



**WBI ENERGY TRANSMISSION, INC.**

**North Bakken Expansion Project**

**Resource Report 5  
Socioeconomics**

**Final**

**Docket No.  
CP20-52-000**

**February 2020**

**WBI ENERGY TRANSMISSION, INC.  
NORTH BAKKEN EXPANSION PROJECT  
RESOURCE REPORT 5 – SOCIOECONOMICS**

<b>Minimum Filing Requirements for Environmental Reports:</b>	<b>Addressed in:</b>
For major aboveground facilities and major pipeline projects that require an environmental impact statement, describe existing socioeconomic conditions within the project area – Title 18 of the Code of Federal Regulations (CFR) Part 380.12 (g)(1)	Section 5.1
For major aboveground facilities, quantify impact on employment, housing, local government services, local tax revenues, transportation, and other relevant factors within the project area - 18 CFR § 380.12 (g)(2-6)	Section 5.2

<b>Additional Information:</b>	<b>Addressed in:</b>
Evaluate the impact of any substantial immigration of people on governmental facilities and services and describe plans to reduce the impact on local infrastructure.	Section 5.2.5
Describe onsite workforce requirements, including the number of construction personnel who currently reside within the impact area, who would commute daily to the site from outside the impact area, or would relocate temporarily and permanently within the impact area.	Section 5.2.4 through 5.2.8
Estimate total worker payroll and material purchases during construction and operation.	Section 5.2.6
Estimate project-related ad valorem and local tax revenues.	Section 5.2.7
Determine whether existing housing within the impact area is sufficient to meet the needs of the additional population	Sections 5.1.3 and 5.2.4
Describe the number and types of residences and businesses that would be displaced by the project, procedures to be used to acquire these properties, and types and amounts of relocation assistance payments	Section 5.2.2
Evaluate the effects of the project on minority and low income populations in consideration of Executive Order 12898.	Section 5.3
Conduct a fiscal impact analysis evaluating incremental local government expenditures in relation to incremental local governmental revenues that would result from construction of the project. Incremental expenditures include, but are not limited to, school operating costs, road maintenance and repair, public safety, and public utility costs	Sections 5.2.5 and 5.2.7

<b>Federal Energy Regulatory Commission's January 17, 2020 Environmental Information Request:</b>	<b>Addressed in:</b>
1. Provide a table (example provided with information request) of racial, ethnic, and poverty statistics for each block group within 1 mile of proposed aboveground facilities and proposed crossings by the permanent pipeline right-of-way. The table should include the following information from the U. S. Census Bureau for each state, county, and block group (American Community Survey 2017 data should be used for this information): a. total population; b. percentage of each racial and ethnic group (White Alone Not Hispanic, Black or African American, American Indian and Alaska Native, Asian, Native Hawaiian and Other Pacific Islander, some other race, two or more races, Hispanic or Latino origin [of any race]); c. total minority population including individuals of Hispanic or Latino origin (percentage of total population); and d. percentage of total population below poverty level.	Section 5.3.1
2. Using the data obtained in response to the question 32 above, identify potential Environmental Justice populations by block group. For minority populations, use the <b>50 percent</b> and the <b>meaningfully greater analysis methods</b> . If the minority population of the block groups in the affected area exceeds 50 percent OR the minority population in the block group affected is 10 percentage points higher than the minority population percentage in the county, then an environmental justice community is present. For low-income populations, use the <b>low-income threshold criteria</b> method. If the percent low income population in the identified block group is equal to or greater than that of the county, then an environmental justice community is present.	Section 5.3.1
3. Provide a discussion regarding impacts on Environmental Justices communities (if any exist) for all resources that would be affected by the project, and whether any of those impacts would be disproportionately high and adverse.	Not Applicable

**WBI ENERGY TRANSMISSION, INC.  
NORTH BAKKEN EXPANSION PROJECT  
RESOURCE REPORT 5 – SOCIOECONOMICS**

**TABLE OF CONTENTS**

<b>5.0</b>	<b>RESOURCE REPORT 5 – SOCIOECONOMICS .....</b>	<b>5-1</b>
5.1	EXISTING SOCIOECONOMIC CONDITIONS .....	5-1
5.1.1	Population Density and Growth .....	5-2
5.1.2	Economy and Employment.....	5-3
5.1.2.1	Per Capita Income .....	5-5
5.1.2.2	Unemployment.....	5-6
5.1.2.3	Major Industries .....	5-6
5.1.2.4	Tourism.....	5-7
5.1.2.5	Tax Revenues.....	5-7
5.1.3	Housing .....	5-8
5.1.4	Transportation .....	5-10
5.2	SOCIOECONOMIC IMPACT ANALYSIS AND MITIGATION .....	5-11
5.2.1	Population .....	5-11
5.2.2	Economy and Employment.....	5-11
5.2.3	Tourism .....	5-12
5.2.4	Housing .....	5-13
5.2.5	Government Services .....	5-13
5.2.6	Economy and Tax Revenue .....	5-14
5.2.7	Transportation .....	5-15
5.2.8	Agriculture .....	5-17
5.2.9	Navigation .....	5-17
5.2.10	Hydropower.....	5-17
5.3	ENVIRONMENTAL JUSTICE .....	5-17
5.3.1	Demographic and Economic Data .....	5-18
5.4	CUMULATIVE IMPACTS .....	5-20
5.5	REFERENCES .....	5-22

**LIST OF TABLES**

Table 5.1-1	Distance to Potentially Affected Communities in the Socioeconomic Study Area .....	5-2
Table 5.1.1-1	Land Area and Population Characteristics Within the Project Study Area ..	5-3
Table 5.1.2-1	Labor Force in the Socioeconomic Study Area (2017).....	5-3
Table 5.1.2-2	Major Industry Employment for the Socioeconomic Study Area (Quarter 1 2019).....	5-4
Table 5.1.2-3	Income Statistics for the Socioeconomic Study Area.....	5-5
Table 5.1.2-4	Oil and Gas Production in the Socioeconomic Study Area (2018) .....	5-6
Table 5.1.2-5	North Dakota State General Fund Revenues by Tax Source.....	5-8
Table 5.1.3-1	Hotel and Motel Accommodation in Tioga, Williston, and Watford City.....	5-9
Table 5.1.3-2	Occupied Housing Statistics for the Socioeconomic Study Area .....	5-9
Table 5.1.3-3	Vacant Housing Statistics for the Socioeconomic Study Area (2017) .....	5-9
Table 5.1.3-4	Work Camps Located in the Socioeconomic Study Area.....	5-10
Table 5.1.4-1	Primary Roadways Within the Socioeconomic Study Area .....	5-11

Table 5.2.5-1	Fire and Police Departments Located in the Socioeconomic Study Area .	5-14
Table 5.2.5-2	Hospitals Near the Project Area .....	5-14
Table 5.2.7-1	Estimated Daily Vehicle Traffic.....	5-16
Table 5.3.1-1	Environmental Justice Demographic Indicators for Census Blocks Crossed by the Project .....	5-19

## ACRONYMS AND ABBREVIATIONS

COE	U.S. Army Corps of Engineers
EPA	U.S. Environmental Protection Agency
FERC	Federal Energy Regulatory Commission
GDP	gross domestic product
HDD	horizontal directional drill
NDDOT	North Dakota Department of Transportation
Project	North Bakken Expansion Project
RFFA	reasonably foreseeable future actions
RV	recreational vehicle
WBI Energy	WBI Energy Transmission, Inc.

**WBI ENERGY TRANSMISSION, INC.  
NORTH BAKKEN EXPANSION PROJECT**

**5.0 RESOURCE REPORT 5 – SOCIOECONOMICS**

WBI Energy Transmission, Inc. (WBI Energy) proposes to construct and operate the North Bakken Expansion Project (or Project), which consists of an approximately 61.9-mile-long, new 24-inch-diameter natural gas pipeline from new facilities at WBI Energy's Tioga Compressor Station near Tioga, North Dakota, to a new compressor station (Elkhorn Creek Compressor Station) southeast of Watford City, North Dakota.

The Project also involves construction of approximately 0.3 mile of new 24-inch-diameter natural gas pipeline between the proposed Elkhorn Creek Compressor Station to a new interconnect with Northern Border Pipeline Company, approximately 20.4 miles of new 12-inch-diameter natural gas pipeline looping along WBI Energy's Line Section 25, approximately 9.4 miles of new 12-inch-diameter natural gas pipeline looping along WBI Energy's Line Section 30, approximately 0.5 mile of new 20-inch-diameter receipt lateral to the Tioga Compressor Station, and uprating of WBI Energy's Line Section 25. The Project includes additional horsepower at the Tioga Compressor Station; the installation of new and modifications to existing delivery, receipt, and transfer stations along WBI Energy's pipeline routes; the replacement of small segments of pipeline facilities; and the installation of block valves, pig launcher/receiver stations, and other associated appurtenances. Figure 1.1-1 of Resource Report 1 provides an overview of the proposed pipeline system and associated facilities.

In accordance with Title 18 of the Code of Federal Regulations Part 380.12(g)(1), Resource Report 5 describes the existing socioeconomic conditions in the vicinity of the proposed Project, evaluates the potential socioeconomic impacts that could result from Project-related activities, and identifies proposed mitigation measures to avoid or minimize these impacts. This report summarizes baseline socioeconomic conditions, including population, economy and employment, housing, public services, and transportation. In addition, this report examines the Project's potential impacts on environmental justice communities and assesses potential socioeconomic cumulative impacts. Evaluations presented in this section are based on the most current publicly available data published by a variety of federal and state agencies including the U.S. Department of Commerce, U.S. Bureau of Labor Statistics, and U.S. Census Bureau.

**5.1 EXISTING SOCIOECONOMIC CONDITIONS**

A socioeconomic study area encompasses the area likely to be affected by a project. Defining the study area is important to understanding the characteristics of the region and the type of socioeconomic impacts that may be associated with a project and other large developments in the area. The location, character, and scale of a project are generally considered when measuring impacts on existing population characteristics and the effects a project will have on the services and economy of an area. Socioeconomic impacts of a project often reach beyond the city or town where it is located, necessitating that the study area extend beyond the project construction limits to accurately analyze the potential socioeconomic impacts. Therefore, the socioeconomic study area for the Project will include Burke, Mountrail, McKenzie, and Williams Counties, which are the four counties in which the proposed Project facilities are located.

Table 5.1-1 summarizes the potentially affected communities within the socioeconomic study area and the nearest Project facility to that community. The proposed pipeline routes primarily cross rural, sparsely populated areas. The Project avoids several of the larger population centers in northwestern North Dakota, such as Bowbells in Burke County, Watford City in McKenzie County, Stanley in Mountrail County, and Williston in Williams County. However, all of the new pipeline routes connect to the Tioga Compressor Station approximately 1.0 mile east of Tioga in Williams County.

TABLE 5.1-1 North Bakken Expansion Project Distance to Potentially Affected Communities in the Socioeconomic Study Area		
County/City or Town	Nearest Project Facility	Distance to Nearest Project Facility (miles)
<b>Burke County</b>		
Bowbells	Lignite Plant Receipt Station and Lignite Town Border Station	13.9
<b>McKenzie County</b>		
Watford City	Delta Contractor Yard	3.3
<b>Mountrail County</b>		
Stanley	Robinson Lake Plant Receipt Station	1.1
<b>Williams County</b>		
Tioga	Tioga Plant Receipt Station	0.5
	68 <sup>th</sup> Street Yard	0.5
Williston	Springbrook Plant Receipt Station	6.0
<sup>a</sup> Includes replacement of approximately 0.4 mile of existing pipeline at four county road crossings and one state highway by the guided bore method and the replacement and rerouting of about 0.1 mile of an existing pipeline..		

### 5.1.1 Population Density and Growth

Table 5.1.1-1 summarizes the 2010 and 2018 population census data and land area for the counties and selected metropolitan areas in the socioeconomic study area. Data for the state of North Dakota are included for comparative purposes.

As shown in table 5.1.1-1, available data indicate that the 2018 population of North Dakota was 760,077, with an average population density of 9.7 persons per square mile, making it the third least populous state in the United States. The highest population densities in the Project area are found in and around Watford City, Williston, Stanley, and Tioga. In 2018, Williston was the sixth largest city in North Dakota with a population of 25,017, which accounts for more than 40 percent of the study area population. The 2018 total population of all communities in the study area was about 61,300, representing 8 percent of North Dakota’s total population. The primary driver of population growth in the study area from 2010 to 2018 was net migration (U.S. Census Bureau, 2019). Due to recent advancements in drilling technology, natural gas deposits in the region are more accessible and have regained economic prominence, resulting in high levels of migration to the state. North Dakota’s current growth rate is around 2 percent, with total population projected to reach 824,344 by 2020, making it the second fastest growing state in the United States (North Dakota Department of Commerce, 2016).

TABLE 5.1.1-1					
<b>North Bakken Expansion Project Land Area and Population Characteristics Within the Project Study Area</b>					
State/County/ City or Town	Population (2010)	Population (2018)	Population Percent Change (2010 to 2018)	Population Density (2018) (persons per square mile)	Land Area (square miles)
<b>NORTH DAKOTA</b>	<b>672,576</b>	<b>760,077</b>	<b>13.0</b>	<b>9.7</b>	<b>69,000.8</b>
<b>Burke County</b>	1,968	2,100	6.7	1.8	1,103.6
Bowbells	336	340	1.0	425.0	0.8
<b>McKenzie County</b>	6,359	13,632	114.4	2.3	2,760.3
Watford City	1,797	7,080	294.0	5,057.1	1.4
<b>Mountrail County</b>	7,663	10,218	33.3	4.2	1,825.3
Stanley	1,458	2,611	79.0	1,450.6	1.8
<b>Williams County</b>	22,398	35,350	57.8	10.8	2,077.4
Tioga	1,230	1,588	29.1	1,134.3	1.4
Williston	14,716	25,017	70.0	3,335.6	7.5
<b>Study Area Total</b>	<b>38,388</b>	<b>61,300</b>			

Source: ND HomeTownLocator, 2018; U.S. Census Bureau, 2018

### 5.1.2 Economy and Employment

As shown in table 5.1.2-1, North Dakota’s labor force reached over 417,577 people in 2018, which is nearly a 13 percent increase since the 2010 census. In 2018, jobs accounted for over half of all relocation to the state and less than one-fourth of all moves out of state (United Van Lines, 2018).

TABLE 5.1.2-1						
<b>North Bakken Expansion Project Labor Force in the Socioeconomic Study Area (2017)</b>						
State/County	Total Labor Force <sup>a,b</sup>	Civilian Workers Over 16 Years of Age	Private Wage and Salary Workers	Government Workers	Self- Employed	Unpaid Family Workers
<b>North Dakota</b>	417,577	400,454	305,973	62,761	30,555	1,165
Burke County	1,161	1,129	803	197	124	5
McKenzie County	10,568	5,984	4,837	729	407	11
Mountrail County	5,594	4,807	2,897	1,055	737	118
Williams County	26,799	17,779	14,421	1,901	1,371	86

Sources:  
<sup>a</sup> U.S. Census Bureau, 2018  
<sup>b</sup> The labor force includes all people classified in the civilian labor force, plus active duty members of the military. The civilian labor force consists of people classified as employed or unemployed. Excluded are people 16 years old and over who are not actively looking for work, such as students, homemakers, retired workers, seasonal workers who are not looking for work, institutionalized people, and people doing only incidental unpaid family work. Also excluded are working-age individuals who have stopped looking for work.



North Dakota holds the second highest labor force participation rate in the United States at 69.5 percent (North Dakota Labor Market Information [NDLMI], 2019). Total employment is expected to increase 1.1 percent annually between 2018 and 2023 due to high demand in energy industry workers and outpacing the national average of 0.6 percent.

Table 5.1.2-2 shows the number of employees for each major industry in the socioeconomic study area. The most dominant industry in the Project area is mining, quarrying, and oil and gas extraction, which comprises over 250 companies that account for 5.2 percent of all employment in North Dakota (NDLMI, 2019). Of these 250 companies, 112 are located in the socioeconomic study area. In the first quarter of 2019 (January to March), McKenzie and Williams Counties experienced the second and third largest increases in employment statewide, respectively. The majority of recent inbound migration to the area is from workers seeking employment in the oil and gas industry.

TABLE 5.1.2-2					
<b>North Bakken Expansion Project</b>					
<b>Major Industry Employment for the Socioeconomic Study Area (Quarter 1 2019)<sup>a</sup></b>					
Industry	North Dakota	Burke County	McKenzie County	Mountrail County	Williams County
Accommodation and Food Services	33,801	35	654	297	1,776
Administrative and Waste Services	12,816	10	219	89	641
Agriculture, Forestry, Fishing and Hunting	3,697	NA	26	7	60
Arts, Entertainment, and Recreation	9,586	NA	104	NA	363
Construction	23,921	19	2,202	335	2,522
Educational Services	37,217	129	NA	472	1,332
Finance and Insurance	18,125	27	137	97	412
Health Care and Social Assistance	67,629	17	312	286	1,682
Information	6,343	NA	36	131	160
Management of Companies and Enterprises	3,513	NA	NA	NA	11
Manufacturing	26,334	NA	NA	NA	387
Mining, Quarrying, and Oil and Gas Extraction	21,414	51	2,006	1,386	9,825
Other Services (except Public Administration)	11,516	NA	291	192	595
Professional and Technical Services	16,719	19	309	150	813
Public Administration	22,137	138	1,579	237	762
Real Estate and Rental and Leasing	5,768	NA	360	61	979
Retail Trade	45,635	72	559	556	2,268
Transportation and Warehousing	19,520	72	1,729	782	2,238
Utilities	3,734	NA	78	59	297
Wholesale Trade	23,804	69	487	256	1,827
<b>Total</b>	<b>413,229</b>	<b>658</b>	<b>11,088</b>	<b>5,393</b>	<b>28,950</b>

Sources: NDLMI, 2019

<sup>a</sup> Average employment for occupational groups excludes most government employees, railroad employees, and self-employed persons. Therefore, employment for some groups may be higher than reported.

Notes: NA = Data not available

North Dakota’s overall employment and economic outlook typically mirrors oil and gas industry trends. The state of Bakken Oil Shale production is the largest economic driver in the study area, accounting for the majority of net migration into the region and stimulating local economies. From 2014 to 2016, North Dakota experienced a recession due to a 16.9 percent drop in oil prices and reduced exploration, resulting in 38,000 lost jobs between 2014 and 2016. Despite this decline, oil and gas remained the largest industry in North Dakota excluding real estate. Even during industry lows in 2016, oil and gas extraction generated 6.6 percent of the state’s gross domestic product (GDP), amounting to over 3.2 billion dollars (24/7 Wall St., 2019). Since 2016, the industry has steadily recovered due to rising oil prices and advancements in horizontal directional drill (HDD) methods. North Dakota’s GDP and employment rates have risen in response. Over the last 5 years, the industry has grown by more than 150 percent, and the state’s GDP has subsequently increased by 24 percent. This GDP increase is more than double the national average (10.5 percent), representing the strongest economic growth by any single state in the country. In 2017, the oil and gas industry had a \$32.6 billion impact on the state’s economy (Bismarck Tribune, 2019). This upturn is expected to continue as barrel-per-day oil production grows, with daily production increasing by up to ten percent (IHS Markit, 2018). Increased production was supported in part by a more than doubling of the number of oil rigs from 30 to 63 between 2016 and August 2019 (North Dakota Oil and Gas Division, 2019).

### 5.1.2.1 Per Capita Income

Table 5.1.2-3 shows the income statistics for the socioeconomic study area. The 2017 per capita incomes in counties crossed by the Project range from \$35,674 in Burke County to \$44,474 in Williams County. Per capita income in each county in the study area is greater than the North Dakota average per capital income of \$34,256. In 2017, the percent of the population with incomes below poverty level ranged from 6.6 to 9.7 percent in the counties in the socioeconomic study area, which is approximately 1 to 3 percent lower than the North Dakota state average of 10.3 percent. The difference in per capita incomes relative to the state average may be associated with the expansion of the oil and gas industries in the affected counties. Over 60 percent of those who moved to North Dakota in 2018 had an income equal to or greater than \$75,000 per year. Many of those moving to the state came for oil and gas jobs, which typically pay around three times more (\$113,880) than the state average (\$34,256) (NDLMI, 2018).

State/County	Unemployment Rate 2019 (percent) <sup>a</sup>	Average Per Capita Income (\$)	Median Household Income (\$)	Population with Incomes Below Poverty Level (percent)
<b>North Dakota</b>	2.3	34,256	61,285	10.3
Burke County	2.5	35,674	71,667	9.1
McKenzie County	1.7	38,324	79,316	8.5
Mountrail County	1.5	40,113	69,622	9.7
Williams County	1.9	44,474	89,874	6.6

Sources: U.S. Census Bureau, 2018; U.S. Bureau of Labor Statistics, 2019

<sup>a</sup> The labor force includes all people classified in the civilian labor force, plus active duty members of the military. The civilian labor force consists of people classified as employed or unemployed. Excluded are people 16 years old and over who are not actively looking for work, such as students, homemakers, retired workers, seasonal workers who are not looking for work, institutionalized people, and people doing only incidental unpaid family work. Also excluded are working-age individuals who have stopped looking for work because they believe work is unavailable.

### 5.1.2.2 Unemployment

As of August 2019, North Dakota’s unemployment rate was 2.3 percent, which is the second lowest unemployment rate in the United States (U.S. Bureau of Labor Statistics, 2019). Unemployment varies seasonally, with a low of 1.8 percent in fall 2018 to a high of 3.5 percent in winter 2018. The state’s unemployment rate has historically remained below the national average. Even during the Great Recession of the late 2000s, North Dakota’s unemployment peaked at 4.1 percent, well below the 9.6 percent national average. As shown in table 5.1.2-3, unemployment is lower than the state average in all counties in the study area except Burke County. The difference in unemployment rates in the study area relative to the state average may be associated with the expansion of the oil and gas industries in the area. This expansion has resulted in significant job creation in North Dakota over the last several years.

### 5.1.2.3 Major Industries

As shown in table 5.1.2-2 above, construction, transportation and warehousing, and retail are the most dominant industries in the socioeconomic study area excluding oil and gas. The oil and gas industry is one of the most significant industries in North Dakota, and in the study area. As shown in table 5.1.2-4, the Bakken formation accounted for 92 percent of all oil and natural gas produced in North Dakota in 2018. There were 13,282 oil and gas producing wells in the Bakken formation as of 2018 (DrillingEdge, 2019).

TABLE 5.1.2-4						
<b>North Bakken Expansion Project</b>						
<b>Oil and Gas Production in the Socioeconomic Study Area</b>						
<b>(2018 Totals)</b>						
Resource	North Dakota	Bakken Formation	Burke County	McKenzie County	Mountrail County	Williams County
Oil (bbl <sup>a</sup> )	460,422,371	423,634,989	3,226,548	179,418,168	86,764,568	73,057,301
Natural Gas (mcf <sup>b</sup> )	861,375,885	792,963,383	8,015,555	426,454,226	128,436,307	156,637,224

Sources: DrillingEdge, 2019; North Dakota Oil and Gas Division, 2019  
 bbl = barrel; mcf = thousand cubic feet of natural gas  
<sup>a</sup> One bbl is equal to 42 U.S. gallons (159 liters).  
<sup>b</sup> One mcf is equal to 1,000 cubic feet (28.3 cubic meters).

Although not listed as one of the most dominant industries in the Project area in table 5.1.2-2, agriculture is also a major industry in the study area and in North Dakota. Statistical Atlas (2018) reports that 5.8 percent of the state’s civilian population were employed in the agricultural industry in 2017; the second highest in the United States. Crops make up 81 percent of agricultural sales, the majority being grains, oilseeds, dry beans, and dry peas. Livestock, poultry, and other animal products make up the remaining 19 percent. Between 2012 and 2017, the total number of farms in North Dakota decreased by 15 percent, but the average size of each farm increased by 18 percent. This may be due to the 25 percent drop in the market value of the state’s agricultural products over the last five years. Over 96 percent of North Dakota farms are family owned and therefore less resilient to market fluctuation, resulting in buy-outs and consolidation of agricultural operations across the state. The per-farm average for government payments also saw a 48 percent increase during the same period. Agricultural activity in the socioeconomic study area accounts for six percent of North Dakota’s total agriculture sales (U.S.

Department of Agriculture, 2017). Markets in Burke, McKenzie, Mountrail, and Williams Counties typically mirror industry trends in the rest of the state.

#### **5.1.2.4 Tourism**

The study area offers a variety of entertainment and recreational tourist activities; however, outdoor recreation is generally the most utilized. Entertainment attractions in the study area include casinos, museums, historical buildings, water parks, and farmer's markets. Recreational activities include auto racing, indoor sports, swimming, fishing, boating, camping, hiking, golfing, mountain biking, picnicking, bird watching, hunting, off-highway vehicle use, horseback riding, snowshoeing, cross country skiing, and snowmobiling. Most activities take place in summer, but some, such as snow- or ice-dependent activities, take place in winter (North Dakota Tourism Division, 2019).

Four national wildlife refuges (NWR) that offer outdoor recreational opportunities are located within the socioeconomic study area for the Project. The Lostwood NWR in Burke and Mountrail Counties is the closest to the Project at about 11.5 miles from the proposed Line Section 25 Loop. The Lake Zahl, Upper Des Lacs, and Shell Lake NWRs are 35.1, 29.5, and 14.6 miles from the proposed Project facilities, respectively. Both Lostwood and Des Lacs NWRs have been designated as Globally Important Bird Areas by the American Bird Conservancy, and provide abundant opportunities for bird watching in addition to other outdoor recreational activities (U.S. Fish and Wildlife Service, 2018 and 2019). The Des Lacs NWR, which runs along the Des Lacs River, also contains a designated scenic byway (U.S. Fish and Wildlife Service, 2018).

Hunting and fishing are major recreational and tourist activities throughout northwestern North Dakota. The area contains abundant waterfowl, upland game birds, big-game species, and game fishing. The hunting seasons for most game species occur in the fall or winter months (September through January) with a peak in late fall (October and November) (North Dakota Game and Fish Department, 2019; North Dakota Tourism Division, 2019). The proposed Tioga-Elkhorn Creek pipeline will cross Lake Sakakawea near Tobacco Garden Bay. The reservoir is 368,000 acres in size and is known for fishing opportunities for walleye, northern pike, and Chinook salmon (North Dakota Parks and Recreation, 2019). Tobacco Garden Campground offers camping, lodging, dining, and a boat launch.

The Little Missouri National Grassland, a part of the Dakota Prairie Grasslands, is also crossed by the proposed Tioga-Elkhorn Creek pipeline. This area offers a variety of recreational opportunities including mountain biking, backpacking/camping, fishing, horseback riding, and small game hunting. There are also opportunities for outdoor learning through interpretive signs and picnicking.

#### **5.1.2.5 Tax Revenues**

Tax revenues are typically used by local and state governments for infrastructure improvements and to meet other community needs. In 2017, 45.1 percent of all tax collection in North Dakota came from the Oil and Gas Production Tax and the Oil Extraction Tax; most of these tax revenues are used to fund schools, roads, infrastructure, and other priority needs (Energy of North Dakota, 2018). WBI Energy will be required to pay property taxes to the counties that host the pipeline and aboveground facilities. The counties will receive property taxes based on the taxable assessment values attributable to the Project facilities in each county. Table 5.1.2-5 shows tax revenue by source for the state of North Dakota.

TABLE 5.1.2-5	
<b>North Bakken Expansion Project North Dakota State General Fund Revenues by Tax Source <sup>a</sup></b>	
Revenue Source	Projected 2017 to 2019 Biennium (\$ million)
Interest, Mineral, Leases, Transfers <sup>b</sup>	945.8
Sales, Use, and Motor Vehicle	2,001.8
Individual Income Tax	772.9
Corporate Income Tax	155.8
Oil Taxes	400.0
Coal Taxes	42.0
Cigarette and Tobacco Taxes	52.1
Insurance Premium Tax	109.3
Wholesale Liquor Tax	17.9
Business Privilege Tax/Financial Institutions Tax <sup>c</sup>	1.3
Gaming Taxes	6.5
Lottery	14.6
Departmental Fees and Collections	83.4
<b>Total Revenues</b>	<b>4,603.4</b>
Sources: North Dakota Office of State Tax Commissioner, 2017	
<sup>a</sup>	Based on the North Dakota Office of Management and Budget's November 2018 revised forecast.
<sup>b</sup>	Interest income, mineral leasing fees, bank of North Dakota profits transfer, state mill profits transfer, gas tax administration transfer, other transfers.
<sup>c</sup>	2015 to 2017 biennium value, no projection available

### 5.1.3 Housing

The U.S. Census Bureau defines a housing unit as a house, apartment, group of rooms, or single room occupied or intended for occupancy as separate living quarters. Oil and gas industry growth over the past several years has imposed strains on housing availability in the socioeconomic study area. The study area is predominately rural, but there are major population centers within the Project vicinity (see table 5.1.1-1). New housing is being constructed in these areas to accommodate the influx of oil and gas industry workers. Housing affordability is also a concern across the region, as increased market demand drives up housing costs. The city of Williston projects a need for 500 additional housing units annually due to an increasing demand from oil and gas workers. A shortage of qualified laborers, high housing construction costs, and low trading value has impeded new housing development in the Williston area. As of 2018, the city of Williston estimated apartment occupancy at 95 percent with new housing construction projected to lag behind the rate of the housing demand increase (Prairie Business Magazine, 2018). However, temporary housing demand is subject to change with Project workforce needs in the area.

As shown in table 5.1.3-1, there are approximately 41 hotels and motels totaling 4,029 rooms located in the three largest population centers (Tioga, Williston, and Watford City) within the socioeconomic study area. These existing businesses could provide temporary accommodation to non-resident workers. Williston is considered a hub for oil and gas workers in the region and has the largest number of rooms available for temporary accommodation. Additional rooms are located in the surrounding area; however, many communities in the immediate vicinity of the proposed pipeline routes are small with limited or no hotel and motel

facilities. Due to the constant flux of oil and gas workers to and from the region, there could be sufficient vacancies at hotels and motels in the study area during construction.

TABLE 5.1.3-1				
<b>North Bakken Expansion Project Hotel and Motel Accommodations in Tioga, Williston, and Watford City</b>				
Facility	Tioga	Williston	Watford City	<b>Total</b>
Hotels/Motels	4	25	12	<b>41</b>
Rooms	266	2,810	953	<b>4,029</b>

Source: North Dakota Tourism Division, 2019; Hotels.com, 2019

Tables 5.1.3-2 and 5.1.3-3 show the occupied and vacant housing inventory in the socioeconomic study area. Since the 2010 Census, North Dakota’s housing growth rate has been the fastest in the nation at about 18.9 percent per year (U.S. Census Bureau, 2019). As of 2018, there were 122 active building permits to construct housing in the socioeconomic study area.

TABLE 5.1.3-2					
<b>North Bakken Expansion Project Occupied Housing Statistics for the Socioeconomic Study Area</b>					
State/County	Occupied Housing Units (number)	Occupied Rental Units (number)	Owner Occupied Housing Units (percent)	Median Owner Occupied Housing Costs (\$ per month) <sup>a</sup>	Median Gross Rent (\$ per month)
<b>North Dakota</b>	311,525	114,442	63.3	1,326	775
Burke County	950	243	74.4	1,105	704
McKenzie County	3,651	1,520	58.4	1,170	1,037
Mountrail County	4,903	975	69.7	1,268	718
Williams County	17,790	4,920	61.8	1,491	922

Source: U.S. Census Bureau, 2017  
<sup>a</sup> Median owner costs for housing with a mortgage

TABLE 5.1.3-3			
<b>North Bakken Expansion Project Vacant Housing Statistics for the Socioeconomic Study Area (2017)</b>			
State/County	Total Vacant Housing Units (number) <sup>a</sup>	Rental Vacancy Rate (percent) <sup>a</sup>	Seasonal, Recreational, or Occasional Use (number)
<b>North Dakota</b>	49,135	7.6	12,327
Burke County	448	12.7	110
McKenzie County	1,669	7.3	331
Mountrail County	1,690	15.1	501
Williams County	4,895	4.5	535
<b>Study Area Total</b>	<b>8,702</b>		<b>1,477</b>

Sources: U.S. Census Bureau, 2018; North Dakota Housing Finance Agency, 2019  
Note: Specific information on vacant housing statistics is not available in more recent U.S. Census data provided in the American Community Survey 2013–2017 5-year Estimates.

Per the U.S. Census Bureau definition, a housing unit is vacant if no one is living in it at the time of the census interview, a definition which captures units for sale or rent, seasonal use units, and any other unoccupied units. As shown in table 5.1.3-3, 2017 vacant housing rates in the socioeconomic study area ranged from 4.5 percent in Williams County to 15.1 percent in Mountrail County. There were 8,702 vacant housing units in the study area, of which about 17 percent were seasonal, recreational, or occasional use housing.

As shown in table 5.1.3-4, there are at least eight modular work camps operating in the study area. Total estimated bed capacity for these camps is 2,283. Work camps range in size from 150 to 600 beds and generally include dormitories, a cafeteria, recreation rooms, and other amenities. McKenzie County has the highest capacity for temporary workforce housing at 1,340 beds. Burke County does not currently have any work camps in operation; the nearest camp is located in Tioga. There are also 148 recreational vehicle (RV) parks and campgrounds licensed in the study area which could be used for temporary workforce housing.

County	Number of Work Camps	Work Camp Capacity (beds)	RV Parks and Campgrounds
Burke County	0	0	1
McKenzie County	4	1,340	73
Mountrail County	1	338	24
Williams County	3	605	50
<b>Study Area Total</b>	<b>8</b>	<b>2,283</b>	<b>148</b>

Sources: North Dakota Department of Health, 2018; Target Hospitality, 2019; Aries Residence Suites, 2019; Telluride Lodge, 2019

#### 5.1.4 Transportation

The North Dakota Department of Transportation (NDDOT) is responsible for development, operation, and maintenance of surface transportation in the state. As of 2018, there were 106,978 total road miles and 4,831 bridges in North Dakota. Of the total road miles, about 3,720 miles are on the National Highway System including 571 miles of interstate. U.S. Highway 85 and U.S. Highway 2 are the major U.S. highways in the socioeconomic study area. In 2017, there were 562,341 licensed drivers and 1.1 million vehicle registration renewals in North Dakota. Over 63 percent of all vehicle miles traveled in 2017 were on the state highway system, which accounts for 7 percent of the total public road mileage in the state (NDDOT, 2019).

State and federal funds support almost all public transport in North Dakota. In 2018, over 2.8 million rides were provided by 334 buses and vans. Because most of the state is rural (areas with a population of less than 50,000), the NDDOT provides grants for rural transportation programs to provide access to people in non-urbanized areas (NDDOT, 2019).

Table 5.1.4-1 identifies primary roadway corridors within the socioeconomic study area. Other roads along the pipeline routes are paved or unpaved county and local roads and private roads. In addition to potentially being crossed by the Project, some of these roads will be used to provide access to the Project area during construction. Project route maps depicting the road

crossings and access roads are provided as appendix 1A of Resource Report 1. Additional information regarding road crossings and access roads is provided in Resource Report 8.

TABLE 5.1.4-1	
<b>North Bakken Expansion Project Primary Roadways Within the Socioeconomic Study Area</b>	
County	Primary Roadways
Burke County	U.S. Highway 52; State Highways 5, 8, 40, and 50
McKenzie County	U.S. Highway 85; State Highways 16, 22, 23, and 68
Mountrail County	U.S. Highway 2; State Highways 8 and 1804
Williams County	U.S. Highway 2 and 85; State Highway 50 and 1804
Source: NDDOT, 2019	

## 5.2 SOCIOECONOMIC IMPACT ANALYSIS AND MITIGATION

### 5.2.1 Population

WBI Energy anticipates that the maximum workforce for construction of the proposed Project will be about 450 people. Construction of the pipeline facilities will be accomplished using three construction spreads with a peak temporary workforce of approximately 350 people and an average of approximately 250 people. The workforce will consist of local residents, commuters, and workers who will temporarily relocate to the Project area. Construction of the aboveground facilities will require an average temporary workforce of about 100 people (80 for compressor stations and 20 to construct an upgrade various delivery, receipt, and transfer stations), expected to be a mix of local residents and workers temporarily relocated to the Project area. Following construction, WBI Energy anticipates that four new permanent employees will be required to assist with operation and maintenance of the proposed facilities.

Construction of the Project will result in a temporary increase in the population of the Project area. A portion of the construction workforce will be non-local skilled labor that will reside in the Project area during construction and then move out once construction is complete. Pending receipt of the necessary permits and approvals, WBI Energy anticipates that the Project construction period will be from March 2021 through the fall of 2021. WBI anticipates that all facilities will be placed in service in November 2021. Consequently, there will be no long-term significant impacts on population resulting from the Project.

### 5.2.2 Economy and Employment

As noted above, WBI Energy expects that the workforce will consist of local and regional workers. These workers will likely come from several of the counties crossed by the Project or the surrounding area, and their projected employment is anticipated to last for the period of construction (approximately 8 months). WBI Energy expects that the hiring of local or regional workers for construction will have minimal impact on the overall unemployment rates for the region given the short-term nature of the work, the relatively large Project area, and the already low unemployment rates in the counties affected by the Project.



WBI Energy estimates that the peak construction workforce will total 450 workers with an average of approximately 350 temporary construction workers. The workforce will consist of local residents, commuters, and workers who will temporarily relocate to the Project area. Construction of the pipeline will be accomplished using three construction spreads with an average temporary workforce of 250 workers over the 8-month (192 working days) construction period for the pipeline; approximately 24 of these workers may be hired locally. Construction of the compressor stations will require an average of about 80 people, consisting of a mix of local residents and workers who will temporarily relocate to the Project area. Construction of the Elkhorn Creek Compressor Station will require an average of approximately 30 construction workers over the 8-month period; about 10 of these construction workers will be hired locally. Construction at the Tioga Compressor Station will require an average of approximately 50 construction workers over the same 8-month period; about 12 of these construction workers will be hired locally. Construction of the remaining aboveground facilities will require an average of 20 construction workers over approximately a 20-day period, of which about 5 may be hired locally.

Approximately four additional permanent staff will be required for operation of the pipeline and aboveground facilities. The additional staff will likely be based out of the Tioga and Elkhorn Creek Compressor Stations.

The majority of land crossed by the Project is rural in nature and few business (other than farming operations) are in close proximity to the Project. It is not anticipated that the Project will have any direct impacts on non-agricultural businesses. Any business accessibility impacts will be temporary in nature. WBI Energy will work with business owners and farm operators that may be affected by Project construction to ensure that potential impacts are minimized.

No displacement or removal of residences or businesses is anticipated due to Project construction and operation. WBI Energy will coordinate any planned road closures with land and business owners. Should construction or operation of the Project result in any unplanned impacts on residences or businesses, WBI Energy will work with individual property or business owners to mitigate the concerns on a case-by-case basis.

### **5.2.3 Tourism**

Minor, short-term impacts on users of tourist resources may occur at specific locations along the pipeline routes such as in the Little Missouri National Grassland and at Lake Sakakawea. These impacts primarily will be associated with increased traffic, noise, and visual impacts caused by construction equipment and activities. Impacts on tourism may be increased due to the timing of the construction schedule (March 2021 to late fall 2021), which is within summer peak tourist season. While construction will coincide with spring, summer, and fall activities such as hunting and fishing, impacts will be short term and localized as discussed below. The Project is not expected to affect tourism industry revenues at the state or local levels, primarily because of the relatively short period (around 8 months) of construction.

To minimize noise impacts, construction equipment will be operated on an as-needed basis. While individuals in the immediate vicinity of the construction corridor will experience an increase in noise, this effect will be temporary and localized. Additional information on potential impacts associated with noise is provided in Resource Report 9.

Impacts on tourists due to increased competition for lodging are anticipated given the existing high demand for accommodations as discussed in section 5.1.3, as well as the fact that

construction will occur during peak tourist season. WBI Energy anticipates that a portion of its workforce will consist of local residents and commuters who will not require lodging facilities in the Project vicinity. The remainder of the workforce will use temporary accommodation in the Project vicinity. Consequently, there is potential for competition between the Project workforce and tourists visiting the area during the construction period.

Short- and long-term impacts on visual resources in areas used by tourists may occur due to construction activities and the temporary loss of scenic vistas resulting from right-of-way clearing. However, the proposed pipelines will be buried underground and WBI Energy will restore the construction right-of-way as near as practicable to preconstruction condition in accordance with the Federal Energy Regulatory Commission (FERC) *Upland Erosion Control, Revegetation, and Maintenance Plan* and *Wetland and Waterbody Construction and Mitigation Procedures*. Therefore, visual impacts from the Project will not have a significant long-term impact on the tourism industry.

Construction activities may have an impact on hunting, fishing, and other outdoor recreational activities due to traffic and noise associated with construction; however, these impacts will be local, short term, and temporary as construction activities proceed through any given area (including activities near Lake Sakakawea, where the HDD is anticipated to take approximately 6 months to complete). Further, opportunities to hunt, fish, and engage in other seasonal activities will be available in surrounding areas, including other areas of the reservoir. Therefore, the Project is not expected to have a significant impact on seasonal tourist activities. More information regarding recreation and special interest areas is provided in section 8.9 of Resource Report 8.

#### **5.2.4 Housing**

The influx of construction workers for the Project will temporarily increase the demand for housing in the area. WBI Energy is not proposing to construct temporary work camps to accommodate non-local workers. Based on the short duration of construction (about 8 months) and the sufficient availability of temporary housing options (e.g., housing units, hotel/motel rooms, RV and camp sites, man camp openings), the Project is expected to have a temporary, short-term, and localized impact on housing. The four additional permanent employees who will be hired for operation and maintenance of the Project facilities will have a negligible long-term effect on housing demand.

#### **5.2.5 Government Services**

Impacts on government services (i.e., police, fire, and medical services) generally will correspond to the movement of construction through a given area. Although the expansion of the oil and gas industries has created challenges for these services, impacts associated with the Project are expected to be temporary, short term, and localized. Local government services are adequate in the study area to support the temporary addition of construction workers in the area. Table 5.2.5-1 details the police and fire protection services located within the socioeconomic study area for the Project. WBI Energy will coordinate with these local public services to verify that they are adequately equipped to respond in the unlikely event of a major accident during Project construction. Resource Report 11 provides detailed information on measures to be implemented to protect public safety once the facilities are in operation.

TABLE 5.2.5-1		
<b>North Bakken Expansion Project Fire and Police Departments Located in the Socioeconomic Study Area</b>		
County	Fire Departments	Police Departments <sup>a</sup>
Burke	3	3
McKenzie	6	4
Mountrail	4	12
Williams	7	5

Source: FireDepartment.net, 2018; U.S. Department of Justice, 2008  
<sup>a</sup> Law enforcement units for universities are included.

There are four hospitals and medical clinics in the socioeconomic study area with a total of 85 beds. Williams County has the two largest hospitals, Tioga Medical Center in Tioga and Mercy Medical Center in Williston, each with 25 beds. Mountrail County Medical Center in Stanley is the smallest hospital with 11 beds. Currently, there are no hospitals in Burke County. Table 5.2.5-2 identifies hospitals near the proposed Project area and the number of beds by facility.

TABLE 5.2.5-2			
<b>North Bakken Expansion Project Hospitals Near the Project Area</b>			
County	Hospital Name	Town	Number of Beds
McKenzie	McKenzie County Healthcare Systems, Inc.	Watford City	24
Mountrail	Mountrail County Medical Center	Stanley	11
Williams	Tioga Medical Center	Tioga	25
	Mercy Medical Center	Williston	25
<b>Total</b>			<b>85</b>

Source: North Dakota Department of Health, 2018

There are numerous educational facilities near the Project area, particularly near larger population centers. Due to the relatively short duration and transient nature of construction, however, WBI Energy anticipates that most non-local workers will not be accompanied by their families. Therefore, local schools are not expected to be affected by the temporary, short-term influx of non-local workers.

### 5.2.6 Economy and Tax Revenue

Most of the construction payroll earnings for the Project are expected to be spent locally/regionally. In addition, it is expected that some portion of non-local payroll earnings will be spent locally for the purchase of items such as fuel, food, and entertainment during travel to the Project area. Construction personnel hired directly or through a third party will have a positive impact on local tax revenues through payroll spending on housing, food, utilities, entertainment, and luxury items. The Project construction payroll is estimated to total approximately \$26,993,000 over the duration of the Project, which may help stimulate regional employment as new workers are hired to meet construction demands. Due to the minimal number (4) of new permanent

employees for operation of the Project facilities, there will be insignificant changes to the long-term contribution of payroll to the local economies.

WBI Energy estimates that construction materials will be purchased locally and other construction funds for housing, machinery repair, catering, fuel, and other items will be spent locally. WBI Energy estimates that such cost of construction materials and supplies will be about \$17,296,000. Materials such as concrete, stone, erosion control materials, mulch, seed, and fencing are all items that can be purchased from local vendors. These purchases will result in short-term beneficial impacts on local businesses by generating additional revenues and contributing to the tax base. Based on current state sales tax rates, the state sales tax revenues for material and supplies are estimated to be about \$927,800.

Project construction will result in positive short-term benefits through increased state and local sales tax revenues associated with increased payroll spending by the construction workforce and the purchase of construction materials. Positive indirect impacts include increased sales for businesses that specifically service construction activities. WBI Energy will pay the required environmental and construction permit fees which will generate a small amount of revenue for the counties. Income and sales tax revenues generated from Project construction will most likely benefit education and school programs, health care programs, and public transportation and infrastructure projects.

In addition, ad valorem, or property taxes, result in long-term benefits to local and regional economies. Ad valorem tax revenues will depend on the length or footprint of Project facilities in each county and will be paid over the life of the Project. Based on estimated property tax rates, WBI Energy estimates that total annual ad valorem tax revenue associated with the Project will be about \$788,186. Property tax revenues are typically used by local and state governments for infrastructure improvements such as roads, schools, and health facilities, and to meet other community needs.

### **5.2.7 Transportation**

Construction of the Project will intermittently affect transportation and traffic in the Project area at varying levels due to construction across roads and highways, the commuting of the construction workforce to the Project area, and the movement of construction vehicles and delivery of equipment and materials to the construction work area.

As noted in appendix 11 of Resource Report 1, WBI Energy received a scoping comment about construction traffic and flaggers. The movement of construction equipment, materials, and construction personnel will cause a temporary increase in traffic volumes along area roadways. However, impacts from construction-related traffic will be short term at any location as construction personnel and equipment will be geographically dispersed during the construction period, and personnel will travel to and from the Project area primarily during early morning and late evening hours. Additionally, construction contractors will comply with local weight limitations and restrictions on area roadways and will remove any soil that falls onto roadway surfaces.

Construction across roads and highways will result in short-term, local impacts on public transportation while construction activities pass through the Project area. Most paved roads, highways, and railroads will be crossed by boring beneath the roadbed or railroad, which will reduce potential impacts on transportation during construction. Brief traffic delays may occur when equipment needed to complete a bore or directional drill is brought onto or off of the Project

site; however, the Project will use flaggers and signage to safely slow or direct traffic as appropriate. Unpaved farm roads, two-tracks, trails, and driveways, as well as roads in areas with a high water table, will be crossed using the open-cut method and then restored to preconstruction condition. Although these crossings are not expected to affect transportation, the Project will implement measures (e.g., detours, plating over the open portion of the trench) to maintain passage for landowners and emergency vehicles, as appropriate.

Existing local county and township roads will be used to transport construction equipment to the Project area. Estimates for the number of vehicles that WBI Energy anticipates will be required during construction are provided in table 5.2.7-1. Vehicles will include stringing trucks, welding rigs, water trucks, fuel trucks, mechanic trucks, front end loaders, hydrostatic equipment trucks, backhoes, and construction personnel and environmental inspector vehicles. WBI Energy anticipates that some workers will carpool to the construction area, thus reducing passenger vehicle load on local roads. During construction, vehicles will be distributed across the Project area according to the specific phase of construction; in addition, vehicles involved in construction are anticipated to travel between the laydown yards and the construction workspace approximately one to two times per day. While the total duration of construction along the pipeline route is anticipated to last about 192 days over an 8-month period, construction in any distinct location is anticipated to last about 4 weeks and construction activities will be scheduled to take advantage of daylight hours. As such, construction crews will typically avoid peak commuting periods by traveling to the worksite early in the morning and from the worksite later in the evening. Certain construction-related activities such as hydrostatic testing, HDDs, and tie-ins, among others, may occur at unspecified times and outside the normal work day. WBI Energy will attempt to schedule these activities in such a way (e.g., outside of peak traffic hours) to minimize impacts on local commuter traffic. The Project may create a minor temporary increase in traffic on county and township roads during active construction, but traffic delays are not anticipated. Construction of the pipeline across public roads will be completed via HDD or guided bore; therefore, no impacts to local traffic are anticipated.

Project Facility	Construction and Delivery Vehicles	Construction Personnel Vehicles	Estimated Duration of Construction	Estimated Trips Per Day Per Vehicle	Estimated Total Trips Per Day
Pipelines	75	25	192 days over a 8-month period	2	200
Elkhorn Creek Compressor Station	15	5	192 days over a 8-month period	2	40
Tioga Compressor Station	25	10	192 day over a 8-month period	2	70
Delivery, Receipt, and Transfer Stations (typical)	5	2	20 days	2	14
<b>Total</b>	<b>120</b>	<b>42</b>	<b>192 days</b>	<b>8</b>	<b>324</b>

As part of the proposed HDD crossing of Lake Sakakawea, the pipe pullback will extend across 51<sup>st</sup> Street N.W. on the north side of the lake. WBI Energy has proposed a temporary aerial span of this road with the pipe during the pullback, which is anticipated to take between 24 and 36 hours to complete. If a road closure is necessary, WBI Energy will work with local law enforcement and county agencies to ensure that impacts on local traffic are minimized.

Construction vehicles and equipment will comply with all federal, state, and county regulations as well as local load weight restrictions.

### **5.2.8 Agriculture**

Construction of the proposed pipelines will result in the short-term loss of cropland within the construction right-of-way, and construction of the aboveground facility sites will result in temporary and permanent impacts on agricultural lands (see Resource Report 8).

### **5.2.9 Navigation**

As mentioned in section 2.2.1 of Resource Report 2, navigation is one of the congressionally authorized purposes of the U.S. Army Corps of Engineers (COE) Garrison Project (COE, 2018). The Missouri River does not support commercial navigation in the portion of the river that will be crossed by the proposed Project. Gavins Point Dam (at river mile 811.1 in South Dakota) is the northernmost point that commercial vessels can travel on the river. While commercial navigation does not occur in the proposed Project area, the entire mainstem dam system is operated to provide adequate flows to support navigation in the southern reaches (COE, 2007).

WBI Energy will install the pipeline under the Missouri River/Lake Sakakawea using the HDD method. Project construction will not require the use of any barges or other structures within Lake Sakakawea. Depth of this crossing will be finalized based on the over water geotechnical analysis to be completed in the spring of 2020. Estimated depth of cover is 300 feet; therefore construction and operation of the Project will not interference with navigation on Lake Sakakawea.

### **5.2.10 Hydropower**

As mentioned in section 2.2.1 of Resource Report 2, hydropower is one of the congressionally authorized purposes of the COE Garrison Project (COE, 2018). The Garrison power plant is operated to assist meeting peak-load demands for hydropower in the Upper Missouri River basin. The plant contains five turbines and generators with a generating capacity of 517,750 kilowatts, which produces about 2.5 billion kilowatt-hours of energy each year. The power is marketed by the Western Area Power Administration and is integrated with the generation provided from other mainstem projects along with other public and private facilities in the market area (COE, 2007).

Project construction and operation will not divert or appropriate water from the Missouri River/Lake Sakakawea; therefore, the Project will not affect lake water volumes or the ability to generate hydropower.

## **5.3 ENVIRONMENTAL JUSTICE**

Executive Order 12898 on Environmental Justice recognizes the importance of using the National Environmental Policy Act process to identify and address, as appropriate, any disproportionately high and adverse health or environmental effects of its programs, policies, and activities on minority and low-income populations. Consistent with Executive Order 12898, the Center for Environmental Quality called on federal agencies to actively scrutinize the following issues with respect to environmental justice (CEQ, 1997):

- the racial and economic composition of affected communities;

- health-related issues that may amplify project effects on minority or low-income individuals; and
- public participation strategies, including community or tribal participation in the process.

The U.S. Environmental Protection Agency's (EPA) Environmental Justice Policies focus on enhancing opportunities for residents to participate in decision making. The EPA (2014) states that Environmental Justice involves meaningful involvement so that: "(1) potentially affected community residents have an appropriate opportunity to participate in decisions about a proposed activity that will affect their environment and/or health; (2) the public's contributions can influence the regulatory agency's decision; (3) the concerns of all participants involved will be considered in the decision-making process; and (4) the decision-makers seek out and facilitate the involvement of those potentially affected."

In accordance with Executive Order 12898 on Environmental Justice, all public documents, notices, and meeting were made readily available to the public during review of the Project. WBI Energy met with many different stakeholders during initial development of the route, including local residents and affected landowners. These efforts involved a number of open houses with the affected communities and local authorities. One of the major goals of this process is to increase public awareness and encourage public input regarding every aspect of the Project before an application is filed.

As part of this process, WBI Energy hosted landowner Informational meetings and open houses, and participated in FERC's scoping meetings to receive input from the public about the Project. Landowner Informational meetings were held in Tioga and Watford City on May 1 and 2, 2019. Open houses were held in Tioga and Waterford City on August 6 and 7, 2019. The FERC scoping meetings were held in Tioga and Watford City on October 1 and 2, 2019. Interested parties have had and will be given opportunities to participate in the National Environmental Policy Act review process. To date, this included the opportunity to participate in the private landowner meetings, public open house meetings, and public scoping meetings within the Project area to identify concerns and issues that should be covered in the environmental assessment, and the opportunity to submit written comments about the Project to FERC. Outreach with Native American peoples is described in Resource Report 4.

### **5.3.1 Demographic and Economic Data**

Environmental Justice Areas or Communities are defined by the EPA as locations that have a "meaningfully greater" percentage of minorities than the general population (ten percent or greater), locations in which minorities comprise more than 50 percent of the affected area's population, or locations in which the low-income population is equal to or greater than that of the reference population (EPA, 2016). The environmental justice communities potentially crossed by the Project's pipeline facilities were identified using available 2017 American Community Survey census statistics regarding ethnicity and poverty levels. Poverty level information was unavailable by block group due to the lower population in the Project area; therefore, this information is presented by Census Tract. Table 5.3.1-1 provides demographic statistics for North Dakota, the four counties affected by the Project, and census block groups within one mile of the Project centerline and/or aboveground facilities. Table 5.1.2-3 above provides an overview of the general economic status of these areas.

TABLE 5.3.1-1

**North Bakken Expansion Project  
Environmental Justice Demographic Indicators for Census Blocks Crossed by the Project <sup>a</sup>**

State/County	White Alone Not Hispanic or Latino (percent)	African American or Black (percent)	Native American/ Alaska Native (percent)	Asian (percent)	Native Hawaiian or Other Pacific Islander (percent)	Some Other Race (percent)	Hispanic or Latino (percent)	<b>Total Minority <sup>b</sup> (percent)</b>	Below Poverty Level <sup>c</sup> (percent)
<b>NORTH DAKOTA</b>	87.7	2.3	5.3	1.4	>0.1	>0.1	3.3	<b>12.3</b>	11.0
<b>Burke County</b>	<b>94.4</b>	<b>0.4</b>	<b>2.8</b>	<b>&gt;0.1</b>	<b>&gt;0.1</b>	<b>0.6</b>	<b>1.6</b>	<b>5.4</b>	<b>7.3</b>
Census Tract 9533, Block Group 1	99.4	>0.1	>0.1	>0.1	>0.1	0.6	0.6	<b>1.1</b>	7.3 <sup>d</sup>
Census Tract 9533, Block Group 2	89.9	0.8	5.2	0.1	>0.1	0.6	2.5	<b>9.2</b>	7.3 <sup>d</sup>
<b>McKenzie County</b>	<b>82.8</b>	<b>0.6</b>	<b>13.3</b>	<b>0.6</b>	<b>&gt;0.1</b>	<b>0.6</b>	<b>7.0</b>	<b>22.1</b>	<b>11.7</b>
Census Tract 9623, Block Group 1	93.2	>0.1	>0.1	>0.1	>0.1	>0.1	>0.1	<b>&gt;0.1</b>	8.9 <sup>d</sup>
Census Tract 9623, Block Group 2	95.0	>0.1	>0.1	2.4	>0.1	0.3	4.9	<b>7.6</b>	8.9 <sup>d</sup>
<b>Mountrail County</b>	<b>65.9</b>	<b>1.1</b>	<b>26.9</b>	<b>0.4</b>	<b>&gt;0.1</b>	<b>1.9</b>	<b>7.0</b>	<b>37.3</b>	<b>11.2</b>
Census Tract 9552, Block Group 1	85.7	3.2	2.4	1.1	>0.1	2.4	8.1	<b>17.1</b>	7.3 <sup>d</sup>
Census Tract 9552, Block Group 2	97.9	0.1	0.2	0.2	>0.1	>0.1	1.5	<b>1.9</b>	7.3 <sup>d</sup>
Census Tract 9552, Block Group 3	92.3	>0.1	>0.1	>0.1	>0.1	4.9	3.2	<b>8.1</b>	7.3 <sup>d</sup>
<b>Williams County</b>	<b>85.2</b>	<b>3.4</b>	<b>2.8</b>	<b>0.7</b>	<b>&gt;0.1</b>	<b>3.5</b>	<b>6.1</b>	<b>16.5</b>	<b>9.0</b>
Census Tract 9534, Block Group 1	96.9	>0.1	>0.1	>0.1	>0.1	>0.1	2.7	<b>2.7</b>	4.5 <sup>d</sup>
Census Tract 9534, Block Group 2	93.2	0.6	0.3	>0.1	>0.1	0.8	4.1	<b>5.9</b>	4.5 <sup>d</sup>
Census Tract 9536, Block Group 2	93.2	>0.1	4.4	>0.1	0.3	0.1	1.5	<b>6.2</b>	7.1 <sup>d</sup>
Census Tract 9536, Block Group 3	85.7	8.8	3.3	0.0	>0.1	>0.1	6.4	<b>18.5</b>	7.1 <sup>d</sup>

Source: U.S. Census Bureau, 2017

<sup>a</sup> Data represents census populations within one mile of the Project

<sup>b</sup> Minority refers to people who reported their ethnicity and race as something other than non-Hispanic white. Totals may not sum to 100 due to rounding.

<sup>c</sup> Poverty level is set by the U.S. Census bureau based on family size and composition; poverty status is determined based on pre-tax income excluding capital gains

<sup>d</sup> Value represents the census tract; data for individual block groups is not available



None of the communities affected by the Project meet the definition of an environmental justice community using the EPA's meaningfully greater analysis method or low-income analysis. However, as indicated in table 5.3.1-1, the poverty levels for Burke County and Census Tract 9533, block groups 1 and 2 are both 7.3 percent. This is because the entire population of Burke County is represented by Census Tract 9533, block groups 1 and 2. To provide meaningful analysis, the state of North Dakota (11.0 percent) was used as a reference population for evaluation of low-income populations within Census Tract 9533. The poverty level in Census Tract 9533 is 7.3 percent, which is 3.7 percentage points lower than the poverty level for the state of North Dakota (11.0 percent). Therefore, Census Tract 9533 in Burke County does not meet the definition of an environmental justice community under EPA standards. The average poverty level across all counties affected by the Project is 9.8 percent, which is 1.2 percentage points lower than the state of North Dakota.

The Fort Berthold Reservation (which is within the study area for socioeconomics but not crossed by the Project) contains four census block groups that exceed the EPA thresholds:

- Census Tract 9403, Block Group 1, Mountrail County, with a minority population of 51 percent;
- Census Tract 9404, Block Group 1, Mountrail County, with a minority population of 62 percent;
- Census Tract 9404, Block Group 2, Mountrail County, with a minority population of 81 percent; and
- Census Tract 9401, Block Group 1, McKenzie County, with a minority population of 95 percent.

The nearest Project facility, the Tioga-Elkhorn Creek pipeline, will be located about 18 miles west of the Fort Berthold Reservation. These census block groups have an average demographic index of 57 percent, and an average low-income population of 40 percent.

WBI Energy has engaged the Three Affiliated Tribes of the Fort Berthold Reservation in consultation to minimize Project impacts on these communities and their cultural resources (for more information see section 4.5.3 of Resource Report 4). Because the proposed Project does not cross any of the communities defined above, environmental justice impacts are not anticipated as a result of the Project.

## **5.4 CUMULATIVE IMPACTS**

Section 1.10 of Resource Report 1 defines a cumulative impact and describes the general scope of the cumulative impact analysis for the Project. This section describes the potential cumulative impacts on socioeconomics from the Project combined with the past, present, and reasonably foreseeable future actions (RFFA) identified in appendix 1J and figure 1.10-1 of Resource Report 1. The location, proposed schedule, and a description of each RFFA are provided in appendix 1J.

Socioeconomic impacts of the Project include increased traffic for workers who commute to and from Project activities, population increases in the areas workers are located, economic

migration and increased burden on local businesses and temporary accommodations, increased population especially in smaller communities, and increased tourism revenue. Significant impacts are possible but unlikely for local utilities, public services, property values, and health.

The RFFAs that could fall within the geographic and temporal scope for socioeconomics are listed in appendix 1J of Resource Report 1. This section focuses on RFFAs that could impact socioeconomics on a county-wide scale within Williams, Mountrail, McKenzie, or Burke Counties.

- Construction of the Aurora energy facilities (including electric transmission lines) are expected to result in short- and long-term economic benefits in Williams and Mountrail Counties. Benefits include employment, an increased tax base due to property taxes, increased spending during construction, and long-term income for landowners receiving lease payments. Although impacts are expected to be primarily positive, adverse impacts could include increased demand on the existing labor force and demand for local housing during construction. Construction is expected to temporarily increase traffic on haul roads and may affect electric, telephone, and fiber optic lines.
- Several natural gas plant facilities are planned. These include Demicks Lake Plant II, two Nesson gathering facilities, the Roosevelt Gas Plant Expansion, the Arrow Bear Den Gas Processing Plant II, and the Robinson Lake Gas Plant. It is likely that these facilities would contribute long-term employment opportunities at the county level for gas plant operators and technicians as well as an indirect and direct contribution to tax base at the state and local levels. Construction of new facilities is expected to temporarily increase traffic on haul roads.
- Several pipeline transmission projects could result in county-wide impacts on socioeconomics similar to those described for the Project. These projects include: the Bakken natural gas pipeline, the Cenex refined fuels pipeline, and the Missouri River Crossing Project. The Western Area Water Supply Project could potentially improve property values for properties with access to the water system.
- Oil and gas exploration and development in the region (including wells and well pads, directional drilling, and access roads) generate federal revenue and annual rents through leasing. These revenues are collected by the federal government, which then distributes a portion of the revenues collected to the state and counties (Bureau of Land Management, 2019).
- Operation of the Williston Basin International Airport may encourage business and economic activity by making the region more accessible via an improved air transportation facility. Overall, the airport is not anticipated to cause a substantial social impact on the community.
- Following the temporary impacts due to construction, Red Mike Area to County Road 42 improvements would have overall beneficial impact because traffic flow, traffic safety, and highway accessibility would be improved throughout the corridor. The improvements would provide efficient and reliable means of transport for goods, services, and people facilitating economic growth and stability within the region. Following temporary impacts on transportation due to construction, road

improvements would have an overall beneficial impact improving traffic flow, traffic safety, and highway accessibility.

- The U.S. Highway 85 to I-94 to Watford City Bypass Project would improve the reliability and capacity of U.S. Highway 85 for industries dependent upon the project corridor. Although construction of the project could result in an expenditure of local funds, the regional economy would experience a temporary increase in construction employment opportunities and subsequent increase in payroll taxes, sales receipts, and indirect purchases of goods and services as result of construction activities. During construction, two lanes of traffic would be maintained and reasonable construction access to properties and roadways would be maintained. Speed limits within construction zones would be reduced, which would temporarily increase travel times, and accessing properties may require minor detours. Expanding U.S. Highway 85 to four lanes would provide a safer and more reliable highway corridor for the traveling public. Overall, reliability would be improved by reducing over-height restrictions, providing additional driving lanes and expanding roadway shoulders (NDDOT, 2019).
- Residential developments including the Pine Ridge Development, Homestead at Watford City First Addition, and Aspen Heights Condominiums would improve housing availability.

Construction-related impacts on socioeconomics and transportation are not expected to result in significant cumulative impacts as no known construction schedules for the RFFAs coincide with Project construction. Cumulative impacts on employment and workforce will largely depend on how much of the temporary construction workforce is sourced locally for the projects described above and the number of permanent positions that will be needed to operate the other facilities listed above. There are likely to be long-term positive cumulative impacts on the economy from property, sales, and income tax collections associated with the Project and the RFFAs listed above.

## 5.5 REFERENCES

- 24/7 Wall St. 2019. Largest Industry in Each State. Available online at <https://247wallst.com/special-report/2018/08/23/largest-industry-in-each-state-5/8/>. Accessed August 2019.
- Aries Residence Suites. 2019. Aries Residence Suites Accommodations. Available online at <https://www.ariesresidencesuites.com/>. Accessed October 2019.
- The Bismarck Tribune. 2019. North Dakota Oil Industry Maturing, Study Shows. Available online at [https://bismarcktribune.com/bakken/north-dakota-oil-industry-maturing-study-shows/article\\_0210cfaf-bef4-5d2f-9f0b-05137df5116e.html](https://bismarcktribune.com/bakken/north-dakota-oil-industry-maturing-study-shows/article_0210cfaf-bef4-5d2f-9f0b-05137df5116e.html). Accessed September 2019.
- BLS (Bureau of Labor Statistics). 2019. Public Databases, Tables and Calculators. Available online at <https://www.bls.gov/data/>. Accessed August 2019.
- Bureau of Land Management (BLM). 2019. DOI-BLM-MT-0000-2018-0007-EA. Oil and Gas Lease Parcel Sale March 27, 2019. Billings, Dillon, Glasgow, Havre, Miles City, South Dakota, and North Dakota Field Offices.

- Council on Environmental Quality (CEQ). 1997. Environmental Justice: Guidance Under the National Environmental Policy Act. Available online at <https://ceq.doe.gov/docs/ceq-regulations-and-guidance/regs/ej/justice.pdf>. Accessed October 2019.
- Energy of North Dakota. 2018. Tax Revenues. Available online at <https://energyofnorthdakota.com/home-menu/bakken-benefits/tax-revenues/>. Accessed September 2019.
- Environmental Protection Agency. 2016. Promising Practices for EJ Methodologies in NEPA Reviews. Report of the Federal Agency Working Group on Environmental Justice and NEPA Committee. Available online at <https://www.epa.gov/environmentaljustice/ej-iwq-promising-practices-ej-methodologies-nepa-reviews>. Accessed January 2020.
- North Dakota Department of Health. 2018. Licensed Mobile Home Parks and RV-Trailer Park/Campgrounds as of 8/1/2018. Available online at [http://www.ndhealth.gov/foodlodging/PDF/Licensed\\_Mobile\\_Home\\_Parks\\_RV-Trailer\\_Parks\\_and\\_Campgrounds\\_8.1.2018.pdf](http://www.ndhealth.gov/foodlodging/PDF/Licensed_Mobile_Home_Parks_RV-Trailer_Parks_and_Campgrounds_8.1.2018.pdf). Accessed October 2019.
- North Dakota Department of Transportation. 2019. North Dakota Highway Systems Map. Available online at <https://www.dot.nd.gov/imgs/nd-highway-sys-lrq.png>. Accessed August 2019.
- North Dakota Housing Finance Agency. 2019 North Dakota Affordable Housing Facts. Available online at <https://www.ndhfa.org/Publications/Reports/NDHFA%20Publications/AffordableHousingFacts4-19.pdf>. Accessed September 2019.
- North Dakota Oil and Gas Division. 2019. North Dakota Oil and Gas Production Statistics. Available online at <https://www.dmr.nd.gov/oilgas/stats/statisticsvw.asp>. Accessed August 2019.
- DrillingEdge. 2019. Oil and Gas Production in North Dakota. Available online at <http://www.drillingedge.com/north-dakota/>. Accessed August 2019.
- FireDepartment.net. 2018. North Dakota Fire Departments. Available online at <https://beta.firedepartment.net/directory/north-dakota/>. Accessed September 2019.
- Hotels.com. 2019. Hotels by Location. Available online at <https://www.hotels.com/?intlid=SEARCHRESULTS+%3A%3A+header+main+section>. Accessed September 2019.
- IHS Markit. 2018. Economic forecasting and industry report for the state of North Dakota. Available online at [https://www.legis.nd.gov/files/committees/65-2017/19\\_5182\\_03000appendixc.pdf](https://www.legis.nd.gov/files/committees/65-2017/19_5182_03000appendixc.pdf). Accessed August 2019.
- North Dakota Game and Fish Department. 2019. Season Opening Dates and Calendar of Events. Available online at <https://gf.nd.gov/hunting/season-dates>. Accessed September 2019.
- North Dakota Office of State Tax Commissioner. 2019. Taxes and Government Funds by Source. Available online at <https://www.nd.gov/tax/>. Accessed August 2019.

- North Dakota Department of Commerce. 2016. Population Projections. Available online at <https://www.commerce.nd.gov/uploads/8/2016PopulationsProjectionsFinal.docx>. Accessed July 2019.
- ND HomeTownLocator. 2019. North Dakota Gazetteer. Available online at <https://northdakota.hometownlocator.com>. Accessed July 2019.
- North Dakota Labor Market Information. 2018. Employment and Wage Data. Available online at <https://www.ndlmi.com/vosnet/lmi/default.aspx?pu=1&plang=E>. Accessed August 2019.
- North Dakota Labor Market Information. 2019. Labor Force Data. Available online at <https://www.ndlmi.com/vosnet/lmi/default.aspx?pu=1&plang=E>. Accessed July 2019.
- North Dakota Parks and Recreation. 2019. Lake Sakakawea State Park. Available online at <https://www.parkrec.nd.gov/lake-sakakawea-state-park>. Accessed July 2019.
- North Dakota Tourism Division. 2019. North Dakota Tourism Information. Available online at <https://www.ndtourism.com/>. Accessed August 2019.
- Prairie Business Magazine. 2018. The Big Squeeze: High Costs and Labor Shortages Hinder Home Building in Western ND. Tom Regan September 30, 2018. Available online at <https://www.prairiebusinessmagazine.com/business/real-estate/4506612-big-squeeze-high-costs-and-labor-shortages-hinder-home-building-western>. Accessed September 2019.
- StatisticalAtlas. 2018. North Dakota Industry Data. Available online at <https://statisticalatlas.com/state/North-Dakota/Industries>. Accessed August 2019.
- Target Hospitality. 2019. Target Hospitality Accommodations. Available online at <https://www.targethospitality.com/>. Accessed October 2019.
- Telluride Lodge. 2019. Telluride Lodge Accommodations. Available online at <https://www.telluridelodge.net/>. Accessed October 2019.
- United Van Lines. 2018. 2018 National Movers Study. Available online at <https://www.unitedvanlines.com/contact-united/news/movers-study-2018>. Accessed September 2019.
- U.S. Army Corps of Engineers. 2007. Garrison Lake/Lake Sakakawea Master Plan with Integrated Programmatic Environmental Assessment. Update of Design Memorandum MGR 107D. Available online at <https://usace.contentdm.oclc.org/digital/collection/p16021coll7/id/2348/>. Accessed November 2019.
- U.S. Army Corps of Engineers. 2018. Missouri River Mainstem Reservoir System, Water Control Manual, Garrison Dam – Lake Sakakawea. Available online at [http://www.nwd-mr.usace.army.mil/rcc/reports/pdfs/GarrisonDamWCM\\_Final\\_Dec2018.pdf](http://www.nwd-mr.usace.army.mil/rcc/reports/pdfs/GarrisonDamWCM_Final_Dec2018.pdf). Accessed November 2019.

- U.S. Census Bureau. 2017. 2017 American Community Survey. Available online at <https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?src=CF>. Accessed August 2019.
- U.S. Census Bureau. 2018. QuickFacts. Available online at <https://www.census.gov/quickfacts/fact/table/US/PST045218>. Accessed July 2019.
- U.S. Census Bureau. 2019. Fastest Growing Cities Primarily in the South and West. Available online at <https://www.census.gov/newsroom/press-releases/2019/subcounty-population-estimates.html>. Accessed September 2019.
- U.S. Department of Agriculture. 2017. USDA 2017 Census of Agriculture: County Profile. Available online at [https://www.nass.usda.gov/Publications/AgCensus/2017/Online\\_Resources/County\\_Profiles/North\\_Dakota/index.php](https://www.nass.usda.gov/Publications/AgCensus/2017/Online_Resources/County_Profiles/North_Dakota/index.php). Accessed September 2019.
- U.S. Department of Justice. 2008. Census of state and Local Law Enforcement Agencies. Available online at <https://www.bjs.gov/content/pub/pdf/cslea08.pdf>. Accessed September 2019.
- U.S. Environmental Protection Agency. 2014. Plan EJ 2014. Available online at <https://nepis.epa.gov/Exe/ZyPDF.cgi/P100DFCQ.PDF?Dockey=P100DFCQ.PDF>.
- U.S. Fish and Wildlife Service. 2018. Des Lacs National Wildlife Refuge – National Wildlife Refuge System. Available online at [https://www.fws.gov/refuge/des\\_lacs/](https://www.fws.gov/refuge/des_lacs/). Accessed September 2019.
- U.S. Fish and Wildlife Service. 2019. Lostwood National Wildlife Refuge – National Wildlife Refuge System. Available online at <https://www.fws.gov/refuge/lostwood/>. Accessed September 2019.