

## 4.2 Social and Community Resources

The social and community resources of an area include the public services in a community that bring people together and create cohesion. These resources include population characteristics, economic activity, and utility services. Changes to social and community resources occur when a project affects any of these elements.

This section evaluates the potential adverse impacts on social and community resources resulting from construction and operation of the proposed export terminal. Social and community resources addressed in this section include social and community cohesion, public services, the local economy, and utilities. Potential impacts on minority and low-income populations are also evaluated in this section, in an environmental justice analysis.<sup>1</sup>

The environmental justice analysis addresses potential disproportionately high and adverse effects on minority and low-income populations. This analysis describes the minority and low-income populations in the study area. It then describes potential impacts on these populations from construction and operation of the terminal, and assesses whether these impacts would be disproportionately high and adverse.

### 4.2.1 Regulatory Setting

Laws and regulations relevant to social and community resources are summarized in Table 4.2-1. As shown, these laws and regulations pertain to environmental justice.

**Table 4.2-1. Regulations, Statutes, and Guidelines for Environmental Justice**

<b>Regulation, Statute, Guideline</b>	<b>Description</b>
<b>Federal</b>	
Title VI of the Civil Rights Act of 1964 (42 USC 2000d) as amended by the Civil Rights Restoration Act of 1987 (P.L. 100-209)	Prohibits discrimination based on race, color, sex, and national origin in the provision of benefits and services resulting from federally assisted programs and activities.
Americans with Disabilities Act, 42 USC 126 § 12101 et seq. (as amended)	Prohibits discrimination based on disability.
Presidential Executive Order 12898, Environmental Justice	Promotes nondiscrimination in federal programs substantially affecting human health and the environment and provides minority and low-income community access to public information on, and an opportunity for public participation in, matters relating to human health or the environment.
Notes: USC = United States Code; P.L. = Public Law	

<sup>1</sup> The U.S. Environmental Protection Agency (EPA) defines environmental justice as “the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies.”

## 4.2.2 Study Area

The study area for direct and indirect impacts on social and community resources include study areas for each element of the social and community resource analysis: social and community cohesion and public services, the local economy, utilities, and environmental justice. These study areas are based on the Corps *NEPA Scope of Analysis Memorandum for Record* (MFR) (2014) and were adjusted to reflect the specific community elements near the project areas. The study areas for each element are listed below.

- **Social and Community Cohesion and Public Services.** For direct impacts, the study area is the project area and the area within 0.5 mile of the project area. For indirect impacts, the study area is the project area and the area within 0.5 mile of the Reynolds Lead and BNSF Railway Company [BNSF] Spur rail corridor. Figure 4.2-1 illustrates these study areas.
- **Local Economy.** For direct impacts, the study area includes the Cities of Kelso and Longview. For indirect impacts, the study area is Cowlitz County.
- **Utilities.** For direct impacts, the study area is the project area and the area within 0.5 mile of the project area. This study area only relates to construction and operation of the terminal at the On-Site Alternative and Off-Site Alternative locations. For indirect impacts, the study area is the area within 0.5 mile of the project area.
- **Environmental Justice.** For direct impacts, the study area is the project area and the area within approximately 1 mile of the project area (Figure 4.2-2). This study area only relates to construction and operation of the terminal at the On-Site Alternative and Off-Site Alternative locations. For indirect impacts, the study area is the project area and the area within 0.5 mile of the Reynolds Lead and BNSF Spur rail corridor.

## 4.2.3 Methods

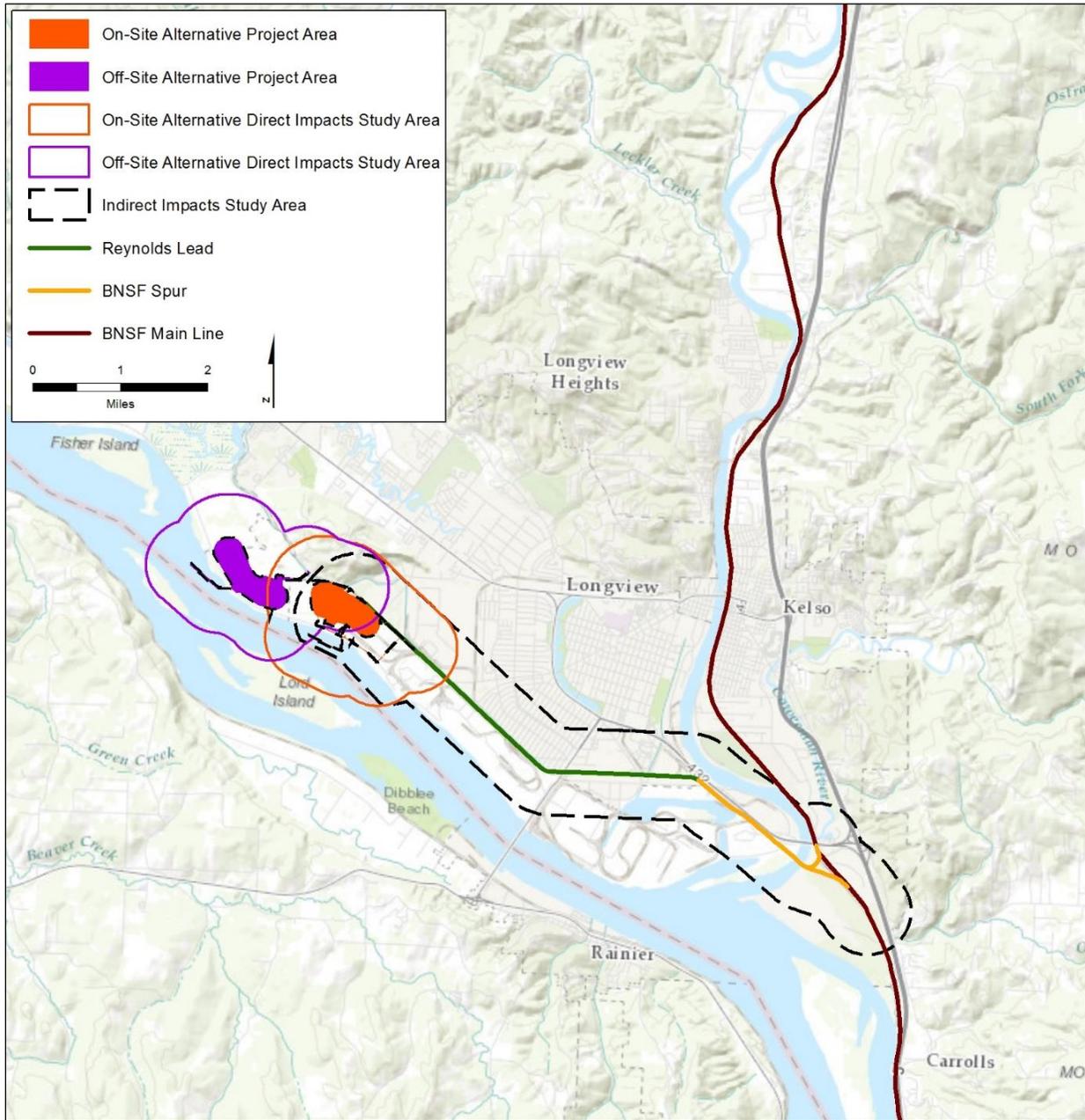
This section describes the sources of information and methods used to evaluate the potential impacts on social and community resources associated with the construction and operation of the proposed export terminal.

### 4.2.3.1 Information Sources

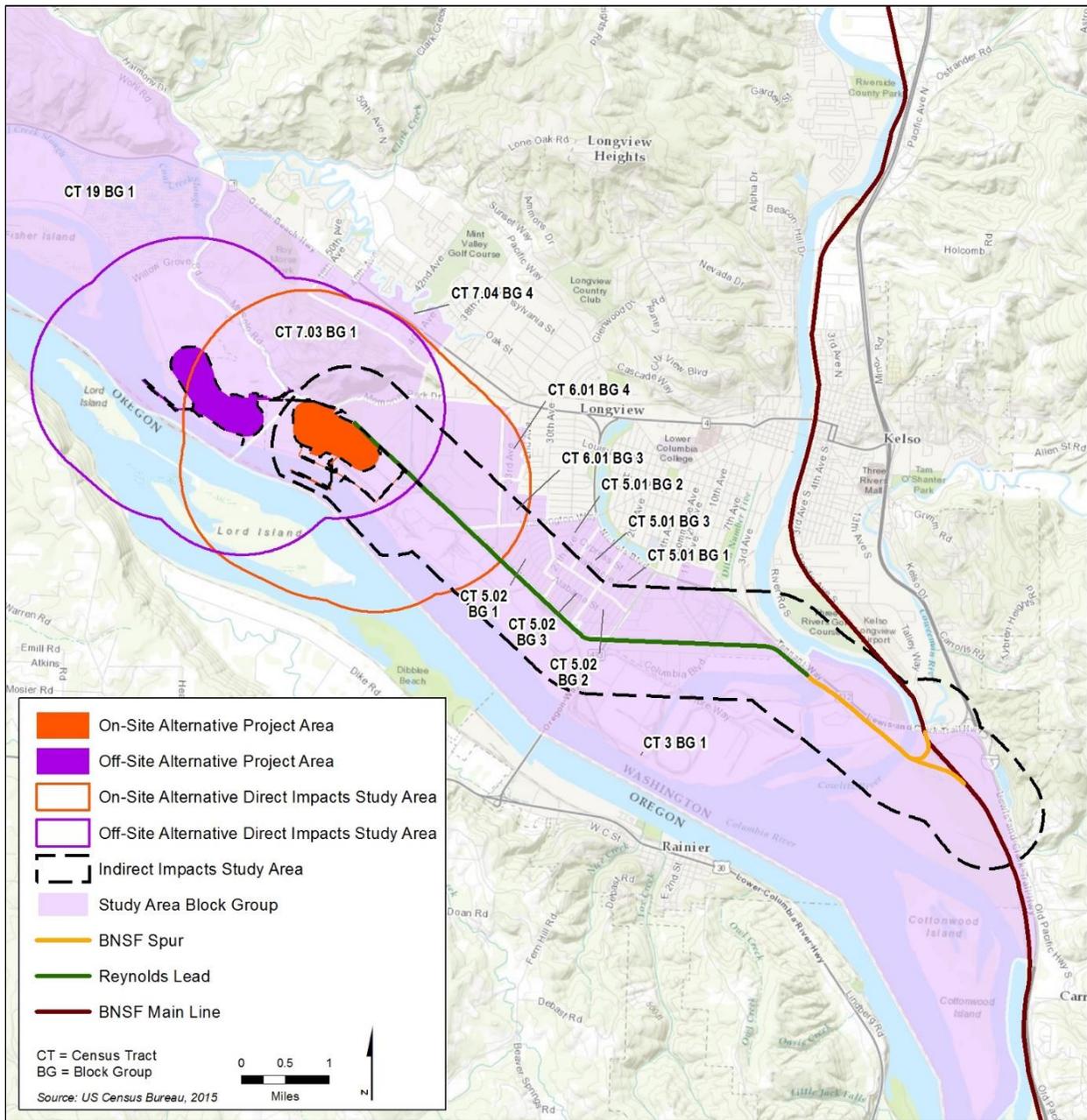
The following sources of information were used to identify the potential impacts of the proposed export terminal on social and community resources in the study areas.

- U.S. Census Bureau 2000 Census data, 2010 Census data, and 2009–2013 American Community Survey (ACS) data available on American FactFinder
- U.S. Census Bureau 2015 On The Map data
- U.S. Census Bureau 2013 Zip Code Business Patterns data
- U.S. Department of Labor, Bureau of Labor Statistics Local Area Unemployment Statistics
- State of Washington Office of Financial Management data
- Cowlitz Economic Development Council data
- Cowlitz-Wahkiakum Council of Governments data
- Various websites to inventory public service facilities in the study areas, including Google Maps and websites for Cowlitz County and the City of Longview

**Figure 4.2-1. Study Areas for Social and Community Cohesion and Public Services**



**Figure 4.2-2. Environmental Justice Study Area**



### 4.2.3.3 Impact Analysis

The following methods were used to evaluate the potential impacts of the proposed export terminal on social and community resources.

#### **Social and Community Cohesion and Public Services**

This analysis describes existing social and community cohesion in terms of the area's population characteristics, the various public services and social institutions serving the community and, thus, creating cohesion (such as parks, schools, and places of religious worship), and the access and linkages between the community and those services. Demographic data were compiled based on the U.S. Census Bureau (census) block group boundaries within the social and community cohesion direct impacts study area: Census Tract 3 Block Group 1, Census Tract 7.03 Block Group 1, and Census Tract 19 Block Group 1 (Figure 4.2-3). Because of the proximity of the On-Site Alternative and Off-Site Alternative project areas, the same block groups represent the direct impacts study area for social and community cohesion and public services.

The analysis then evaluates if construction and operation of the proposed export terminal could affect social and community cohesion by altering population characteristics, dividing or isolating a neighborhood, or separating residents from public services by changing travel patterns. This evaluation considers the location of public services in the study areas relative to characteristics of the On-Site Alternative and Off-Site Alternative. Impacts on social and community cohesion occur when an action does one of the following.

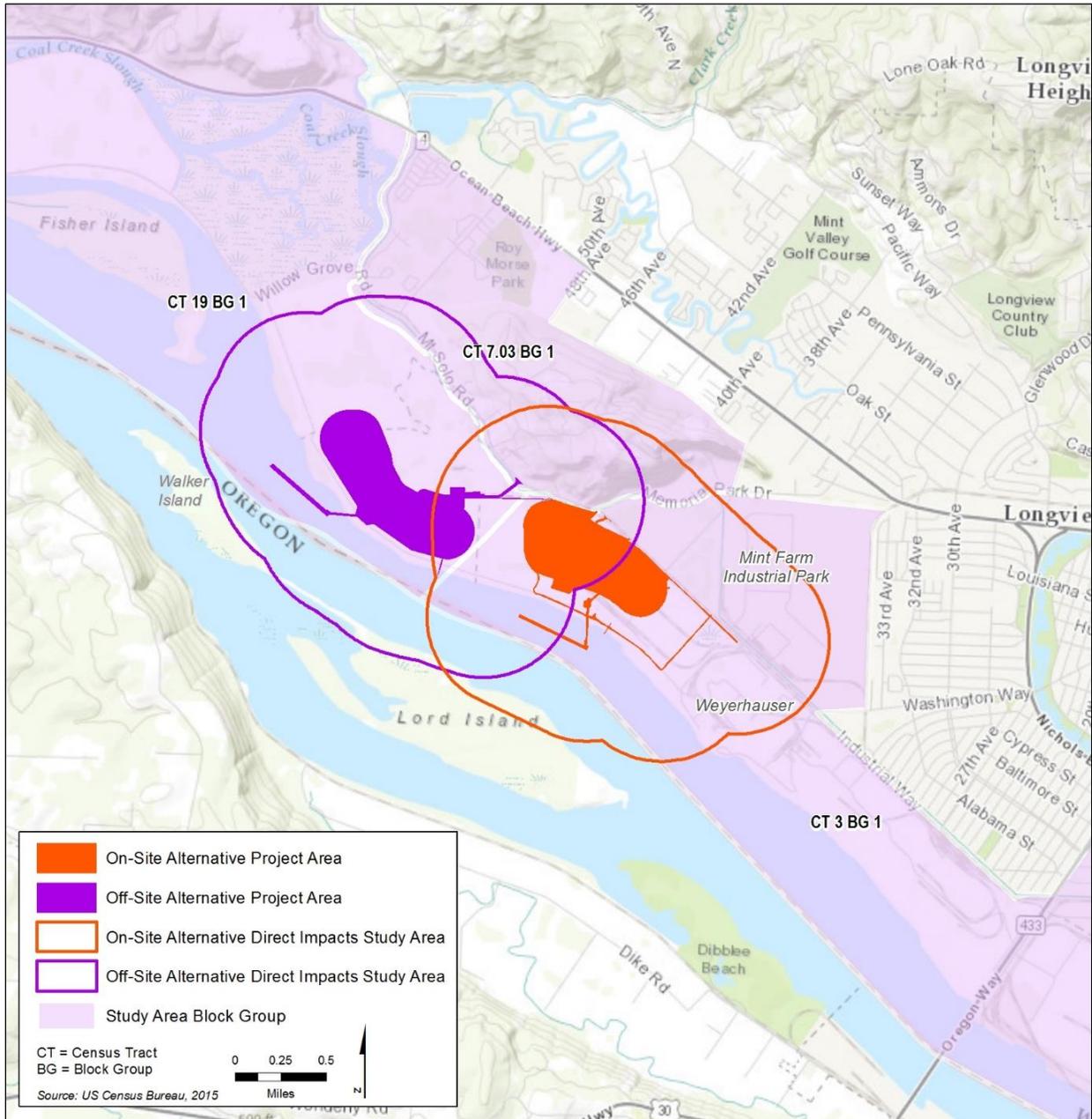
- Divides or isolates part of a neighborhood.
- Displaces or alters a public service facility, such as an educational facility, library, public park, or recreational facility.
- Generates substantial new development or changes property values leading to the displacement of substantial portions of the existing community.

Impacts on public services occur when an action introduces a new population or service demand affecting the services delivered by a public service facility, or if an action separates residents from public services by changing travel patterns or access to the service.

#### **Local Economy**

The assessment of the local economy includes information describing existing economic conditions, including data on the labor force, unemployment, job inflows, major employers, local tax revenues, and business activity. Future developments that would affect economic activity are also identified. The impact assessment projects potential direct, indirect, and induced economic and fiscal benefits associated with the proposed export terminal, and evaluates the terminal's potential to affect business activity. This assessment is not intended to be a cost-benefit analysis.

**Figure 4.2-3. Census Tract and Block Groups in the Direct Impacts Study Area for Social and Community Cohesion and Public Services**



The projections of potential direct, indirect, and induced economic and fiscal benefits presented in this section are derived from the study titled *Economic and Fiscal Impacts of Millennium Bulk Terminals Longview* prepared by BERK (2012) on behalf of the Applicant. The data provided by this study have not been independently verified by the lead agency. This study used an input-output model to estimate the economic and fiscal impacts of the proposed project in terms of jobs, wages, and economic output; specific technical details on the input-output model were not provided by the Applicant. Estimates of indirect and induced economic impacts were modeled using the Washington State Input-Output Model developed for the Washington State Office of Financial Management. The study also estimated the tax revenues generated by the construction and operation of the proposed project.

## Utilities

The assessment of utilities focuses on water utilities, including potable water and wastewater service, and electrical utilities. Electricity and natural gas consumption are addressed in Section 4.7, *Energy*. This evaluation assesses whether the proposed export terminal would affect utility service directly by altering the water supply or wastewater conveyance system or electrical utilities. The evaluation also assesses the potential for indirect impacts from new demands on water supply capacity and/or wastewater treatment capacity.

## Environmental Justice

The environmental justice assessment used guidance published by the Council on Environmental Quality (CEQ) (1997), which involved the following six steps.

1. Identify the area where the proposed project could cause adverse effects either during construction or operation (i.e., the study area, described in Section 4.2.2, *Study Area*).
2. Compile minority and low-income data for the census block groups in the study area and identify minority and low-income populations.
3. Identify the proposed project's potential adverse effects on minority and low-income populations.
4. Evaluate the proposed project's potential adverse effects on minority and low-income communities relative to the effects on the overall population to determine if potential adverse effects on those communities would be disproportionately high and adverse.
5. Discuss mitigation measures for any identified disproportionate adverse effects.
6. Describe the public outreach and participation process for effectively engaging minority and low-income populations in the decision-making process.

### Identification of Minority and Low-Income Populations

Census block groups were selected as the geographic unit for analysis to avoid artificially diluting or inflating the affected populations, consistent with CEQ guidance. As shown in Figure 4.2-2, the study area for direct and indirect impacts includes 12 census block groups.

Data on race, ethnicity, and poverty status were gathered from the U.S. Census Bureau's 2009–2013 ACS for the census block groups in the study area. For comparison purposes, data for the City of

Longview and Cowlitz County were also compiled. Based on census data and CEQ guidance, potential minority and low-income populations were identified as follows.

- **Minority populations.** CEQ guidance defines minorities to include American Indians or Alaskan Natives, Asian and Pacific Islanders, African Americans or Black persons, and Hispanic persons. This analysis also considers minority populations to include persons who identified themselves as being either “some other race” or “two or more races” in the 2009–2013 ACS. Following CEQ guidance, minority populations were identified where either 1) the minority population of the affected area exceeds 50%; or 2) the minority population percentage of the affected area is meaningfully greater than the minority population percentage in the general population or other appropriate comparison unit of geographic analysis (Council on Environmental Quality 1997). For the purposes of this analysis, *meaningfully greater* is interpreted as *at least 50% greater*. This analysis used Cowlitz County as the primary comparison area. In Cowlitz County, the minority population in the 2009–2013 ACS was 14.6% of the total population. Therefore, this analysis considers any study area block group with a minority population of greater than 21.9% to be a minority community.
- **Low-income populations.** This study defines low-income populations as the percent of individuals living below the poverty level in each census block group, as presented in the 2009–2013 ACS. CEQ guidance does not specify a threshold for identifying clusters of low-income populations. Therefore, for this analysis, any census block group with a percentage of low-income population at least 50% greater than the percentage in Cowlitz County as a whole was considered a low-income community. In Cowlitz County, the low-income population (the population with incomes below the poverty level) is approximately 17.6% of the total population. Therefore, this assessment identifies low-income communities as those in which the census block group population living below the poverty level exceeds 26.4%.

### Identification of Potential Disproportionately High and Adverse Effects

The determination of the potential to result in disproportionately high and adverse effects involved the following considerations.

- If the adverse project impact is considered significant.
- If the impacts on minority or low-income populations would appreciably exceed, or would be likely to appreciably exceed, the risk or rate to the general population.
- If the minority or low-income population would be affected by cumulative or multiple adverse exposures from environmental hazards.<sup>2</sup>

In making this determination following CEQ guidance, it was recognized effects on minority or low-income populations may be different from effects on the general population (e.g., due to a community’s distinct cultural practices, such as a pattern of living relying on subsistence fish, vegetation, or wildlife consumption). The determination of disproportionately high and adverse effects also considered proposed mitigation measures and offsetting benefits.

All resource sections in Chapters 4, 5, and 6 present the potential impacts resulting from construction and operation of the proposed export terminal. These impacts were evaluated for their

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<sup>2</sup> According to CEQ guidance, the term “environmental hazard” means a chemical, biological, physical, or radiological agent, situation, or source having the potential for deleterious effects to the environment and/or human health.

potential to result in disproportionately high and adverse effects on minority and low-income communities in the *NEPA Social and Community Resources Technical Report* (ICF International and BergerABAM 2016). A summary of the evaluation is provided in Section 4.2.5, *Impacts*.

As discussed in the *NEPA Social and Community Resources Technical Report*, the assessment of disproportionately high and adverse effects on minority and low-income communities focused on potential impacts on minority and low-income populations, including impacts related to aesthetics; cultural resources; tribal resources; fish; geology and soils; groundwater; noise and vibration; and vehicle transportation. In other resource areas, the proposed export terminal would not result in adverse impacts or would result in low or minor impacts that would be avoided or minimized with standard best management practices or other mitigation measures. Based on the analysis presented in the *NEPA Social and Community Resources Technical Report*, the proposed export terminal would not have the potential to result in disproportionately high and adverse effects on minority and low-income populations in these resource areas.

## 4.2.4 Affected Environment

This section describes the environment in the study areas related to social and community resources potentially affected by construction and operation of the proposed export terminal. Given the proximity of the two project areas, the conditions described below generally apply to both the On-Site Alternative and the Off-Site Alternative; distinctions between the two alternatives are noted in the text where necessary.

### 4.2.4.1 Social and Community Cohesion and Public Services

This section describes social and community cohesion in terms of population, the various public services and social institutions serving the community, and the access and linkages between the community and those services.

The direct impacts study area (project area and within 0.5 mile of the project area) for the On-Site Alternative is characterized by predominantly industrial and transportation/utility land uses, along with limited residential uses to the north of Mount Solo Road. The area east of the project area is part of a wide corridor of industrial land uses along the Columbia River. Notable uses include the Weyerhaeuser Company lumber products manufacturing site/North Pacific Paper Corporation (NORPAC) facility and Mint Farm Industrial Park. The area west of the project area is Barlow Point, which includes an undeveloped parcel owned by the Port of Longview (the Off-Site Alternative project area), the closed Mount Solo Landfill, and large-lot residential and agricultural land uses south of Industrial Way. Neighborhoods in the direct impacts study area include Barlow Point, Memorial Park, and Mint Farm (City of Longview 2007).

The indirect impacts study area along the Reynolds Lead and BNSF Spur (within 0.5 mile of these rail lines) includes the Highlands neighborhood and the Industrial and California Way neighborhood in Longview. The Highlands neighborhood is predominantly residential. The Industrial and California Way neighborhood includes a mix of commercial and industrial uses.

### Population Characteristics

Key population characteristics, including local population and population projections, are summarized below. The *NEPA Social and Community Resources Technical Report* provides a full discussion of population characteristics, including local population, population projections, age

distribution, households, family composition, race and ethnicity, limited English proficiency, disability status, median household income and poverty status, and housing characteristics.

Table 4.2-2 presents the population for the direct impacts study area, Longview, and Cowlitz County in 2000, 2010, and 2013. The population of the study area has declined by approximately 3% since 2000. In comparison, the populations of both Longview and Cowlitz County grew from 2000 to 2010 and remained flat from 2010 to 2013. Census Tract and Block Groups are shown in Figure 4.2-3.

**Table 4.2-2. Population Estimates for Years 2000, 2010, and 2013**

Area	Population 2000	Population 2010	Percent (%) Change 2000-2010	Population 2013	Percent (%) Change 2010-2013
<b>Direct Impacts Study Area (Project Area and within 0.5 mile of the Project Area)</b>					
Census Tract 3 Block Group 1 <sup>a</sup>	868	509	-41.4	570	12.0
Census Tract 7.03 Block Group 1 <sup>b</sup>	1,367	1,601	--	1,373	-14.2
Census Tract 19 Block Group 1	827	956	15.6	1,021	6.8
	<b>3,062</b>	<b>3,066</b>	<b>0.1</b>	<b>2,964</b>	<b>-3.3</b>
<b>Longview</b>	<b>34,660</b>	<b>36,648</b>	<b>5.7</b>	<b>36,656</b>	<b>0.0</b>
<b>Cowlitz County</b>	<b>92,948</b>	<b>102,410</b>	<b>10.2</b>	<b>102,110</b>	<b>-0.3</b>

Notes:

<sup>a</sup> The drop in population in this census tract is largely due to the displacement of mobile home units from 2000 to 2010. In particular, the 166-space River City RV and Mobile Home Park, located near the corner of California Way and 7th Avenue, closed in 2009 for the development of a Super Walmart.

<sup>b</sup> Census Tract 7.03 Block Group 1 applies to demographic data for 2010 and 2013. In the 2000 Census, this area is closely approximated by Census Tract 7.01 Block Group 4. The 2000 Census data are presented for informational purposes, but a percent change is not presented because the geographic areas are not identical.

Source: U.S. Census Bureau 2000, U.S. Census Bureau 2010, U.S. Census Bureau 2013.

Table 4.2-3 shows Cowlitz County population projections to 2040 (Washington State Office of Financial Management 2012). The population of Cowlitz County is projected to grow by approximately 6% from 2010 to 2020. Lower growth rates are estimated from 2020 to 2040. Over the coming decades, it is projected the age distribution in Cowlitz County will shift, with an increase in the elderly population (age 65 and over) and a decrease in the school-age population (age 0 to 17) (Cowlitz County 2015). It is also expected the proportion of the population with a disability will increase as the share of elderly population increases.

**Table 4.2-3. Cowlitz County Population Projections to 2040**

Area	Population 2010	Population 2020	Population 2030	Population 2040	Percent (%) Change 2010-2040
Cowlitz County	102,410	108,588	114,158	116,897	14.1
Percent Change over Previous 10 Years	--	6.0	5.1	2.4	--

Notes:

Source: Washington State Office of Financial Management 2012.

## Public Services

For the purposes of this assessment, public services include educational facilities, religious institutions, social institutions, medical facilities, fire protection and emergency medical services, police services, cemeteries, public park and recreation facilities, and other notable public services and government institutions.

There are no public service facilities in the direct impacts study area for the On-Site Alternative (project area and within 0.5 mile of the project area). There are three public service facilities (a funeral home and two cemeteries) in the direct impacts study area for the Off-Site Alternative. These facilities are approximately 0.5 mile from the Off-Site Alternative project area. Table 4.2-4 illustrates the public service facilities in the indirect impacts study area (within 0.5 mile of the Reynolds Lead and BNSF Spur).

**Table 4.2-4. Public Service Facilities in the Indirect Impacts Study Area**

Type of Facility	Number of Facilities
Educational Facility	1
Religious Institution	3
Police Facility	1
Parks and Recreation Facility	2
Other	3
<b>Total</b>	<b>10</b>

Notes:  
See the *NEPA Social and Community Resources Technical Report* for a detailed list of public service facilities.

## Access and Linkages

A variety of roadway, pedestrian, transit, and bicycle transportation facilities provide access to and among the various public service facilities. Local roadways, Interstate 5, and state highways provide access to public service facilities.

River Cities Transit provides public transit throughout the Longview/Kelso area. The closest transit route to the project area is Route 31, which runs along 32nd Avenue, Washington Way, and Alabama Street into downtown Longview. The nearest portion of Route 31 is approximately 1 mile from the project areas. Route 33 and Route 44 both run along Ocean Beach Highway and are approximately 1 to 2 miles from the project areas. No fixed transit routes directly serve the project areas, nor do any routes cross the Reynolds Lead. Frequent and comprehensive transit service is a critical support service to residents with no access to a vehicle, especially those who are low-income, homeless, and/or reliant on public transit (River Cities Transit 2015).

Within Cowlitz County, there are various bicycle trails in parks and along certain waterfront areas. Several bicycle trails are located along the Columbia and Cowlitz rivers; however, there are no designated bicycle trails within the direct impacts study areas (0.5 mile from the project areas). Bicycle trails may provide access to public services and are discussed in more detail in the *NEPA Social and Community Resources Technical Report*.

### Fire Protection and Emergency Medical Services

The Cowlitz 2 Fire & Rescue District, Longview Fire Department, and American Medical Response (AMR) provide emergency medical services and fire protection for the project areas. A brief description of each of these service providers is below; additional information on the stations, facilities, and apparatus of each is provided in the *NEPA Social and Community Resources Technical Report*.

Cowlitz 2 Fire & Rescue provides fire protection services, and serves approximately 34,000 citizens in the City of Kelso and unincorporated Cowlitz County, responding to approximately 4,100 calls per year (Cowlitz 2 Fire & Rescue 2015). The district is staffed by approximately 120 full-time and volunteer members in five active fire stations, two of which are staffed with full-time EMT and paramedic firefighters. Volunteer firefighter EMTs also respond on an on-call basis.

The Longview Fire Department serves approximately 36,000 citizens spread over 14.7 square miles of urban and suburban development. The department is staffed with 39 full-time EMT/firefighters, and 4 paramedic/firefighters. Paramedic transport service is provided within the city by AMR, a private provider. The Longview Fire Department responds to approximately 4,500 calls per year from two fire stations (City of Longview 2015).

AMR is a private ambulance company providing emergency and nonemergency medical transport service. AMR includes approximately 35 paramedics and EMTs, and handles an average of 7,500 calls annually (American Medical Response 2015). The medical transport vehicles are based out of the facility near the Cowlitz Way intersection with Long Avenue.

#### 4.2.4.2 Local Economy

This section discusses important characteristics of the local economy, including the labor force, job inflow and outflow, unemployment, and business activity. Additional information regarding the local economy, including employment, local government revenues, and economic development activities, is provided in the *NEPA Social and Community Resources Technical Report*. For direct impacts on the local economy, the study area includes the Cities of Kelso and Longview. For indirect impacts, the study area is Cowlitz County.

#### Labor Force

Table 4.2-5 shows labor force data, which include the total number of people employed or seeking employment, for Longview and Cowlitz County. In 2014, Longview had a total labor force of approximately 15,019 people, which was 4.4% less than in 2004. Over the same period, the labor force in Cowlitz County overall grew by approximately 3.0%, to 44,048 people.

**Table 4.2-5. Average Annual Labor Force**

Area	2004	2014	Percent (%) Change
Longview	15,707	15,019	-4.4
Cowlitz County	42,763	44,048	3.0

Notes:

Data are only available for cities and towns with a population over 25,000.

Source: U.S. Bureau of Labor Statistics 2015a.

## Cowlitz County Jobs

Table 4.2-6 presents data on the number of workers in Cowlitz County and where they reside, as well as the number of workers who live in Cowlitz County but work outside it. As shown, there were 31,988 employed workers in Cowlitz County in 2011. Approximately 65% lived in Cowlitz County, while 35% lived outside Cowlitz County. Of the workers not living in Cowlitz County, the highest proportions resided in Clark County to the south, Lewis County to the north, and across the river in Columbia County, Oregon. Cowlitz County employers also drew workers from larger labor pools in King County (the Seattle area) and Multnomah County (the Portland area). Approximately 20,353 workers reside in Cowlitz County but work outside of the county. Of the workers who live in Cowlitz County but are employed outside it, the highest proportions were employed in Clark County and Multnomah County to the south and King County to the north.

**Table 4.2-6. 2011 Jobs Inflow and Outflow for Cowlitz County**

Area	Number of Workers	Percent (%) of Total
<b>Total Primary Jobs in Cowlitz County</b>	<b>31,988</b>	<b>100.0</b>
Employed in Cowlitz County and Living Inside the County	20,765	64.9
Employed in Cowlitz County but Living Outside the County	11,223	35.1
Clark County, WA	3,560	11.1
Columbia County, OR	1,080	3.4
Lewis County, WA	1,073	3.4
King County, WA	657	2.1
Pierce County, WA	523	1.6
Thurston County, WA	362	1.1
Grays Harbor County, WA	339	1.1
Multnomah County, OR	359	1.1
All Other Locations	3,270	10.2
Living Inside Cowlitz County but Employed Outside the County	20,353	100.0
Clark County, WA	4,256	20.9
King County, WA	2,907	14.3
Multnomah County, OR	2,148	10.6
Pierce County, WA	1,710	8.4
Thurston County, WA	1,220	6.0
Washington County, OR	1,019	5.0
Lewis County, WA	795	3.9
Yakima County, WA	591	2.9
Clackamas County, OR	547	2.7
All Other Locations	5,160	25.4

Notes:

Source: U.S. Census Bureau 2015.

## Unemployment

Table 4.2-7 presents unemployment numbers and rates in Longview and Cowlitz County. In 2014, there were 1,278 and 3,697 unemployed people in Longview and Cowlitz County, respectively, representing approximately 8.5 and 8.4% of the communities' respective labor forces. In contrast, in December 2014, the unemployment rate in Washington was 6.3%, and the rate for in the nation as a whole was 5.6% (U.S. Bureau of Labor Statistics 2015a, 2015b).

**Table 4.2-7. Unemployment Rates for the City of Longview and Cowlitz County**

Area	Unemployed Population		Unemployment Rate	
	2004	2014	2004	2014
Longview	1,395	1,278	8.9%	8.5%
Cowlitz County	3,705	3,697	8.7%	8.4%
Washington State	187,334	223,295	5.8%	6.3%
United States	7,934,000	8,704,000	5.4%	5.6%

Notes:

Data are available only for cities and towns with a population over 25,000.

Source: U.S. Bureau of Labor Statistics 2015a.

## Business Activity

Business activity near the On-Site Alternative project area includes a mix of industrial and commercial uses. The 550-acre Weyerhaeuser Company lumber products manufacturing site/NORPAC facility is located upriver (southeast) of the project area along the Columbia River. This manufacturing facility produces liquid packaging board, newsprint, and other specialty papers and includes open-air storage of lumber (Weyerhaeuser 2014a, 2014b). The Mint Farm Industrial Park, a partially developed 445-acre industrial site operated as a public-private partnership between Longview and the Weyerhaeuser Real Estate Development Company, is located across Industrial Way from the On-Site Alternative project area. Current tenants include Epson Toyocom (manufacturer of quartz devices), Flexible Foam Products (manufacturer of polyurethane foam and carpet cushion), Northwest Renewables LLC (a proposed biomass energy facility), and the Mint Farm Energy Center (a natural gas energy plant) (The Mint Farm 2014).

The nearest business to the Off-Site Alternative project area is the existing bulk product terminal located adjacent to the On-Site Alternative project area in the Applicant's leased area. Many commercial and industrial businesses are within the indirect impacts study area. This study area passes through several Columbia River ports—including the ports of Longview, Kalama, and Woodland—containing numerous industrial and marine-related businesses. The study area also passes through several urban areas containing a mix of industrial, commercial, and residential land uses.

### 4.2.4.3 Utilities

This section describes existing utility services provided to the project area. This assessment focuses on water utilities, including potable water and wastewater service, and electrical utilities. Electricity and natural gas consumption are addressed in Section 4.7, *Energy*. For direct impacts on utilities, the study area is the project area and the area within 0.5 mile of the project area. For indirect impacts on utilities, the study area is the area within 0.5 mile of the project area.

An existing sewage treatment system provides sewer service to the On-Site Alternative project area. An existing on-site industrial wastewater treatment facility and stormwater/wastewater collection and treatment system provides wastewater treatment. The Applicant replaced the sanitary sewer collection and treatment systems with a new collection system and connection to the Longview sewer system (URS Corporation 2014). With the new connection, project area sewage flows are conveyed to the Three Rivers Regional Treatment Plant. This wastewater treatment plant has a design capacity of 26.0 million gallons per day (Washington State Department of Ecology 2012). From 2001 to 2009, the plant received an average wet-weather (typically the highest rate) flow of 3.04 million gallons per day (City of Kelso 2011).

The Mint Farm Regional Water Treatment Plant supplies drinking water to more than 45,000 people in the Longview area. Groundwater is tapped from wells in the Mint Farm Industrial Park, and the water plant consists of four high-capacity (4,000 gallons per minute) groundwater wells. The On-Site Alternative project area receives potable water from Longview through a connection on Industrial Way. This water is for domestic usage such as sinks and toilets in existing facilities (URS Corporation 2014).

For stormwater, the On-Site Alternative project area also includes on-site stormwater ponds providing water for dust control and other production needs. The stormwater ponds are supplemented with groundwater well withdrawals during dry periods (URS Corporation 2014).

For electricity, the On-Site Alternative project area also includes two Bonneville Power Administration (BPA) parcels. One parcel includes high-power transmission lines and the second parcel includes a power substation with an access road.

The Off-Site Alternative project area does not have existing connections to sewer and potable water utility service. The Port of Longview is currently engaged in an ongoing planning effort for the project area to identify its infrastructure needs.

#### 4.2.4.4 Environmental Justice

This section describes the existing minority and low-income populations in the study areas - potentially affected by the construction and operation of the proposed export terminal. For direct impacts on minority and low-income populations, the study area is the project area and the area within approximately 1 mile of the project area. The study area for indirect impacts is the area within 0.5 mile of the Reynolds Lead and BNSF Spur.

Race, ethnicity, and poverty characteristics were compiled for the study area's block groups, Longview, and Cowlitz County as a whole.<sup>3</sup> Table 4.2-8 provides the population, percent minority, and percent low-income for each block group in the study areas. Of the 12 census block groups in the study area, 7 have minority populations exceeding the 21.9% threshold, ranging from 23.7 to 42.4%. In addition, 6 of the census block groups have low-income populations exceeding the 26.4% threshold, ranging from 31.4 to 57.6%. The *NEPA Social and Community Resources Technical Report* provides detailed data on race, ethnicity, and poverty status for the study area. Overall, 8 of the study area's 12 block groups are considered minority and/or low-income communities for the purposes of this analysis. The remaining 4 block groups are not considered minority or low-income

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<sup>3</sup> Except for Census Tract 6.01 Block Group 4, the study areas for the On-Site Alternative and Off-Site Alternative contain the same block groups. Census Tract 6.01 Block Group 4 is within the environmental justice study area for the On-Site Alternative only; it is more than 1 mile from the Off-Site Alternative.

communities. Figure 4.2-4 shows the location of minority and low-income communities within the study area.

**Table 4.2-8. Minority and Low-Income Status by Block Group**

Census Block Group	2013 Total Population	Percent Minority <sup>a</sup>	Percent Low-Income <sup>a</sup>
<b>Direct Impacts Study Area Census Block Groups (Project Area and Area within 1 Mile of the Project Area)</b>			
Census Tract 3, Block Group 1	570	35.4	44.7
Census Tract 6.01, Block Group 3	1,025	42.4	32.0
Census Tract 6.01, Block Group 4 <sup>b</sup>	881	20.0	31.4
Census Tract 7.03, Block Group 1	1,373	15.1	23.7
Census Tract 7.04, Block Group 4	1,912	11.9	18.8
Census Tract 19, Block Group 1	1,021	2.0	23.5
<b>Direct Impacts Study Area Census Block Groups<sup>c</sup></b>	<b>6,782</b>	<b>18.7</b>	<b>26.3</b>
<b>Indirect Impacts Study Area Census Block Groups (Within 0.5 Mile of the Reynolds Lead and BNSF Spur)</b>			
Census Tract 5.01, Block Group 1	846	24.3	24.7
Census Tract 5.01, Block Group 2	1,047	23.7	21.2
Census Tract 5.01, Block Group 3	952	8.3	18.8
Census Tract 5.02, Block Group 1	1,587	33.1	39.6
Census Tract 5.02, Block Group 2	1,841	28.1	57.6
Census Tract 5.02, Block Group 3	1,454	26.4	44.8
<b>Indirect Impacts Study Area Census Block Groups<sup>d</sup></b>	<b>7,727</b>	<b>25.4</b>	<b>38.2</b>
<b>Longview</b>	<b>36,656</b>	<b>18.4</b>	<b>22.6</b>
<b>Cowlitz County</b>	<b>102,110</b>	<b>14.6</b>	<b>17.6</b>

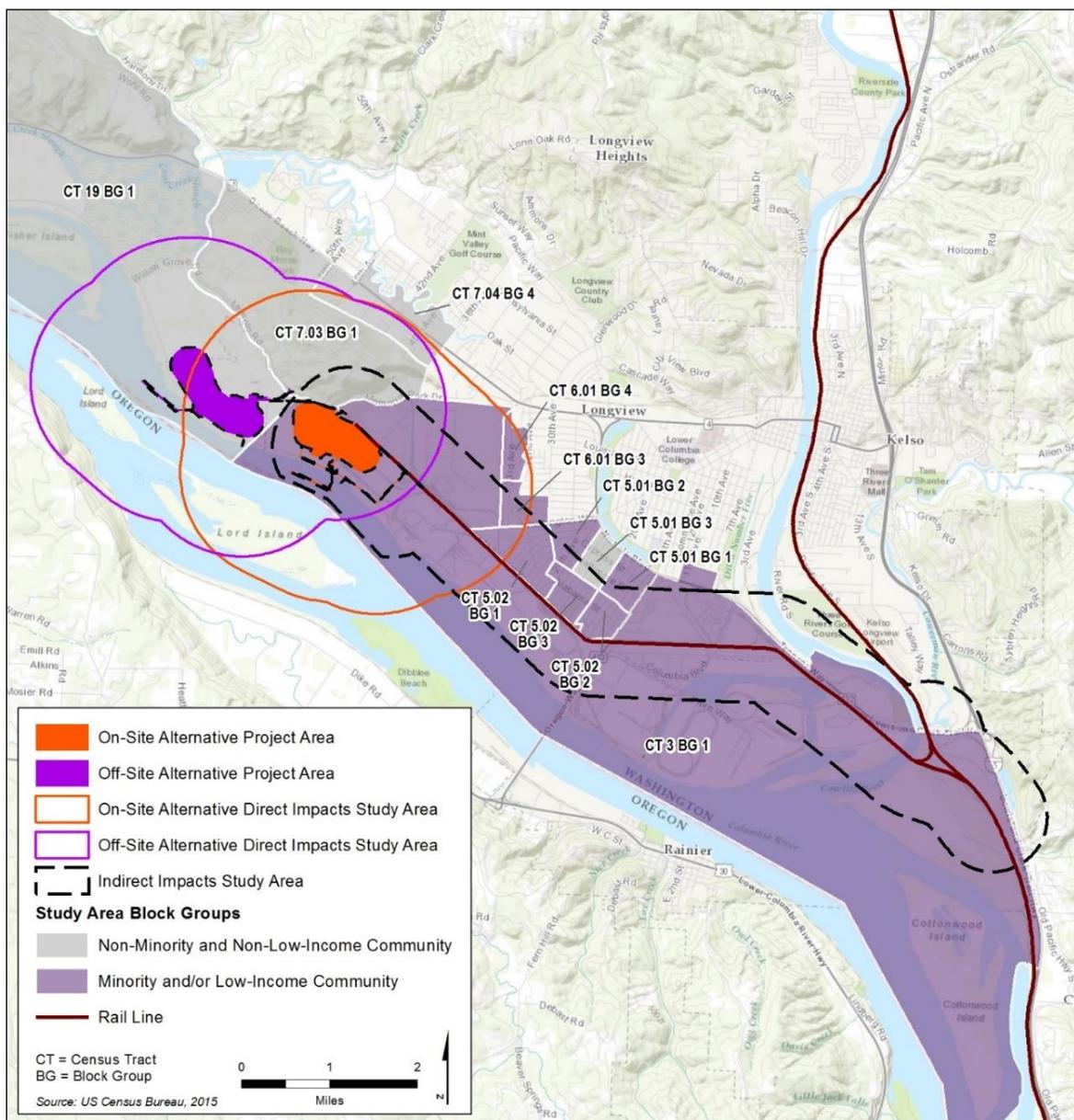
Notes:

Shading indicates a minority and/or low-income community. The threshold for a minority community was a percent minority of at least 21.9%. The threshold for a low-income community was a percent low-income of at least 26.4%.

- <sup>a</sup> Minority status includes individuals defined as any race or ethnicity other than white alone and not Hispanic or Latino. Percent low-income is based on the population for whom the Census Bureau can determine poverty status. For some block groups, the population for whom poverty status is determined is slightly smaller than the total population.
- <sup>b</sup> Census Tract 6.01 Block Group 4 is within the environmental justice study area for the On-Site Alternative only; it is more than 1 mile from the Off-Site Alternative. All other block groups are within the environmental justice study areas for both alternatives.
- <sup>c</sup> Census Block Groups within 1 mile of the project areas.
- <sup>d</sup> Census Block Groups within 0.5 mile of Reynolds Lead and BNSF Spur.

Source: U.S. Census Bureau 2013.

**Figure 4.2-4. Minority and Low-Income Communities**



Within the direct impacts study area for the On-Site Alternative, three of six block groups are identified as minority or low-income communities.<sup>4</sup> These block groups are located to the east of the project area. These block groups contain industrial uses in the areas nearest the project area. Residential uses are located approximately 1 mile or more from the On-Site Alternative project area and approximately 2 miles from the Off-Site Alternative project area. The nearest residences to the project areas (those located north of State Route 432 and along Barlow Point Road) are not located within a minority and/or low-income community. Within the indirect impacts study area, 5 of 6 block groups are identified as minority or low-income communities.

<sup>4</sup> For the Off-Site Alternative, two of five block groups are minority or low-income communities. Census Tract 6.01 Block Group 4 is not within the direct impacts study area for the Off-Site Alternative.

During interviews conducted for the proposed project's public involvement plan, stakeholders expressed the Highlands neighborhood in the City of Longview warranted environmental justice consideration under Executive Order 12898. Consistent with this recommendation, this analysis identifies the Highlands neighborhood in the City of Longview as a minority and low-income community. The Highlands neighborhood corresponds with Census Tract 5.02, Block Groups 1, 2, and 3, which are shown in Figure 4.2-4.

## 4.2.5 Impacts

This section describes the potential direct and indirect impacts related to social and community resources from construction and operation of the proposed export terminal.

The study areas for direct and indirect impacts for each element of this social and community resources are listed below.

- **Social and Community Cohesion and Public Services.** For direct impacts, the study area is the project area and the area within 0.5 mile of the project area. For indirect impacts, the study area is the area within 0.5 mile of the Reynolds Lead and BNSF Spur.
- **Local Economy.** For direct impacts, the study area includes the Cities of Kelso and Longview. For indirect impacts, the study area is Cowlitz County.
- **Utilities.** For direct impacts, the study area is the project area and the area within 0.5 mile of the project area. For indirect impacts, the study area is the area within 0.5 mile of the project area.
- **Environmental Justice.** For direct impacts, the study area is the project area and the area within approximately 1 mile of the project area. For indirect impacts, the study area is the area within 0.5 mile of the Reynolds Lead and BNSF Spur.

### 4.2.5.1 On-Site Alternative

This section describes potential impacts in the study areas from construction and operation of the proposed export terminal at the On-Site Alternative location.

#### Construction—Direct Impacts

Construction-related activities associated with the proposed export terminal at the On-Site Alternative location would result in direct impacts as described below. As explained in Chapter 3, *Alternatives*, construction-related activities include demolishing existing structures and preparing the site, constructing the rail loop and dock, and constructing supporting infrastructure (i.e., conveyors and transfer towers).

#### Social and Community Cohesion and Public Services

Construction of the terminal at the On-Site Alternative location would not directly affect social and community cohesion or public services because construction activities would be limited to the project area and there are no public service facilities in the direct impacts study area.

#### Local Economy

Construction of the terminal at the On-Site Alternative location would result in the following direct impacts on the local economy.

## Economic Output

Based on data provided by the Applicant, the terminal would generate approximately 1,350 jobs during the construction period. Construction of the terminal is expected to occur over 6 years with the peak construction activity occurring in 2018. The employees would be derived primarily from the local and regional labor pool. Assuming construction expenditures of \$600 million, the terminal would have a direct economic construction output of about \$232 million supporting about \$70 million in direct wages (Table 4.2-9).

**Table 4.2-9. Direct Economic Impacts during Construction**

<b>Economic Impacts</b>	<b>Value</b>
Jobs Total	1,350
Wages Total (in millions \$)	\$70
Output Total (in millions \$)	\$232
Notes:	
Source: BERK 2012	

Overall, the terminal would have a positive short-term beneficial impact on the local and regional economies.

## Construction Sales and Business and Occupation Tax Revenues

Construction of the terminal would generate state and local sales and use taxes and business and occupation (B&O) taxes. Construction activities are estimated to provide a one-time construction sales tax of \$5.87 million for Cowlitz County, which represents a 5% increase of the 2012 Cowlitz County revenue of \$107.8 million (BERK 2012). The state is estimated to receive just over \$37 million in state tax revenue.

## Utilities

Construction of the terminal is not anticipated to result in direct impacts on water and sewer service. Construction activities would use groundwater for dust suppression and would not affect water utility service. Construction practices would ensure the water supply and sewer connections are not disrupted for surrounding users.

## BPA-Owned Parcels

As described in Chapter 3, *Alternatives*, if the Applicant obtains easements from BPA, construction of the export terminal would affect two BPA-owned parcels in the project area.<sup>5</sup> The Applicant would coordinate with BPA on potential impacts on BPA infrastructure to minimize adverse impacts.

## Environmental Justice

Direct impacts resulting from construction of the terminal would be temporary and limited to the project area and the immediate vicinity (for example, construction noise directly affecting nearby residences). As discussed above, the nearest residences in minority or low-income communities in

<sup>5</sup> This impact would occur if BPA grants an easement to the Applicant prior to construction of the On-Site Alternative. The impact would not occur if BPA sells the land to the Applicant prior to construction.

the direct impacts study area are located approximately 1 mile from the project area. Because of the distance between the project area and identified minority and low-income communities, the direct construction impacts of the terminal would not affect minority or low-income communities at a rate that would appreciably exceed the rate to the general population. Therefore, the analysis concluded the direct impacts resulting from construction of the terminal would not have a disproportionately high and adverse effect on minority and low-income communities.

### **Construction—Indirect Impacts**

Construction of the proposed export terminal at the On-Site Alternative location would result in the following indirect impacts.

#### **Social and Community Cohesion and Public Services**

As described in Chapter 3, *Alternatives*, construction materials would be delivered to the project area by truck or rail (truck delivery scenario and rail delivery scenario). As described in Chapter 6, Section 6.3, *Vehicle Transportation*, construction activities would not adversely affect vehicle delay at grade crossings on the Reynolds Lead and BNSF Spur because average vehicle delay would not substantially change during construction, except during the peak traffic hour at two public at-grade crossings on the Reynolds Lead under the rail delivery scenario. However, this vehicle delay impact would only occur if a project-related construction train (average of 1.3 trains per day) passes during the peak traffic hour. Therefore, construction of the terminal would have negligible impacts on social and community cohesion and access to public services.

#### **Local Economy**

Construction activity can disrupt local businesses with increased traffic, noise, dust, and other indirect impacts. Because the On-Site Alternative would have negligible vehicle delay impacts during construction, impacts on local business access would be negligible as well. As described in Chapter 6, Section 6.5, *Noise and Vibration*, delivery of construction materials by rail would increase noise levels but would not cause adverse noise impacts. As described in Chapter 6, Section 6.6, *Air Quality*, project-related construction trucks and trains would not adversely affect air quality during construction and dust from construction activities would be limited to the project area. Therefore, construction of the terminal would have negligible indirect impacts on local business activity.

Construction of the terminal at the On-Site Alternative location would have the following indirect impacts on the local economy.

#### **Economic Output**

Based on data provided by the Applicant, construction of the proposed export terminal would require approximately 1,350 direct jobs, which could generate an additional 1,300 indirect and induced local and regional jobs during construction with approximate wages of \$65 million and an additional economic output of \$203 million (Table 4.2-10) (BERK 2012). Input-output models used to estimate the impacts of total wages over multiple years provide estimates of jobs in terms of job-years. Therefore, 1,300 indirect and induced jobs resulting from construction wage expenditure over 5 years, is the equivalent of 260 job positions held for the 5-year

duration of construction.<sup>6</sup> For example, if construction employment expenditures of \$70 million were to be spent uniformly over 5 years (\$14 million per year), the model indicates the equivalent of 260 positions would be created in the local economy, and could employ those people for 5 years.

**Table 4.2-10. Indirect Economic Impacts during Construction**

<b>Impacts</b>	<b>Value</b>
Jobs Total	1,300
Wages Total (in million \$)	\$65
Output Total (in million \$)	\$203
Notes:	
Source: BERK 2012	

### Utilities

Demand for water and sewer utility services during construction of the terminal would be confined to activities in the project area. Construction would not result in new indirect demands on water supply, sewer utility services, or wastewater treatment. Therefore, construction of the terminal would not result in indirect impacts on utilities.

### Environmental Justice

As noted above, the assessment of disproportionately high and adverse effects on minority and low-income communities focused on potential impacts related to aesthetics, cultural resources, geology and soils, groundwater, fish, noise and vibration, and vehicle transportation. The On-Site Alternative would not result in indirect construction impacts in any of these resource areas except vehicle transportation. Construction of the terminal would result in an indirect impact related to increased vehicle delay from construction rail traffic. The vehicle delay impacts would only occur if a project-related construction train (average of 1.3 trains per day) travels during the peak traffic hour and would be temporary (limited to the peak traffic hour during the construction period). Vehicle delay impacts would affect roadway users during the peak traffic hour, which would include minority and low-income populations as well as non-minority and non-low-income populations. Therefore, vehicle delay impacts are not likely to affect minority or low-income communities at a rate that would appreciably exceed the rate to the general population. Therefore, the analysis concluded the indirect impacts resulting from construction of the terminal would not have a disproportionately high and adverse effect on minority and low-income populations.

### Operations—Direct Impacts

Operation of the proposed export terminal at the On-Site Alternative location would result in the following direct impacts.

#### Social and Community Cohesion and Public Services

Operation of the terminal would not divide or isolate neighborhoods because operations would be confined to the project area, nor would it lead to the displacement of substantial portions of the

<sup>6</sup> The economic and fiscal impact study prepared by BERK for the On-Site Alternative used a 5-year construction duration for its assessment of economic impacts during the construction period.

existing community. Operations also would not physically displace or alter any public service facility, but it would place new demands on fire protection services, as discussed below.

### Fire Protection Services

The terminal would place new demands on Cowlitz Fire & Rescue protection services. Required fire and life safety systems would be installed in the project area according to fire code standards. These systems would be regularly inspected and maintained. The Applicant would also maintain a surface water storage pond with a reserve of 0.36 million gallons for fire suppression.

### Local Economy

The following direct impacts on the local economy related to operation of the terminal at the On-Site Alternative location have been identified.

### Economic Output

Operation of the terminal would generate direct economic benefits based on the Applicant's expected staffing and expenditure plan. At full operation, the terminal would employ 135 people, which would include terminal administrative staff (25), waterfront staff (30), and terminal upland staff (80).

Based on data provided by the Applicant, total direct output at full buildout would be about \$49 million supporting about \$16 million in wages (BERK 2012). Unemployed and underemployed workers in the manufacturing industry could potentially fill the new jobs generated by the terminal (Table 4.2-11).

**Table 4.2-11. Direct Economic Output during Operations**

<b>Impacts</b>	<b>Value</b>
Jobs Total	135
Wages Total (in millions \$)	\$16
Output Total (in millions \$)	\$49
Notes:	
Source: BERK 2012	

The wage information used in this analysis provided by the Applicant relies on wage data based on the International Longshore and Warehouse Union average salaries for the entire West Coast. Wages in Cowlitz County would likely be lower than the West Coast averages used in the economic impact analysis and overall economic impacts would also be lower. For instance, the economic impact analysis assumed direct wages of approximately \$118,000 per employee, exclusive of benefits. This is not representative of actual wages likely at the terminal and likely overstates the economic output.

For comparison, the average annual wage for workers in transportation and material moving occupations, which would be similar to the type of occupational employment created by the terminal, was \$38,730 in Cowlitz County in 2014 according to the U.S. Bureau of Labor Statistics State Occupational Employment and Wage Estimates for Washington State. Wages reported in

the State Occupational Employment and Wage Estimates do not include employer costs for benefits.

### **Tax Revenues**

Operation of the terminal would generate property taxes, combined state and local sales and use taxes, and B&O taxes. The greatest share of state, county, and special purpose district taxes would be generated by property taxes. Operation of the terminal is estimated to generate an annual average of \$1.65 million in Cowlitz County revenue and a 30-year present value of \$32.37 million in tax revenues. At the state level, operation of the terminal is estimated to generate an annual average of \$2.18 million and a 30-year present value of \$41.77 million in tax revenues. County taxes are shared with cities, allocated on the basis of population. Local taxes have historically been spent primarily on schools, roads, and emergency services, all of which have the potential for direct or indirect positive impacts on public health and safety.

A more detailed discussion of potential tax revenues from operation of the terminal is provided in the *NEPA Social and Community Resources Technical Report*.

### **Utilities**

Operation of the terminal at the On-Site Alternative location would result in the following direct impacts.

#### **BPA-Owned Parcels**

As described in *Chapter 3, Alternatives*, if the Applicant obtains an easement from BPA, operation of the terminal at the On-Site Alternative location would be located on two BPA-owned parcels within the project area. The Applicant would coordinate with BPA to minimize adverse impacts.<sup>7</sup>

#### **Sanitary Sewage Flows**

As described in Section 4.2.4.3, *Utilities*, the sanitary sewer collection and treatment system serving the project area and the Applicant's leased area has been permitted and replaced with a new collection system and connection to the Longview sewer system. A new sanitary sewer conveyance system and connection to the Longview sewer system would be developed. New sanitary sewer flows from the On-Site Alternative location would be small. The Three Rivers Wastewater Treatment Plant has sufficient capacity to treat additional wastewater flows generated by the terminal. The Applicant would be required to obtain a permit to discharge wastewater, as described in Section 4.2.6, *Required Permits*.

The On-Site Alternative would not convey industrial process wastewater to the Longview sewer system or the Three Rivers Wastewater Treatment Plant. Industrial process wastewater would be treated in the on-site water treatment facility, used on site, and would not add new demands to public sewer and wastewater utilities.

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<sup>7</sup> This impact would occur if BPA grants an easement to the Applicant prior to construction of the On-Site Alternative. The impact would not occur if BPA sells the land to the Applicant prior to construction.

## Water Demand

The terminal would use potable municipal water supplies for domestic uses such as drinking, sinks, and toilets, but would not use potable water supplies for industrial needs. Therefore, the On-Site Alternative would result in a small increase in demand for potable water.

Non-potable water would be used for industrial processes such as dust control, stockpile sprays, wash down, clean up, and fire protection. This water would be supplied by treated water from the proposed water management system and storage ponds and supplemented by wells during dry seasons. Therefore, the industrial water use would not place substantial new demands on the Longview water supply.

## Environmental Justice

Direct impacts resulting from operation of the terminal would be limited to the project area and the immediate vicinity (for example, operational noise directly affecting adjacent residences). As discussed above, the nearest residences in minority or low-income communities within the direct impacts study area are located approximately 1 mile from the project area. Because of the distance between the project area and identified minority and low-income communities, the direct impacts of the On-Site Alternative during operations would not likely have the potential to affect minority or low-income communities at a rate that would appreciably exceed the rate to the general population. Therefore, the analysis concluded the direct impacts resulting from operation of the terminal would not likely have a disproportionately high and adverse effect on minority and low-income populations.

## Operations—Indirect Impacts

Operation of the proposed export terminal at the On-Site Alternative location would result in the following indirect impacts.

### Social and Community Cohesion and Public Services

Operation of the terminal would result in the following indirect impacts on social and community cohesion, and public services.

### Community Resources and Public Services

As described in Chapter 6, Section 6.3, *Vehicle Transportation*, project-related trains would not adversely impact daily average vehicle delay at public at-grade crossings on the Reynolds Lead and BNSF Spur because average vehicle delay would not change substantially. Peak traffic hour vehicle delay would also not be adversely affected if track improvements are made to the Reynolds Lead and BNSF Spur (as described in Chapter 6, Section 6.1, *Rail Transportation*)<sup>8</sup> and only one project-related train travels during the peak traffic hour. Therefore, under these scenarios, accessibility to social and community resources and public services would not change substantially.

However, if two project-related trains travel during the peak traffic hour, or infrastructure improvements are not made to the Reynolds Lead and BNSF Spur (as described in Chapter 6,

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<sup>8</sup> The owner of the Reynolds Lead and BNSF Spur has indicated track improvements would be made, but these plans have not been submitted or permitted.

Section 6.1, *Rail Transportation*), vehicle delay would substantially change at selected public at-grade crossings along the Reynolds Lead and BNSF Spur during the peak traffic hour. (See Chapter 6, Section 6.3, *Vehicle Transportation* for the identification of crossings and discussion of vehicle delay impacts.) These vehicle delay impacts would be temporary (limited to the peak traffic hour), and the probability for two trains to pass during the peak vehicle traffic hour would be low. Under these scenarios, project-related trains would adversely affect the accessibility to community resources and public services at selected public at-grade crossings on the Reynolds Lead and BNSF Spur.

### Noise Levels

Project-related trains would increase rail traffic-related noise levels in Archie Anderson Park, along the Highlands Trail, and in Gerhart Gardens Park, all of which are located within 1,000 feet of the Reynolds Lead or BNSF Spur. Increased noise levels could reduce the attractiveness of the features in these parks that are more sensitive to increased noise levels, such as picnic facilities and sitting areas. Archie Anderson Park, the Highlands Trail, and Gerhart Gardens also include features not particularly sensitive to increased noise levels (e.g., facilities used for sports, exercise, or active play), such as walking and running trails, baseball fields, and basketball courts.

Increased noise levels would occur because project-related trains would be required to sound their horns for public safety at grade crossings per Federal Railroad Administration (FRA) regulations.

### Local Economy

The following direct impacts on the local economy related to operation of the terminal at the On-Site Alternative location have been identified.

#### Economic Output

The terminal would result in economic and fiscal benefits to the local area, Cowlitz County, and Washington. There would be benefits beyond the project area because the terminal would support ship networks operating on the Columbia River and rail networks in Washington State.

As illustrated in Table 4.2-12, operation of the terminal would generate approximately 135 jobs. Based on data provided by the Applicant, these jobs would generate an additional 165 indirect and induced local and regional jobs with approximate wages of \$9 million and total economic output of \$21 million.

**Table 4.2-12. Indirect and Induced Economic Output during Operations**

<b>Operations Impact (Full Buildout)</b>	<b>Value</b>
Indirect and Induced Total <sup>a</sup>	165
Wages Total (in millions \$)	\$9
Output Total (in millions \$)	\$21
Notes:	
<sup>a</sup> Indirect and induced jobs, wages, and total output were calculated using estimated multipliers from the Washington State Input-Output model.	
Source: BERK 2012	

### Local Business Activity

The previous section describes how project-related trains would affect vehicle delay at at-grade crossings on the Reynolds Lead and BNSF Spur. This vehicle delay could affect accessibility to local businesses during the peak traffic hour without track infrastructure improvements to the Reynolds Lead and BNSF Spur, or if two project-related trains travel during the peak traffic hour. As described in Chapter 6, Section 6.5, *Noise and Vibration*, project-related trains would increase noise levels but would not cause adverse noise impacts on businesses because the applicable noise criteria only applies to noise-sensitive land uses, such as residences. As described in Chapter 6, Section 6.6, *Air Quality*, project-related trains would not adversely affect air quality during operations. Therefore, the terminal would have negligible indirect impacts on local business activity. Overall, increased vehicle delay from project-related rail traffic would be unlikely to affect business activities substantially, especially if the planned track improvements to the Reynolds Lead and BNSF Spur are implemented, as described in Chapter 6, Section 6.1, *Rail Transportation*.

### Utilities

The terminal at the On-Site Alternative location would not result in indirect impacts on water and sewer utilities because demand for these utilities would be limited to the project area.

### Environmental Justice

The terminal's indirect impacts during operations were evaluated for their potential to result in disproportionately high and adverse effects on minority and low-income communities in the *NEPA Social and Community Resources Technical Report*. Except for the impact related to horn noise from project-related trains on the Reynolds Lead during operations, the assessment concluded the terminal's indirect impacts would not affect minority or low-income communities at a rate that would appreciably exceed the rate to the general population, nor would they contribute to cumulative exposures to environmental hazards. The analysis concluded horn noise from project-related trains on the Reynolds Lead during operations would have a disproportionately high and adverse effect on minority and low-income populations. Potential mitigation measures are discussed in Chapter 8, *Minimization and Mitigation*.

Indirect noise impacts would occur because project-related trains would be required to sound their horns for public safety at grade crossings per FRA regulations, and noise levels would exceed applicable criteria at adjacent land uses near four at-grade crossings on the Reynolds Lead (Chapter 6, Section 6.5, *Noise and Vibration*). Because there are minority and low-income communities adjacent to the Reynolds Lead (Figure 4.2-4),<sup>9</sup> the terminal would have a disproportionately high and adverse effect on minority and low-income populations if no measures were implemented to mitigate this indirect noise impact.

#### 4.2.5.2 Off-Site Alternative

This section describes potential impacts in the study areas from construction and operation of the terminal at the Off-Site Alternative location.

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<sup>9</sup> There are approximately 289 residences located in Census Tract 3 Block Group 1, Census Tract 5.02 Block Group 1, and Census Tract 5.02 Block Group 2. All of these census block groups have been identified as minority and/or low-income communities.

## **Construction—Direct Impacts**

The Off-Site Alternative would result in the following direct impacts.

### **Social and Community Cohesion and Public Services**

The Off-Site Alternative would not directly affect social and community cohesion or public services because construction activities would be limited to the project area. The only public service facilities in the direct impacts study area are approximately 0.5 mile from the Off-Site Alternative project area.

### **Local Economy**

The Off-Site Alternative would result in the following direct impacts on the local economy.

#### **Economic Output**

Construction of the terminal at the Off-Site Alternative location would require the same construction labor force as the On-Site Alternative. The Off-Site Alternative would result in the same economic impacts in terms of direct jobs, wages, and economic output during construction as those described for the On-Site Alternative. The additional construction jobs provided by the Off-Site Alternative would have a positive short-term beneficial impact on the local and regional economies.

#### **Construction Sales and Business and Occupation Tax Revenues**

The Off-Site Alternative would generate similar state and local sales and use taxes and B&O taxes during construction activities as described for the On-Site Alternative. Given the location of the Off-Site Alternative is in Longview, it is expected a greater share of tax revenues would go to Longview than the On-Site Alternative.

### **Utilities**

The Off-Site Alternative is not anticipated to result in direct impacts on water and sewer service. Construction activities would use groundwater for dust suppression and would not affect water utility service. Construction practices would ensure the water supply and sewer connections are not disrupted for surrounding users.

### **Environmental Justice**

Direct impacts resulting from the Off-Site Alternative would be temporary and limited to the project area and the immediate vicinity (for example, construction noise directly affecting nearby residences). The nearest residences in minority or low-income communities in the direct impacts study area are located approximately 2 miles from the project area. Because of the distance between the project area and identified minority and low-income communities, the direct impacts from construction of the Off-Site Alternative would not affect minority or low-income communities at a rate that would appreciably exceed the rate to the general population. Therefore, the analysis concluded the direct impacts resulting from construction of the terminal would not have a disproportionately high and adverse effect on minority and low-income communities.

## **Construction—Indirect Impacts**

The Off-Site Alternative would result in the following indirect impacts.

### **Social and Community Cohesion and Public Services**

Similar to the On-Site Alternative, construction of the terminal at the Off-Site Alternative location would not adversely affect vehicle delay at grade crossings on the Reynolds Lead and BNSF Spur because average vehicle delay would not substantially change during construction, except during the peak traffic hour at two public at-grade crossings on the Reynolds Lead under the rail delivery scenario. However, this vehicle delay impact would only occur if a project-related construction train (average of 1.3 trains per day) passes during the peak traffic hour. Therefore, the Off-Site Alternative would have negligible impacts on social and community cohesion and access to public services.

### **Local Economy**

The Off-Site Alternative would result in the same types and intensity of construction activity as the On-Site Alternative. Therefore, like the On-Site Alternative, construction of the terminal at the Off-Site Alternative location would have negligible indirect impacts on local business activity. The Off-Site Alternative would have the following indirect impacts on the local economy.

#### **Economic Output**

The Off-Site Alternative would generate the same indirect and induced local and regional jobs, wages, and economic output as the On-Site Alternative.

### **Utilities**

Demand for water and sewer utility services during construction of the terminal at the Off-Site Alternative location would be confined to activities in the project area. The Off-Site Alternative would not result in new indirect demands on water supply, sewer utility services, or wastewater treatment. Therefore, the Off-Site Alternative would not result in indirect impacts on utilities.

### **Environmental Justice**

As noted previously, the assessment of disproportionately high and adverse effects on minority and low-income communities focused on potential impacts related to aesthetics; tribal resources; cultural resources; fish; geology and soils; groundwater; noise and vibration; and vehicle transportation. The Off-Site Alternative would not result in indirect construction impacts in any of these resource areas except vehicle transportation. The Off-Site Alternative would result in an indirect impact related to increased vehicle delay from construction rail traffic. The vehicle delay impacts would only occur if a project-related construction train (average of 1.3 trains per day) travels during the peak traffic hour and would be temporary (limited to the peak traffic hour during the construction period). Vehicle delay impacts would affect roadway users during the peak traffic hour, which would include minority and low-income populations as well as non-minority and non-low-income populations. Therefore, vehicle delay impacts are not likely to affect minority or low-income communities at a rate that would appreciably exceed the rate to the general population. Therefore, the analysis concluded the indirect impacts resulting from construction of the Off-Site Alternative would not have a disproportionately high and adverse effect on minority and low-income populations.

## **Operations—Direct Impacts**

Operation of the proposed export terminal at the Off-Site Alternative location would result in the following direct impacts.

### **Social and Community Cohesion and Public Services**

Operation of the terminal would not divide or isolate neighborhoods, displace substantial portions of the existing community, or displace any public service facility. However, it would place new demands on fire protection services, as discussed below.

#### **Fire Protection Services**

The Off-Site Alternative could result in new or different demands on fire protection services; however, required fire and life safety systems would be installed in the project area according to fire code standards. These systems would be regularly inspected and maintained. The Applicant should work with the Longview Fire Department to plan for new facilities and operations.

### **Local Economy**

The following direct impacts on the local economy related to the Off-Site Alternative have been identified.

#### **Economic Output**

The Off-Site Alternative would require the same labor force as the On-Site Alternative and is expected to generate the same economic impacts in terms of direct jobs, wages, and economic output as those described for the On-Site Alternative.

#### **Tax Revenues**

Similar to the On-Site Alternative, the Off-Site Alternative would generate property taxes, combined state and local sales and use taxes, B&O taxes, and property taxes.

### **Utilities**

The Off-Site Alternative would directly affect water and sewer utilities. Operation of the Off-Site Alternative would result in the following direct impacts.

#### **Sanitary Sewage Flows**

A new sanitary sewer conveyance system and connection to the City of Longview sewer system would be developed for the Off-Site Alternative. New sanitary sewer flows from the Off-Site Alternative would be small and, as discussed previously, the Three Rivers Wastewater Treatment Plant has sufficient capacity to treat additional wastewater flows. The Applicant would be required to obtain a permit to discharge wastewater, as described in Section 4.2.6, *Required Permits*.

The Off-Site Alternative would not convey industrial process wastewater to the City of Longview sewer system or the Three Rivers Wastewater Treatment Plant. Industrial process wastewater would be treated in the on-site water treatment facility and would not add new demands to public sewer and wastewater utilities.

### **Water Demand**

The Off-Site Alternative would use potable municipal water supplies for domestic uses such as drinking, sinks, and toilets but, like the On-Site Alternative, this alternative would not use potable water supplies for industrial needs. The Off-Site Alternative would result in a small increase in demand for potable water.

Non-potable water would be used for industrial processes such as dust control, stockpile sprays, wash down, clean up, and fire protection. This water would be supplied by treated water from the proposed water management system and storage ponds and supplemented by wells during dry seasons. Therefore, the industrial water use would not place substantial new demands on the City of Longview water supply.

### **Environmental Justice**

Direct impacts resulting from the Off-Site Alternative would be limited to the project area and the immediate vicinity (for example, operational noise directly affecting adjacent residences). As discussed above, the nearest residences in minority or low-income communities within the direct impacts study area are located approximately 2 miles from the project area. Because of the distance between the project area and identified minority and low-income communities, the direct impacts of the Off-Site Alternative during operations would not likely have the potential to affect minority or low-income communities at a rate that would appreciably exceed the rate to the general population. Therefore, the analysis concluded the direct impacts resulting from operation of the Off-Site Alternative would not likely have a disproportionately high and adverse effect on minority and low-income populations.

### **Operations—Indirect Impacts**

The Off-Site Alternative would result in the following indirect impacts.

#### **Social and Community Cohesion and Public Services**

The Off-Site Alternative would result in the following indirect impacts on social and community cohesion, and public services.

#### **Community Resources and Public Services**

The Off-Site Alternative would result in the same impacts on vehicle delay as the On-Site Alternative if 2 project-related trains travel during the peak hour, or infrastructure improvements are not made to the Reynolds Lead and BNSF Spur. Under these scenarios, the Off-Site Alternative would adversely affect the accessibility to community resources and public services at selected public at-grade crossings on the Reynolds Lead and BNSF Spur, similar to the On-Site Alternative.

#### **Noise Levels**

The Off-Site Alternative would result in the same increases in rail traffic-related noise along the Reynolds Lead and BNSF Spur due to sounding train horns, and the same increases in noise in Archie Anderson Park, along the Highlands Trail, and in Gerhart Gardens Park as the On-Site Alternative.

## Local Economy

The following indirect impacts on the local economy related to the Off-Site Alternative have been identified.

### Economic Output

The Off-Site Alternative would generate the same indirect impacts and induced jobs, wages, and economic output as the On-Site Alternative. The Off-Site Alternative would result in economic and fiscal benefits to the local area, Cowlitz County, and Washington. There would be benefits beyond the project area because the terminal would support ship networks operating on the Columbia River and rail networks in Washington State.

### Local Business Activity

As with the On-Site Alternative, the Off-Site Alternative would have negligible indirect impacts on local business activity. The Off-Site Alternative would not have adverse noise or air quality impacts on businesses. Increased vehicle delay from project-related rail traffic would be unlikely to affect business activities substantially, especially if the planned track improvements to the Reynolds Lead and BNSF Spur are implemented, as described in Chapter 6, Section 6.1, *Rail Transportation*.

### Utilities

The Off-Site Alternative would not result in indirect impacts on water and sewer utilities because demand for these utilities would be limited to the project area.

### Environmental Justice

The Off-Site Alternative's indirect impacts during operations were evaluated for their potential to result in disproportionately high and adverse effects on minority and low-income communities in the *NEPA Social and Community Resources Technical Report*. Except for the impact related to horn noise from project-related trains on the Reynolds Lead during operations, the assessment concluded the Off-Site Alternative's indirect impacts would not affect minority or low-income communities at a rate that would appreciably exceed the rate to the general population, nor would they contribute to cumulative exposures to environmental hazards. The analysis concluded horn noise from project-related trains on the Reynolds Lead during operations would have a disproportionately high and adverse effect on minority and low-income populations. Potential mitigation measures are discussed in Chapter 8, *Minimization and Mitigation*.

Indirect noise impacts would occur because project-related trains would be required to sound their horns for public safety at grade crossings per FRA regulations, and noise levels would exceed applicable criteria at adjacent land uses near four at-grade crossings on the Reynolds Lead (Chapter 6, Section 6.5, *Noise and Vibration*). Because there are minority and low-income communities adjacent to the Reynolds Lead (Figure 4.2-4),<sup>10</sup> the Off-Site Alternative would have a disproportionately high and adverse effect on minority and low-income populations if no measures were implemented to mitigate this indirect noise impact.

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<sup>10</sup> There are approximately 289 residences located in Census Tract 3 Block Group 1, Census Tract 5.02 Block Group 1, and Census Tract 5.02 Block Group 2. All of these census block groups have been identified as minority and/or low-income communities.

### 4.2.5.3 No-Action Alternative

Under the No-Action Alternative, the Corps would not issue a Department of the Army permit authorizing construction and operation of the proposed export terminal. As a result, impacts resulting from constructing and operating the terminal would not occur. In addition, not constructing the terminal would likely lead to expansion of the adjacent bulk product business onto the On-Site Alternative project area. The following discussion assesses the likely consequences of the No-Action Alternative related to social and community resources.

Construction and operations would likely be limited to the project area, and therefore, would not likely result in direct impacts on social and community cohesion and public services. The No-Action Alternative could result in new jobs, which would generate additional direct, indirect, and induced wages and economic output. The No-Action Alternative would also generate tax revenue to the county and state. However, it is possible the No-Action Alternative could result in fewer new jobs and correspondingly lower new wages, output, and tax revenue than the proposed export terminal. The No-Action Alternative likely would not result in direct impacts on water and sewer service but could result in new sanitary sewage flows and new water demand.

Under the scenario evaluated for the No-Action Alternative, approximately 2 additional trains per day would use the Reynolds Lead and BNSF Spur. Noise levels from rail traffic would be higher than under existing conditions. Effects on other environmental resource areas under the No-Action Alternative would likely be similar to or less than impacts under the On-Site Alternative. Therefore, the No-Action Alternative likely would not have disproportionately high and adverse effects on minority and low-income populations.

### 4.2.6 Required Permits

For either proposed export terminal location, the following required permits are expected to reduce impacts on social and community services.

- **Wastewater Discharge Permit—Three Rivers Regional Wastewater Authority.** A permit would be required to discharge wastewater to the Three River Regional Wastewater Treatment Plant.
- **Utility Service Permit—City of Longview.** A permit would be required for the terminal to receive water and wastewater services from the City of Longview.

### 4.2.7 Public Outreach and Participation Process

The U. S. Army Corps of Engineers (Corps) implemented a public outreach effort to encourage full public participation in the EIS process. A primary component of this effort is providing two NEPA-required formal comment periods: 1) the scoping phase comment period, and 2) the comment period following public issuance of the Draft EIS. A public involvement plan developed for the environmental review process guided the public outreach effort.

Population demographics regarding minority status and limited English proficiency also informed the public outreach effort. Table 4.2-13 shows the percentage of the population over age 5 with limited English proficiency in the social and community cohesion direct impacts study area, Longview, and Cowlitz County. In all three areas, a low percentage of the population over age 5 has

limited English proficiency; approximately 3% of the population of the direct impacts study area, the City of Longview, and Cowlitz County have limited English proficiency.

**Table 4.2-13. 2013 Limited English Proficiency**

<b>Area</b>	<b>Population Age 5 and Over</b>	<b>Population Age 5 and Over with Limited English Proficiency<sup>a</sup></b>	<b>Percentage Population with Limited English Proficiency<sup>a</sup></b>
Social and Community Cohesion Direct Impacts Study Area <sup>b</sup>	2,754	90	3.3
Longview	34,354	1,194	3.5
Cowlitz County	95,579	2,939	3.1

Note:

<sup>a</sup> Limited English proficiency includes individuals who speak English less than very well (i.e., those identified as speaking English “well,” “not well,” or “not at all” in Census data).

<sup>b</sup> The project area and within 0.5 mile of the project area.

Source: U.S. Census Bureau ACS 2009–2013 5-year estimates.

Table 4.2-14 shows the minority percentage of the population in the minority and low-income direct and indirect impacts study areas, City of Longview, and Cowlitz County. As shown, both the direct and indirect impacts study areas and the City of Longview have higher percentages of minority population than Cowlitz County.

Prior to the scoping meeting, stakeholder interviews were conducted to guide planning for the scoping process. These interviews were conducted with stakeholders representing a diverse range of interests and demographics including city and county jurisdictions, environmental and conservation groups, landowner organizations, labor organizations, economic development and business organizations, port authorities, river pilots, and local community groups. A project website was also developed ([www.millenniumbulkeiswa.gov](http://www.millenniumbulkeiswa.gov)) providing information in English and Spanish. This website serves as an information hub, a public-comment portal, and a document review and download repository throughout development of this Draft EIS. The website was promoted in news releases, ads in local media, and printed project information.

**Table 4.2-14. 2013 Minority Status**

<b>Census Block Group</b>	<b>2013 Total Population</b>	<b>Percent Minority<sup>a</sup></b>
Environmental Justice Direct Impacts Study Area Census Block Groups <sup>b</sup>	6,782	18.7
Environmental Justice Indirect Impacts Study Area Census Block Groups <sup>c</sup>	7,727	25.4
<b>Longview</b>	<b>36,656</b>	<b>18.4</b>
<b>Cowlitz County</b>	<b>102,110</b>	<b>14.6</b>

Notes:

<sup>a</sup> Minority status includes individuals defined in the census as any race or ethnicity other than white alone and not Hispanic or Latino.

<sup>b</sup> Census Block Groups within 1 mile of the project areas.

<sup>c</sup> Census Block Groups within 0.5 mile of the Reynolds Lead and BNSF Spur.

Source: U.S. Census Bureau ACS 2009–2013 5-year estimates.

The Corps held two scoping meetings to receive NEPA-related scoping comments.

- September 17, 2013, in Longview, Washington
- October 9, 2013, in Ridgefield, Washington

The public scoping meetings were announced in various publications. Notices were published in the *Federal Register*, and the Corps also issued a press release. Display ads were placed in local newspapers where scoping meetings were held (*The Columbian* and *The Longview Daily News*). Announcements were also sent to a listserv group consisting of parties who have requested to be informed about project activities, and an informational flyer was mailed to 6,000 residents in neighborhoods near the project area, including the Highlands neighborhood in Longview. A Spanish translation of the informational flyer was also distributed.

Both scoping meetings used an open-house format to provide process information for the Draft EIS and details about the proposed project, and to receive comments on the scope of the Draft EIS. Spanish-language handouts and Spanish translation services were available at each meeting. All facilities were Americans with Disabilities Act-accessible.

The Corps will hold two public hearings to receive comments on the Draft EIS. The public hearings will be held on October 24, 2016, in Longview, Washington and October 25, 2016, in Vancouver, Washington. The public outreach program, including outreach to minority populations, low-income populations, and persons with limited English proficiency is ongoing throughout the environmental review process in accordance with applicable regulations. More information about public outreach can be found in Chapter 11, *Public Involvement and Agency Coordination*, of this Draft EIS.