

15.1 Introduction

This chapter describes the socioeconomic impacts that would result from construction and operation of each of the build alternatives. The sections that follow describe the socioeconomics study area, the methods used to analyze the impacts, the affected environment, and the socioeconomic impacts of the build alternatives. The regulations and guidance related to socioeconomics are summarized in Section 15.6, *Applicable Regulations*. Appendix T, *Socioeconomic Methods and Tables*, provides further data on analysis methods and socioeconomics metrics. The contribution of the proposed rail line to cumulative impacts on socioeconomics is discussed in Chapter 18, *Cumulative Impacts*.

In summary, construction and operation of any build alternative would decrease farm output along the right-of-way and could displace up to two residences from the right-of-way. Project-associated increases in population and in the demand for housing and public services would not be sufficient to alter the current population and economic trends in the study area. Construction and operation of the proposed rail line would have positive impacts on employment and earning opportunities and add to counties and local jurisdictions' fiscal revenues. Temporary and permanent socioeconomic impacts—both positive and negative—would be greatest under the Tongue River East Alternative, the Tongue River Road East Alternative, and the Moon Creek East Alternative, and least under the Colstrip Alternative and the Decker Alternative. OEA concludes that the socioeconomic impacts would be both positive and moderately adverse.

15.2 Study Area

OEA defined the study area for socioeconomics as a nine-county area. All of the counties are located in Montana except for Sheridan County, which is in Wyoming. The study area includes four counties that one or more of the build alternatives would cross (Custer, Rosebud, Powder River and Big Horn Counties; referred to as the four-county study area), as well as five counties that are linked to these four counties by trade and commuter patterns (Yellowstone, Treasure, Carter, Fallon, and Sheridan Counties). These five linked counties are likely to receive part of construction and operation expenditures of the proposed rail line, whether directly or through the expenditure of labor earnings associated with the proposed rail line. Appendix T, *Socioeconomic Methods and Tables*, provides the supporting data for defining this study area.

The analysis that follows refers to the study area (all nine of the listed counties) or the four-county area (Custer, Rosebud, Powder River and Big Horn Counties), depending on the area where impacts are expected to occur.

15.3 Analysis Methods

OEA used the following methods to evaluate the socioeconomic impacts of construction and operation of the proposed rail line. Appendix T, *Socioeconomic Methods and Tables*, provides additional detail on the methods of analysis.

15.3.1 Scope of Assessment

OEA defined the scope of the socioeconomic impact assessment based on the following elements.

- OEA’s professional knowledge of the socioeconomic impacts of construction and operation of rail lines.
- Comments received from the public during scoping.
- Council on Environmental Quality (CEQ) regulations for implementing the requirements of the National Environmental Policy Act of 1969 (NEPA), which state that “economic or social effects are not intended by themselves to require preparation of an environmental impact statement,” but that when “economic or social and natural or physical environmental effects are interrelated, then the environmental impact statement will discuss all of these effects on the human environment” (40 Code of Federal Regulations [C.F.R.] §1508.14).

15.3.2 Existing Conditions

To the extent possible, OEA relied on the latest data available from the following federal and state sources to describe the existing socioeconomic conditions of the study area.

- U.S. Census Bureau
- U.S. Department of Commerce, Bureau of Economic Analysis
- U.S. Department of Labor, Bureau of Labor Statistics
- U.S. Department of Agriculture, National Agricultural Statistics Service
- Montana Department of Commerce
- Montana Department of Revenue

15.3.3 Impact Assessment

OEA assessed impacts based on project information provided by TRRC, using the following methods.

- OEA used GIS methods to estimate the area of land that would be lost in the right-of-way of each build alternative. OEA characterized the land by type of economic activity (e.g., farming and livestock grazing) and used U.S. Department of Agriculture, National Agricultural Statistics Service data to estimate the value of associated output lost.
- OEA estimated direct employment during construction and operation of the proposed rail line based on information provided by TRRC, as well as indirect, induced, and total employment during construction and operation. OEA obtained estimates for two construction scenarios: one corresponding to an 8-month annual construction schedule and another corresponding to an expedited 12-month annual construction schedule.¹ OEA used the Impact analysis for Planning (IMPLAN) regional impact model to obtain the employment estimates. IMPLAN captures commodity flows among industrial sectors and by county, and allows the estimation of indirect and induced effects of increases in demand on employment, earnings, and output. OEA adjusted all monetary values to be expressed in 2012 dollars. When the data was expressed in dollars of a different year, OEA used the Bureau of Labor Statistics Consumer Price Index to adjust the estimates to 2012 dollars (Bureau of Labor Statistics 2014).
- OEA estimated population increase in the four-county area and the study area based on the difference between peak employment estimates (direct peak employment in the case of the four-county area, total peak construction employment in the case of the study area) and estimates of available construction workers already living in the four-county area and the study area.
- OEA estimated demands for housing and public services by comparing population increase estimates based on knowledge of available housing and public services.

15.4 Affected Environment

The existing socioeconomic conditions in the study area are described below.

15.4.1 Population

Table 15-1 shows population and population trends for the study area. The four-county area is mostly rural; the largest community is Miles City in Custer County, with a population of

¹ As explained in Appendix T, *Socioeconomic Methods and Tables*, OEA analyzed build alternatives under two scenarios. The first scenario assumes construction would occur during 8 months of the year, excluding 4 months of cold weather. In this scenario, workers were assumed to work in two shifts of 8 hours each. The second scenario assumes construction would occur year-round (during all 12 months). In the second scenario, workers were assumed to work 24 hours, in three shifts of 8 hours, during the 4 months of cold weather, and in two shifts of 8 hours during the remaining months.

8,410 in 2010. The study area includes larger urban areas, particularly Billings, in Yellowstone County, with a population of 104,455 in 2010; and Sheridan, in Sheridan County, Wyoming, with a population of 17,444 in 2010. Table 15-1 includes the projected population in each county for the year 2015, which is the year that OEA expects that TRRC would begin construction of the rail line; and for the year 2018, which is the expected completion date assuming winter construction.² The population of the four-county area was generally stagnant between 2000 and 2010, but the Montana Department of Commerce projects it to grow at a faster pace through 2018 (Table 15-1). Growth rates were faster between 2000 and 2010 in other parts of the study area, particularly in Yellowstone and Sheridan Counties.

The Montana Department of Commerce projects additional population growth for Custer, Rosebud, Powder River, Carter, and Fallon Counties under higher growth scenarios of oil production in eastern Montana. Under these scenarios, the total population of the four-county area would reach 38,190 in 2015 and 40,235 in 2018. The population in the nine-county study area would reach 234,838 in 2015 and 244,667 in 2018 (Montana Department of Commerce 2013).

Additional transient population is present in the area and not included in these estimates. No estimates are available for the transient population.

² OEA expects the local population and economy to grow over time, based on the population growth rates shown in Table 15-1. This means that if construction and operation start later, any potential impacts would tend to be diluted relative to the size of the population and economy affected.

Table 15-1. Population in the Study Area, 2000 to 2018^a

Community	2000	2010	2015	2018	Annual Growth Rate 2000–2010 (percent)	Annual Growth Rate 2010–2018 (percent)
Custer County	11,678	11,710	13,128	13,764	0.03	2.04
Miles City	8,473	8,410	9,304	9,885	-0.07	2.04
Rosebud County	9,399	9,264	9,293	9,347	-0.14	0.11
Colstrip	2,349	2,225	2,237	2,245	-0.54	0.11
Forsyth	1,918	1,864	1,874	1,881	-0.29	0.11
Powder River County	1,847	1,737	1,818	1,834	-0.61	0.68
Broadus	504	467	483	493	-0.76	0.68
Big Horn County	12,669	12,925	12,954	12,874	0.20	-0.05
Hardin	3,405	3,519	3,510	3,505	0.33	-0.05
Four-County Area^b	35,593	35,636	37,193	37,819	0.01	0.75
Yellowstone County	129,570	148,450	160,556	166,910	1.37	1.48
Billings	91,950	104,455	112,394	117,444	1.28	1.48
Treasure County	854	721	780	804	-1.68	1.37
Hysham Town	327	312	334	348	-0.47	1.37
Carter County	1,335	1,157	1,295	1,356	-1.42	2.00
Ekalaka Town	406	331	366	388	-2.02	2.00
Fallon County	2,816	2,891	3,548	3,839	0.26	3.61
Baker City	1,686	1,741	2,079	2,312	0.32	3.61
Plevna Town	137	163	195	216	1.75	3.61
Sheridan County	26,560	29,116	30,270	31,020	0.92	0.79
Sheridan (city)	15,804	17,444	18,135	18,585	0.99	0.80
Study Area^c	196,728	217,971	233,642	241,748	1.03	1.30

Notes:

^a Data for 2000 and 2010 are from the U.S. Census Bureau Decennial Census. Data for 2015 and 2018 are state government projections using a model called eREMI. Projections for Montana cities are based on county projected growth rates.

^b Custer, Rosebud, Powder River and Big Horn Counties

^c Includes Yellowstone, Treasure, Carter, Fallon and Sheridan (WY) Counties

Sources: Montana Department of Commerce 2013; Wyoming Economic Analysis Division 2011

15.4.2 Housing and Public Services

Table 15-2 shows the total housing stock and vacancy status in the study area from 2008 to 2012. OEA used U.S. Census Bureau American Community Survey 5-year data to account for the long-term scenario, given the considerable annual fluctuation of the housing market in recent years. In the four-county area, Rosebud and Big Horn Counties tend to have the largest number of vacant housing units.

Table 15-2. Housing Stock and Vacancy Status, 2008 to 2012

Community	Total Housing Units	Occupied Housing Units		Vacant Housing Units						Total Vacant Units
		Owner Occupied	Renter Occupied	For Rent	Rented, Not Occupied	For Sale or Sold, Not Occupied	Seasonal/ Recreational/ Occasional Use	For Workers	Other	
Custer	5,558	3,403	1,672	44	82	28	147	0	182	483
Rosebud	4,075	2,257	1,028	148	5	29	149	0	459	790
Powder River	1,014	512	182	21	3	4	133	0	159	320
Big Horn	4,700	2,305	1,227	193	26	5	378	0	566	1,168
Four-County Area ^a	15,347	8,477	4,109	406	116	66	807	0	1,366	2,761
Yellowstone	63,822	42,246	18,460	829	190	301	519	39	1,238	3,116
Sheridan, WY	13,967	8,713	3,733	269	58	272	747	0	174	1,521
Treasure	444	336	108	6	0	4	52	6		108
Carter	828	545	283	11	0	14	128	6	124	283
Fallon	1,474	1,231	243	29	27	19	82	0	86	243
Study Area ^b	95,882	61,548	26,936	1,550	391	676	2,335	51	3,028	8,032

Notes:

^a Custer, Rosebud, Powder River and Big Horn Counties

^b Includes Yellowstone, Treasure, Carter, Fallon, and Sheridan (WY) Counties

Source: U.S. Census Bureau 2008–2012

If the housing stock were to grow at the projected population growth rate and if vacancy rates remain the same as the average vacancy rates from 2008 to 2012, the number of vacant rental housing units in the four-county area would be 415 in 2015 and 425 in 2018. These are the projected initial years of construction and commencement of operation of the proposed rail line, respectively, assuming winter construction.

Because of uncertainty regarding the extent to which energy development in eastern and southeastern Montana will affect housing availability in the study area, these estimates also carry considerable uncertainty. If local planners and real estate developers perceive that energy development and housing demand are increasing, then new permanent housing

construction is likely to follow. Permanent housing availability may be greater or less than the estimates above.

A 2013 study conducted for the Eastern Montana Impact Coalition suggests housing costs have increased in some counties of the study area (e.g. Fallon County) as a consequence of increased oil and gas production in Eastern Montana, reducing housing affordability in those counties (Jones et al. 2013).

Information is provided below for public services in the four-county area, where population increase is expected to be concentrated, given commuting distances to the project area.

15.4.2.1 Law Enforcement

Either a city-run police department or the county-run Sheriff's Office provides law enforcement in the four-county area. Custer, Rosebud, Powder River, and Big Horn Counties all have individual sheriff's offices. Both Big Horn and Powder River Counties provide law enforcement services throughout their entire respective county (Big Horn County Sheriff's Office pers. comm., Powder River County Sheriff's Office pers. comm.). The Cities of Miles City and Colstrip have individual police departments that coordinate with their respective county's Sheriff's Office (Miles City Police Department pers. comm.). The Cities of Forsyth and Ashland do not have local police departments and are under the jurisdiction of the Rosebud County Sheriff's Office (Southeastern Montana Development Corporation 2010).

15.4.2.2 Fire Protection and Emergency Services

Either a city-run or a county-run fire department provides fire protection and emergency services in the four-county area. The Miles City Fire Rescue Department is in charge of structure protection within the boundaries of Miles City, but also maintains contracts to provide fire protection services in other areas of Custer County. The Miles City Fire Rescue Department also provides ambulance service for all areas of Custer County (Miles City Fire Rescue Department 2014). Custer County has a fire department that responds to structural and rangeland fires outside Miles City (Custer County 2014). Rosebud County provides fire protection services to the cities of Colstrip, Forsyth, Ashland, Lame Deer, and Birney (Rosebud County pers. comm.). The Cities of Colstrip, Forsyth, and Ashland also have volunteer fire departments (Southeastern Montana Development Corporation 2010). Big Horn County maintains a rural fire department with the City of Hardin maintaining its own volunteer fire department (Hardin City Hall pers. comm.). Powder River County is served by the Broadus Fire Department and the Belle Creek Fire District (FireDepartment.net 2014).

15.4.2.3 Public Schools

Public schools in the four-county area are funded and operated at either the county or the local level. The Miles City School District operates five elementary schools that serve students from within city boundaries (Montana Office of Public Instruction 2013). High

school students from Miles City typically attend Custer County High School. The school districts of Colstrip, Forsyth, and Lame Deer each operate their own elementary, middle, and high schools. Ashland and Birney School Districts operate elementary and middle schools. High school students from these cities attend either Lame Deer High School or Powder River High School. The Broadus School District serves kindergarten through eighth grade students, with high school students attending the Powder River County District High School. The Hardin and Lodge Grass School Districts in Big Horn County serve kindergarten through 12th grade students (Taylor pers. comm.).

15.4.3 Employment and Income

Table 15-3 shows the labor force in the study area. The labor force in the four-county area is relatively small when compared to the labor force in the study area. Across all of the counties in the study area, Yellowstone County has the largest labor force, followed by Sheridan County. As of 2012, unemployment was considerably higher in Big Horn County than in the other counties.

Table 15-3. Labor Force and Employment, 2012^a

Community	Labor Force	Employed	Unemployed	Unemployment Rate (percent)
Custer County	6,349	6,111	238	3.7
Rosebud County	4,174	3,874	300	7.2
Powder River County	966	927	39	4.0
Big Horn County	5,252	4,579	673	12.8
Four-County Area ^b	16,741	15,491	1,250	7.5
Yellowstone County	83,480	79,834	3,646	4.4
Sheridan County	16,236	15,240	996	6.1
Treasure County	379	361	18	4.7
Carter County	696	674	22	3.2
Fallon County	2,143	2,102	41	1.9
Study Area ^c	119,675	113,702	5,973	4.9

Notes:

^a Data based on place of residence

^b Custer, Rosebud, Powder River and Big Horn Counties

^c Includes Yellowstone, Treasure, Carter, Fallon, and Sheridan (WY) Counties

Source: Bureau of Labor Statistics 2012

If the labor force were to grow at the projected population growth rate, the labor force in the four-county area would be 17,121 in 2015 and 17,509 in 2018 (Bureau of Labor Statistics 2012), the projected initial years of construction and operation of the proposed rail line, respectively, assuming winter construction. If the unemployment rate remains the same as it

was in 2012, the number of employed would be 15,842 in 2015 and 16,201 in 2018 (approximately 93 percent of the labor force).

Table 15-4 shows the main sources of employment and income in the study area. Unlike the data in Table 15-3, the data in Table 15-4 are aggregated by place of work, not by place of residence. Also, Table 15-4 reports jobs (annual part-time and full-time)³ while Table 15-3 reports persons employed. The farm and mining sectors, as well as the local government, are much more important sources of employment and income in the four-county area than in the broader study area. Mining and local government jobs tend to pay higher than average income, and much higher than sectors such as retail trade, accommodation, food services (sectors often associated with recreation and tourism), and farming in both the four-county and study areas.

Table 15-4. Employment and Income in Selected Industrial Sectors, 2011^a

Sectors	Four-County Area ^b		Study Area ^c		Montana Average Earnings per Job ^d
	Jobs	Labor Income ^d	Jobs	Labor Income ^d	
All Sectors	21,624	\$892,151	147,604	\$6, 452, 768	\$39,684
Farm	9.3%	5.1%	3.3%	0.9%	\$21,638
Mining (including fossil fuels)	6.3%	11.3%	2.6%	4.2%	\$70,187
Construction	4.4%	5.9%	6.5%	8.2%	\$45,199
Wholesale trade	0.2%	0.2%	4.2%	6.1%	\$59,265
Retail trade	8.9%	5.7%	11.6%	7.7%	\$28,938
Professional and technical services	2.6%	1.8%	5.5%	6.4%	\$45,493
Health care and social assistance	4.9%	4.8%	11.3%	14.5%	\$48,824
Accommodation and food services	6.6%	2.5%	7.8%	3.6%	\$19,449
Other services, except public administration ^e	4.4%	3.1%	5.6%	3.7%	\$28,065
Federal Government	4.9%	10.2%	3.1%	6.2%	\$24,456
Local Government	18.6%	19.7%	7.7%	9.6%	\$49,926

Notes:

^a Data based on place of work. Because the Bureau of Economic Analysis does not show data for some industries in some counties to avoid disclosing information, values for individual industries may be higher.

^b Custer, Rosebud, Powder River and Big Horn Counties

^c Includes Yellowstone, Carter, Fallon, Treasure and Sheridan (WY) Counties

^d Labor income in thousands of 2012 dollars. Inflated from 2011 \$ to 2012 \$ using the Bureau of Labor Statistics Consumer Price Index (Bureau of Labor Statistics 2014)

^e Includes a variety of services such as machine and equipment repairs, household services, personal care services, and religious activities

Source: Bureau of Economic Analysis 2011

³ Throughout this chapter, OEA defines a job as a full-time or part-time occupied employment position during one year. This definition differs from full-time equivalent employment in that it treats part-time and full-time employment equally. This definition was adopted because it is the same definition used by the U.S. Department of Commerce Bureau of Economic Analysis and the regional economic impact model used to analyze job creation in this document (IMPLAN).

If the number of jobs were to grow at the projected population growth rate, the number of jobs in the study area would be 150,727 in 2015, when construction would begin, and 156,497 in 2018, when operation of the rail line would begin, assuming winter construction.

Farm employment and income are particularly valuable to the economy of the four-county area. Table 15-5 shows OEA's estimates of the value of annual output for the three major farm products in those counties (cattle, winter wheat, and alfalfa hay). Other farm products in the four-county area include barley, oats, corn, and sugar beets.

Table 15-5. Estimated Value of Selected Farm Production, Four-County Area, 2012^a

Product	Inventory (Heads)	\$ Value ^b	Production ^c	Unit	\$/Unit ^d	Annual Output
Cattle and calves	321,000	\$439,770,000	131,610,000	Pounds	\$1.21	\$159,248,100
Winter wheat	-	-	4,246,000	Bushels	\$7.96	\$33,798,160
Alfalfa hay	-	-	283,000	Tons	\$146.00	\$41,318,000

Notes:

^a Custer, Rosebud, Powder River and Big Horn Counties

^b Based on value per head of \$1,370, average of values on January 1, 2012, and January 1, 2013, for the State of Montana

^c For cattle, based on annual production of 410 pounds of meat per head of cattle inventory in Montana in 2012

^d For cattle, reflects annual gross income of \$1.21 per pound of production in Montana in 2012. Gross income includes cash receipts and home consumption. For winter wheat and alfalfa hay, 2012 marketing year average for Montana.

Source: U.S. Department of Agriculture, National Agricultural Statistics Service 2013

The retail trade, accommodation, and food services sectors are also major contributors to employment and income in the four-county area. This suggests that activities associated with recreation, travel, and tourism are important to the local economy. Chapter 12, Section 12.3, *Recreation*, describes recreational activities in the four-county area, which include hunting, fishing, hiking, picnicking, and camping.

Of the remaining industrial sectors present in the four-county area, the coal, oil and gas mining sector is an important employer.

15.4.4 Fiscal Revenues

Table 15-6 shows the fiscal revenues for the State of Montana. Revenues in fiscal year (FY) 2012 were approximately \$5,118 million (State of Montana 2013). Of these, approximately 41 percent were federal transfers and 41 percent were tax revenues. Other sources of revenue included charges for services, investment earnings, licenses and permits, and distribution to the state of federal royalties collected on the production of oil, gas and coal from federal subsurface in Montana. The federal government collects a royalty of 12.5 percent of the gross value of surface coal produced from the federal mineral estate. Forty-nine percent of these royalties are paid back to the state where the coal was produced. The State of Montana, in turn, allocates 25 percent of the royalties it receives to the producing counties.

Table 15-6. State of Montana Government Fiscal Revenues FY 2012^a

Revenue Source	(\$ thousands)	Percent ^b
Total revenues	\$5,118,047	100.0
Federal transfers	\$2,102,964	41.1
Others	\$918,351	17.9
Taxes	\$2,096,732	41.0
○ <i>Natural resources</i>	\$309,343	14.8
○ <i>Individual income</i>	\$880,814	42.0
○ <i>Corporate income</i>	\$128,632	6.1
○ <i>Property</i>	\$257,631	12.3
○ <i>Fuel</i>	\$211,933	10.1
○ <i>Other</i>	\$308,379	14.7

Notes:

^a Government funds^b Percent of total revenues for broad revenue items, and percent of tax revenues for specific taxes

Source: State of Montana 2013

FY = fiscal year

15.4.4.1 State Taxes

The main source of tax revenues for the State of Montana is the individual income tax, which ranges from 1 to 6.9 percent of taxpayer income. The corporate income tax rate is 6.75 percent. The State of Montana does not have a general sales tax, but does have miscellaneous excise and use taxes on specific items such as retail telecommunications, wholesale and retail energy transactions, lodging facilities, rental vehicles, and tobacco products.

15.4.4.2 Natural Resource Taxes

The State of Montana also imposes *severance*, *license*, or *ad valorem* taxes,^{4,5} on nonrenewable natural resources, particularly oil, gas, and coal. The taxable value for the coal severance tax is the mine mouth price less other taxes and royalties paid to the state, tribes, or the federal government (Montana Office of Budget Program Planning 2009). The tax rate varies with the heat content of the coal produced and the surface or underground source of the coal. Underground coal is taxed between 3 and 4 percent of its value, and surface coal is taxed between 10 and 15 percent of its value (Montana Department of Revenue 2013). The state also assesses a gross proceeds tax on coal of 5 percent of gross proceeds (revenues) plus a surface reclamation fee. In FY 2012, taxable gross proceeds were approximately \$10.2 per ton of coal produced (Montana Department of Revenue 2013). Natural resource tax revenues are shared with local jurisdictions. In FY 2012, approximately 33 percent of the natural

⁴ Terms italicized at first use are defined in Chapter 25, *Glossary*.

⁵ Severance taxes are taxes on production; a license tax is a tax charged to authorize operations; an *ad valorem* tax is a tax based on assessed value, such as property tax.

resource tax revenues collected by the state was transferred to local jurisdictions, but the share transferred varied among natural resources and types of tax. In FY 2012, the State of Montana collected the following revenues, among others.

- Approximately \$53 million in coal severance taxes, of which \$3 million (6 percent) were transferred to local jurisdictions.
- Approximately \$20 million in coal gross proceeds, of which \$11 million (55 percent) were transferred to local jurisdictions.
- Approximately \$205 million in severance tax collection on oil and gas production, of which \$84 million (41 percent) were transferred to local jurisdictions (Montana Department of Revenue 2013).

The State of Montana imposes a fuel tax but exempts certain uses of diesel fuel, including diesel fuel for rail, from this tax (Montana Department of Transportation 2014). The state also assesses property values and collects property taxes on various types of property, including railroads.⁶ In FY 2012, Class 12 property (railroads, airlines) in Montana had a full market value of approximately \$2.1 billion and a taxable value of approximately \$70.1 million. The state assessed property taxes of approximately \$35.3 million on these properties. This is equivalent to a rate of 1.7 percent of the full market value (Montana Department of Revenue 2013).

15.4.4.3 Local Taxes

In 2011, intergovernmental transfers were the largest source of local government revenues and accounted for approximately 44 percent of total revenues (more than 80 percent of these intergovernmental transfers came from the State of Montana). Most of the intergovernmental transfers that local governments received from the State of Montana were funded by taxes on natural resources, especially oil and gas. As described above, in FY 2012, 6 percent of coal severance taxes were allocated to the counties.

Local taxes accounted for 33 percent of local government revenues. Local taxing jurisdictions in Montana include counties, school districts, cities, towns, fire, and other miscellaneous districts. Approximately 97 percent of tax revenues collected by local jurisdictions are from property taxes (U.S. Census Bureau 2011). Landowners often pay property taxes to multiple jurisdictions based on the tax rate charged by each jurisdiction. Table 15-7 shows property taxes collected in 2012 by local jurisdictions in the four-county area.

Charges for services accounted for 23 percent of local government revenue. Charges for services include charges for hospital services, sewerage and solid waste management, parking facilities, and parks and recreation.

⁶ Other types of property may be assessed locally (at the county level, e.g., residential and commercial land and improvements).

Table 15-7. Local Property Tax Collections, 2012

County	Taxing Jurisdiction					Total
	County Government	Cities and Towns	Schools	Fire and Other Districts	Special Improvement Districts and Fees ^a	
Custer	\$3,152,187	\$1,577,848	\$5,225,790	\$35,047	\$2,240,702	\$12,231,574
Rosebud	\$3,246,645	\$2,866,107	\$6,378,471	\$2,422,912	\$932,205	\$15,846,340
Powder River	\$1,005,887	\$58,911	\$1,173,079	\$59,725	\$218,493	\$2,516,095
Big Horn	\$2,097,717	\$471,555	\$4,634,358	\$134,814	\$11,751,142	\$19,089,586

Notes:

^a Districts created to support specific infrastructure, facility or service

Source: Montana Department of Revenue 2013

15.4.5 Communities and Social Groups

The largest communities by population in the four-county area are, in order, the cities of Miles City, Hardin, Colstrip, Forsyth and Broadus (Table 15-1). The largest community, Miles City, has fewer than 10,000 inhabitants.

The Northern Cheyenne Indian Reservation is located in Rosebud and Big Horn Counties. Its main communities, located along Highway 212, are Lame Deer, Muddy, and Busby. Ashland is located east of the reservation. Approximately half of the Northern Cheyenne Tribe's 10,500 members reside on the reservation (Governor's Office of Indian Affairs 2013a).

The Crow Reservation is located to the west of and adjacent to the Northern Cheyenne Indian Reservation in Big Horn County. Its main communities are located along Interstate 90 and are Crow Agency, Garryowen, Lodge Grass, and Wyola. Approximately 70 percent of the tribe's 13,260 members live on the reservation (Governor's Office of Indian Affairs 2013b).

An Amish community located north of Ashland in Rosebud County along the Tongue River is one of several Amish communities in Montana (Amish America 2011). The total Amish population in the state was estimated to be 540 people in 2013 (Amish Studies 2013).

Organized groups in the four-county area include city chambers of commerce and community development organizations. Organizations associated with ranching and oil and gas are present in Billings. Most nonprofit organizations in the area are associated with health, education, and outdoor recreational activities (National Center for Charitable Statistics n.d.).

15.4.5.1 Nonmarket Values and Quality of Life

Important characteristics of the affected area that cannot or have not been quantified include nonmarket values and quality of life. Nonmarket values are benefits associated with the use or existence of resources but that are not reflected in market prices. As discussed in Section

15.4.3, *Employment and Income*, industries associated with recreation, travel, and tourism are locally important. Recreation and ranching are typically associated with nonmarket values in western states. Many studies have attempted to identify and attribute dollar values to nonmarket values of recreation. A 2003 review, for example, identified 40 economic studies addressing the nonmarket values of fish and wildlife in the State of Montana (Duffield 2003). These include nonmarket values associated with hunting and fishing recreational trips. Studies have also raised evidence of nonmarket values associated with ranching in the Western United States. For example, there is some evidence from ranch sales data that the value of ranches is often reflective of more than market returns, suggesting that ranchers tend to value the activity for cultural reasons associated with lifestyle or regional values and not just for its economic return (Tanaka et al. 2005).

Quality of life is a concept used to capture the desirable or beneficial quality of multiple aspects of individual and community life, such as health, material wealth, natural amenities, and satisfaction with work, leisure, family and community (Theofilou 2013, Sirgy et al. 2010). Impacts on social and economic characteristics could enhance or impair the quality of life of the communities in the study area. One illustration of values associated with quality of life by the local population is the Southeastern Montana Development Corporation's *2011–2015 Comprehensive Economic Development Strategy*. The Southeastern Montana Development Corporation is a nonprofit organization formed by Custer, Powder River, Rosebud and Treasure Counties; the Northern Cheyenne Indian Reservation; and several towns within these areas. The development strategy identifies common development goals for these communities, which include economic growth and development of infrastructure and public services and sustainable natural resource development. A Strengths, Weaknesses, Opportunities and Threats (SWOT) analysis conducted during community meetings for development of this plan shows aspects that communities associate with regional quality of life. Strengths were associated with small communities, scenic natural surroundings, and recreation. Weaknesses were associated with limited housing, school funding, senior services, and youth leaving the area (Southeastern Montana Development Corporation 2010).

15.5 Environmental Consequences

Socioeconomic impacts could result from construction and operation of any build alternative. The impacts common to all build alternatives are presented first, followed by the impacts specific to each build alternative.

15.5.1 Impacts Common to All Build Alternatives

15.5.1.1 Construction

The following construction-related socioeconomic impacts would be the same for all build alternatives.

- **Displace Economic Activity in the Right-of-Way**

If the proposed rail line is constructed, the land in the right-of-way would no longer be used for farming, ranching, or other economic activities. This loss of local economic activity would reduce demand from those earning income from the affected activities. The current value of economic activity on the displaced lands would differ slightly by build alternative, but would not exceed 0.2 percent of the estimated total farm production value of cattle, winter wheat, and alfalfa hay in the four-county area (Tables T-3 through T-5 of Appendix T, *Socioeconomic Methods and Tables*, compared to sum of annual output of selected farm production in four-county area, shown in Table 15-5). Any build alternative would sever parcels, limit access to irrigation systems, and restrict the movements of animals and equipment (Chapter 12, Section 12.2, *Land Use*). Individual farmers could respond to these impacts in different ways.

Economic activities associated with recreation could also be affected by the conversion of conservation easements and block management lands to right-of-way, discouraging recreationists or diverting them to other area. Impacts on recreation are discussed in Chapter 12, Section 12.3, *Recreation*.

- **Displace Residences in the Right-of-Way**

Construction of any build alternative would displace between zero and two residences in the right-of-way. The affected homes could be relocated to or rebuilt in a different area within the property.

- **Increase Construction-Related Local Employment and Earnings**

Construction of any build alternative would temporarily support local employment and the local economy. Any build alternative would directly employ construction labor during the construction period and induce local expenditures on inputs and services. In addition, construction workers would spend a portion of their income locally.

OEA estimated the direct and total employment generated during the construction period under each of the build alternatives, as explained in Appendix T, *Socioeconomic Methods and Tables*. Direct employment refers to workers hired by rail line builders during construction. Total employment includes—in addition to direct employment—indirect and induced employment. Indirect employment consists of employment generated by rail construction through its demand for construction materials and services. Induced employment consists of employment generated by rail construction in firms where construction workers and service providers spend their incomes. Direct and total estimated employment would be specific to each build alternative, as discussed in Section 15.5.2, *Impacts by Build Alternative*. Peak employment would be highest under the year-round construction schedule (as opposed to the 8-months-per-year construction schedule) and, for most build alternatives, would occur in year 1 of the construction schedule (2015 assuming winter construction). As a result, these impacts would be temporary.

- **Attract Construction Workers to the Study Area**

Employment generated by construction would bring construction workers to areas within commuting distance of construction sites. Given commuter patterns, the location of roads and distances to rail alignments, OEA assumed that construction workers would reside in the four-county area. OEA analyzed the impact of construction of the proposed rail line on changes to population in the four-county area using the Tongue River Alternative with year-round construction. OEA estimated that this build alternative would generate the most direct employment in a single year in the four-county area and would, therefore, attract the greatest number of workers to the four-county area. The other build alternatives would have comparable or lower peak employment (Section 15.5.2, *Impacts by Build Alternatives* and Appendix T, *Socioeconomic Methods and Tables*). Based on the analysis of the four-county area labor force, OEA estimates that 238 construction workers (295 jobs minus 57 unemployed construction workers) would move to the four-county area during peak construction in 2015. Assuming they would not move with their families, this would represent 0.6 percent of the projected four-county population (37,193, per Table 15-1).

Construction would also create employment in the study area where construction-related expenditures are expected to be made. Employment in the study area could bring new construction workers to that area. OEA estimates that 630 construction workers (1,039 jobs minus 409 unemployed construction workers) would move into the study area by 2015, during the peak year of construction (including the 297 in the four-county area). This is equal to less than 0.3 percent of the projected population in 2015 (233,642, per Table 15-1). All build alternatives would have a similarly small impact on population (Appendix T, *Socioeconomic Methods and Tables*).

- **Increase Demand for Local Housing and Public Services**

The increase in the number of construction workers in the four-county area would add demand for housing and public services. OEA analyzed the impact of construction on increased demand for housing and services using the same build alternatives and construction schedule as those for the analysis of peak employment, because these would generate the largest change in demand for housing. Other build alternatives would have comparable or slightly lower peak employment (Section 15.5.2, *Impacts by Build Alternatives* and Appendix T, *Socioeconomic Methods and Tables*). In the four-county area, the projected demand for 238 housing units would represent 57 percent of the average number of vacant rental housing units in 2015. In the study area, the demand for 630 housing units would represent 39 percent of the vacant housing units for rent in 2015 (for estimation details, see Appendix T, *Socioeconomic Methods and Tables*). These estimates assume each construction worker would require one housing unit. To the extent that workers share housing units or make use of temporary housing such as hotels, motels, or camps, the increase in demand would be considerably less.

OEA expects that the demand for public services, such as law enforcement and fire protection, would increase in proportion to the increase in population (0.6 percent of the local population in the four-county area; 0.3 percent in the study area). However, the increase in demand for public services may be considerably higher in some communities, depending on the distribution of the population among the communities in the four-county area. The communities that could see the greatest change in demand for housing and public services are Miles City, Forsyth, Colstrip, Broadus, and Hardin, as well as the smaller communities along Highway 212, such as Ashland, Lame Deer, Muddy, Busby, and Crow Agency. Impacts from increased employment or an increase in the demand for housing or public services in any of these communities would be temporary.

- **Affect Communities and Social Groups**

The job opportunities created during construction of the proposed rail line would benefit construction workers. Impacts on individual communities in the four-county area would depend on the distribution of existing and incoming construction workers. As previously noted, communities that may see an influx of construction workers include Miles City, Forsyth, Colstrip, Broadus, Hardin and smaller communities along Highway 212, such as Ashland, Lame Deer, Muddy, Busby, and Crow Agency.

Communities with traditional lifestyles, such as the Indian tribes and the Amish community, could be affected by the influx of construction workers, to the extent that incoming workers' daily work and leisure activities contrast with those of the local communities. This would be more likely if workers choose to reside or commute along Highway 212, which intersects the Northern Cheyenne Indian Reservation. These impacts would be temporary.

Farmers and livestock operators would be affected by the loss of output along the right-of-way.

- **Increase State and Local Tax Revenues**

During construction of any build alternative, TRRC would not pay Montana corporate income taxes associated with the proposed rail line because it would not have earned net income from the proposed rail line. Residents of the state earning income during construction would pay state income taxes. Construction of the proposed rail line would create up to 1,974 jobs in the study area during the peak year of construction (2015). As discussed above in Section 15.3.3, *Impact Assessment*, this includes direct, indirect, and induced employment in a variety of industrial sectors. At average labor earnings of \$39,684 for the State of Montana (Table 15-4), this would correspond to approximately \$78 million in labor earnings. A state individual income tax rate of up to 6.9 percent (Section 15.4.4.1, *State Taxes*) would generate state revenues of up to \$5.4 million.

The State of Montana would also collect miscellaneous state excise or use taxes because of local construction expenditures (e.g., retail energy taxes, lodging facilities use tax,

rental vehicles tax). OEA expects total state taxes paid during construction of the proposed rail line to be a small portion of the state's fiscal revenues.

As discussed in Section 15.4.4.3, *Local Taxes*, approximately 44 percent of county revenues in the State of Montana are from intergovernmental transfers. Construction of the proposed rail line would not affect these transfers. Some changes in property tax revenues could occur during rail construction due to the shift in ownership of lands in the right-of-way. County revenues from charges for services would increase with population increase in the study area. Assuming this increase would be proportional to the increase in population in the counties affected, the effect on county tax revenues would be minor. The overall impact of the proposed rail line on county revenues during construction would depend on the rate at which the railroad property taxable value increases.

15.5.1.2 Operation

The following socioeconomic impacts from operation of the proposed rail line would be common to all of the build alternatives.

- **Displace Economic Activity in the Right-of-Way**

Noise and visual impacts that result from operation of the proposed rail line could affect recreational activities, but are not expected to reduce the overall levels of recreation or to have socioeconomic impacts (Chapter 12, Section 12.3 *Recreation*). Rail-induced wildfire occurrences and acreages burned in Montana are very low, and wildfire risk along any build alternative would be low, based on a wildfire risk probability assessment. However, some small areas along the Tongue River Alternatives, Colstrip Alternatives, Tongue River Road Alternatives, and Moon Creek Alternatives would have higher wildfire risk (Appendix I, *Wildfire Risk to Vegetation*). Impacts on livestock operations resulting from collisions with livestock would be largely avoided by fencing along the right-of-way, with some exceptions (Chapter 2, Section 2.2.1, *Right-of-Way*). The loss of output associated with the loss of lands along the right-of-way currently being used for ranching, farming or other economic activities would be permanent.

- **Increase Operation-Related Local Employment and Earnings**

Operation of any build alternative would support local employment and earnings and would contribute to the local economy. The contribution of rail operation to the local economy would be much less than the contribution of construction. OEA estimates that any build alternative would employ 24 staff members. The average annual earning by railroad conductors and yardmasters in Montana is \$50,809 (Bureau of Labor Statistics 2013). Therefore, OEA expects that employees involved in rail operation would earn approximately \$1.2 million annually. OEA estimates that an annual direct employment of 24 employees would support additional employment of 54 jobs in the study area. These jobs would be in areas such as maintenance and repair, food services, wholesale

and retail trade, and financial services (see discussion of the IMPLAN model in Appendix T, *Socioeconomic Methods and Tables*).

Operation of the proposed rail line would also stimulate the local economy (particularly the study area) through the purchase of services and input materials, including diesel fuel. Consumption of diesel fuel by the proposed rail line could approach 1.7 percent of the annual statewide consumption of diesel fuel (Chapter 14, *Energy Resources*, up to 7.35 million gallons/year compared to 441 million gallons consumed in the State of Montana in 2011).

The impacts of rail operation on employment and earning for any build alternative would be a small fraction of total labor and earnings in the study area.

- **Attract Workers Employed in Rail Operation to the Study Area**

The BNSF Railway Company (BNSF) would operate the proposed rail line. BNSF already has facilities and rail operation in the area, and TRRC would build new facilities that could attract some new workers. OEA estimates that total direct employment would be 24 new employees. Assuming an average Montana family size of 2.91 persons (U.S. Census Bureau 2010) and assuming that all employees would move into the four-county area from elsewhere, the population could increase by up to 70 residents. Any increase in the number of workers and their families would not have a measurable impact on long-term population trends in the study area.

- **Increase Demand for Local Housing and Public Services**

The increase in the number of workers in rail operation in the study area would generate added demand for housing and public services. Because the population increase in the affected four-county area during rail operation could be up to 70 residents, the current provision of housing and public services in local communities would be sufficient to handle the added demand.

- **Affect Communities and Social Groups**

Under any build alternative, Miles City, Forsyth, Colstrip, Broadus, Hardin, and smaller communities along Highway 212 such as Ashland, Lame Deer, Muddy, Busby, and Crow Agency could see an influx of workers for rail operation seeking permanent residence. Although many of these communities are small, OEA expects that, because of the small number of new families (up to 70 residents), they would not overburden the local supply of housing and public services.

The loss of output along the right-of-way would permanently affect farmers and livestock operators in the study area.

- **Increase State and Local Tax Revenues**

TRRC would pay the State of Montana corporate income taxes associated with operation of the proposed rail line, and staff would pay individual income taxes. TRRC estimates that corporate income before taxes would be approximately \$60 million in 2017, in 2017 dollars (Tongue River Railroad Company 2012). OEA estimates this would correspond to approximately \$53 million in 2012 dollars.⁷ A corporate tax rate of 6.75 percent (Section 15.4.4.1, *State Taxes*) would generate state income taxes of approximately \$3.6 million annually. TRRC estimates that it would employ up to 24 workers during rail operation (Tongue River Railroad Company 2012). Based on the income assumptions described above and a state individual income tax rate of 6.9 percent (Section 15.4.4.1, *State Taxes*), employment for rail operation would generate annual state income tax revenues of approximately \$83,000.

TRRC would also pay property taxes to the State of Montana; 20 percent of these taxes would be allocated to the state and 80 percent to the counties (Montana Department of Revenue 2013). OEA predicted TRRC's property taxes by multiplying the estimated market value of the railroad property by the average industrial property tax rate in Montana. OEA's estimate of the market value of the railroad property is based on the estimated cost of construction. The Tongue River Road East Alternative would be the most expensive alignment to construct, at an estimated \$874 million in 2012 dollars. Property taxes on this value can be estimated by using the ratio of taxes paid by Class 12 property in FY 2012 (airports and railroads) to the full market value of that property. In FY 2012, the effective tax rate on Class 12 properties (airports and railroads) was 1.7 percent (Montana Department of Revenue 2013).⁸ By applying this rate to the estimated property value of the Tongue River Road East Alternative, OEA estimates that TRRC would pay up to \$15 million in property taxes in 2012 dollars. If 20 percent of these taxes is retained by the state, annual state revenues from property taxes on the proposed rail line would be approximately \$3 million.

Additional state tax revenues generated by operation of the proposed rail line would include miscellaneous state excise or use taxes on expenditures such as retail energy, use of lodging facilities, and rental vehicles. Because total state fiscal revenues were, in 2012, approximately \$5 billion, of which \$2.1 billion were taxes (Table 15-6), the overall impact of the proposed rail line on state revenues would be less than 1 percent of total state revenues.

With respect to county revenues, operation of the proposed rail line would mainly affect property taxes collected by the counties where it would be located. OEA estimates that TRRC would pay up to \$12 million, in 2012 dollars, to county governments, or

⁷ Assuming an average annual inflation rate equal to the Bureau of Labor Statistics Consumer Price Index annual average variation in the 2004–2013, 10-year period (Bureau of Labor Statistics 2014).

⁸ Class 12 property taxes paid in FY 2012 of \$37,080,721 divided by Class 12 property full market value of \$2,097,157,340.

80 percent of the estimated state property taxes. If a northern alternative⁹ is approved, Custer, Powder River, and Rosebud Counties would benefit from these property taxes. If a southern alternative is approved, Powder River, Rosebud, and Big Horn Counties would benefit. Table 15-8 shows the estimated property tax revenues as a share of current revenues of local jurisdictions under the northern and southern alternatives.

Table 15-8. Property Tax Collections by Local Jurisdictions by Build Alternative, Millions of 2012 dollars

Build Alternative	Estimated Railroad Property Taxes Distributed to Local Jurisdictions	Counties Benefitting	Current Property Tax Collections by Local Jurisdictions	New Railroad Property Taxes as Share of Current County Government Property Tax Collections
Northern alternatives	\$12.0	Custer, Powder River, Rosebud	\$30.6	39.2%
Southern alternatives	\$12.0	Powder River, Rosebud, Big Horn	\$37.5	32.0%

Notes:

The northern alternatives are the Tongue River Alternatives, Colstrip Alternatives, Tongue River Road Alternatives, and Moon Creek Alternatives. The southern alternatives are the Decker Alternatives.

15.5.2 Impacts by Build Alternative

The socioeconomic impacts that are specific to each build alternative are described below, and are represented in the following tables. The methods for calculating and accruing data are described in Appendix T, *Socioeconomic Methods and Tables*.

- Table 15-9 shows the estimated loss of farm income from production in the right-of-way of each build alternative.
- Table 15-10 shows the estimated number of residences within the right-of-way that would be displaced by each build alternative (Chapter 12, Section 12.2, *Land Use*). Information on the number of residents that would be affected is not available. If these residences had the average Montana household size of 2.45 people per household (U.S. Census Bureau 2008 to 2012), the number of residents affected would range from 0 to 8, depending on the build alternative.
- Table 15-11 shows the direct total and peak employment for each build alternative, assuming year-round construction. At peak employment, direct employment supported by rail construction would approach an estimated 1.9 percent of the total projected employment in that year in the four-county area.
- Table 15-12 shows construction costs and total employment (direct, indirect, and induced) by build alternative for the year-round construction schedule. At peak employment, total employment supported by rail construction would approach an estimated 1.7 percent of total projected employment in that year in the study area.

⁹ The northern alternatives are the Tongue River Alternatives, Colstrip Alternatives, Tongue River Road Alternatives, and Moon Creek Alternatives. The southern alternatives are the Decker Alternatives.

Table 15-9. Estimated Loss of Farm Output in Four-County Area by Build Alternative

Build Alternative	Estimated Loss of Farm Output to Right-of-Way (2012 \$)			Four-County Annual Output (Cattle, Winter Wheat and Alfalfa Hay) (2012 \$)	Share of Annual Output Lost (%)	
	Livestock Production	Winter Wheat	Alfalfa Hay			Total
Tongue River	\$111,436	\$130,715	\$25,278	\$267,430	\$234,364,260	0.11
Tongue River East	\$108,007	\$35,167	\$19,176	\$162,350	\$234,364,260	0.07
Colstrip	\$58,329	\$113,864	\$16,767	\$188,960	\$234,364,260	0.08
Colstrip East	\$57,185	\$0	\$10,664	\$67,849	\$234,364,260	0.03
Tongue River Road	\$122,729	\$215,151	\$21,456	\$359,336	\$234,364,260	0.15
Tongue River Road East	\$118,168	\$119,603	\$15,321	\$253,092	\$234,364,260	0.11
Moon Creek	\$115,535	\$137,980	\$27,784	\$281,299	\$234,364,260	0.12
Moon Creek East	\$112,106	\$42,432	\$21,649	\$176,187	\$234,364,260	0.08
Decker	\$67,739	\$3,053	\$32	\$70,824	\$234,364,260	0.03
Decker East	\$62,564	\$3,053	\$0	\$65,617	\$234,364,260	0.03

Table 15-10. Residences Displaced by Right-of-Way by Build Alternative

Build Alternative	Known Residences in the Right-of-Way
Tongue River	1
Tongue River East	1
Colstrip	1
Colstrip East	1
Tongue River Road	1
Tongue River Road East	1
Moon Creek	2
Moon Creek East	2
Decker	0
Decker East	0

Table 15-11. Direct Employment by Build Alternative, Year-Round Construction

Build Alternatives	Peak Year of Direct Employment	Direct Employment ^a		Total Employment as Share of Employment in Four-County Area (Peak Construction Year) (%)
		Total	Peak	
Tongue River	2015	496	295	1.9
Tongue River East	2015	602	238	1.5
Colstrip	2015	320	240	1.5
Colstrip East	2015	429	233	1.5
Tongue River Road	2016	612	245	1.5
Tongue River Road East	2015	720	239	1.5
Moon Creek	2016	596	242	1.5
Moon Creek East	2015	703	212	1.3
Decker	2015	604	205	1.3
Decker East	2015	578	196	1.2

Notes:

^a Employment refers to part-time and full-time jobs, not number of people employed

Source: OEA estimates based on Tongue River Railroad Company 2014a

Table 15-12. Construction Costs and Employment Estimates by Build Alternative, Year-round Construction Schedule

Build Alternative	Peak Year of Construction Expenditures and Employment, Assuming Year 1 is 2015	Construction Cost (2012 million \$)		Total Employment (Direct, Indirect and Induced) ^a		Total Employment as Share of Employment in Study Area (Peak Construction Year) (%)
		Total	Peak Year	Total	Peak	
Tongue River	2015	\$602	\$359	3,313	1,974	1.7
Tongue River East	2015	\$731	\$289	4,023	1,589	1.3
Colstrip	2015	\$388	\$291	2,135	1,601	1.4
Colstrip East	2015	\$520	\$283	2,863	1,557	1.3
Tongue River Road	2015	\$743	\$298	4,087	1,637	1.4
Tongue River Road East	2015	\$874	\$290	4,810	1,597	1.4
Moon Creek	2015	\$724	\$294	3,984	1,620	1.4
Moon Creek East	2015	\$853	\$258	4,694	1,417	1.2
Decker	2015	\$733	\$249	4,034	1,371	1.2
Decker East	2015	\$702	\$238	3,864	1,311	1.1

Notes:

^a Employment refers to part-time and full-time jobs, not number of people employed

Source: OEA estimates based on Tongue River Railroad Company 2014a, 2014b, and using IMPLAN, as explained in the text

15.5.2.1 Tongue River Alternatives

Tongue River Alternative

Displaced Economic Activity in the Right-of-Way

Construction and operation of the Tongue River Alternative would result in the loss of \$267,430 of agricultural production per year in the right-of-way, or 0.11 percent of the total four-county output (Table 15-9).

Displaced Residences

Construction of the Tongue River Alternative could require the relocation of one residence within the right-of-way (Table 15-10).

Construction Employment

Construction of the Tongue River Alternative could result in 3,313 part-time and full-time jobs (adding annual jobs throughout the construction period), or a peak of 1,974 jobs (annual jobs in year of peak employment). This represents 1.7 percent of total employment in the study area during the peak construction year 2015 (Table 15-12).

Population and Housing

Construction of the Tongue River Alternative could result in a population increase of up to 238 construction workers in the four-county area and 630 construction workers in the study area during the year of peak construction. This would correspond to a 0.6 percent increase in the four-county area population and a 0.3 percent increase in the study area population (Appendix T, *Socioeconomic Methods and Tables*, Table T-14). The increased demand for housing would correspond to approximately 57 percent of the projected vacant housing units for rent in the four-county area and approximately 39 percent of the vacant housing units for rent in the study area (Appendix T, *Socioeconomic Methods and Tables*, Table T-15).

Tongue River East Alternative

Displaced Economic Activity in the Right-of-Way

Construction and operation of the Tongue River East Alternative would result in the loss of \$162,350 of agricultural production per year in the right-of-way, or 0.07 percent of the total four-county output (Table 15-9).

Displaced Residences

Construction of the Tongue River East Alternative could require the relocation of one home within the right-of-way (Table 15-10).

Construction Employment

Construction of the Tongue River East Alternative could create 4,023 part-time and full-time jobs, or a peak of 1,589 jobs. The peak employment represents 1.3 percent of total employment in the study area during the peak construction year 2015 (Table 15-12).

Population and Housing

Construction of the Tongue River East Alternative could result in the population increase of up to 181 construction workers in the four-county area and 428 construction workers in the study area, during the year of peak construction. This would correspond to a 0.5 percent increase in the four-county area population and a 0.2 percent increase in the study area population (Appendix T, *Socioeconomic Methods and Tables*, Table T-14). The increased demand for housing would correspond to approximately 43 percent of the projected vacant housing units for rent in the four-county area, and approximately 27 percent of the vacant housing units for rent in the study area (Appendix T, *Socioeconomic Methods and Tables*, Table T-15).

15.5.2.2 Colstrip Alternatives

Colstrip Alternative

Displaced Economic Activity in the Right-of-Way

Construction and operation of the Colstrip Alternative would result in the loss of \$188,960 of agricultural production per year in the right-of-way, or 0.08 percent of the total four-county output (Table 15-9).

Displaced Residences

Construction of the Colstrip Alternative could require the relocation of one home within the right-of-way (Table 15-10).

Construction Employment

Construction of the Colstrip Alternative could create 2,135 part-time and full-time jobs, or a peak of 1,601 jobs. This represents 1.4 percent of total employment in the study area during the peak construction year 2015 (Table 15-12).

Population and Housing

Construction of the Colstrip Alternative could result in a population increase of up to 183 construction workers in the four-county area and 434 construction workers in the study area, during the year of peak construction. This would correspond to a 0.5 percent increase in the four-county area population and a 0.2 percent increase in the study area population (Appendix T, *Socioeconomic Methods and Tables*, Table T-14). The increased demand for

housing would correspond to approximately 44 percent of the projected vacant housing units for rent in the four-county area, and approximately 27 percent of the vacant housing units for rent in the study area (Appendix T, *Socioeconomic Methods and Tables*, Table T-15).

Colstrip East Alternative

Displaced Economic Activity in the Right-of-Way

Construction and operation of the Colstrip East Alternative would result in the loss of \$67,849 of agricultural production per year in the right-of-way, or 0.03 percent of the total four-county output (Table 15-9).

Displaced Residences

Construction of the Colstrip East Alternative would require the relocation of one home within the right-of-way (Table 15-10).

Construction Employment

Construction of the Colstrip East Alternative could create 2,863 part-time and full-time jobs, or a peak of 1,557 jobs. This represents 1.3 percent of total employment in the study area during the peak construction year 2015 (Table 15-12).

Population and Housing

Construction of the Colstrip East Alternative could result in the population increase of up to 176 construction workers in the four-county area and 411 construction workers in the study area, during the year of peak construction. This would correspond to a 0.5 percent increase in the four-county area population and a 0.2 percent increase in the study area population (Appendix T, *Socioeconomic Methods and Tables*, Table T-14). The increased demand for housing would correspond to approximately 42 percent of the projected vacant housing units for rent in the four-county area, and approximately 26 percent of the vacant housing units for rent in the study area (Appendix T, *Socioeconomic Methods and Tables*, Table T-15).

15.5.2.3 Tongue River Road Alternatives

Tongue River Road Alternative

Displaced Economic Activity in the Right-of-Way

Construction and operation of the Tongue River Road Alternative would result in the loss of \$359,336 of agricultural production per year in the right-of-way, or 0.15 percent of the total four-county output (Table 15-9).

Displaced Residences

Construction of the Tongue River Road Alternative could require the relocation of one home within the right-of-way (Table 15-10).

Construction Employment

Construction of the Tongue River Road Alternative could result in 4,087 part-time and full-time jobs, or a peak of 1,637 jobs. This represents 1.4 percent of total employment in the study area during the peak construction year 2015 (Table 15-12).

Population and Housing

Construction of the Tongue River Road Alternative could result in the population increase of up to 188 construction workers in the four-county area and 453 construction workers in the study area, during the year of peak construction. This would correspond to a 0.5 percent increase in the four-county area population and a 0.2 percent increase in the study area population (Appendix T, *Socioeconomic Methods and Tables*, Table T-14). The increased demand for housing would correspond to approximately 45 percent of the projected vacant housing units for rent in the four-county area, and approximately 28 percent of the vacant housing units for rent in the study area (Appendix T, *Socioeconomic Methods and Tables*, Table T-15).

Tongue River Road East Alternative

Displaced Economic Activity in the Right-of-Way

Construction and operation of the Tongue River Road East Alternative would result in the loss of \$253,092 of agricultural production per year in the right-of-way, or 0.11 percent of the total four-county output (Table 15-9).

Displaced Residences

Construction of the Tongue River Road East Alternative could require the relocation of one home within the right-of-way (Table 15-10).

Construction Employment

Construction of the Tongue River Road East Alternative could result in 4,810 part-time and full-time jobs, or a peak of 1,597 jobs. This represents 1.4 percent of total employment in the study area during the peak construction year 2015 (Table 15-12).

Population and Housing

Construction of the Tongue River Road East Alternative could result in the population increase of up to 182 construction workers in the four-county area and 432 construction workers in the study area, during the year of peak construction. This would correspond to a

0.5 percent increase in the four-county area population and a 0.2 percent increase in the study area population (Appendix T, *Socioeconomic Methods and Tables*, Table T-14). The increased demand for housing would correspond to approximately 44 percent of the projected vacant housing units for rent in the four-county area, and approximately 27 percent of the vacant housing units for rent in the study area (Appendix T, *Socioeconomic Methods and Tables*, Table T-15).

15.5.2.4 Moon Creek Alternatives

Moon Creek Alternative

Displaced Economic Activity in the Right-of-Way

Construction and operation of the Moon Creek Alternative would result in the loss of \$281,299 of agricultural production per year in the right-of-way, or 0.12 percent of the total four-county output (Table 15-9).

Displaced Residences

Construction of the Moon Creek Alternative could require the relocation of two homes within the right-of-way (Table 15-10).

Construction Employment

Construction of the Moon Creek Alternative could result in 3,984 part-time and full-time jobs, or a peak of 1,620 jobs. This represents 1.4 percent of total employment in the study area during the peak construction year 2015 (Table 15-12).

Population and Housing

Construction of the Moon Creek Alternative could result in the population increase of up to 185 construction workers in the four-county area and 444 construction workers in the study area, during the year of peak construction. This would correspond to a 0.5 percent increase in the four-county area population and a 0.2 percent increase in the study area population (Appendix T, *Socioeconomic Methods and Tables*, Table T-14). The increased demand for housing would correspond to approximately 44 percent of the projected vacant housing units for rent in the four-county area, and approximately 28 percent of the vacant housing units for rent in the study area (Appendix T, *Socioeconomic Methods and Tables*, Table T-15).

Moon Creek East Alternative

Displaced Economic Activity in the Right-of-Way

Construction and operation of the Moon Creek East Alternative would result in the loss of \$176,187 of agricultural production per year in the right-of-way, or 0.08 percent of the total four-county output (Table 15-9).

Displaced Residences

Construction of the Moon Creek East Alternative could require the relocation of two homes within the right-of-way (Table 15-10).

Construction Employment

Construction of the Moon Creek East Alternative could result in 4,694 part-time and full-time jobs, or a peak of 1,417 jobs. This represents 1.2 percent of total employment in the study area during the peak construction year 2015 (Table 15-12).

Population and Housing

Construction of the Moon Creek East Alternative could result in the population increase of up to 155 construction workers in the four-county area and 337 construction workers in the study area, during the year of peak construction. This would correspond to a 0.4 percent increase in the four-county area population and a 0.1 percent increase in the study area population (Appendix T, *Socioeconomic Methods and Tables*, Table T-14). The increased demand for housing would correspond to approximately 37 percent of the projected vacant housing units for rent in the four-county area, and approximately 21 percent of the vacant housing units for rent in the study area (Appendix T, *Socioeconomic Methods and Tables*, Table T-15).

15.5.2.5 Decker Alternatives

Decker Alternative

Displaced Economic Activity in the Right-of-Way

Construction and operation of the Decker Alternative would result in the loss of \$70,824 of agricultural production per year in the right-of-way, or 0.03 percent of the total four-county output (Table 15-9).

Displaced Residences

Construction of the Decker Alternative would not require the relocation of any homes (Table 15-10).

Construction Employment

Construction of the Decker Alternative could result in 4,034 part-time and full-time jobs, or a peak of 1,371 jobs. This represents 1.2 percent of total employment in the study area during the peak construction year 2015 (Table 15-12).

Population and Housing

Construction of the Decker Alternative could result in the population increase of up to 148 construction workers in the four-county area and 313 construction workers in the study area, during the year of peak construction. This would correspond to a 0.4 percent increase in the four-county area population and a 0.1 percent increase in the study area population (Appendix T, *Socioeconomic Methods and Tables*, Table T-14). The increased demand for housing would correspond to approximately 35 percent of the projected vacant housing units for rent in the four-county area, and approximately 19 percent of the vacant housing units for rent in the study area (Appendix T, *Socioeconomic Methods and Tables*, Table T-15).

Decker East Alternative

Displaced Economic Activity in the Right-of-Way

Construction and operation of the Decker East Alternative would result in the loss of \$65,617 of agricultural production per year in the right-of-way, or 0.03 percent of the total four-county output (Table 15-9).

Displaced Residences

Construction of the Decker East Alternative would not require the relocation of any homes (Table 15-10).

Construction Employment

Construction of the Decker East Alternative could result in 3,864 part-time and full-time jobs, or a peak of 1,311 jobs. This represents 1.1 percent of total employment in the study area during the peak construction year 2015 (Table 15-12).

Population and Housing

Construction of the Decker East Alternative could result in the population increase of up to 139 construction workers in the four-county area and 281 construction workers in the study area, during the year of peak construction. This would correspond to a 0.4 percent increase in the four-county area population and a 0.1 percent increase in the study area population (Appendix T, *Socioeconomic Methods and Tables*, Table T-14). The increased demand for housing would correspond to approximately 33 percent of the projected vacant housing units for rent in the four-county area, and approximately 18 percent of the vacant housing units for rent in the study area (Appendix T, *Socioeconomic Methods and Tables*, Table T-15).

15.5.3 No-Action Alternative

Under the No-Action Alternative, TRRC would not construct and operate the proposed Tongue River Railroad, and there would be no socioeconomic impacts from construction or operation of the proposed rail line.

15.5.4 Mitigation and Unavoidable Environmental Consequences

To avoid or minimize socioeconomic impacts from the proposed rail line, OEA is recommending that the Board impose five mitigation measures, including three measures volunteered by TRRC (Chapter 19, Section 19.2.11, *Socioeconomics*). These measures would require TRRC to negotiate with landowners for compensation for loss of agricultural lands, compensate or replace improvements that are displaced by construction or operation, appoint a community liaison to work with affected parties, appoint a tribal liaison to work with affected federally recognized tribes, and work with the tribal liaison to ensure that members of federally recognized tribes receive an equal opportunity to apply and secure jobs with the railroad.

Even with the implementation of OEA's recommended mitigation measures and TRRC's voluntary measures, construction and operation of the proposed rail line would cause unavoidable socioeconomic impacts. These impacts could include an increase in employment during the construction period and a reduction in economic activities directly displaced by the rail line right-of-way, resulting in both beneficial and adverse impacts. Rail construction and operation workers could move to the four-county area, causing local communities to face an increase in demand for housing and public services. Impacts would be greatest, but also temporary, during construction. OEA concludes that the socioeconomic impacts would be both positive and moderately adverse.

15.6 Applicable Regulations

Different federal, state, and local jurisdictions provide guidance or regulations pertaining to socioeconomics. These jurisdictions and the regulations and guidance that govern the socioeconomics are described in Table 15-13.

Table 15-13. Regulations, Statutes, and Guidance Governing Socioeconomics

Regulation, Statute, Guidance	Explanation
Federal	
National Environmental Policy Act (42 U.S.C. § 4321 <i>et seq.</i>)	Requires the consideration of potential environmental effects for any proposed major federal agency action. NEPA implementation procedures are set forth in the President's Council on Environmental Quality's Regulations for Implementing NEPA (49 C.F.R. Part 1105). These regulations define the human environment to include the relationship of people with the environment, and establish that economic and social effects should be discussed when related to natural or physical effects (40 C.F.R. §1508.14).
U.S. Department of the Interior, Bureau of Land Management Handbook H-1601-1, Land Use Planning Handbook (2005), Appendix D	Provides guidance on incorporating social science considerations into the BLM land use planning process
State	
Montana Environmental Policy Act (75 MCA)	Provides for adequate review and interdisciplinary analysis of state actions that have an impact on Montana's human environment in order to ensure that environmental attributes are fully considered. Features of the human environment, including economic and social considerations, are evaluated under MEPA.
Local	
No local regulations or statutes apply to socioeconomics	
Notes: U.S.C. = United States Code; NEPA = National Environmental Policy Act; C.F.R. = Code of Federal Regulations; BLM = Bureau of Land Management; MCA = Montana Code Annotated; MEPA = Montana Environmental Policy Act	