109	2,168	-2.7	42.9	98%	2%
Harlowton	932	997	-6.5	48.8	97%	3%
Montana	1,023,391	989,415	3.4	39.8	89%	11%

Source: U.S. Census Bureau 2010; U.S. Census Bureau 2016

[a] Percent totals are greater or less than 100 percent due to rounding.

As **Table 3.9-1** shows, Meagher County population in 2016 was more than 98 percent white and other socioeconomic analysis area counties ranged from 92 to 99 percent white, which is generally less diverse than the state of Montana (89.2 percent white).

3.9.2.2. Employment and Income

Mining activity has historically played a major role in the economy of the socioeconomic analysis area communities since the late 1800s. The past gold mining and silver mining boom and bust cycles throughout the 1900s contributed to periods of significant economic growth and decline. Timber and agriculture sectors have also been key to the socioeconomic analysis area economy (Meagher County 2015). Today, the largest industry in Meagher County is farming and ranching. **Table 3.9-2** provides a summary of employment by industry in Meagher County.

Table 3.9-2
2016 Meagher County Employment by Industry

Employment by Industry in Meagher County	Number of Jobs	Percent of Total Employment
Farm	193	25%
Retail Trade	87	11%
Transportation and warehousing	33	4%
Professional, scientific, and technical services	53	7%
Administrative and waste services	18	2%
Educational services	10	1%
Arts, entertainment, and recreation	71	9%
Accommodation and food services	113	15%
Other services, except public admin.	48	6%
Government	146	19%

Source: USBEA 2016a

U.S. Bureau of Economic Analysis does not show Meagher County employment for some industries (i.e., Mining, Forestry, Construction, Health Care) to avoid disclosure of confidential information. As of 2016, mining employment in Montana accounted for 1.2 percent of total employment, compared to less than 1 percent of the total employment in the United States. The median wage for a mining sector job in Montana was $60,190 in 2016, higher than the overall median wage in Montana of $32,750. One can assume that mining wages in the socioeconomic analysis area are similar, at least to the extent that they are higher than the overall median wage in Montana (Montana DLI 2016).

Montana Department of Labor & Industry estimated the labor force in Meagher County to be 930 with 890 people employed and an estimated 40 people unemployed in 2017, with the unemployment rate at 4.3 percent (Montana DLI 2017).

Table 3.9-3 provides a summary of five measures of individual prosperity for the overall socioeconomic analysis area economy, with data for the state of Montana shown for comparative purposes. These five measures include unemployment, average earnings per job, per capita personal income, median household income, and families with income below the poverty level. The total labor force is also given in the first column of the table for reference.

Table 3.9-3
2016 Selected Employment and Income Measures

County	Labor Force	Unemployment Rate	Average Earnings Per Job*	Per Capita Personal Income**	Median Household Income***	All Ages in Poverty ***
Meagher County	930	4.3%	$30,656	$19,989	$39,284	18.3%
Broadwater County	2,584	4.6%	$30,378	$29,598	$50,791	10.6%
Cascade County	37,753	3.7%	$46,667	$26,578	$45,569	14.2%
Gallatin County	64,527	2.7%	$44,612	$31,909	$60,439	11.4%
Judith Basin County	923	3.6%	$42,875	$28,741	$44,607	13.4%
Lewis and Clark County	35,249	3.4%	$47,953	$29,892	$60,370	10.4%
Park County	8,621	3.8%	$32,108	$27,597	$45,405	11.7%
Wheatland County	784	4.3%	$37,227	$19,407	$37,306	19%
State of Montana	526,914	3.9%	$43,654	$27,309	$50,265	13.4%

Source: Montana DLI 2017; *USBEA 2016b; **U.S. Census Bureau 2016; ***SAIPE 2016

Meagher County's current economic indicators are generally on the lower end of the larger analysis area, indicating a less healthy economy. Meagher County had the second highest unemployment rate of socioeconomic analysis area counties (along with Wheatland County) at 4.3 percent compared to the Montana unemployment rate of 3.9 percent (Montana DLI 2017). Meagher County and Broadwater County had the lowest average earnings per job of socioeconomic analysis area counties at $30,656 and $30,378 respectively, compared to Montana at $43,654 (USBEA 2016b).

Per capita personal income (or average personal income) is the total personal income of an area divided by that area's population. Meagher County and Wheatland County had the lowest per capita income among socioeconomic analysis area counties at $19,989 and $19,407 respectively, compared to Montana at $27,309 (U.S. Census Bureau 2016).

Median household income is the income level earned by a given household in a given area where half the households in that area earn more and half earn less; "median" household is used instead of "average" or "mean" household income because it can give a more accurate picture of an area's actual economic status. Median household incomes were the lowest in Meagher County and Wheatland County at $39,284 and $37,306 respectively, compared to Montana at $50,265 (SAIPE 2016).

Wheatland County had the highest percentage of persons in poverty at more than 19 percent, followed by Meagher County at more than 18 percent. Lewis and Clark County had the lowest percentage of persons in poverty at 10.4 percent (SAIPE 2016).

The Mountainview Medical Center is the largest employer in the City of White Sulphur Springs and Meagher County. The center is a critical access hospital that employs between 50 and 99 people. Critical access hospitals are limited service hospitals designed to provide essential services to rural communities. Other large employers include Showdown Ski Area and The Equestrian Center at Horse Creek. **Table 3.9-4** summarizes top employers in Meagher County.

Table 3.9-4
2016 Top Employers in Meagher County

Business Name	Number of Employees
All Seasons Inn & Suites	10-19
Bank of the Rockies	10-19
Bar 47	20-49
Castle Mountain Grocery	10-19
Mathis Food Farm	10-19
Mountainview Medical Center	50-99
Seventy-One Ranch LP	10-19
Showdown Ski Area	20-49
The Equestrian Center at Horse Creek	20-49

Source: Montana DLI 2016

Montana's outdoor recreation industry plays an important role in the economy of the socioeconomic analysis area communities. While there are no public recreation opportunities located within or adjacent to the MOP Application Boundary, recreation within 15 miles of the Project area includes hiking, camping, fishing, hunting, boating, and river floating (see Section 3.7, Land Uses and Recreation).

FWP provides statewide estimates of hunter and angler trip-related expenditures, which can be found on their website. FWP estimated $760.4 million in total expenditures from river/stream angler use in 2018 in Montana (Lewis 2018). According to FWP in a comment on the Draft EIS during the public comment period, they estimated angler expenditures associated with the Smith River at $9.1 million annually based on the number of angler days and average per day expenditures for the river and its North and South Fork tributaries (see Submittal ID HC-001, comment number 6 in **Table 8.2-2** in Chapter 8, Response to Public Comments, of this EIS).

3.9.2.3. Housing

Meagher County had an estimated count of 1,432 housing units, of which the City of White Sulphur Springs had an estimated 600 units. Vacant housing units made up 43 percent of housing units in Meagher County. Median housing values were lowest in Meagher County and Wheatland County, at $122,200 and $89,700 respectively (U.S. Census Bureau 2016). The median rent in Meagher County was $625 per month (U.S. Census Bureau 2016). Four motels are in White Sulphur Springs with 87 rooms (Sandfire 2018).

According to the Meagher County Growth Policy and White Sulphur Springs Growth Policy, significant numbers of housing units in White Sulphur Springs are deteriorated and there is a need for programs to rehabilitate or replace housing in poor condition (CTA 2017; Meagher County 2015). Almost every residential structure in Meagher County is a single family home or mobile home. A few multiple family structures, mostly apartments, exist in White Sulphur Springs. Outside of Meagher County, areas with the largest population and housing availability

include Bozeman, Great Falls, and Helena. **Table 3.9-5** provides a summary of housing for each county in the socioeconomic analysis area (Sandfire 2018).

Table 3.9-5
2016 Selected Housing Measures

County	Housing Units	Median Value	Percentage of Vacant Housing Units	Median Rent	Motel/Hotel Rooms*
Meagher County	1,378	$122,200	43%	$625	-
White Sulphur Springs	600	NA	NA	NA	87
Broadwater County	2,691	$192,400	10.2%	$626	NA
Townsend (40 miles from White Sulphur Springs)	900	NA	NA	NA	36
Cascade County	37,714	$165,800	9.5%	$671	NA
Great Falls (100 miles from White Sulphur Springs)	27,405	NA	NA	NA	>2,100
Gallatin County	44,932	$285,200	13.7%	$895	NA
Bozeman (80 miles from White Sulphur Springs)	19,070	NA	NA	NA	>2,000
Belgrade (80 miles from White Sulphur Springs)	3,200	NA	NA	NA	>200
Judith Basin County	1,338	$136,500	31.6%	$507	11
Stanford (90 miles from White Sulphur Springs)	248	NA	NA	NA	NA
Lewis and Clark County	30,646	$212,600	12.7%	$802	NA
Helena (70 miles from White Sulphur Springs)	14.169	NA	NA	NA	>1,500
Park County	9,369	$222,500	23.9%	$704	NA
Livingston (70 miles from White Sulphur Springs)	3,750	NA	NA	NA	>380
Wheatland County	1,297	$89,700	33%	$525	NA
Harlowton (50 miles from White Sulphur Springs)	725	NA	NA	NA	37

Source: U.S. Census Bureau 2016; *Sandfire 2018

NA = not applicable

3.9.2.4. Public Infrastructure and Services

Meagher County is governed by a three-member Board of County Commissioners. Other administrative officers include the Clerk and Recorder, Treasurer, County Attorney, Superintendent of Schools, law enforcement, Justice of the Peace, disaster and emergency services, and Clerk of District Court (Sandfire 2018); all of which are located in White Sulphur Springs.

Meagher County has several law enforcement agencies that serve the county, including the Helena-Lewis and Clark National Forest law enforcement officers, Montana Highway Patrol, and the Sheriff's Department. The Sheriff's Department is located in White Sulphur Springs and employs a sheriff, two full-time deputies, and five dispatchers.

The County Road Department maintains approximately 200 miles of roads, most of which are gravel. The department is also responsible for maintaining ten bridges on those roads. The department includes a road supervisor and three full-time employees (Sandfire 2018).

Fire protection is provided in Meagher County by several fire departments: City of White Sulphur Springs, Meagher County Fire District, Martinsdale Fire Service Area, and Grassy Mountain Rural Fire District. In total Meagher County has 12 structure trucks, 7 tenders, and 1 bucket truck. Volunteer fire fighters, with a ½ full-time equivalent fire chief, operate the agencies (Sandfire 2018).

Ambulance and emergency medical service is provided by 18 certified emergency medical technicians and three ambulances (Sandfire 2018). A ½ full-time equivalent paramedic is employed by Meagher County (Sandfire 2018).

The White Sulphur Springs sewage treatment plant is currently being upgraded to comply with the state sewage treatment permit (Sandfire 2018). The upgraded wastewater system will be able to serve a population of 1,800 (Sandfire 2018).

White Sulphur Springs obtains its public water supply from two wells in the northeast part of the city and from South Willow Creek about 2 miles east of the city. The city's water system has gone through several upgrades.

White Sulphur Springs' streets are in poor condition in some locations throughout the city and the situation is exacerbated where underlying water or sewer lines are deteriorated (CTA 2017). The city plans to undertake combined street and water/sewer repaving–line replacement projects to upgrade and repair old, deteriorated, or inadequate water/sewer lines that underlie streets (CTA 2017).

The Meagher County City Library is located in White Sulphur Springs and provides library services across Meagher County. The Library Foundation has secured sufficient funding to construct a new library on a site adjacent to U.S. Route 12/89. Construction began in summer 2018. Library staff includes one full-time librarian and one part-time employee.

One school district in Meagher County serves grades K-12. Enrollment in the 2016 to 2017 school year was 129 students for K-8 and 61 students in grades 9 to 12. K-8 enrollment is down 30 students and high school enrollment is down 19 students, compared to the 2010 to 2011 school year (Sandfire 2018). **Table 3.9-6** provides a summary of student enrollment for each county in the socioeconomic analysis area.

Table 3.9-6
2016-2017 School Enrollment

County	K-8 Students	High School Students
Meagher County	129	61
Broadwater County	462	208
Cascade County	8,400	3,313
Gallatin County	9,580	3,530
Judith Basin County	180	77
Lewis and Clark County	6,598	2,998
Park County	1,356	611
Wheatland County	236	75

Source: Sandfire 2018

Meagher County has lower educational attainment on average than other counties in the analysis area. As shown in **Table 3.9-7**, Meagher County has the second lowest percentage of the population with a postsecondary degree (i.e., associate's degree, bachelor's degree, and graduate or professional degree) at 28.3 percent compared to other socioeconomic analysis area counties. Wheatland County has the lowest percentage of the population with a postsecondary degree at 21.9 percent and Gallatin County has the highest percentage of the population with a postsecondary degree at 54.5 percent (U.S. Census Bureau 2016).

3.9.2.5. Health and Quality of Life

Health and quality of life are dependent on a number of factors, particularly access to education, public services, healthcare, recreation, and social services. According to the White Sulphur Springs Growth Policy, residents are increasingly interested in ensuring new growth and development be located in suitable locations, and that it be designed and constructed to ensure the health, safety, and livability for residents (CTA 2017). Both the Meagher County and White Sulphur Springs growth plans indicate the aging of the population is likely to continue and could have impacts upon the area's ability to provide services such as healthcare (CTA 2017; Meagher County 2015). This is because aging populations tend to require additional healthcare treatment for more than one chronic condition; therefore, the cost of health care increases.

The Meagher County Draft Growth Policy indicates there has been a departure of businesses important to the health and well-being of the community, such as the loss of a dentist office and a chiropractor (Meagher County 2015). The growth policy recommends an assessment of services to understand the community's service needs, develop strategies to help retain existing services/businesses and identify opportunities to attract new or replacement businesses (Meagher County 2015).

Table 3.9-8 presents selected health measures of county residents from the socioeconomic analysis area, and with data for the state of Montana shown for comparative purposes. County Health Rankings has developed a model for ranking counties relative to the health of other

counties in the same state according to summaries of a variety of health measures. Health outcome rankings are calculated based on length of life (mortality) and how healthy people feel while alive (quality of life). Health factor rankings are calculated based on health behaviors, clinical care, social and economic factors, and the physical environment. Rankings are out of 47 because 47 of the 56 counties in Montana were ranked while 9 counties were not ranked due to unreliable or missing data (County Health Rankings 2017).

The data show that Meagher County has the lowest health outcomes ranking and the lowest health factors ranking among socioeconomic analysis area communities. The table includes select health measures as an example of what contributes to the rankings. Premature death is one type of health outcome measure that is factored into the health outcomes ranking, and it is defined as the years of potential life lost before age 75; many premature deaths are considered preventable. Quality of life is the second type of health outcome measure that incorporates four measures (poor or fair health, poor physical health days, poor mental health days, and low birthweight). The data show that premature death is higher in three of the socioeconomic analysis area counties than in Montana on average, and that accessibility to primary care physicians also tends to be lower in these counties. The lack of healthcare professionals is common in rural areas, as are higher rates of obesity, as shown in **Table 3.9-8**.

Table 3.9-7
2016 Educational Attainment

County	Less Than 9th Grade	9th to 12th Grade, No Diploma	High School Graduate (Includes Equivalency)	Some College, No Degree	Associate's Degree	Bachelor's Degree	Graduate or Professional Degree
Meagher County	2%	6%	42%	22%	7%	17%	5%
White Sulphur Springs	3%	6%	52%	16%	11%	9%	2%
Broadwater County	2%	5%	38%	23%	6%	19%	8%
Townsend	4%	8%	39%	19%	8%	14%	9%
Cascade County	2%	6%	31%	25%	9%	18%	8%
Great Falls	2%	7%	31%	26%	9%	18%	8%
Gallatin County	1%	2%	20%	23%	6%	32%	17%
Bozeman	<1%	1%	13%	24%	6%	35%	21%
Belgrade	2%	5%	34%	24%	6%	20%	9%
Judith Basin County	1%	4%	35%	22%	7%	27%	4%
Stanford	<1%	3%	36%	31%	5%	19%	6%
Lewis and Clark County	2%	4%	25%	25%	8%	24%	13%
Helena	2%	3%	21%	22%	8%	27%	17%
Park County	1%	4%	33%	22%	5%	23%	12%
Livingston	<1%	5%	35%	22%	4%	24%	10%
Wheatland County	18%	6%	33%	21%	3%	15%	4%
Harlowton	9%	7%	41%	24%	2%	15%	3%

Source: U.S. Census Bureau 2016

[a] Percent totals are greater or less than 100% due to rounding.

Table 3.9-8
2017 Selected Health Measures

County	Health Outcomes Ranking (out of 47)	Select Health Outcome Measures		Health Factors Ranking (out of 47)	Select Health Factor Measures	
		Premature Death (in years of potential life lost)	Poor or Fair Health		Ratio of Population to Primary Care Physicians	Obesity Rate (population 20 years +)
Meagher County	41	NA	16%	34	1,850:1	24%
Broadwater County	23	10,500	13%	23	2,830:1	30%
Cascade County	20	7,200	15%	24	1,310:1	28%
Gallatin County	2	4,200	12%	1	1,330:1	16%
Judith Basin County	30	NA	12%	12	1,990:0	29%
Lewis and Clark County	9	5,900	11%	3	1,140:1	24%
Park County	11	7,600	13%	7	880:1	23%
Wheatland County	26	NA	15%	33	NA	25%
Montana	NA	7,100	NA	NA	1,310:1	25%

Source: County Health Rankings 2017

3.9.3. Environmental Consequences

Potential socioeconomic impacts relate to the expected changes a community experiences as a result of the Project alternatives under consideration in this EIS. These can relate to changes in population, demographics, income, taxes, and demands on community and government services.

3.9.3.1. No Action Alternative

Under the No Action Alternative, there would be minimal impacts to socioeconomics as population, employment, and economic activity levels would be expected to follow current trends.

3.9.3.2. Proposed Action

Under the Proposed Action, potential impacts on socioeconomic resources were assessed based on assumptions using the best available information. This includes the Proponent's estimates of the number of workers needed for construction, operations, and associated mine support services; findings from other large-scale developments such as the Rosebud Mine near Colstrip, Montana; and monitoring results presented in the most recent "East Boulder Mine Hard Rock Mining Impact Plan," which indicates that workers would travel up to 2 hours for higher paying natural resource jobs (Sandfire 2018).

Projected Employment

The workforce estimates summarized in **Table 3.9-9** were obtained from the "Draft Hard Rock Mining Impact Plan" and used to project potential workforce and associated population influx over the life of the mine.

Table 3.9-9
Project Workforce Estimates

Worker Type	Construction			Operations	Reclamation/Closure			
	Year 1	Year 2	Year 3	Years 4-14	Year 15	Year 16	Year 17	Year 18
Proponent Employees	14	37	165	235	203	90	60	40
Proponent Contractors	70	115	108	24	24	24	24	24
Associated Support Workers [a]	8	20	89	127	110	49	32	22
Total	92	362	293	386	337	163	116	86

Source: Sandfire 2018

[a] Associated support workers are considered workers that would provide secondary support services to the mine, but would not be employed or contracted directly by the Project.

The Proponent expects to hire up to 200 contractors during the construction phase in Year 1 and into Year 3; not all contractors would be at the Project site at the same time. As shown in **Table 3.9-9**, contractors are expected to peak at 115 during construction in Year 2, and up to 24 contractors are projected to be at the mine site from time to time during the operations and reclamation phases of the project. The number of Proponent employees is projected to gradually

ramp up through the first 3 years up to an operating workforce of 235 employees. Associated support workers are considered workers that would provide secondary support services as a result of the mine, but would not be employed or contracted directly by the Project. The Proponent estimates that the number of associated support workers would be at a ratio of 0.54 for every Project employee and contractor.

Projected Workforce Influx

Workforce influx projections were obtained from the "Draft Hard Rock Mining Impact Plan," which includes assumptions about the extent to which workers can be hired locally (defined as within 110 miles of the mining operations or within an approximate 1.5-hour commuting distance) and the extent to which workers may move in from outside the 110-mile area (referred to as in-migrating workers):

- An estimated 30 percent of Proponent employees can be hired locally from the area (within 110 miles of the mining operations) and 70 percent are projected to move in from outside of the 110-mile area.
- An estimated 30 percent of Proponent contractors can be hired locally from the area (within 110 miles of the mining operations) and 70 percent are projected to move in from outside of the 110-mile area.
- An estimated 70 percent of associated support workers can be hired locally from the area (within 110 miles of the mining operations) and 30 percent are projected to move in from outside of the 110-mile area.

Table 3.9-10 provides a summary of workers that are projected to move into the area for the mine by applying the influx assumptions listed above to **Table 3.9-9**.

Projected Population Influx and Distribution

Population influx and distribution projections were obtained from the "Draft Hard Rock Mining Impact Plan." To estimate potential population influx associated with the Proposed Action and distribution, the Proponent made the following assumptions about whether in-migrating workers may bring their families and where they may decide to reside as a result of the Proposed Action:

- 50 percent of in-migrating workers (i.e., Proponent employees, contractors, and associated support workers) are projected to move into Meagher County; the remainder would reside outside of Meagher County but within 110 miles of the Project.
- In-migrating Proponent employees and associated support workers are projected with dependents, assuming an average of 2.46 people per household based on the state average.
- In-migrating Contractors are projected without dependents given the temporary construction period.
- Among in-migrating workers moving to Meagher County, 90 percent are estimated to stay in White Sulphur Springs.

Table 3.9-10
Projected Workforce Influx

Worker Type	Construction			Operations	Reclamation/Closure			
	Year 1	Year 2	Year 3	Years 4-14	Year 15	Year 16	Year 17	Year 18
In-migrating Proponent Employees (70% of total employees)	10	26	116	165	142	163	42	28
In-migrating Proponent Contractors (70% of total contractors)	49	81	76	17	17	17	17	17
In-migrating Associated Support Workers (30% of total associated support workers) [a]	2	6	27	38	33	15	10	7
Total	61	113	219	220	192	95	69	52

Source: Sandfire 2018

[a] Associated support workers are considered workers that would provide secondary support services to the mine, but would not be employed or contracted directly by the Project.

Table 3.9-11 provides a summary of projected population influx and distribution by applying the assumptions listed above to **Table 3.9-10**. In-migrating workers and associated population influx numbers are presented across three geographic areas in **Table 3.9-11** to show the potential distribution of influx to Meagher County, and outside Meagher County but within 110 miles of the Project and White Sulphur Springs.

Table 3.9-11
Projected Population Influx Relocating to Meagher County and Areas Within 110 Miles of the Project

Population Influx Type	Construction			Operations	Reclamation/Closure			
	Year 1	Year 2	Year 3	Years 4 -14	Year 15	Year 16	Year 17	Year 18
Meagher County Influx (50% of influx)								
In-migrating workers (including Employees, Contractors and Associated Support Workers)	31	57	110	110	96	48	35	26
Associated population influx	40	80	214	258	224	105	73	52
Influx Outside Meagher County But Within 110 Miles Of The Project (50% of influx)								
In-migrating workers	31	57	110	110	96	48	35	26

Population Influx Type	Construction			Operations	Reclamation/Closure			
	Year 1	Year 2	Year 3	Years 4 -14	Year 15	Year 16	Year 17	Year 18
Meagher County Influx (50% of influx)								
In-migrating workers (including Employees, Contractors and Associated Support Workers)	31	57	110	110	96	48	35	26
Associated population influx	40	80	214	258	224	105	73	52
White Sulphur Springs Influx (90% of Meagher County Influx)								
In-migrating workers	28	51	99	99	86	43	32	23
Associated population influx	36	72	193	232	202	95	66	47

Source: Sandfire 2018

As shown in **Table 3.9-11**, Meagher County is projected to have 214 people move in during peak construction (Year 3), with 193 of them residing in White Sulphur Springs. During operations, Meagher County is projected to have 258 people move in, with 232 of them residing in White Sulphur Springs.

Population and Demographic Change

Under the Proposed Action, Meagher County and the city of White Sulphur Springs are expected to be most impacted by population influx. The population of Meagher County (estimated at 1,960 as of 2016) is projected to increase by 13 percent, assuming 258 people move into Meagher County as a result of the Project. This represents a significant increase, given the population in Meagher County has only increased by 3.6 percent over a 6-year period (since 2010). The City of White Sulphur Springs population (estimated at 999 as of 2016) is projected to increase by 23 percent, assuming 232 of the 258 people in-migrating to Meagher County move into White Sulphur Springs. This would also represent a significant increase, given that the population in White Sulphur Springs has only increased by 6.4 percent over a 6-year period (since 2010). All other socioeconomic analysis area county populations are projected to increase by 1 to 10 percent assuming remaining population influx outside Meagher County but within a 110 mile area of the Project is evenly distributed across cities and towns in the seven counties surrounding Meagher County. It is important to note that both Meagher County and the City of White Sulphur Spring have had larger populations at 2,154 and 1,302 respectively in 1980 (U.S. Census Bureau 1995). This suggests that the projected population increase would bring the population totals roughly back in line with 1980 numbers. In other words, this area has seen and handled the projected higher population numbers before.

Project-related employment would be based on candidate skill set and qualification. While the demographic make-up of individuals that would move to the area as a result of the Project is unknown, based on U.S. labor force statistics, the total employed in mining, quarrying, and oil and gas extraction sector jobs represent a workforce population that is 88 percent white and

13 percent women (USBLS 2018). If Project-related employment is similar to U.S. employment demographics in mining, quarrying, and oil and gas extraction sector jobs, workforce influx would represent a male-dominated, slightly more racially diverse in-migrating population compared to existing analysis area populations (as mentioned in Section 3.9.2, Affected Environment, socioeconomic analysis area counties ranged from 92 to 99 percent white).

Employment, Income and Tax Revenues

Under the Proposed Action, the Proponent expects to hire up to 200 contractors during the construction phase and employ an operating workforce of 235 employees. These jobs would be expected to pay more than the average wage of people employed in the socioeconomic analysis area counties. In addition to job creation, the Proposed Action would deliver further benefits to the local economy from Project investment, purchasing, and tax payments.

The Hard Rock Mining Impact Act, Tax Base Sharing Act, and metal mines license tax allocation are intended to mitigate fiscal impacts of a hard rock mineral development and assist affected local governments in preparing for, and mitigating, area fiscal and economic impacts. According to the Meagher County Growth Policy, implementation of Growth Policy goals includes an action plan to utilize the Hard Rock Mining Act process to address mining impacts on community services (Meagher County 2015).

The Hard Rock Mining Impact Act requires the mineral developer to prepare an impact plan that describes the financial impacts the Proposed Action would have on affected units of local government, which include Meagher County, the City of White Sulphur Springs, and the White Sulphur Springs Public School District #8. Under the Impact Act, the mineral developer commits to pay all increased local government costs resulting from the construction and operation of the Proposed Action.

Under the Montana Tax Base Sharing Act, the increase in taxable valuation of the mineral development that occurs after the operating permit is issued must be allocated among the affected local government units within each of three categories: counties and incorporated cities or towns, high school districts, or elementary school districts [§ 90-6-403 and § 90-6-404, MCA]. White Sulphur Springs would receive 20 percent of the Project's taxable valuation to assess its mill levies against, and Meagher County would be able to levy 100 percent of its mills for all funds except those that are not levied within the city limits of White Sulphur Springs. The White Sulphur Springs Public School District #8 would receive 100 percent of the Project's taxable valuation since it is the only school district in Meagher County. The increase in taxable valuation is projected to be $8.2 million at peak copper production (Sandfire 2018).

The metal mines license tax is collected by Montana Department of Revenue and is based on the mineral and the extent of processing that occurs before the mineral is transported. Annually, the Department of Revenue transfers 35 percent of metal mines license tax collections to the affected government units as identified in the "Hard Rock Mining Impact Plan." According to the plan, over $4 million per year would be paid in the metal mines license tax to the State of Montana as a result of production from the Proposed Action; over $1.4 million per year is estimated to be distributed to Meagher County during the projected 11 years of production (Sandfire 2018).

Housing

Based on the population influx projections summarized in **Table 3.9-11**, Meagher County is projected to have 214 people move in during peak construction (Year 3), with 193 of them residing in White Sulphur Springs. During operations, Meagher County is projected to have 258 people move in, with 232 of them residing in White Sulphur Springs.

The Proponent does not intend to provide a construction camp or housing for employees. In-migrating workers are expected to seek housing options in populated areas within 110 miles (or approximately within a 1.5-hour commute) to the Project. In-migrating workers are expected to reside in hotels/motels, rental units, recreational vehicles (RVs) or affordable single family homes. The Proponent assumes that private housing developers would provide additional housing after the permitting process is completed and construction begins. The Montana Business Assistance Connection estimates that an additional 112 housing units may be needed as a result of the Project (Sandfire 2018).

Housing impacts could come in the form of increased demand and costs for housing due to population influx. Potential impacts include increased rental and housing values as a result of demand that exceeds the available housing supply, contributing to significant housing constraints and affordability challenges particularly during the construction phase. This could lead in some cases to higher property taxes if property values rise. In the longer term, benefits may include increased housing stock, improved housing units (repaired and/or remodeled existing units), and increased availability of newer units. But if overbuilding during Project construction occurs, this could result in a housing glut during operations due to excess supply of housing stock.

According to the White Sulphur Springs Growth Policy (adopted May 2017), a significant number of housing units are deteriorated and programs are needed to rehabilitate or replace housing in poor condition (CTA 2017). Within 3 years (by May 2020) the City of White Sulphur plans to assess the needs for additional housing and rehabilitation of existing housing units and implement a housing plan to meet the identified housing needs with appropriate housing programs (CTA 2017). According to the Meagher County Growth Policy, the county may consider developing and implementing temporary workforce regulations to ensure that housing selected by construction workers is designed to protect public health and safety and to ensure that necessary services and infrastructure is provided (Meagher County 2015). According to the "Hard Rock Mining Impact Plan," the Proponent intends to collaborate with Meagher County and the City of White Sulphur Springs and assist with funding community planning and economic development efforts.

Public Infrastructure and Services

Impacts on public infrastructure and services could come in the form of increased demand for services or degradation of public infrastructure due to additional use. Adverse impacts would include demand for services that exceeds the available capacity or degradation that exceeds the county or city's ability to perform repairs. According to White Sulphur Springs and Meagher County Growth Plans, streets are in poor condition in some locations and underlying water and/or sewer lines are also deteriorated and need replacement. The City plans to implement a

5- to 6-year capital improvement plan to address public infrastructure issues, including a combined street repair/water-sewer line replacement plan. Water and sewer upgrades are also underway in White Sulphur Springs.

Although infrastructure improvement planning is in progress, the Project is likely to significantly affect public infrastructure if the City of White Sulphur Springs' plans are not implemented in time for Project construction. Any fiscal impacts on local government service providers would be mitigated through payments as established in the "Hard Rock Mining Impact Plan" (Sandfire 2018). Public service providers would benefit from the additional tax revenues generated by the mine and should be able to adapt to the long-term changes in demand associated with mine operations.

Health and Quality of Life

Potential impacts to health and quality of life depend on the current health status of communities, the capacity of public health services and the ability of area communities to adjust to (and accept) changes in life style as a result of the Proposed Action. As discussed in Section 3.9.2, Affected Environment, Meagher County ranks lowest among socioeconomic analysis area counties in health (based on County Health Rankings analysis of a variety of health indicators) and there has been a departure of business important to community health and well-being (e.g., loss of dentist office and chiropractor). The aging of the population, combined with rapid population influx, particularly during Project Construction, has the potential to put significant strain on local healthcare services. Mountainview Medical Center is Meagher County's only hospital and provides inpatient, outpatient, long-term care, diagnostics, and emergency services. However, the facility has the potential to become overloaded with increased demand for services associated with a larger population. Nurse and staff recruitment could be challenging if high housing prices or low salaries make it difficult to draw needed healthcare professionals to the area.

The Project has the potential to impact local healthcare capacity as a result of associated population influx. As a result, impacts to health and quality of life is a high-likelihood event particular during Project construction as local populations adjust to rapid change in their community from population influx. A younger demographic than what currently exists would likely make up the 20 percent of new population coming to White Sulphur Springs and Meagher County. Also, the boom and bust cycle that sometimes occurs during and after a large project presents a risk. According to the Meagher County Growth Policy, residents of the county welcome new economic opportunities and growth for our communities, but they want to ensure that it occurs in a manner that maintains their identity and quality of life. Effective implementation of Meagher County and White Sulphur Springs Growth Plans would be critical to minimizing impacts on health and quality of life if the Project is approved.

Smith River Assessment

During the public scoping period, numerous comments were received regarding potential impacts to Smith River users (see Section 1.6.1, Public Participation). Based on impact analysis of Project activities on various area resources, the Project could secondarily affect Smith River

users as a result of Project traffic impacts (including brief periods of congestion and traffic safety risks) on U.S. Route 89 and U.S. Route 89/12, which provide regional access to and from the Smith River (see Section 3.12.3, Environmental Consequences, for a discussion of potential impacts of Project traffic.) The Smith River is mainly a regional recreation destination in the general Project vicinity. Recreational users on the Smith River are not expected to be affected by the Project in terms of potential socioeconomic impacts. While Project traffic may result in brief periods of congestion at the intersection of Sheep Creek Road and U.S. Route 89 (particularly during employee shift changes), this is not expected to affect Smith River users. Considering that demand to float the river is currently regulated and limited by a permit system, demand to use the Smith River recreationally would likely continue at its current levels into the future. The Project would not likely have direct or secondary impacts on any other resources as summarized below.

As discussed in Section 3.2.4, the impacts of airborne dust and fine particulates are of potential concern for the basin, due to fugitive mining sources and venting of underground emissions. However, modeled concentrations were predicted to be less than the regulatory SIL at all locations within the basin. As such, a negligible level of PM and other pollutants would be conveyed to the Smith River basin from point source and fugitive dust emission sources. Given modeled concentrations are less than SIL, and because the SIL concentrations are well below ambient air standards, which are themselves accepted as protective of sensitive populations, Project emissions would not impact Smith River users, including sensitive populations such as people with asthma, children, and the elderly.

As discussed in Section 3.5.3, Smith River is the receiving waters to Sheep Creek. Secondary impacts on base flow of Sheep Creek as a result of mine dewatering and disposal of treated water to the UIG are expected to partially offset one another. Therefore, the Project is expected to have an insignificant impact on recreational opportunities of the Smith River due to changes in water quality or water quantity (also see Section 3.7.3). It should be noted, however, that the Smith River is included in DEQ's 303(d) list of impaired streams for flow regime modification due to agricultural irrigation, from the North and South Forks to the mouth at the Missouri River. Those activities which impact surface water quantity are not associated with the Project and are likely to continue in the future.

As discussed in Section 3.8, the Project would not likely have any direct or secondary impacts on visual and aesthetics resources in the Smith River area. The closest distance between the Project site and the Smith River is approximately 12 miles. The existing topography and vegetation block views of the Project from the river as well as from Smith River Road. Therefore, the Project would not impact Smith River users since there would be no changes to the visual and aesthetic resources in the Smith River area.

As discussed in Section 3.11.3, blasting during the construction phase of the Project would be audible for several miles around the Project site. However, any noise associated with blasting activities at the Smith River State Park, if audible, would be significantly below DEQ's noise threshold for noise sensitive areas. Therefore, Project generated noise is not expected to impact Smith River users.

3.9.3.3. Agency Modified Alternative

The AMA would not change the Project's construction or operations-phase workforce, purchasing, or procurement activities. Therefore, the potential impacts of the AMA on socioeconomic resources would be the same as described for the Proposed Action.

Smith River Assessment

The impacts of the AMA on the Smith River would be the same as described for the Proposed Action.