

MILLENNIUM BULK TERMINALS—LONGVIEW SEPA ENVIRONMENTAL IMPACT STATEMENT

SEPA LAND AND SHORELINE USE TECHNICAL REPORT

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Contents

List of Tables	ii
List of Figures.....	ii
List of Acronyms and Abbreviations.....	iii
Chapter 1 Introduction	1-1
1.2 Regulatory Setting	1-4
1.3 Study Areas	1-6
Chapter 2 Existing Conditions	2-1
2.1 Methods.....	2-1
2.1.1 Data Sources	2-1
2.1.2 Impact Analysis	2-2
2.2 Existing Conditions.....	2-2
2.2.1 Land and Shoreline Use	2-2
2.2.2 Zoning	2-13
2.2.3 Land Use Plans and Public Policies	2-15
Chapter 3 Impacts and Mitigation	3-1
3.1 Impacts.....	3-1
3.1.1 Proposed Action.....	3-1
3.1.2 No-Action Alternative	3-16
3.2 Mitigation.....	3-18
Chapter 4 Required Permits	4-1
Chapter 5 References	5-1

Appendix A. Properties and Land Use in the Study Area

List of Tables

Table 1. Regulations, Statutes, and Guidelines for Land and Shoreline Use.....	1-5
Table 2. Public Facility Uses in the Longview-Kelso Study Area	2-8
Table 3. Cowlitz County SMP Applicable Policies and Goals	3-6
Table 4. Cowlitz County SMP Applicable Use Activity Regulations	3-11

List of Figures

Figure 1. Project Vicinity.....	1-2
Figure 2. Proposed Action	1-3
Figure 3. Study Areas for Land and Shoreline Use	1-7
Figure 4. Existing Land Use	2-4
Figure 5. Public Facilities	2-11
Figure 6. Parks and Recreation Facilities.....	2-12
Figure 7. Cowlitz County Zoning Map.....	2-14
Figure 8. Cowlitz County Comprehensive Plan Map	2-17
Figure 9. Cowlitz County 1977 Shorelines Designation Map.....	2-19
Figure 10. Regulated Shoreline Jurisdiction	2-20

List of Acronyms and Abbreviations

Applicant	Millennium Bulk Terminals—Longview, LLC
BMP	best management practice
BNSF	BNSF Railway Company
CCC	Cowlitz County Code
CFR	Code of Federal Regulations
CUP	Conditional Use Permit
CWCOG	Cowlitz-Wahkiakum Council of Governments
Ecology	Washington State Department of Ecology
GMA	Washington State Growth Management Act
I-5	Interstate 5
LMC	Longview Municipal Code
M/RTP	CWCOG Metropolitan and Regional Transportation Plan 2009–2029
NEPA	National Environmental Policy Act
NPDES	National Pollutant Discharge Elimination System
OHWM	ordinary high water mark
Port	Port of Longview
RCW	Revised Code of Washington
Reynolds facility	Reynolds Metals Company facility
SEPA	Washington State Environmental Policy Act
SMA	Shoreline Management Act
SMP	Shoreline Management Master Program
SPW	shoreline protection work
SSDP	Site-Specific Development Plan
TESC	Temporary Erosion and Sediment Control
USC	United States Code
WAC	Washington Administrative Code

This technical report assesses the potential land and shoreline use impacts of the proposed Millennium Bulk Terminals-Longview project (Proposed Action) and No-Action Alternative. For the purposes of this assessment, land and shoreline use includes land and shoreline resources, parks and recreation facilities, and agricultural land. This report describes the regulatory setting, establishes the method for assessing potential land and shoreline use impacts, presents the historical and current land and shoreline use conditions in the study area, and assesses the potential for impacts on land and shoreline use.

1.1 Project Description

Millennium Bulk Terminals—Longview, LLC (Applicant) proposes to construct and operate a coal export terminal in Cowlitz County, Washington, along the Columbia River (Figure 1). The coal export terminal would receive coal from the Powder River Basin in Montana and Wyoming and the Uinta Basin in Utah and Colorado via rail, then load and transport the coal by ocean-going ships via the Columbia River and Pacific Ocean to overseas markets in Asia. The coal export terminal would be capable of receiving, stockpiling, blending, and loading coal by conveyor onto ships for export. Construction of the coal export terminal would begin in 2018. For the purpose of this analysis, it is assumed the coal export terminal would operate at full capacity in 2028.

The following subsections present a summary of the Proposed Action and No-Action Alternative. For detailed information on these alternatives, see the Washington State Environmental Policy Act (SEPA) Alternatives Technical Report (ICF International 2016a).

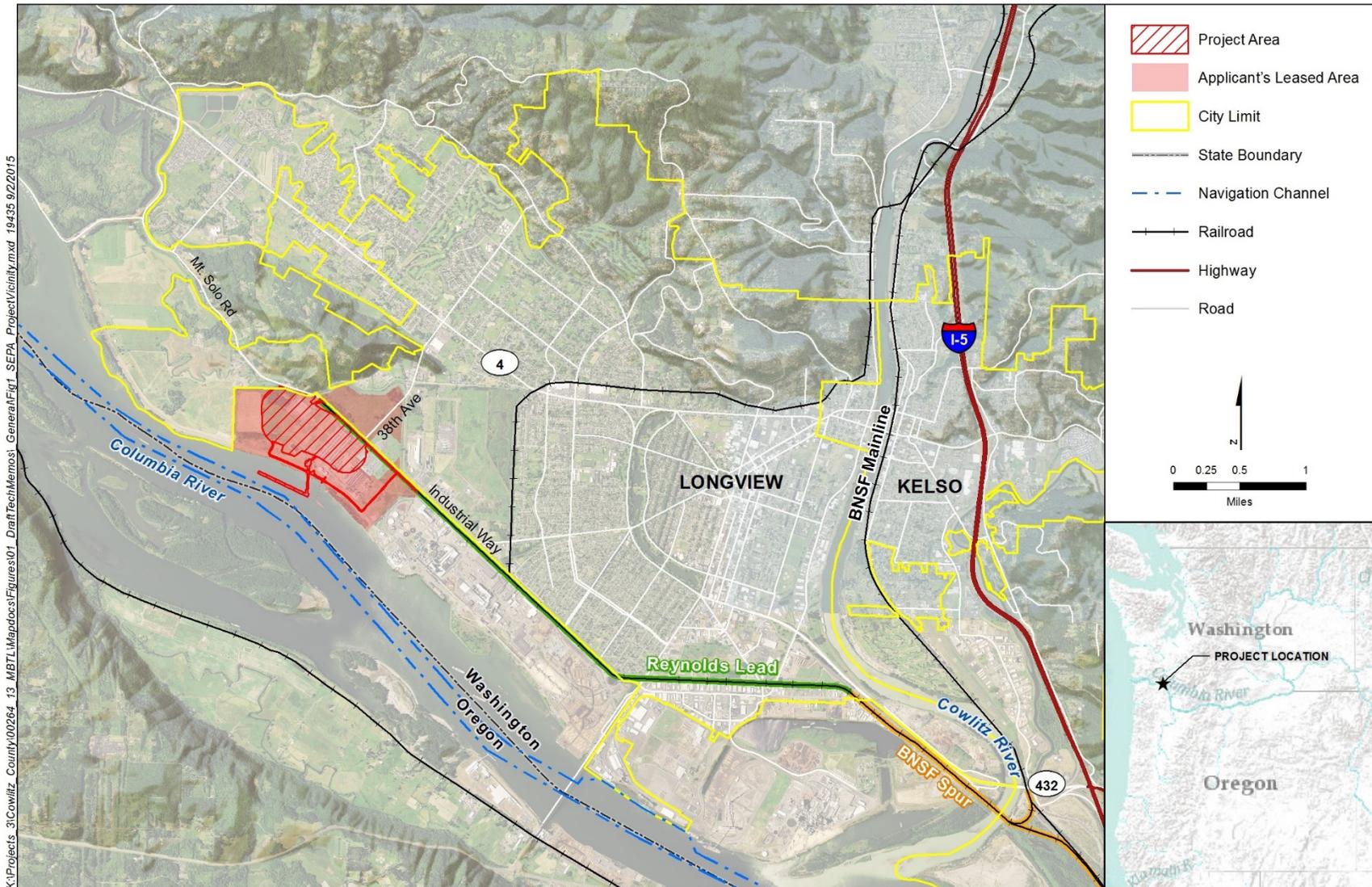
1.1.1 Proposed Action

The Proposed Action would develop a coal export terminal on 190 acres (project area). The project area is located within an existing 540-acre area currently leased by the Applicant at the former Reynolds Metals Company facility (Reynolds facility), and land currently owned by Bonneville Power Administration. The project area is adjacent to the Columbia River in unincorporated Cowlitz County, Washington near Longview city limits (Figure 2).

The Applicant currently and separately operates, and would continue to separately operate, a bulk product terminal on land leased by the Applicant. Industrial Way (State Route 432) provides vehicular access to the Applicant's leased land. The Reynolds Lead and the BNSF Spur, both operated by Longview Switching Company (LVSW),¹ provide rail access to the Applicant's leased area from a point on the BNSF Railway Company (BNSF) main line (Longview Junction, Washington) located to the east in Kelso, Washington. Ships access the Applicant's leased area via the Columbia River and berth at an existing dock (Dock 1) operated by the Applicant in the Columbia River.

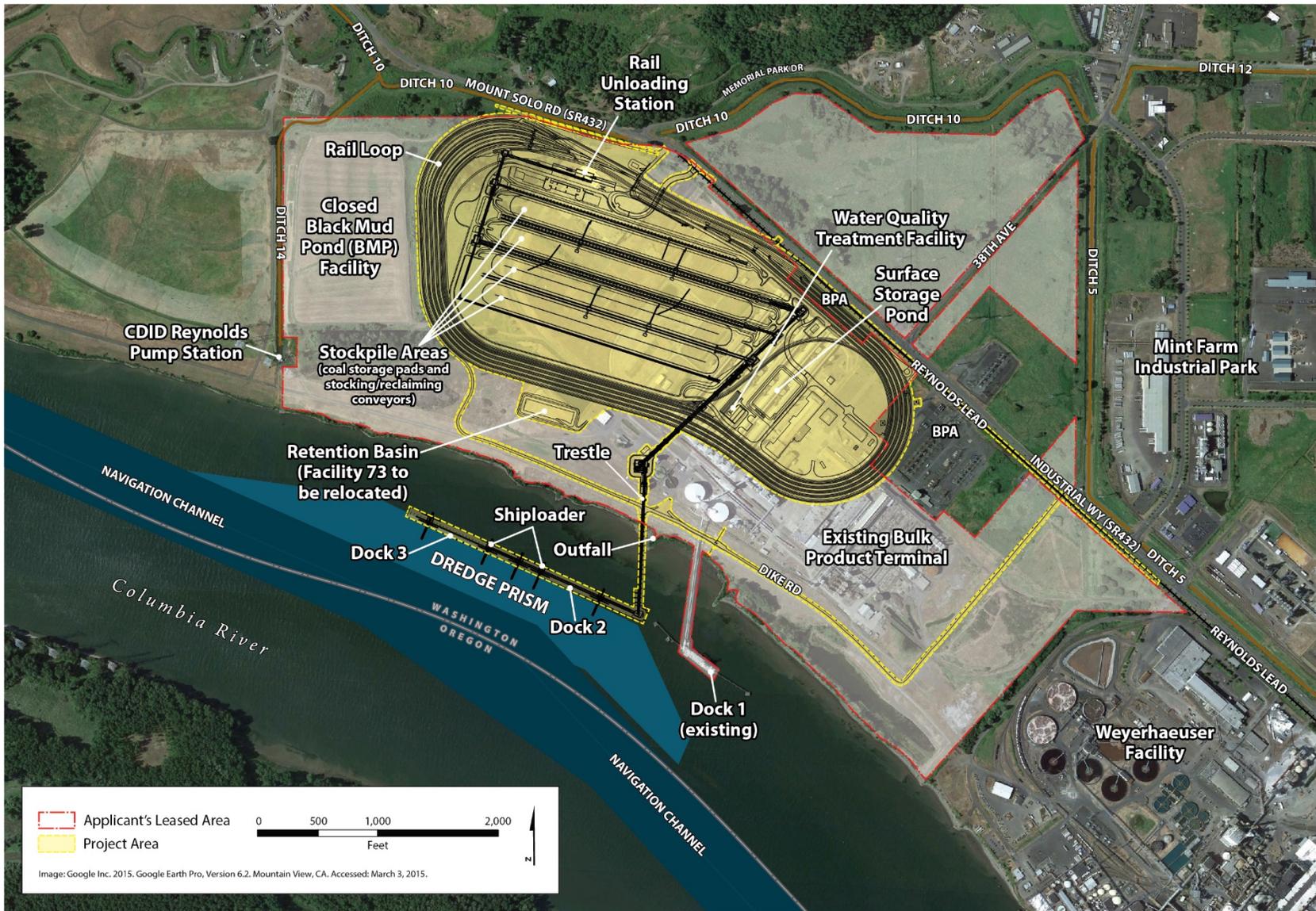
¹ LVSW is jointly owned by BNSF Railway Company (BNSF) and Union Pacific Railroad (UP).

Figure 1. Project Vicinity



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Figure 2. Proposed Action



Under the Proposed Action, BNSF or Union Pacific Railroad (UP) trains would transport coal in rail cars from the BNSF main line at Longview Junction, Washington, to the project area via the BNSF Spur and Reynolds Lead. Coal would be unloaded from rail cars, stockpiled and blended, and loaded by conveyor onto ocean-going ships at two new docks (Docks 2 and 3) on the Columbia River for export.

Once construction is complete, the Proposed Action would have an annual throughput capacity of up to 44 million metric tons.² The coal export terminal would consist of one operating rail track, eight rail tracks for the storage of rail cars, rail car unloading facilities, stockpile areas for coal storage, conveyor and reclaiming facilities, two new docks in the Columbia River (Docks 2 and 3), and ship-loading facilities on the two docks. Dredging of the Columbia River would be required to provide access to and from the Columbia River navigation channel and for berthing at the two new docks.

Vehicles would access the project area from Industrial Way (State Route 432). Ships would access the project area via the Columbia River and berth at one of the two new docks. Terminal operations would occur 24 hours per day, 7 days per week. The coal export terminal would be designed for a minimum 30-year period of operation.

1.1.2 No-Action Alternative

Under the No-Action Alternative, the proposed export terminal would not be constructed. Current operations of the bulk product terminal, which include the storage and transport of alumina and up to 150,000 metric tons per year of coal. Importing of alumina would continue and increase in the project area using Dock 1. The Applicant could expand the existing bulk product terminal onto the 190-acre project area, developing storage and shipment facilities to bulk product terminal operations. Coal and alumina would continue to be stored, transferred, and shipped. Additional bulk product transfers activities involving products such as calcine pet coke, coal tar pitch, cement, fly ash, and sand or gravel could also be pursued, and new or revised permits could be required. These operations would involve storage and upland transfer of bulk products, which would use existing or new buildings. Construction of new buildings could involve demolition and replacement of existing buildings and new or modified permits. Any new construction would be limited to uses allowed under existing Cowlitz County development regulations and federal and state permits.

1.2 Regulatory Setting

Federal, state, and local regulations, statutes, and guidelines require the review of the possible environmental impacts of the Proposed Action, including potential impacts on land and shoreline use. The jurisdictional authorities and corresponding regulations, statutes, and guidance for determining potential land and shoreline use impacts are summarized in Table 1.

² A metric ton is the U.S. equivalent to a tonne per the International System of Units, or 1,000 kilograms or approximately 2,204.6 pounds.

Table 1. Regulations, Statutes, and Guidelines for Land and Shoreline Use

Regulation, Statute, Guideline	Description
Federal	
National Environmental Policy Act (42 USC 4321 <i>et seq.</i>)	Requires the consideration of potential environmental impacts. NEPA implementation procedures are set forth in the President’s Council on Environmental Quality’s Regulations for Implementing NEPA (49 CFR 1105).
Clean Water Act (33 USC 1251 <i>et seq.</i>)	Authorizes the U.S. Environmental Protection Agency to establish the basic structure for regulating discharges of pollutants into the waters of the United States and regulating quality standards for surface waters.
State	
Washington State Environmental Policy Act (WAC 197-11, RCW 43.21C)	SEPA directs state and local agencies to consider environmental impacts (cumulative, short-term, long-term, direct, and indirect), alternatives, and mitigation before committing to an action. SEPA gives agencies the authority to condition or deny a proposal based on the agency’s adopted SEPA policies and environmental impacts identified in a SEPA document (RCW 43.21C.060, WAC 197-11-660).
Washington State Growth Management Act (WAC 365-196, RCW 36.70A)	Requires state and local governments to manage Washington’s growth by identifying and protecting critical areas and natural resource lands, designating urban growth areas, and preparing comprehensive plans and implementing them through capital investments and development regulations. The County is required to designate and protect critical areas under the Growth Management Act, but is otherwise not required to fully plan under the Growth Management Act.
Washington State Shoreline Management Act (WAC 173. 27 <i>et seq.</i> , RCW 90.58)	Governs the use and development of “shorelines of the state.” Requires local jurisdictions with “shorelines of the state” to develop and adopt a shoreline master program to carry out the policies of the SMA.
Washington State Harbor Improvement Plans (RCW 53.20)	Requires port commissions to develop and adopt a comprehensive scheme of harbor improvements and to make harbor improvements substantially in accordance with the adopted plan.
State Water Pollution Control Law (RCW 90.48)	Provides Ecology with the jurisdiction to control and prevent the pollution of streams, lakes, rivers, ponds, inland water, salt waters, watercourses, and other surface and groundwater in the state.
Local	
Cowlitz County SEPA Regulations (CCC 19.11)	The County has adopted and incorporated rules pertaining to the integration of policies and procedures as required under SEPA (RCW 43.21C.120).
Cowlitz County Critical Areas Regulations (CCC 19.15)	Designates critical areas within Cowlitz County and adopts development regulations to preserve them, in accordance with the requirements of GMA.

Regulation, Statute, Guideline	Description
Cowlitz County Land Use Ordinance (CCC 18.10)	Establishes official land use controls (including zoning regulations) for unincorporated areas of Cowlitz County. The zoning regulations are the principal tool for implementing the goals and policies of the Cowlitz County Comprehensive Plan.
Cowlitz County Comprehensive Plan	Adopted in 1976 and amended in 1981 to manage County growth. A draft update is currently in public review and is subject to change. Adoption of the updated comprehensive plan is expected in late 2016.
Cowlitz County Shoreline Management Master Program (CCC 19.20)	Adopted in 1977 in accordance with requirements of the SMA and County shorelines management regulations. Defines goals, policies, and objectives that apply to development within shoreline areas of the County. A draft update is currently in public review and is subject to change. Adoption of the updated SMP is expected in fall of 2016.

NEPA = National Environmental Policy Act; CFR = Code of Federal Regulations; USC = United States Code; RCW = Revised Code of Washington; SEPA = Washington State Environmental Policy Act; Ecology = Washington State Department of Ecology; WAC = Washington Administrative Code; SMA = Shoreline Management Act; CCC = Cowlitz County Code; County = Cowlitz County; GMA = Washington State Growth Management Act; SMP = Shoreline Management Master Program; City = City of Longview; Port = Port of Longview; LMC = Longview Municipal Code

1.3 Study Areas

The study area for both direct and indirect impacts on land and shoreline use includes three areas: the project area, the area within 500 feet of the project area (500-foot study area), and the Longview-Kelso urban area, which includes nearby unincorporated areas of Cowlitz County (County) (Figure 3). However, the study area for each element of this resource varies slightly, as presented in this section.

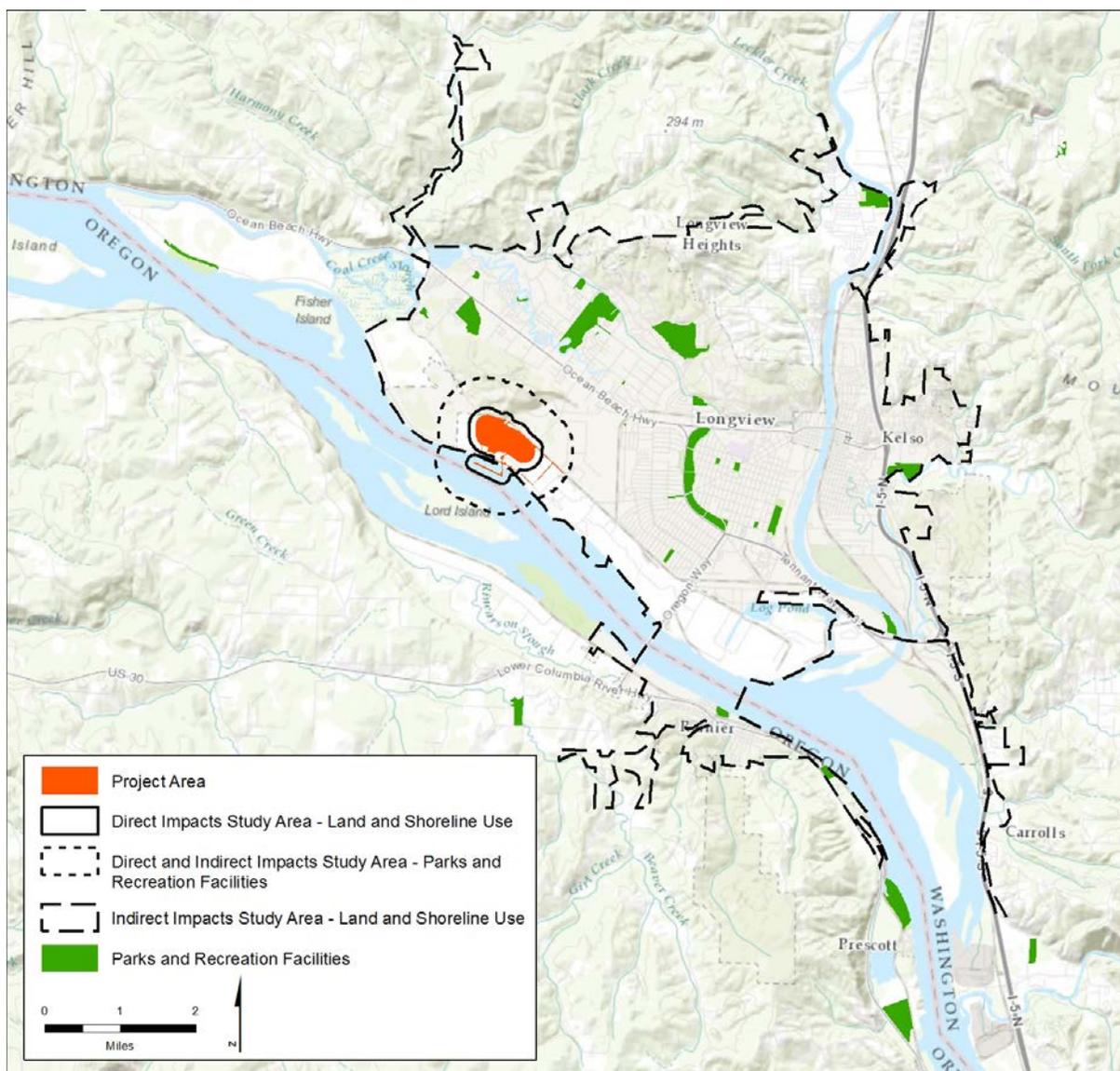
- Land use and shoreline resources.** For direct impacts, the study area is the project area and the area within 500 feet of it, including the Columbia River. For indirect impacts, the study area is defined as the Longview-Kelso urban area and nearby unincorporated areas of Cowlitz County.³ For consistency with zoning regulations, comprehensive plans, and other public plans and policies, the study area is the project area and the 500-foot buffer of the project area, since those are the areas where these plans and policies would most directly apply to the Proposed Action.
- Parks and recreation facilities.** For direct impacts, the study area is the area within 0.5 mile of the project area, as well as the Willow Grove boat launch on the Washington side of the Columbia River and the Rainier Riverfront Park boat launch on the Oregon side. Although these boat launches are more than 0.5 mile from the project area, they have been included in the assessment because they provide public boating access to the Columbia River near the project area. The study area for indirect impacts is the same study area defined for direct impacts.

³ This broader land use study area is the Longview-Kelso urban area as defined in the 2010 U.S. Census and adjusted to include the unincorporated areas of Cowlitz County adjacent to the project area, which are not part of the Census-defined urban area.

- Agricultural land.** For direct impacts, the study area is defined as the project area. For indirect impacts, the study area is defined as the project area and the area within 500 feet of it.

As noted previously, this technical report assesses the potential land and shoreline use impacts of the Proposed Action and No-Action Alternative, including land use and shoreline resources, parks and recreation facilities, and agricultural land. The Proposed Action and No-Action Alternative would result in different impacts on these resources; therefore, the Co-Lead Agencies defined different study areas to represent the areas where the alternatives could affect various resources. Different study areas have also been defined for the evaluation of direct and indirect impacts of the Proposed Action and No-Action Alternative.

Figure 3. Study Areas for Land and Shoreline Use



This chapter explains the methods for assessing the existing conditions and determining impacts, and describes the existing conditions in the study area as they pertain to land and shoreline use.

2.1 Methods

This section describes the methods and data sources used to characterize the existing conditions and assess the potential impacts of the Proposed Action and No-Action Alternative on land and shoreline use.

2.1.1 Data Sources

The following sources of information were used to evaluate the land and shoreline use characteristics of the study areas and to define applicable public policies.

- *Shorelines Management Master Program* (Cowlitz County 1977) and current documents related to the update process for both Cowlitz County and the City of Longview, including draft Shoreline Environmental Designation maps
- *Cowlitz County Comprehensive Plan* (1976) and current comprehensive plan update documents
- Cowlitz County Code (CCC), including the Land Use Ordinance (Chapter 18.10), Environmental Policy (Chapter 19.11), Critical Areas Protection Ordinance (Chapter 19.15), and Shoreline Management (Chapter 19.20)
- Cowlitz County NetMaps and geographic information system data
- Field surveys conducted September 15 and October 29, 2014
- Revised Code of Washington (RCW) and Washington Administrative Code (WAC)
- U.S. Census Bureau, State and County Quick Facts reports for the Cities of Kelso and Longview and Table DP-1 Profile of General Population and Housing Characteristics: 2010 Demographic Profile for the City of Rainier (U.S. Census Bureau 2014a, 2014b, 2014c)
- *Millennium Coal Export Terminal Longview, Washington Land Use and Shoreline Plans and Policies; Other Public Interest Areas Resource Report* (URS Corporation 2014)
- *Remedial Investigation Feasibility Study, Former Reynolds Metals Reduction Plant-Longview Draft Executive Summary* (Washington State Department of Ecology 2014)
- Cowlitz County and City of Longview websites
- Longview Municipal Code (LMC)
- Websites for Mint Farm Industrial Park; Lower Columbia Estuary Partnership; Patriot Rail; Millennium Bulk Terminals—Longview, LLC; Washington Department of Fish and Wildlife; and Weyerhaeuser

2.1.2 Impact Analysis

The following methods were used to evaluate the potential impacts of the action alternative on land and shoreline use in the study areas. For the purposes of this analysis, construction impacts are based on peak construction period, and operations impacts are based on maximum throughput capacity (up to 44 million metric tons per year).

The analysis identifies existing conditions and then describes changes to land and shoreline use conditions at the project area during both construction and operation of the Proposed Action and No-Action Alternative. The analysis then assesses whether the changes to land and shoreline use on the project areas would be compatible with surrounding land use and whether they would be consistent with applicable land use plans and policies, zoning ordinances, and shoreline regulations. In general, the assessment of land and shoreline use compatibility is based on the types of uses, their intensities, and their proximity to one another.

2.2 Existing Conditions

The existing environmental conditions related to land and shoreline use, zoning, land use plans and public policy in the study areas are described below.

2.2.1 Land and Shoreline Use

This section describes the existing land and shoreline use of the project area and the study areas for the Proposed Action.

2.2.1.1 Project Area

The project area consists of an approximately 190-acre upland portion primarily within a 540-acre area currently leased and operated by the Applicant, as well as the in-water area where the proposed docks would be constructed in the Columbia River. The project area consists of all or portions of eight Cowlitz County tax parcels (619530400, 61950, 61953, 6195303, 61954, 61951, 61948, and WI3100003). These parcels are owned by Northwest Alloys, BNSF, and the Bonneville Power Administration (BPA) (Cowlitz County 2014). The project area also includes portions of the Columbia River that are owned by the Washington State Department of Natural Resources and subject to an aquatic lands lease (Lease No. 20-B09222). Northwest Alloys leases the aquatic lands, but the Applicant is under contract as the operator of the marine and upland facilities at the project area.

Historical Land Use

The 540-acre area leased by the Applicant that contains the project area has been an industrial use since 1941. Reynolds Metals Company constructed and operated an aluminum smelter and aluminum casting facility within the project area from 1941 until 2000. Northwest Alloys purchased the area in May 2000, and remains as the owner. Operations at the area ceased in February 2001, and all smelting equipment was removed (Washington State Department of Ecology 2014a). The Reynolds Metals Company facility was an intensive industrial use and, at the time of its closure in 2001, it employed approximately 800 workers and operated 24 hours per day, 7 days per week. In December 2004, Chinook Ventures purchased the facility assets and obtained a ground lease to store

and transport fly ash, petroleum coke, alumina, and cement from 2004 to 2010. The Applicant purchased the facility assets from Chinook Ventures in January 2011, and now operates on a ground lease with Northwest Alloys (Washington State Department of Ecology 2014a). After taking ownership of facility assets in early 2011, the Applicant cleared and disposed of the debris and waste left by previous industrial activities.

Current Land Use

Overall, the project area is underused, with industrial activities occurring at a much lower intensity than historical levels. Portions of the project area are also the subject of ongoing hazardous materials cleanup activities resulting from contamination by former aluminum smelting and casting uses (Washington State Department of Ecology 2014a). Cleanup and hazardous materials are described in the SEPA Hazardous Materials Technical Report (ICF International 2016b). Figure 4 shows the existing land uses in the vicinity of the project area; land uses in the broader Longview-Kelso study area are discussed below.

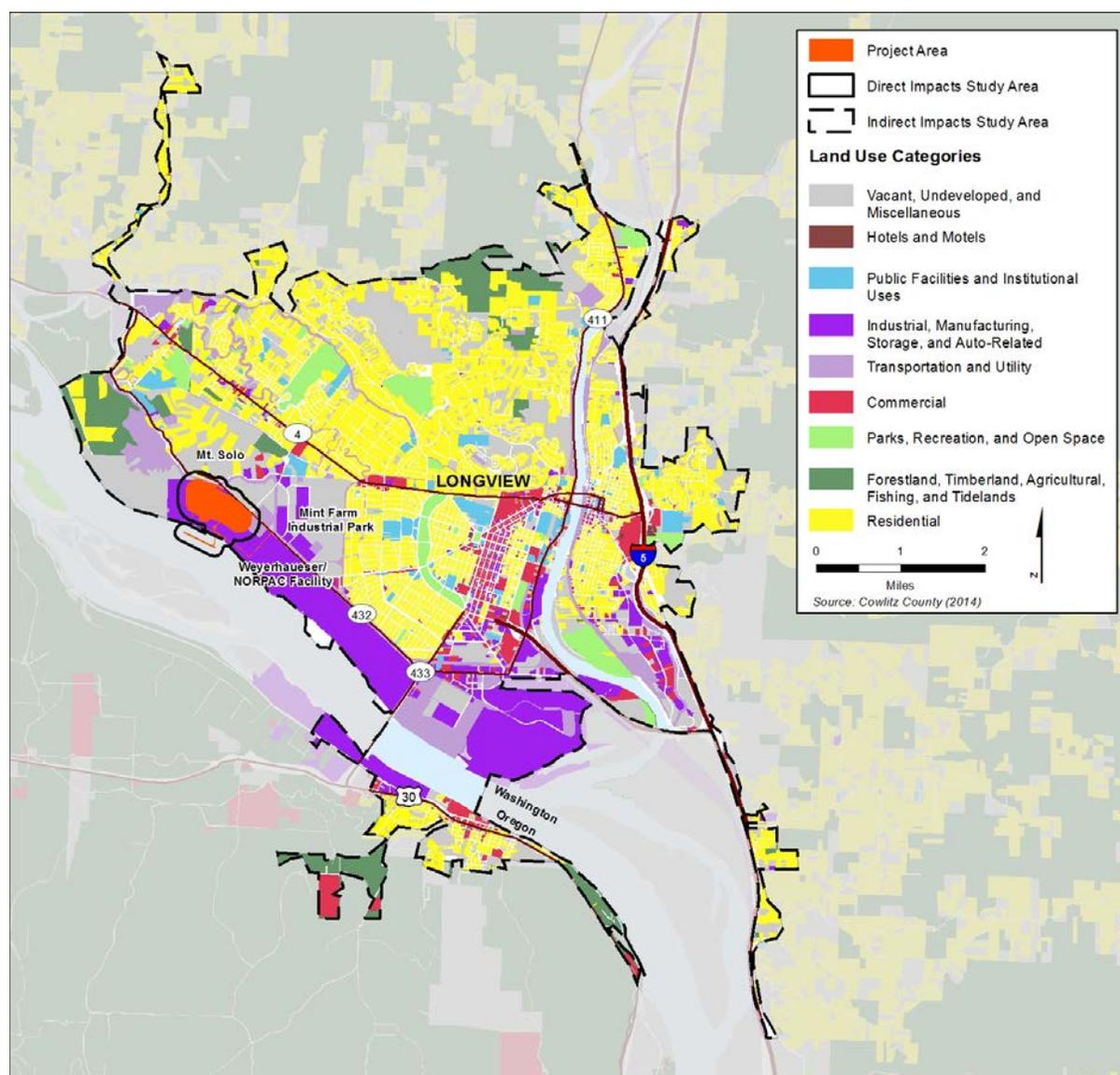
According to reports prepared by the Applicant (URS Corporation 2014a), portions of the project area are used for industrial purposes, and facilities in the project area include the following.

- Four office buildings
- Maintenance sheds
- Potlines for storage of materials
- Two cast house buildings
- A combined stormwater and wastewater treatment facility
- An industrial wastewater treatment plant
- A carbon plant
- The former cable plant building and associated structures
- Rail facilities associated with the Reynolds Metals Company operations

The project area also overlaps with two parcels currently owned by BPA and parcels owned by BNSF. The BPA parcels contain BPA facilities, including an access road and substation along Industrial Way. The parcels owned by BNSF contain portions of the Reynolds Lead.

The Applicant's leased area surrounding the project area also contains industrial uses associated with the existing bulk products terminal. Facilities within the Applicant's leased area include:

- A sanitary sewer treatment plant
- A dock, trestle, and dolphins for vessel berthing
- A ship berth
- A vacuum ship unloader used for alumina shipments
- An additional shiploader originally installed by Reynolds Metals Company
- A conveyor system extending from the vacuum unloader to upland storage silos
- Holding tanks and silos constructed for the Reynolds Metals Company operations

Figure 4. Existing Land Use

While most of the project area is developed, its undeveloped western limit consists of open areas of grass and wetlands, and there is an approximately 6-acre forested wetland in the northwest corner of the property. No formally designated recreation sites or activities are located on the project area. An extensive levee system along the Columbia River is maintained by the Consolidated Diking and Improvement District (CDID) #1.

2.2.1.2 500-Foot Study Area

The area within 500 feet of the project area contains predominantly industrial and transportation/utility land uses, along with two single-family residential uses. The area south of the project area within the 500-foot study area is occupied by the bulk products terminal that the Applicant operates within the 540-acre leased area. Currently the Applicant uses a portion of the leased area as a bulk products terminal to import, store, and transfer bulk alumina and coal. The leased area includes upland facilities, a dock on the Columbia River capable of receiving Panamax-sized ships, and rail

and road connections. Alumina is imported by ship, then stored and transferred by rail to an ALCOA smelter near Wenatchee, Washington (Millennium Bulk Terminals Longview 2104). The coal is currently imported by rail, stored, and then transferred by truck to the adjacent Weyerhaeuser lumber products manufacturing facility, where it is used to power the facility.

Immediately west of the project area is the Closed Black Mud Pond Facility (Closed BMP Facility), which previously served the Reynolds Metals Company facility. As part of the Reynolds facility, a cryolite recovery plant was constructed in 1953. A byproduct of the cryolite recovery process was black mud, which was disposed of in several fill deposits. One such pond was located in the West Plant area near Landfill 2. The 33-acre black mud pond impoundment, which was formally closed in 1992, has been subject to an approved ongoing maintenance and monitoring program overseen by the Washington State Department of Ecology (Ecology). No further remedial activities related to the Closed Black Mud Pond Facility are required in the final cleanup action plan.

The Closed BMP Facility appears as open vacant land traversed by overhead electrical lines and towers. Industrial Way (State Route 432) is adjacent to the project area to the northeast. As noted, in this area, the BNSF tracks are used to deliver and ship alumina and coal for the bulk products terminal. The area east of Industrial Way from the project area is also part of the Applicant's leased area and contains open land with overhead electrical wires and towers and a vacant building (formerly the Reynolds Longview Federal Credit Union) on the corner of Industrial Way and 38th Avenue. The Bonneville Power Administration operates a substation along Industrial Way adjacent to the project area and the 540-acre leased area.

Other uses within the 500-foot study area include rights-of-way for CDID #1 and various land owned by the Port. The CDID #1 rights-of-way contain flood protection facilities such as levees, drainage ditches, and pump stations. The Port-owned land within the 500-foot study area is vacant.

The only residential uses in the 500-foot study area are two single-family detached houses across Industrial Way from the project area. These houses are on wooded lots set back from the street.

No agricultural activities occur within 500 feet of the project area. While no formally designated recreation sites or activities occur in the upland portion of the 500-foot study area, the Columbia River is used for boating, fishing, and other forms of water recreation. In addition, the 146-mile Lower Columbia River Water Trail, which extends from Bonneville Dam to the mouth of the Columbia River, passes by the project area (Lower Columbia Estuary Partnership 2014).

Table A-1 in Appendix A lists the properties located within 500 feet of the boundaries of the project area and their land uses.

2.2.1.3 Longview-Kelso Study Area

The Longview-Kelso study area includes the Longview-Kelso urban area as defined in the 2010 U.S. Census and the unincorporated areas of the County adjacent to the project area (which are not part of the Census-defined urban area). The Cities of Longview and Kelso, Washington and Rainier, Oregon are located in this study area (Figure 4). The downtown centers of Longview (2010 population 36,648) and Kelso (2010 population 11,925) are located approximately 1 mile and 5 miles east of the project area, respectively, and Rainier (2010 population 1,895) is located approximately 4 miles southeast of the project area across the Columbia River (U.S. Census Bureau 2014). The Lewis and Clark Bridge connects the Washington and Oregon sides of the river.

Longview was the first planned community in Washington, and its downtown core along the west bank of the Cowlitz River includes streets radiating out from the Civic Center around R. A. Long Square. As is typical of urban areas, the Longview-Kelso study area includes a wide range of industrial, residential, commercial, recreation, and public facility land uses. Development patterns throughout the Longview-Kelso study area generally consist of areas dominated by a single land use (e.g., residential neighborhoods and commercial shopping centers), except for limited mixed-use development in downtown Longview and Kelso.

Major road corridors through the Longview-Kelso study area include Ocean Beach Highway (State Route 4) and Industrial Way (east-west) and Interstate 5 (I-5), SR 433, and SR 411 (north-south) through Longview and Kelso, along with U.S. Highway 30 in Rainier (east-west). Another prominent transportation use in the Longview-Kelso study area is BNSF and the Columbia & Cowlitz Railway. The BNSF tracks generally run along the Columbia and Cowlitz Rivers, with spurs serving downtown Longview and the industrial areas along the Columbia River, including the project area. The Columbia & Cowlitz Railway, operated by Patriot Rail, connects and exchanges traffic with the BNSF tracks along Industrial Way and runs north and east through Longview parallel to 33rd Avenue and Ocean Beach Highway. These railways consist of active freight rail traffic including shipments of alumina and coal, as well as lumber, metals, liquefied petroleum gas, and steel and petroleum products (Patriot Rail 2014). In addition, the Columbia River provides a key marine transportation link serving the Longview-Kelso study area. According to Ecology Vessel Entry and Transit data, the river accommodated approximately 1,457 cargo and passenger vessels, tank ships, and articulated tug barge vessel calls in 2013 (Washington State Department of Ecology 2014c). Historically, the Columbia River has supported even higher levels of ship traffic; in 1999, the peak traffic year for the Columbia River, there were 2,269 vessels calls, including 2,052 cargo and passenger vessels and 217 tank ships and articulated tug barges (Washington State Department of Ecology 2014c). Furthermore, according to data from the Columbia River Bar Pilots, who sometimes move vessels that are not required to be reported in the data captured for the Vessel Entry and Transit database, the river supported an annual average of approximately 2,000 vessel calls per year from 1979 to 2000 and a historic high traffic level of 2,376 vessel calls in 1979 (ICF International 2015e). Overall, the integrated network of road, rail, and marine transportation in the Longview-Kelso study area has facilitated the area's development as an industrial and commercial hub along the Columbia River.

There is a wide corridor of industrial and transportation/utility land uses along the Columbia River in the Longview-Kelso study area. This corridor includes the project area and the 500-foot study area discussed above. The 550-acre Weyerhaeuser Company lumber products manufacturing site/North Pacific Paper Corporation facility is located upstream (southeast) of the project area along the Columbia River. This manufacturing facility produces liquid packaging board, newsprint, and other specialty papers and also includes open-air storage of lumber (Weyerhaeuser 2014a, 2014b). Further upstream from the project area is the Port of Longview's 478-acre Port Industrial Marine property, which includes eight marine terminals equipped to handle commodities such as bulk goods, forest products, wind energy products, steel, and heavy-lift cargo, as well as associated staging and storage areas and water treatment facilities (Port of Longview 2011a). The Port also operates a warehouse complex and storage area on the Port Industrial Marine property.

The Mint Farm Industrial Park, a partially developed 445-acre industrial site operated as a public-private partnership between the City of Longview and the Weyerhaeuser Real Estate Development Company, is located across Industrial Way from a portion of the Applicant's 540-acre leased area and the Weyerhaeuser facility. 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). Development and tenancy of the Mint Farm Industrial Park are ongoing and additional industrial tenants may locate there in the future. The industrial park also includes open-space areas set aside for stormwater management and wetland mitigation.

The Barlow Point property, an undeveloped area downstream (west) of the project area along the Columbia River and within Longview, was recently purchased by the Port for future port improvements (Port of Longview 2011a). The Mount Solo landfill, a closed landfill under WAC 173-304 regulations, is located adjacent to the Port's Barlow Point property to the north (EMCON Northwest 1992). Further downstream (northwest) from Barlow Point, the Longview-Kelso study area contains large-lot residential and agricultural land uses south of Industrial Way, the Longview Memorial Park Cemetery and small single-family housing subdivisions north of Industrial Way, and the undeveloped Willow Grove property just outside of the Longview-Kelso study area to the northwest. The Willow Grove property is used for wetlands preservation and mitigation and most of it was sold recently by the Port to the Columbia Land Trust. The Port retained approximately 76 acres of Willow Grove for anticipated future mitigation needs.

Aside from the two residences located adjacent to the project area, other nearby residential uses include several single-family residences on Mount Solo, a steep hill near the project area, approximately 0.5 to 0.75 mile north of the project area. More densely developed residential areas are located at least 1 mile away from the project area to the north and east in Longview and across the Cowlitz River in the City of Kelso. Nearby residential neighborhoods include Memorial Park, Mint Valley, Columbia Valley Garden, West Longview, Olympic West, St. Helens, and Highlands (City of Longview 2014a). Residential uses in the Longview-Kelso study area consist primarily of low-density, single-family, detached houses. Higher-density residential uses, such as two- and three-story apartment buildings, exist along Ocean Beach Highway and in downtown Longview between 7th Avenue and 11th Avenue.

Commercial uses in the Longview-Kelso study area include retail, office, and storage uses concentrated along Ocean Beach Highway and in downtown Longview and Kelso. In Longview, commercial uses along Ocean Beach Highway include storage facilities, restaurants, and large-format retailers such as Walmart and Fred Meyer. Commercial uses in downtown Longview are located primarily in the area bounded by Ocean Beach Highway, 11th Avenue, Tennant Way, and 15th Avenue. Most of the commercial uses in this area are located along auto-oriented corridors, although there is a concentration of mixed-use, ground-floor commercial with residential use above along Commerce Avenue.

Development in Kelso is concentrated primarily between the Cowlitz River and I-5. Land use patterns are characterized by commercial uses along Ocean Beach Highway. Residential uses exist further north and south of the corridor, and a mix of industrial, commercial, and undeveloped land uses in the southern portion of the City of Longview near the confluence of the Cowlitz and Columbia rivers. The biggest commercial use is the Three Rivers Mall near I-5 and Ocean Beach Highway. As in Longview, residential uses in Kelso are predominantly low-density, single-family, detached dwellings.

As shown in Figure 4, the Longview-Kelso study area extends well beyond the project area and the downtown cores of Longview and Kelso. To the north, the outer portions of the Longview-Kelso

study area encompass suburban and exurban areas with scattered residential development interspersed among forested areas. Residential development is generally denser, closer to the Cowlitz River. West Side Highway, a census-designated place characterized by relatively dense development of single-family detached houses, occupies the northernmost portion of the Longview-Kelso study area along the Cowlitz River.

The Lewis and Clark Bridge (SR 433) spans the Columbia River upstream from the project area and provides access to Rainier, Oregon. This portion of the study area is approximately 2 to 5 miles from the project area; it is characterized by industrial and open-storage uses along the Columbia River, low-density residential and commercial development within Rainier, agricultural uses, and undeveloped and forested land. In general, commercial uses in Rainier exist along Oregon’s Highway 30, and residential uses are located on steeply sloped streets south of the commercial corridor.

The project area and Longview-Kelso study area fall within the Washington Department of Fish and Wildlife Mount Saint Helens Wildlife Area. The nearest wildlife unit is the Fisher Island unit, which is located approximately 3 miles downstream from the project area. This 257-acre wildlife unit is maintained as forested floodplain (Washington Department of Fish and Wildlife 2014).

A variety of public facility uses serve the Longview-Kelso study area, including schools, police and fire facilities, libraries, community centers, health care facilities, and government facilities. Table 2 and Figure 5 identify the locations of the major public facilities in the Longview-Kelso study area. As shown, several public facility uses are centered on R.A. Long Square, which comprises the Longview’s civic center.

Table 2. Public Facility Uses in the Longview-Kelso Study Area

Map No.	Name	Address	City	Type
1	Public Library	351 Three Rivers Mall Drive	Kelso	Library
2	Police Department	203 S Pacific Avenue	Kelso	Police
3	Community Development	203 S Pacific Avenue	Kelso	Government
4	Water and Sewer Department	203 S Pacific Avenue	Kelso	Government
5	Cowlitz Fire Station 2	701 Vine Street	Kelso	Fire Department
6	Southwest Regional Airport	2215 Parrot Way	Kelso	Airport
7	Public Works Department	2300 Parrot Way	Kelso	Utilities
8	City Hall	1525 Broadway Street	Longview	Government
9	Street, Traffic, Transit, and Fleet Divisions	254 Oregon Way	Longview	Transportation
10	Transit Center	1135 12th Avenue	Longview	Transportation
11	Regional Water Treatment Plant	101 Fishers Lane	Longview	Utilities
12	Water and Sewer Operations	1460 Industrial Way	Longview	Government
13	Police Department	1351 Hudson Street	Longview	Police
14	Longview Public Library	1600 Louisiana Street	Longview	Library
15	Cowlitz Fire Station 81	740 Commerce Avenue	Longview	Fire Department
16	Parks Division	706 30th Avenue	Longview	Government

Map No.	Name	Address	City	Type
17	Recreation Office	2920 Douglas Street	Longview	Government
18	Mint Valley Golf Course and Facilities Maintenance	4002 Pennsylvania Street	Longview	Recreation
19	Mint Valley Racquet and Fitness Complex	4004 Pennsylvania Street	Longview	Recreation
20	Highlands Police Office	216 30th Avenue	Longview	Police
21	Cowlitz Fire Station 82	2355 38th Avenue	Longview	Fire Department
22	Columbia Theater	1231 Vandercook Way	Longview	Entertainment
23	Senior Center	1111 Commerce Avenue	Longview	Community Center
24	McClelland Arts Center	951 Delaware Street	Longview	Entertainment
25	Women's Club	835 21st Avenue	Longview	Recreation
26	Elks Memorial Building	2121 Kessler Blvd	Longview	Community Center
27	Cowlitz County District Court	310 1st Avenue	Kelso	Government
28	St. Helens Elementary	4371 27th Avenue	Longview	Education
29	Memorial Stadium	28th Avenue	Longview	Recreation
30	R.A. Long Senior High School	2903 Nichols Blvd.	Longview	Education
31	Monticello Middle School	1225 28th Ave	Longview	Education
32	Kelso High School	1904 Allen Street	Kelso	Education
33	Cascade Middle School	2821 Parkview Drive	Longview	Education
34	Columbia Heights Elementary	2820 Parkview Drive	Longview	Education
35	North Lake Elementary	2210 Olympia Way	Longview	Education
36	Columbia Valley Garden Elementary	2644 30th Avenue	Longview	Education
37	Kessler Elementary	1902 East Kessler	Longview	Education
38	Mint Valley Elementary	2745 38th Ave	Longview	Education
39	Robert Gray Elementary	4622 Ohio Street	Longview	Education
40	Olympic Elementary	1324 30th Ave	Longview	Education
41	Mount Solo Middle School	5300 Mount Solo Road	Longview	Education
42	Mark Morris High School	1602 Mark Morris Court	Longview	Education
43	Post Office	1603 Larch Street	Longview	Government
44	St. John Medical Center	1615 Delaware Street	Longview	Healthcare
45	Cowlitz Free Medical Clinic	1230 7th Avenue	Longview	Healthcare
46	Senior Center	106 NW 8th Avenue	Kelso	Recreation
47	Barnes Elementary	401 Barnes Street	Kelso	Education
48	Huntington Middle School	500 Redpath Street	Kelso	Education
49	Butler Acres Elementary	1609 Burcham Street	Kelso	Education
50	Caitlin Elementary	404 Long Street	Kelso	Education
51	Wallace Elementary	410 Elm Street	Kelso	Education
52	Carrolls Elementary	3902 Old Pacific Highway	Kelso	Education

Map No.	Name	Address	City	Type
53	Rose Valley Elementary	1502 Rose Valley Road	Kelso	Education
54	Coweeman Middle School	2000 Allen Street	Kelso	Education
55	Cowlitz County Health and Human Services	900 Ocean Beach Highway	Longview	Healthcare
56	City Hall/ Library/Utilities/ Court/ Police Department	106 West B Street	Rainier	Government
57	Post Office	207 West A Street	Rainier	Government
58	Hudson Park Elementary	28176 Old Rainier Road	Rainier	Education
59	North Columbia Academy	28168 Old Rainier Road	Rainier	Education
60	Rainier Junior/Senior High School	28170 Old Rainier Road	Rainier	Education
61	Columbia River Fire & Rescue	211 West 2nd Street	Rainier	Fire Department

2.2.1.4 Parks and Recreation Study Area

As discussed above, the study area for parks and recreation facilities is the area within 0.5 mile of the project area, as well as the Willow Grove boat launch.

There are no parks and recreation facilities on the project area or within the 0.5-mile study area. However, the Columbia River is used for boating, fishing, and other forms of water recreation. The 146-mile Lower Columbia River Water Trail, which extends from Bonneville Dam to the mouth of the Columbia River, passes by the project area. Recreation users of the Columbia River currently must share the use of the river with a variety of commercial vessels, including oceangoing cargo ships.

The nearest parks are Roy Morse Park 1 mile north of the project area, Mint Valley Golf Course 1 mile northeast of the project area, and a primitive campsite (i.e., a campsite with no support facilities) on Lord Island 0.8 mile south of the project area (Lower Columbia Estuary Partnership 2014) (Figure 6). In addition, a portion of Dike Road to the northwest of the project area has been identified as a potential trail in Cowlitz Regional Trails Plan (Cowlitz Wahkiakum Council of Governments 2006).

Figure 5. Public Facilities

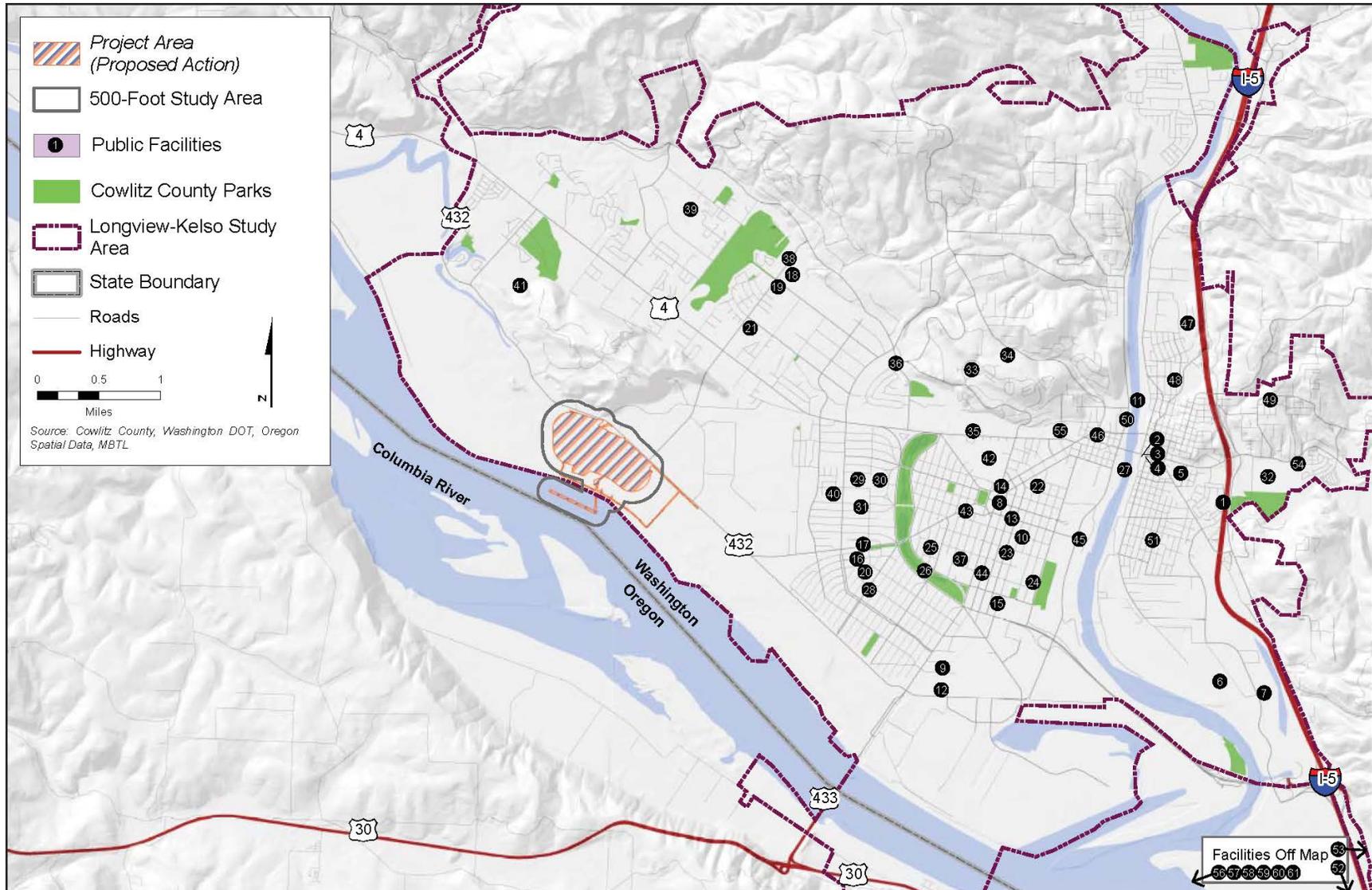
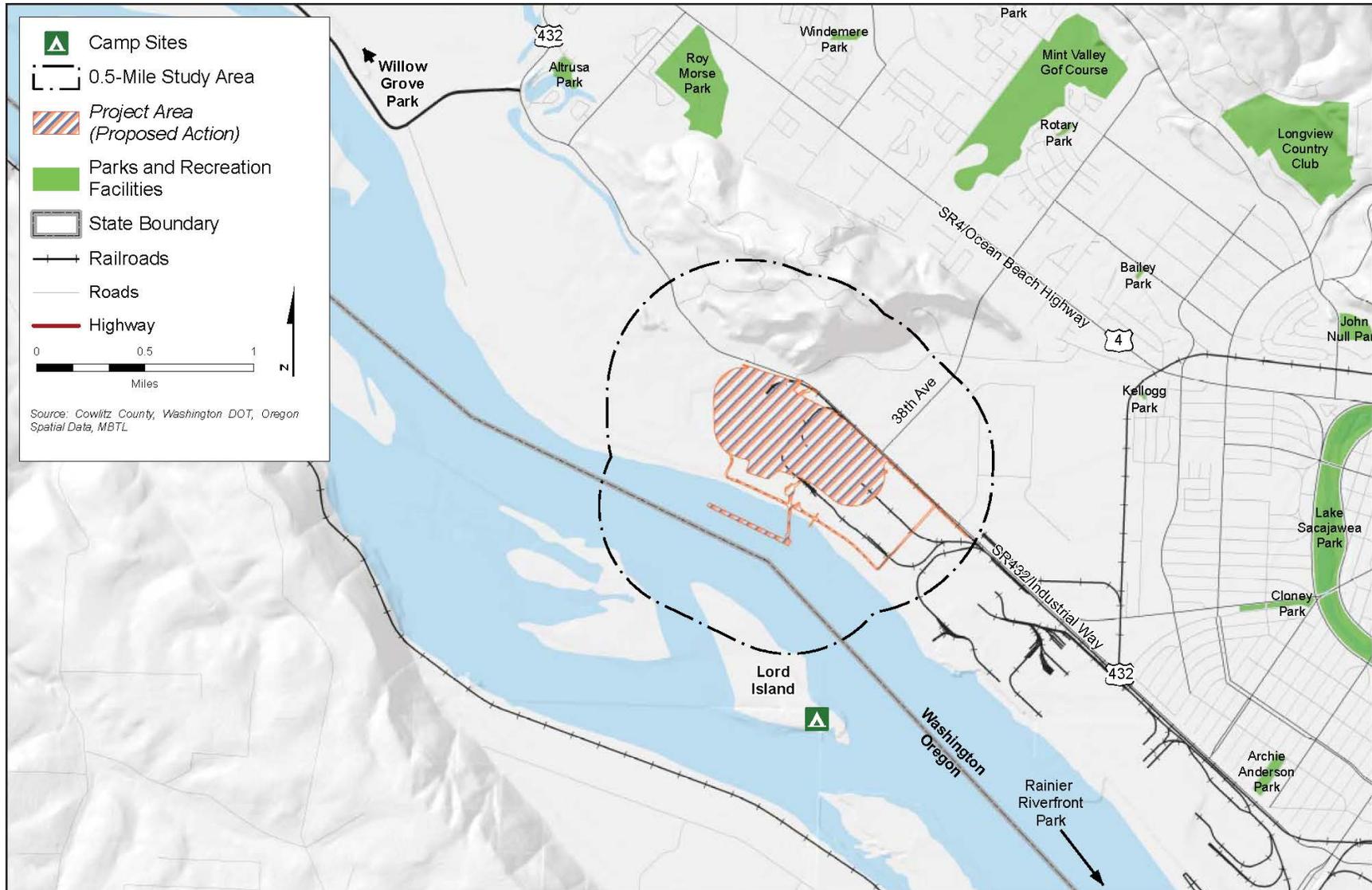


Figure 6. Parks and Recreation Facilities



Roy Morse Park is a 60-acre sports complex owned by the City of Longview containing baseball, softball, and soccer fields; basketball courts; picnic areas; playground equipment; seasonal restrooms; and parking lots (City of Longview 2014c). Mint Valley Golf Course is a public golf course also owned by the City of Longview.⁴

The nearest boat launches are located at Rainier Riverfront Park in Rainier, across the Columbia River approximately 4 miles upstream, and at Willow Grove Boat Launch, approximately 4 miles downstream. Rainier Riverfront Park is owned by the City of Rainier and includes a boat launch, restrooms, baseball field, basketball and tennis courts, a skateboard park, and playground equipment. The Willow Grove boat launch is located in Willow Grove Park, which is owned by the Port and is open daily from 5:00 a.m. to 10:00 p.m. year-round (Cowlitz County 2014c). In addition to the boat launch, Willow Grove Park includes an asphalt walking trail, riverfront beach, large parking lot, picnic areas, seating, bathrooms, lawn areas, and playground equipment.

2.2.1.5 Agricultural Land Study Area

As discussed above, the study area for agricultural land uses is the project area and the area within 500 feet of the project area. According to Ecology Farm Soil Maps, the entire project area and 500-foot study area, except for the levees along the Columbia River and slopes on Mount Solo, contain soils designated as “prime farmland,” “prime farmland if drained,” and “prime farmland if irrigated” (Washington State Department of Ecology 2008). However, as noted above, these areas contain predominantly industrial uses and there are no agricultural land uses within the project area or the 500-foot study area.

2.2.2 Zoning

The project area is located in an unincorporated portion of the County; therefore, it is subject to CCC. County zoning regulations are established in the Land Use and Development Code (CCC 18.10). The zoning regulations establish permitted uses, various building and lot dimensional standards, and other requirements for development on parcels throughout the county. The zoning regulations are the principal tool for implementing the goals and policies of the *Cowlitz County Comprehensive Plan*.

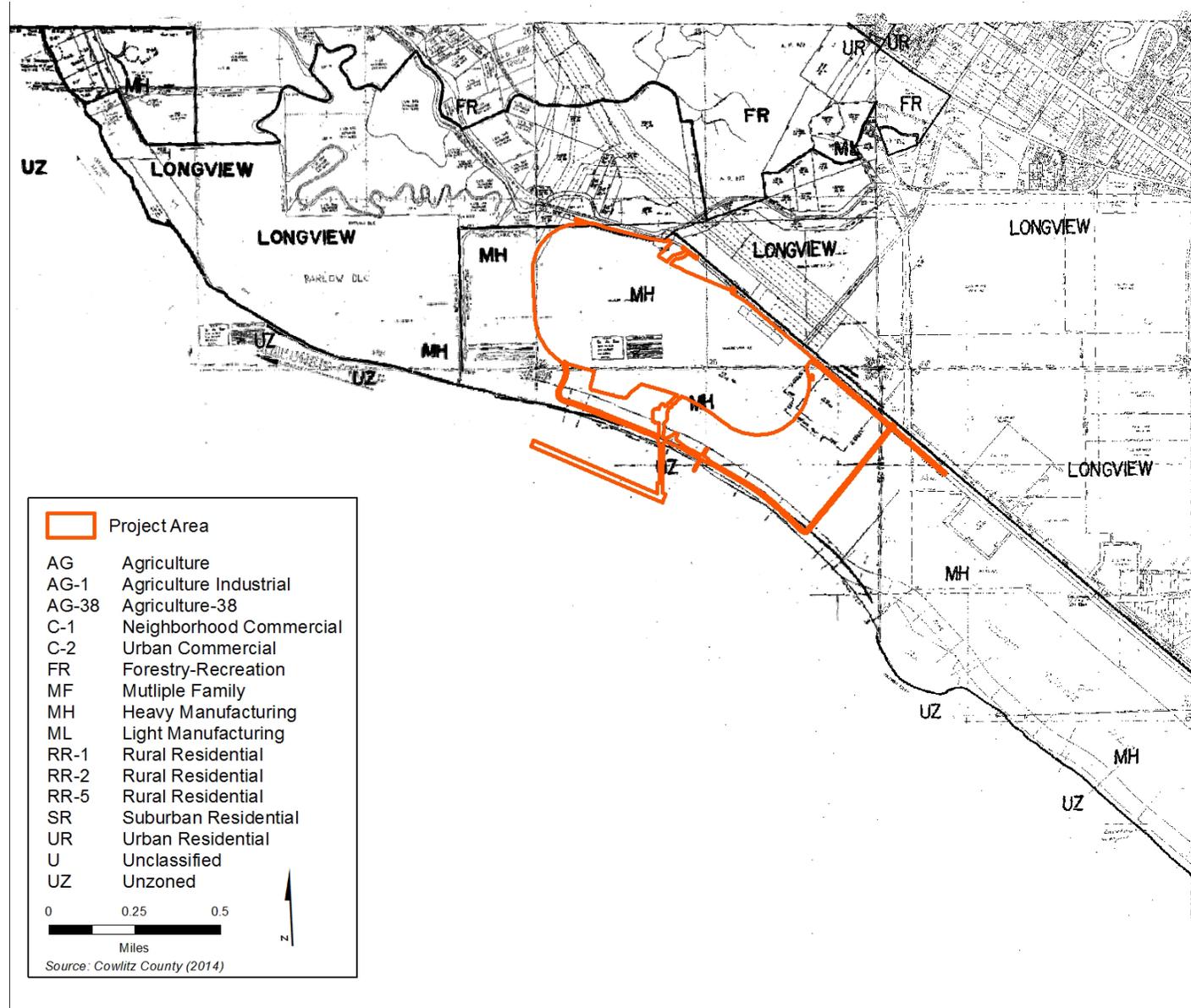
The following sections discuss the zoning regulations pertaining to the project area and the 500-foot study area.

2.2.2.1 Project Area

The project area is zoned Heavy Manufacturing, as shown in Figure 7.

⁴ For additional public parks within the City of Longview area, see the Aesthetics, Light, and Glare Technical Report (ICF International 2016j), which identifies public parks within approximately 3 miles of the project area.

Figure 7. Cowlitz County Zoning Map



Per CCC Chapter 18.10.235, the purpose of the Heavy Manufacturing zone is as follows.

The purpose of this zoning classification is to allow heavy industrial uses or structures where the primary use involves fabrication, manufacturing, assembly, processing and distribution of raw materials, primarily serving nonlocal wholesale and retail markets. Heavy industrial uses may generate some noise, smoke, dust, odors, toxic gases, vibration, glare, heat and other environmental pollutants in conformance with applicable regulations and must be tolerated, to the benefit of the economy and general welfare of the county. Heavy industrial uses are dependent upon rail, water or arterial access to the interstate highway system.

The permitted uses in the Heavy Manufacturing zone are identified in CCC 18.10.236 and include “[s]torage and distribution of petroleum, propane, liquefied gas, coal, and wood.” Minimum standards regarding lot area, setbacks, and lot coverage have not been established for Heavy Manufacturing zones, except for rear and side yard setback requirements for buildings exceeding 35 feet in height.

2.2.2.2 500-Foot Study Area

Unincorporated areas of Cowlitz County are subject to the zoning provisions of CCC 18.10. Areas in Longview are subject to the zoning established by LMC 19.

The zoning designations for parcels within the 500-foot study area are provided in Appendix A, Table A-1. The City of Longview zones these parcels as Heavy Industrial and Mixed Use – Commercial/Industrial (City of Longview 2014b). In addition to the Heavy Industrial and Mixed Use – Commercial/Industrial -zoned parcels, the area also includes state-owned right-of-way associated with SR 432/Industrial Way.

LMC 19 states the Heavy Industrial zone is “intended for industrial uses that tend to involve processing of natural and manmade materials into finished goods for sale, and may take place in interior and/or exterior settings. Uses in this district may require some handling of hazardous or flammable materials, may require outdoor storage, and may create some external emissions of noise, odor, glare, vibration, etc., but these are largely contained on-site.” LMC 19 states that the Mixed Use – Commercial/Industrial zone is “intended to allow low intensity industrial uses, including light manufacturing, warehousing and distribution, research and development, and regional commercial services. Commercial uses should be compatible to and complement low-intensity industrial uses and provide a convenient business environment for employees and visitors. High quality employment facilities are encouraged, such as corporate office headquarters and technology centers.”

LMC 19.58.030 also establishes dimensional standards for the Heavy Industrial and Mixed Use – Commercial/Industrial zoning districts. These standards establish minimum lot size, frontage, and setbacks, and maximum building heights and maximum impervious area of the lot. In particular, the standards for both districts permit a maximum building height of 60 feet (no more than six stories) and a maximum impervious area of 85%.

2.2.3 Land Use Plans and Public Policies

Development in the project area and surrounding study areas is guided by a variety of land use plans and public policies, which include comprehensive plans, shoreline management master programs, transportation plans, critical area regulations, and other specific plans.

The following land use plans and public policies apply to the project area and surrounding area.

2.2.3.1 Cowlitz County Comprehensive Plan

According to the Washington State Growth Management Act (GMA), counties and cities meeting specific population and growth criteria are required to prepare comprehensive plans in accordance with GMA goals. Cowlitz County is not required to fully plan under the GMA, but counties not fully planning under the GMA are still required to prepare a comprehensive plan with elements defined in Revised Code of Washington (RCW) 36.70.330. The County adopted its comprehensive plan in 1976, updated it in 1981, and is currently updating the plan. A draft update of the comprehensive plan is currently in public review, and adoption of the updated comprehensive plan is expected in late 2016.

The County's current comprehensive plan designates the project area as Heavy Industrial (Cowlitz County 1976) (Figure 8). The plan states that the purpose of the industrial classification is to "assure the presence of adequate amounts of land for industrial growth in the County." Appropriate uses in the Heavy Industrial designation include lumber and plywood mills, metal manufacturing, sand and gravel operations, foundry or iron works, quarries, agriculture, nonresidential commercial, and forest management and processing (Cowlitz County 1976). Power substations and generating facilities are subject to special use approval, and all residential uses are discouraged.

The County's current comprehensive plan articulates eight goals, each with supporting policies, to further the overall goals of the comprehensive plan and the Heavy Industrial designation.

Goal A: Provide for adequate land to accommodate a moderate level of economic growth in Cowlitz County.

Goal B: Encourage development of the necessary supporting services and facilities to support a moderate level of industrial growth consistent with the respective general service and facility plans for the area.

Goal C: Encourage industrial development that will maintain or enhance the county's environment. Industries requiring shoreline locations should be developed consistent with the Shorelines Management section of this plan.

Goal D: Industrial development should be encouraged to locate in areas where environmental constraints relating to soils, slopes, geology, and drainage are minor.

Goal E: Industrial development should be located near existing industrial activities so that special facilities and services required to support industrial activities can be more effectively and efficiently provided, thereby minimizing private and public costs.

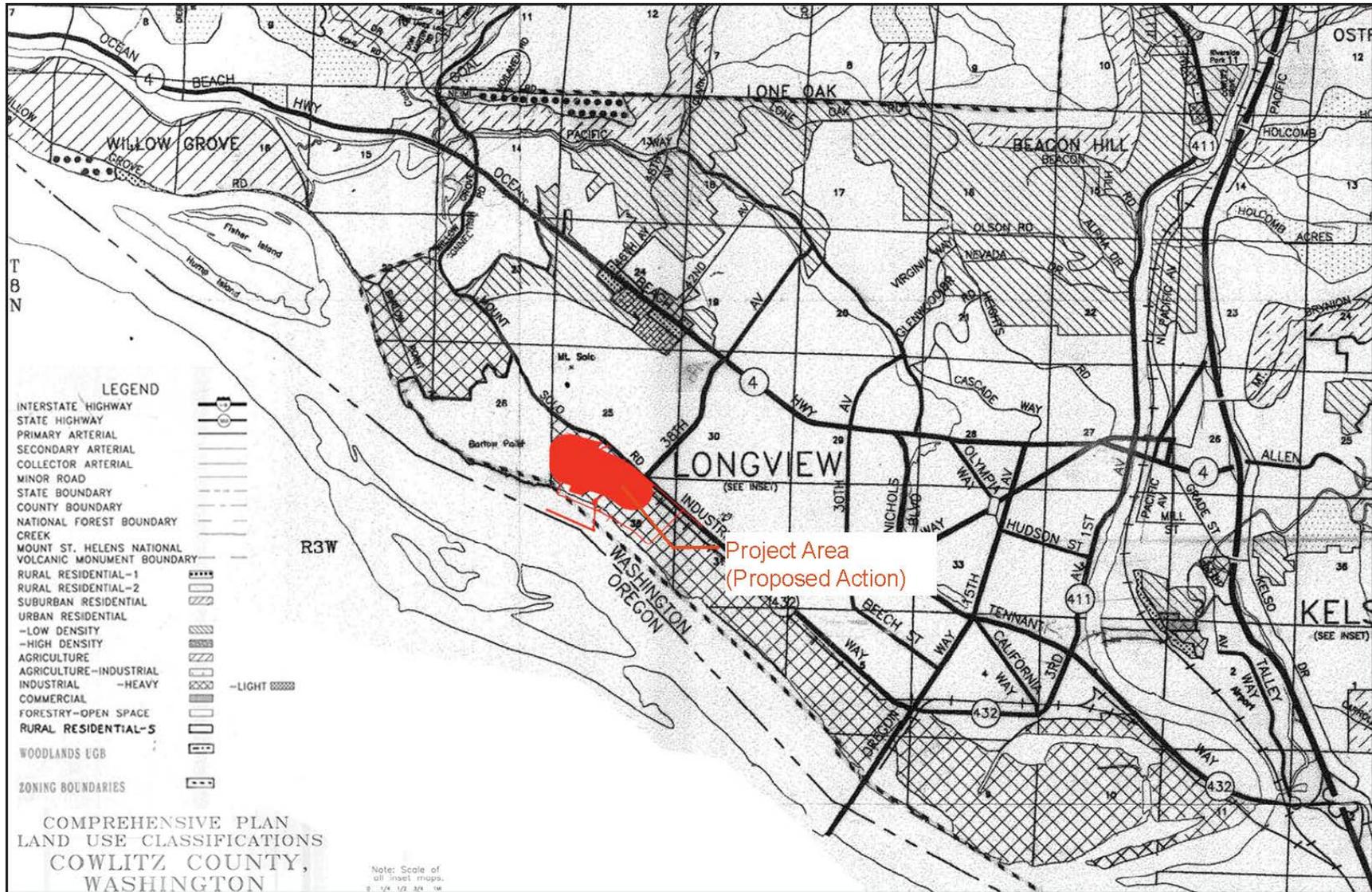
Goal F: Encourage industrial diversifications so that the County's economy is less vulnerable to the cyclical fluctuations of one or two dominant industries.

Goal G: The location of new industrial activities in prime agriculture areas should be avoided.

Goal H: Industrial growth in shoreland areas of the County should be planned so that unique recreation and environmental features common to these areas are protected.

The March 2015 draft comprehensive plan map and April 2015 draft comprehensive plan text that are part of the update designate the project area as Economic Resource Lands – Industrial. The draft comprehensive plan states that the County must provide a balanced distribution of land for industrial activities to accommodate economic growth and outlines two goals and associated policies to identify and protect industrial resource lands (Cowlitz County 2014b).

Figure 8. Cowlitz County Comprehensive Plan Map



The updated comprehensive plan is currently in review by the Cowlitz County Planning Commission and adoption is anticipated by the Board of County Commissioners in 2016.

A section of the County's current comprehensive plan lists policies and goals related to shoreline management. These are the same goals articulated in the Cowlitz County Shoreline Management Master Program (SMP), and are discussed in the section below.

2.2.3.2 Cowlitz County Shorelines Management Master Program

The Shoreline Management Act (SMA) applies to all counties and cities that have "shorelines of the state," as defined in RCW 90.58.030. The SMA requires that these jurisdictions prepare and adopt shoreline master programs that protect natural resources along regulated shorelines and give priority and preference to public access and water-oriented uses within shoreline environments. Each jurisdiction with shorelines of the state must establish shoreline "environment designations" based on physical, biological, and developmental characteristics (Washington State Department of Ecology 2014b). The current Cowlitz County SMP was approved in 1977 and includes four basic shoreline environment designations: natural, conservancy, rural, and urban.

The Columbia River, which borders the project area to the south, is a shoreline of statewide significance. The areas of the project area under shoreline jurisdiction include the Columbia River and all areas within 200 feet of the ordinary high water mark (OHWM). The Cowlitz County SMP designates the shoreline environment at the project area as urban, making it suitable for intensive recreation, residential, industrial, and commercial development (Cowlitz County 1977:22) (Figure 9). The objective of the urban designation is to identify those defined areas that are currently in and potentially capable of such use to satisfy the socioeconomic needs of the present and future population of the County. Figure 10 shows the regulated shoreline jurisdiction within the project area.

The Cowlitz County SMP establishes use regulations for 21 shoreline use activities. These use regulations supplement other land use regulations and speak to the shoreline management issues that must be addressed to implement the goals of the SMP. According to these regulations, ports and water-related industries are permitted uses in urban shorelines. The SMP also includes use activity regulations for construction and operations, commercial development (which also applies to industrial development), roads and railroads, and shoreline works and structures.

To achieve the overall goals of the SMA, the Cowlitz County SMP also outlines a series of specific goals related to circulation, conservation, economic development, historical/cultural, recreation, residential, public access, and shoreline uses. Policies related to ports and water-related industries are identified under the economic development goal of the SMP. The SMP also includes policies related to dredging, shoreline protection works, and piers.

The Cowlitz County SMP is implemented by CCC 19.20, which identifies the submittal requirements and approval process for proposed development activities in a designated shoreline.

Cowlitz County's SMP is undergoing a comprehensive update to meet the requirements of the revised 2003 and 2011 Shoreline Master Program Guidelines based on WAC 173-26. The guidelines set minimum procedural and substantive standards for local governments updating their programs. Updated SMPs are required to account for advancements in science and shoreline management practices and to align with current environmental and land-use laws such as the GMA and critical area ordinances.

Figure 9. Cowlitz County 1977 Shorelines Designation Map

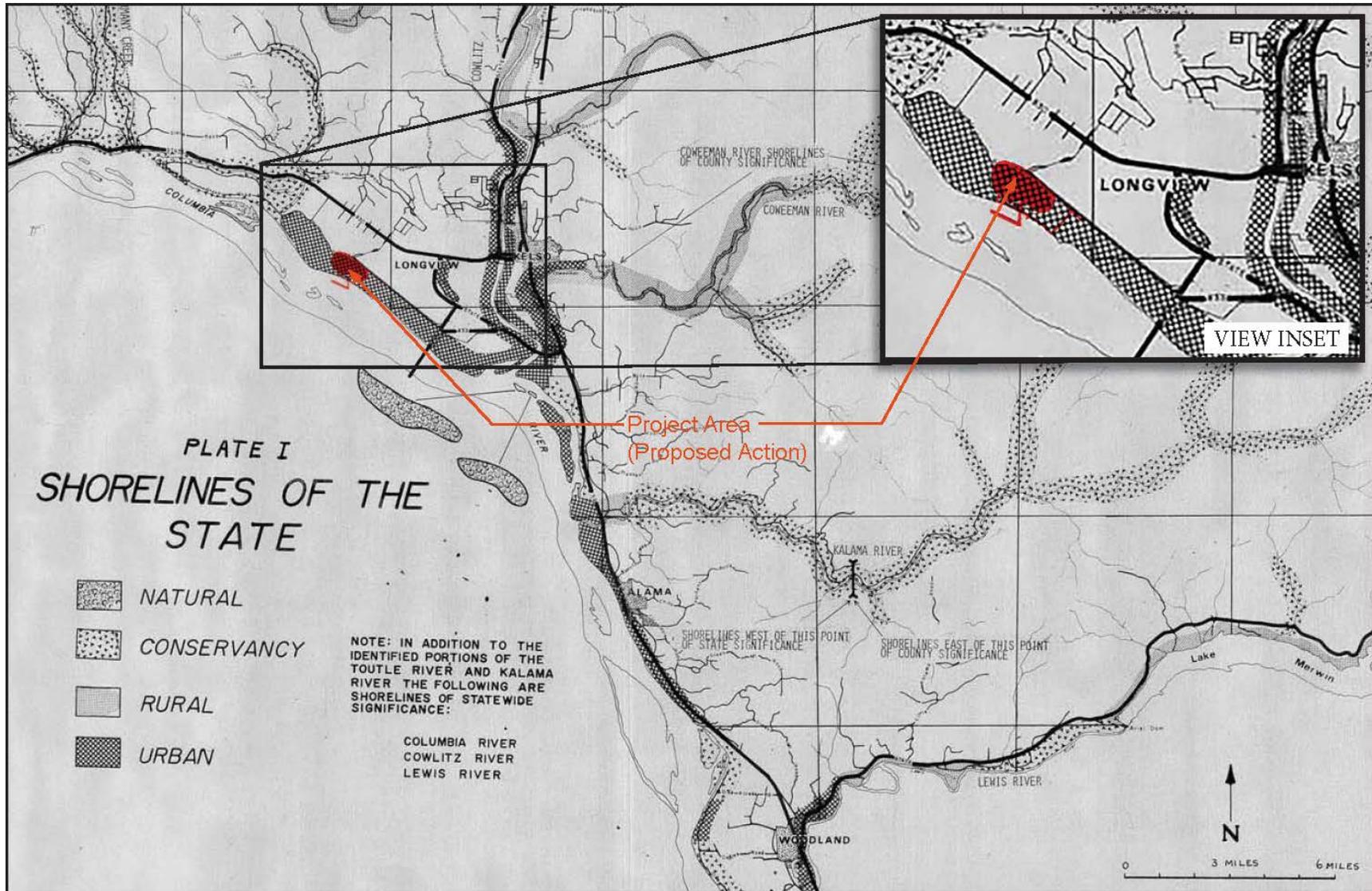
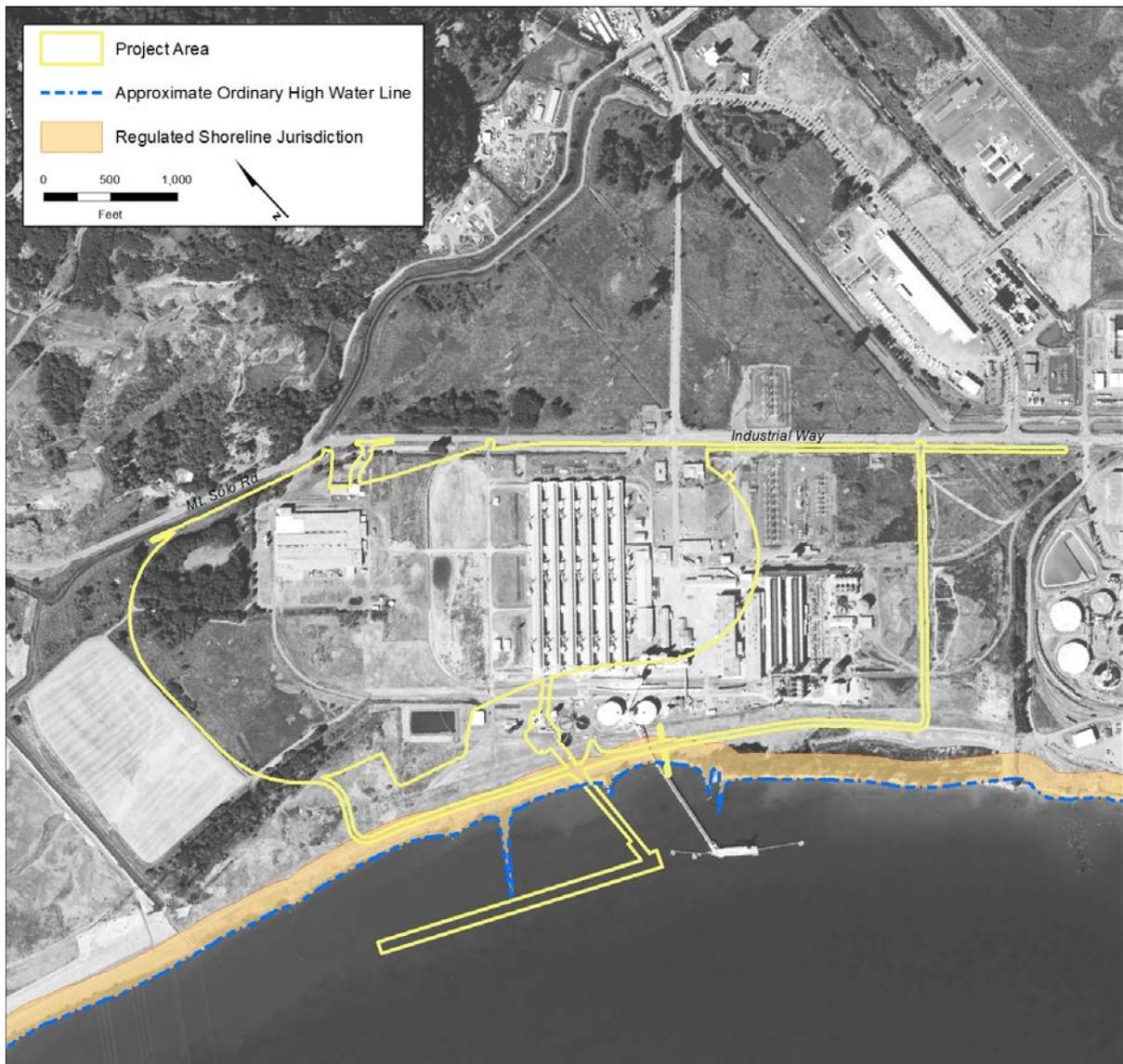


Figure 10. Regulated Shoreline Jurisdiction

They are also required to plan for preferred uses following a required order of preference that prioritizes uses that protect and restore ecological functions or are water-dependent or water-related. The guidelines also direct that SMPs include policies and regulations to achieve “no net loss of shoreline ecological functions” and plan for shoreline restoration to provide overall improvements in shoreline ecological function over time.

The draft updated SMP shoreline maps, dated February 15, 2015, designate the shoreline environment at the project area as Heavy Industrial and Aquatic (Cowlitz County 2015). The draft updated SMP is currently undergoing public review and is subject to review and approval by Ecology and adoption by the Board of Commissioners. Adoption is anticipated in late 2016.

2.2.3.3 Cowlitz County Critical Areas Protection

CCC 19.15, the Cowlitz County Critical Areas Ordinance (CAO), provides protection for designated critical areas. As mandated by the GMA (RCW 36.70A.060), the County is required to develop and adopt a critical areas protection ordinance that designates critical areas in the County and sets out development regulations to ensure their protection. The ordinance must classify, designate, and protect critical areas, which include critical aquifer recharge areas, frequently flooded areas, geological hazard areas, wetland areas, and fish and wildlife habitat conservation areas. The critical areas identified on the upland portions of the project area include geologic hazard areas, critical aquifer recharge areas, and wetlands (URS Corporation 2014a). Frequently flooded areas and fish and wildlife habitat conservation areas are found along the shoreline of and within the Columbia River.

This chapter describes the impacts on land and shoreline use that would result from construction and operation of the Proposed Action or the ongoing activities of the No-Action Alternative.

3.1 Impacts

This section describes the impacts on land and shoreline use that could result from the Proposed Action and No-Action Alternative.

3.1.1 Proposed Action

Overall, the Proposed Action would affect the land use of the project area by redeveloping it with a coal export terminal that would include a rail loop system and rail unloading facilities, coal handling and stockpile areas, and shiploading facilities (including two new docks in the Columbia River). Construction activities associated with the Proposed Action would also affect land and shoreline use. These activities would include building demolition, site preparation (e.g., clearing, grading, and earthwork), ground pre-loading in preparation for coal stockpiles, equipment installation, rail loop construction, and dredging and in-water construction.

The following sections describe the potential land use impacts attributable to the construction and operation of the Proposed Action.

3.1.1.1 Construction: Direct Impacts

The SEPA Alternatives Technical Report describes construction-related activities in the project area. These activities would not change land and shoreline use in the project area.

3.1.1.2 Construction: Indirect Impacts

Construction of the Proposed Action would not result in indirect impacts on land and shoreline use because it would be limited to the project area and construction activities would not affect land and shoreline use outside the project area.

3.1.1.3 Operations: Direct Impacts

As noted above, the study area for direct impacts has been defined as the project area and the area within 500 feet of it. The following direct impacts on land use may result from the operation of the Proposed Action.

Land and Shoreline Uses

Modify Existing Land and Shoreline Uses on the Project Area

The Proposed Action would redevelop the project area with a coal export terminal that would include a rail loop system and rail unloading facilities, coal handling and stockpile areas, shiploading

facilities (including two new docks in the Columbia River), and associated rail and coal handling facilities. This would constitute a new heavy industrial use in the project area. However, because the project area and surrounding area already contain industrial uses, the Proposed Action would not change the land use character of the project area substantially and would be generally consistent with other land uses in the 500-foot study area, except for the two single-family residential uses, as discussed below. As discussed above, land use within the 500-foot study area is already characterized by the presence of many industrial and transportation/utility land uses. The Proposed Action would be consistent with these industrial and transportation/utility land uses, including the existing bulk products terminal that would continue to operate within the 540-acre leased area, as well as the Weyerhaeuser facility, the Port Industrial Marine property, and the Mint Farm Industrial Park located just outside the 500-foot study area. Although the Proposed Action would increase activity on the project area as compared to existing conditions, it should be noted that employment activity with the Proposed Action would be similar to historical employment on the project area.

As a result of the change in land and shoreline use in the project area, surrounding uses and the Columbia River may experience other impacts related to water quality, noise and vibration, coal dust, wake action on the shoreline, erosion, and vessel transportation. These potential impacts are addressed in the SEPA Water Quality Technical Report (ICF International 2016d), SEPA Noise Technical Report (ICF International 2016g), SEPA Air Quality Technical Report (ICF International 2016c), SEPA Geology and Soils Technical Report (ICF International 2016h), SEPA Fish Technical Report (ICF International 2016e), and SEPA Vessel Transportation Technical Report (ICF International 2016i).

Introduce New, Intensive Industrial Use Near Residential Land Uses

Two single-family residential uses are located adjacent to the project area within the 500-foot study area. These uses currently coexist with existing industrial uses on the project area and nearby. Therefore, the Proposed Action would not impact the adjacent residential uses directly with respect to land use compatibility. Potential impacts on these residential uses related to noise, air quality, and transportation (i.e., vehicular and rail traffic) are discussed in the respective technical reports.

Parks and Recreation Facilities

For parks and recreation facilities, the study area for direct impacts has been defined as the area within a half-mile of the project area as well as the Willow Grove and Rainier Riverfront Park boat launches along the Columbia River. As discussed above, there are no parks and recreation facilities within the project area or the half-mile study area; the nearest parks are approximately 1 mile away from the project area. The Proposed Action would not have the potential to directly affect parks and recreation land uses because of the distance between the project area and such uses.

The Proposed Action would not impact the continued use of the Columbia River for recreation purposes, nor would it have any impact on the Willow Grove and Rainier Riverfront Park boat launches. At completion, the Proposed Action would result in the introduction of approximately 70 ships per month (840 per year) to the Columbia River. Although the Proposed Action would add commercial ship traffic to the river, recreation users (such as those using the river for fishing or boating) currently must take account of commercial vessels, including large oceangoing ships, within the river. With the additional vessels the Proposed Action would result in an approximately

46% increase over current river vessel traffic.⁵ While this would be a substantial increase, the vessels would only operate in the navigation channel and operations would be similar to current vessel traffic. Therefore, the Proposed Action would not result in any direct impacts on parks and recreation facilities.

Agricultural Areas

As discussed above, there are no agricultural land uses within the 500-foot study area. Therefore, the Proposed Action would not result in any direct impacts on agricultural land uses.

3.1.1.4 Operations: Indirect Impacts

As discussed above, the study area for indirect impacts is the Longview-Kelso urban area and other nearby unincorporated areas of Cowlitz County.

The Proposed Action would be compatible with land use conditions within the broader Longview-Kelso study area. The Proposed Action would be consistent with the existing concentration of industrial land uses along the Columbia River, in particular with the Weyerhaeuser and Port facilities upstream from the project area. Downstream from the project area, the Closed BMP Facility would separate the Proposed Action from the currently undeveloped Barlow Point property. Furthermore, the Port may redevelop the Barlow Point property in the future, and such port-related land uses, which are expected to include a marine facility and other industrial activities as discussed in the Port's Comprehensive Scheme of Harbor Improvements, would be compatible with the Proposed Action land use. The large-lot residential and agricultural land uses downstream from Barlow Point are approximately 1 mile from the project area and would be separated from the project area by the Barlow Point property and the Closed BMP Facility. Therefore, the land use conditions in this area would not be impacted by the Proposed Action.

The Proposed Action would not impact land use conditions in the remainder of the Longview-Kelso study area indirectly. Most land uses outside the corridor of industrial and transportation/utility uses along the Columbia River are separated from the project area by at least 1 mile. Furthermore, the nearest residential uses to the north on Mount Solo (aside from the two residences adjacent to the project area) are located approximately 0.5 to 0.75 mile from the project area and are buffered by dense vegetation on Mount Solo. More densely developed residential neighborhoods to the north are buffered from the project area by Mount Solo. Land uses within the Rainier, Oregon portion of the study area would continue to be separated from the project area by the Columbia River and thus the Proposed Action would not impact land use conditions in the Rainier area.

The Proposed Action would result in increased rail traffic due to coal being transported to the project area, but this traffic would not impact land use conditions along the rail lines in the study area. Land uses adjacent to the rail lines currently coexist with rail traffic, including the transportation of coal, and the Proposed Action would not change the land uses along the rail corridors. The Proposed Action would also result in increased commercial ship traffic along the Columbia River but, as discussed above, the Columbia River is already used for marine transportation, and the additional ship traffic would be consistent with this ongoing use.

⁵ Current vessel traffic based on 2014 large commercial vessel traffic in the Columbia River according to Bar Pilots records, which was 3,638 transits or 1,819 vessels. See the *Vessel Transportation Technical Report*.

As discussed in the SEPA Vessel Transportation Technical Report (ICF International 2016i), the Proposed Action would result in approximately 840 vessel calls per year during full operation. This increase in vessel traffic and the potential impacts associated with it are discussed in detail in the SEPA Vessel Transportation Technical Report. The potential impacts from propeller wash and ship wakes are discussed in the SEPA Water Quality Technical Report (ICF International 2016d) and the SEPA Fish Technical Report (ICF International 2016e), respectively.

The Proposed Action would not introduce a substantial new population that would generate demand for park and recreation facilities. Therefore, the Proposed Action would not result in indirect impacts on park and recreation land uses, nor would it result in an increased demand for agricultural land uses.

Overall, the development of the Proposed Action would not impact land use trends or conditions throughout the Longview-Kelso study area.

3.1.1.5 Consistency with Zoning

The Proposed Action would be consistent with the stated purpose of the existing Heavy Manufacturing zoning designation and would comply with the permitted uses and associated development standards and requirements. The purpose of the existing Heavy Manufacturing zone is to allow heavy industrial uses, including those that are dependent on rail and water access. The Proposed Action would introduce a coal export terminal dependent on rail and marine transportation and thus would be consistent with the purpose of the Heavy Manufacturing zone. As discussed above, the “[s]torage and distribution of petroleum, propane, liquefied gas, coal, and wood” is a permitted use in Heavy Manufacturing zones (CCC 18.10.236). Therefore, the proposed coal export terminal would be a permitted use. Furthermore, minimum standards regarding lot area, setbacks, and lot coverage have not been established for Heavy Manufacturing zones, except for rear and side yard setback requirements for buildings exceeding 35 feet in height (CCC 18.10.501). The Proposed Action would comply with the limited rear and side yard setback requirements for any proposed structures exceeding 35 feet in height.

As the Proposed Action would not alter the existing zoning of the project area, it would continue to be consistent with zoning in the surrounding area, which includes the City of Longview’s Heavy Industrial and Mixed Use – Commercial/Industrial districts within 500 feet of the project area. Overall, the Proposed Action would not result in any impacts on zoning.

3.1.1.6 Consistency with Land Use Plans and Public Policies

Cowlitz County Comprehensive Plan

As discussed above, the current *Cowlitz County Comprehensive Plan* designates the project area as Heavy Industrial. The purpose of this classification is to “assure the presence of adequate amounts of land for industrial growth in the County.” The Proposed Action would maintain and expand the industrial use of the project area and would be consistent with the comprehensive plan designation. Furthermore, the currently effective, adopted comprehensive plan articulates several goals regarding industrial development that are applicable to the Proposed Action. The Proposed Action would be consistent with these goals, as analyzed below.

Goal A: Provide for adequate land to accommodate a moderate level of economic growth in Cowlitz County. The project area is designated for heavy industrial use, and as such is part of

the land designated by the County to fulfill this goal. Therefore, the Proposed Action would be supportive of Goal A.

Goal B: Encourage development of the necessary supporting services and facilities to support a moderate level of industrial growth consistent with the respective general service and facility plans for the area. The Proposed Action would redevelop an existing industrial site and would add to an existing concentration of industrial uses. Therefore, the Proposed Action would be consistent with this goal.

Goal C: Encourage industrial development that will maintain or enhance the county's environment. Industries requiring shoreline locations should be developed consistent with the Shorelines Management section of this plan. Consistent with the comprehensive plan policies related to this goal, the Applicant would be required to adhere to all federal, state, and local laws regarding pollution abatement and would seek to minimize nuisances related to industrial activity by implementing best management practices to minimize and control fugitive dust emissions, noise, and stormwater runoff.

Goal D: Industrial development should be encouraged to locate in areas where environmental constraints relating to soils, slopes, geology, and drainage are minor. The Proposed Action would be located on an area that is currently developed with and designated for industrial uses. The Applicant's project design is intended to address any environmental constraints on the project area.

Goal E: Industrial development should be located near existing industrial activities so that special facilities and services required to support industrial activities can be more effectively and efficiently provided, thereby minimizing private and public costs. The Proposed Action would be located on an existing industrial site in close proximity to several other large industrial uses, including the Weyerhaeuser facility, the Mint Farm Industrial Park, and the Port. Furthermore, the project area is zoned for heavy industrial uses and designated as Heavy Industrial in the County's comprehensive plan.

Goal F: Encourage industrial diversifications so that the County's economy is less vulnerable to the cyclical fluctuations of one or two dominant industries. The Proposed Action would introduce a major new bulk commodity export terminal to the County, which would bring new economic activity to an existing underutilized industrial site.

Goal G: The location of new industrial activities in prime agriculture areas should be avoided. The Proposed Action would be located on an existing industrial site designated for industrial use. There are no active agricultural uses on the project area or within 500 feet of the project area.

Goal H: Industrial growth in shoreland areas of the County should be planned so that unique recreation and environmental features common to these areas are protected. The policies pertaining to this goal identify four specific shoreline areas that require special planning. These areas are Cottonwood Island, the industrial area north of the mouth of the Kalama River, Austin Point near the confluence of the Columbia and Lewis Rivers, and a portion of the Woodland Bar north of Austin Point. The Proposed Action would not be located in any of these areas. Therefore, this goal does not apply to the Proposed Action.

Overall, the Proposed Action would be consistent with the *Cowlitz County Comprehensive Plan* because it would maintain and expand the industrial use of the project area and would be supportive of the plan's various policies related to industrial land uses.

The Proposed Action would also be consistent with the Economic Resource Lands – Industrial designation of the project area in the draft updated Cowlitz County Comprehensive Plan. By redeveloping an existing industrial site with a new, active industrial use, the Proposed Action would be supportive of the draft comprehensive plan goals to identify and protect industrial land.

Cowlitz County Shorelines Management Master Program

The Proposed Action would result in development within the shoreline area regulated by the County SMP. It designates the shoreline environment at the project area as urban, which includes areas suitable for intensive recreation, residential, industrial, and commercial development. The Proposed Action would be consistent with the objective of the urban designation. Furthermore, ports and water-related industries, such as those contemplated in the Proposed Action, are permitted uses on urban shorelines per the SMP.

Cowlitz County's SMP is undergoing a comprehensive update to meet the requirements of the revised 2003 and 2011 Shoreline Master Program Guidelines based on WAC 173-26. The proposed industrial use is a preferred use under the Shoreline Management Act as a water-dependent use.

Dredging and the installation of the new docks, which may occur under the Proposed Action, is a conditional use on urban shorelines. Therefore, new development on the project area would require a Site-Specific Development Plan (SSDP) from Cowlitz County for any new structures within the shoreline jurisdiction, and a Conditional Use Permit (CUP) from Cowlitz County for proposed dredging activities.

Specifically, the Proposed Action would dredge an estimated 500,000 cubic yards of material to provide access from the Columbia River navigation channel and berthing at Docks 2 and 3. The Proposed Action would also require construction activities both in-water and above-water and waterward of the OHWM for the approach trestle and entire dock structure for Docks 2 and 3. The Applicant currently anticipates up to 2 years of in-water work (over two approved in-water work windows) to complete Docks 2 and 3 and the associated trestle work, depending on permit restrictions. Work windows would be scheduled to avoid and minimize impacts on various natural resources, most notably federally protected fish species. In-water construction would primarily involve dredging, pile driving, and pile removal (pile dikes) and would use barge-based equipment and purpose-built vessels, although some work would likely be supported from land. Piles would be driven and removed via vibratory methods. Potential impacts from dredging and in-water construction associated with the proposed docks are described in the SEPA Water Quality Technical Report (ICF International 2016d).

The Proposed Action's consistency with the applicable policies and use activity regulations of the SMP are discussed in Table 3 and Table 4 below.

Table 3. Cowlitz County SMP Applicable Policies and Goals

Policy & Goal	Response
Goal: Economic Development	
5. Ports and Water-Related Industry—Ports are centers for waterborne traffic and as such, have become gravitational points for industrial/manufacturing firms.	
a) Port facilities shall be designed to permit viewing of harbor areas from viewpoints, waterfront restaurants, and similar public facilities which would not interfere with port operations or endanger public health and safety.	<i>The proposed action would be located in an existing industrial area and there are no public viewpoints, waterfront restaurants, or similar public facilities on the project area or in the immediate area. Furthermore, the proposed action would not preclude the construction of the harbor area viewpoints in the surrounding area in the future as described in the SEPA Aesthetics, Light, and Glare Technical Report</i>

Policy & Goal	Response
b) Sewage treatment, water reclamation, and desalinization and power plants shall be located where they do not interfere with, and are compatible with, recreational, residential, or other public uses of the water and shorelands. Waste treatment ponds for water-related industry shall occupy as little shoreline as possible.	<p>(ICF International 2016j). Therefore, the proposed action would be consistent with this policy.</p> <p>The proposed action does not involve sewage treatment, water reclamation, desalinization, or power plants. During construction, the Proposed Action would create five water quality ponds to store and treat stormwater. During operation, the Proposed Action water management system would collect all stormwater and surface water (washdown water) from the stockpile areas, rail loop, office areas, docks, and other paved/ impervious surface areas at the project area and direct these waters to a series of vegetated ditches and ponds, and then to a collection basin or sump. Similar to existing conditions, collected water would be pumped to an existing on-site treatment facility consisting of settling pond(s). It is expected that these ponds would be located outside the shoreline jurisdiction. Therefore, the proposed action would be consistent with this policy.</p>
c) The cooperative use of dock parking, cargo handling, and storage facilities shall be strongly encouraged in waterfront industrial areas.	<p>At this time, the proposed action does not contemplate the cooperative use of parking or cargo handling or storage facilities. However, the proposed action would not preclude the cooperative use of such facilities in other industrial areas. Therefore, the proposed action would be consistent with this policy.</p>
d) Land transportation and utility corridors serving ports and water-related industry in the shoreline area shall follow the guidelines provided under the sections dealing with utilities and road and railroad design and construction. Where feasible, transportation and utility corridors shall be located upland to reduce pressures for the use of waterfront sites.	<p>The proposed action would utilize existing upland transportation (roadway and rail) corridors and utility corridors. Therefore, the proposed action would be consistent with this policy.</p>
e) Prior to allocating shorelines for port uses, local government shall consider statewide needs and coordinate planning with other jurisdictions to avoid wasteful duplication of port services within port-service regions.	<p>The proposed action would be located on an existing waterfront industrial site, and therefore would be connected to the existing network of port services and facilities. The proposed action would not allocate new shorelines for port uses. Therefore, the proposed action would be consistent with this policy.</p>
f) Since industrial docks and piers are often longer and greater in bulk than recreational or residential piers, careful planning must be undertaken to reduce the adverse impact of such facilities on other water-dependent uses, aesthetics, and shoreline resources. Because heavy industrial activities are associated with industrial piers and docks, the location of these facilities must be considered a major factor in determining the environmental and aesthetic compatibility of such facilities.	<p>The proposed action, including the two proposed docks, is the subject of this environmental review, which will account for its potential impacts to other land uses, water-dependent uses, aesthetics, and shoreline resources. Furthermore, the proposed action would require an SSDP and a CUP for any dredging activities as well as a critical areas permit. The reviews for these permits will consider the environmental and aesthetic compatibility and potential adverse impacts of the proposed action and would condition the permits to include necessary</p>

Policy & Goal	Response
g) Because a large impact cannot be avoided due to ports and port-related uses, preference will be given to development and redevelopment of existing port areas.	<i>mitigation measures. Therefore, the proposed action would be consistent with this policy.</i> <i>The proposed action would redevelop a contaminated waterfront industrial site. Therefore, the proposed action would be consistent with this policy.</i>
h) Ports and water-related industries are encouraged to locate in urban environments, but in exceptional cases may locate under natural, conservancy, and rural environments, subject to conditional use and specific performance standards. An exception is log storage and rafting which may be permitted in conservancy, rural, urban, and is considered as a conditional use on natural shorelines.	<i>The proposed action would be located in a designated urban shoreline environment and therefore is consistent with this policy.</i>
Other General Shoreline Uses	
Goal: Development within the shorelines of Cowlitz County must be for the betterment of the lifestyle of the citizens of Cowlitz County, and so located as to prevent ecological debilitation from occurring.	
1. Dredging - Dredging is the removal of earth from the bottom of a stream, river, lake, bay, or other water body for the purposes of deepening a navigational channel or to obtain use of the bottom materials for landfill.	
a) Dredging operations shall be so controlled as to minimize damage to existing ecological values and natural resources of both the area to be dredged, and the area for deposit of dredged materials.	<i>Dredging would be controlled to minimize and avoid potential impacts. Permits and authorizations under Section 10 of the Rivers and Harbors Act, Section 404 of the Clean Water Act, and the provisions of other laws and regulations would be required before dredging operations begin.</i> <i>Dredging would be conducted using a barge-mounted mechanical clamshell dredge with material loaded into a bottom-dump barge for transport to an approved dredge material disposal site once the barge is full. This method does not require dewatering.</i> <i>As discussed in the SEPA Water Quality Technical Report (ICF International 2016d), dredged material would be suitable for flow-lane disposal or beneficial use in the Columbia River based on recent sediment sampling that suggests that sediments from the deepwater areas of the Columbia River are composed of silty sands with a low proportion of fines and low total organic carbon. The disposal area for this dredging action is anticipated to be approximately 80 to 110 acres. However, the actual acreage of the disposal site would be determined by the permitting agencies and would be based on sediment characteristics (i.e., consistency and density of sediments).</i> <i>Impacts on water quality from dredging would be minimized with the implementation of a dredging and disposal quality control plan in compliance with</i>

Policy & Goal	Response
	<p><i>the dredged material management program as required by state agencies (Ecology and Washington Department of Natural Resources) and federal agencies (the U.S. Army Corps of Engineers and the U.S. Environmental Protection Agency).</i></p> <p><i>The quality control plan would include dredging methods and procedures to minimize water quality impacts, define disposal protocols (whether upland or in-water), and develop a water quality monitoring plan and contingencies for exceedances. Adhering to the plan would avoid and minimize impacts and ensure that potential impacts would be temporary and localized. Therefore, the proposed action would be consistent with this policy.</i></p>
<p>b) This program must include long-range plans for the deposit and use of spoils on land. Spoils deposit sites in water areas shall also be identified by local government in cooperation with the state departments of natural resources, game, and fisheries. Depositing of dredge material in water areas shall be allowed only for habitat improvement, to correct problems of material distribution adversely affecting fish and shellfish resources, or where the alternative of depositing material on land is more detrimental to shoreline resources than depositing it in water areas.</p>	<p><i>Dredged material would be suitable for flow-lane disposal or beneficial use in the Columbia River. The disposal area for this dredging action is anticipated to be approximately 80 to 110 acres. The dredging and disposal quality control plan would include dredging methods and procedures to minimize water quality impacts, define disposal protocols (whether upland or in-water), and develop a water quality monitoring plan and contingencies for exceedances. Adhering to the plan would avoid and minimize impacts and ensure that potential impacts would be temporary and localized. Therefore, the proposed action would be consistent with this policy.</i></p>
<p>c) Dredging of bottom materials for the single purpose of extending one's property shall be discouraged.</p>	<p><i>Dredging would be required to provide access to and from the Columbia River navigation channel and for berthing at the two new docks. Dredging would not be used to extend the area of the property.</i></p>
<p>d) Navigation channels, turning and moorage basins shall be identified. Future channel and basin areas which would be used in conjunction with potential future ports and marinas should be identified as non-deposit areas for spoils from other dredging operations.</p>	<p><i>The proposed dredge prism, navigation channels, and the turning and moorage basins would be identified in the permit applications as required.</i></p>
<p>3. Shoreline Protection Works - Shoreline protection works (SPW) shall include bulkheads, breakwaters, jetties, groins, levees, berms, retaining walls, riprapping, dikes, and the like.</p>	
<p>a) Shoreline protection works should be located and constructed in such a manner which will not result in adverse effects on "wetlands" and will minimize alterations of the natural shoreline.</p>	<p><i>The proposed action would not create any new shoreline protection works within the shoreline jurisdiction. The Columbia River shoreline in the vicinity of the Proposed Action project area already includes extensive diking and riprap that would not be altered with the proposed action. Therefore, this policy does not apply.</i></p>
<p>b) Consider the effect of a proposed SPW on public access to publicly owned shorelines.</p>	<p><i>The proposed action would not create any new shoreline protection works within the shoreline jurisdiction. Therefore, this policy does not apply.</i></p>

Policy & Goal	Response
c) Shoreline protection works should be designed to blend in with the surroundings and not to detract from the aesthetic qualities of the shoreline.	<i>The proposed action would not create any new shoreline protection works within the shoreline jurisdiction. Therefore, this policy does not apply.</i>
d) The construction of SPW should be permitted only where they provide protection to upland areas or facilities and not for the direct purpose of creating land by filling behind the SPW. Landfill operations should satisfy the policies under "Landfills".	<i>The proposed action does not include any landfill operations. Therefore, this policy does not apply.</i>
e) Riprapping and other bank stabilization measures should be located, designed, and constructed so as to avoid the need for channelization, and to protect the natural character of the streamway.	<i>The proposed action does not involve any new riprapping or other bank stabilization measures within the shoreline jurisdiction. Therefore, this policy does not apply.</i>
f) The use of non-rock riprap material should be strongly discouraged. The use of abandoned automobiles for SPW is to be prohibited.	<i>The proposed action does not involve any new riprapping within the shoreline jurisdiction. Therefore, this policy does not apply.</i>
g) Planned flood protection measures, such as dikes, should be placed landward of the streamway, including associated swamps and marshes, and other wetlands directly inter-related and inter-dependent with the stream proper.	<i>The proposed action does not include any new flood protection measures. The Columbia River shoreline in the vicinity of the project area already includes extensive diking that would not be altered with the proposed action. Therefore, this policy does not apply.</i>
h) Flood protection measures which result in channelization should be avoided.	<i>The proposed action would not introduce flood protection measures. Therefore, this policy does not apply.</i>
i) Special attention should be given to the effect these structures will have on fish and wildlife propagation, habitat, and movement.	<i>The proposed action would not create any new shoreline protection works within the shoreline jurisdiction. Therefore, this policy does not apply.</i>
4. Piers - A pier or dock is a structure built over or floating upon the water, used as a landing place for marine transportation or for recreation purposes	
a) The use of floating docks should be encouraged in those areas where scenic values are high and where conflicts with recreational boaters and fishermen will not be created.	<i>A floating dock is not feasible due to the scale of ships used in exporting coal.</i>
b) Open-pile piers should be encouraged where shore trolling is important, where there is significant littoral drift, and where scenic values will not be impaired.	<i>The proposed docks would be open pile construction and located in an area where similar docks are constructed.</i>
c) Priority should be given to the use of community piers and docks in all new major waterfront developments. In general, encouragement should be given to the cooperative use of piers and docks.	<i>At this time, the proposed action does not contemplate the cooperative use of the proposed docks. However, the proposed action would not preclude the cooperative use of such facilities in other industrial areas. Therefore, the proposed action would be consistent with this policy.</i>
d) In providing for boat docking facilities in the master program, local governments should consider the capacity of the shoreline sites to absorb the impact of waste discharges from boats including gas and oil spillage.	<i>The project area and surrounding shoreline area contain predominantly industrial and transportation/utility land uses and are designated as urban shorelines in the County SMP. The County has determined this shoreline area best for supporting potential shipping-related facilities.</i>

Policy & Goal	Response
	<p><i>Modern vessel design and operational standards greatly reduce the potential for a fuel oil spill. In addition, federal and state regulations protect against the discharge of contaminated ballast water and the introduction of exotic species via ballast water (RCW 77.120). The discharge of ballast water into waters of the state is not allowed unless there has been an open sea exchange (replacing coastal water with open-ocean water to reduce the density of coastal organisms), or the vessel has treated its ballast water to meet state and federal standards set by the U.S. Coast Guard, the Clean Water Act (33 USC 1251–1387), or the international maritime organization. Therefore, the proposed action would be consistent with this policy.</i></p>
<p>e) The risk and potential damage of contaminants must be determined for piers and the ability of the shoreline area to recover from such spills must be known. Where appropriate, contamination prevention and abatement measures will be required as part of any proposal to erect a pier.</p>	<p><i>The potential impacts of the proposed action attributable to contaminants from the construction and operation of the proposed docks are accounted for as part of this environmental review. Furthermore, the proposed action would require a critical areas permit and an SSDP and a CUP for any dredging activities. The reviews for these permits would also consider the environmental and aesthetic compatibility and potential adverse impacts of the proposed action and would condition the permits to include necessary mitigation measures. Therefore, the proposed action would be consistent with this policy.</i></p>

Table 4. Cowlitz County SMP Applicable Use Activity Regulations

Use Activity Regulations:	Response
Construction and Operations Regulations	
<p>1) No construction equipment shall enter any shoreline body of water, except as authorized under the terms of a substantial development permit.</p>	<p><i>Dredging and dock construction activities under the proposed action would require construction equipment to be in and over the water. The SSDP should include the specific authorization of this activity.</i></p>
<p>2) Vegetation along the water shall be left in its natural condition unless the substantial development permit allows otherwise.</p>	<p><i>Construction of the proposed action would require the removal of vegetation within the shoreline jurisdiction. The SSDP should include the specific authorization of this activity.</i></p>
<p>3) During construction, care will be taken to assure that waste material and foreign matter are not allowed to enter the water.</p>	<p><i>As discussed in the SEPA Water Quality Technical Report (ICF International 2016d), a wide variety of BMPs would be implemented during construction to avoid and minimize potential impacts on water quality. These BMPs would include measures to reduce pollutants in stormwater and other nonpoint source runoff. Construction practices would include measures to avoid and minimize soil erosion associated with land disturbance and the subsequent discharge of sediment-laden stormwater to adjacent</i></p>

Use Activity Regulations:	Response
4) All fuel and chemicals shall be kept, stored, handled and used in a fashion which assures that there will be no opportunity for entry of such fuel and chemicals into the water.	<p>surface waters. Construction projects in Washington that include clearing, grading, and excavating activities that disturb one or more acres and discharge stormwater to surface waters of the state must obtain a National Pollutant Discharge Elimination System (NPDES) Construction Stormwater General Permit from Ecology. That permit requires the development and implementation of a Temporary Erosion and Sediment Control (TESC) plan, an SWPPP, and BMPs to avoid and minimize the risk of erosion. Therefore, the proposed action would be consistent with this policy.</p>
5) Protection from siltation and erosion shall be provided for on all earthworks projects.	<p>The development and implementation of an SPCC plan and a site-specific construction SWPPP that include BMPs for material handling and construction waste management would reduce the potential for water quality impacts from sources of fuel and chemical pollutants during construction because water entering the CDID ditches from the project area would be treated. Furthermore, with proper training as specified in the SPCC, the response to a spill would be quick, and proper equipment would be labeled and available.</p>
6) Land being prepared for development shall have an adequate drainage system to prevent runoff from entering water bodies.	<p>To control on-site erosion and off-site sediment delivery during construction and initial operation, the proposed action would implement the erosion control recommendations in the geotechnical report. Additionally, the site erosion control plan would include an SWPPP and would implement measures in Ecology's Stormwater Management Manual for Western Washington. The proposed action also would incorporate a monitoring and evaluation plan in the erosion control plan to identify and address any deficiencies that might occur over this extended construction timeframe. When build-out is complete, impervious surfaces would constitute approximately 90% of the project area, reducing the potential for soil erosion to near zero.</p>
6) Land being prepared for development shall have an adequate drainage system to prevent runoff from entering water bodies.	<p>The proposed action would be required to obtain a NPDES Construction Stormwater General Permit from Ecology. The permit requires the development and implementation of a TESC plan, a construction SWPPP, and BMPs to avoid and minimize the risk of erosion. The Ecology Stormwater Management Manual for Western Washington would guide the design and implementation of these BMPs. The selected BMPs would represent the best available technology that is economically achievable and the best conventional pollutant control technology to reduce pollutants. BMPs would include a wide variety of measures to reduce pollutants in stormwater and other nonpoint source runoff. Construction practices</p>

Use Activity Regulations:	Response
	<p>would include measures to avoid and minimize soil erosion associated with land disturbance and subsequent discharge of sediment-laden stormwater to adjacent surface waters.</p> <p>During operation, stormwater would be managed in accordance with the requirements of a new NPDES Industrial Stormwater Permit to be issued exclusively for the coal export terminal water management facilities. Contaminants such as oil and grease, coal dust, and other chemicals could accumulate on surfaces and would become constituents of site stormwater. All stormwater runoff would be collected for treatment before reuse or discharge to the Columbia River. Coal particulates would be removed from stormwater and placed back in the coal stockpile area for shipment. Other solids accumulated in the treatment systems not acceptable for reuse would be collected periodically and disposed of at an appropriate off-site disposal site.</p>
7) Side casting of excess road building material into streams will not be permitted.	Road building materials would not be side-cast into streams.
8) All construction debris such as fuel and oil containers and barrels and other miscellaneous litter shall be removed from the shoreline area. No equipment shall be abandoned within the shoreline area.	Construction materials would be placed in designated staging areas. Unused equipment and materials would be removed from the project area once construction is complete.
9) State and federal water quality standards for both inter-state and intra-state waters already are established. These shorelines regulations need only allude to these and other regulations already in effect. Any activities within the shorelines must, as a minimum, meet all these other regulations.	The proposed action would comply with all applicable state and federal water quality standards.
Commercial Development	
1) Commercial and industrial uses are of such varied nature that many may be considered a conditional use in any district and to be permitted must meet conditions; except independent commercial parking lots, which shall be prohibited in all environments.	The proposed action would be required to obtain an SSDP and a CUP. The proposed action does not include a commercial parking lot.
2) Airport and aircraft landing strips shall be prohibited in natural and conservancy districts and shall be considered a conditional use in rural and urban environments.	The proposed action does not involve the development of an airport or an aircraft landing strip. Therefore, this regulation does not apply.
Urban District	
1) Because shorelines suitable for urban uses are a limited resource, emphasis should be given to development within already developed areas and particularly on water-dependent industrial and commercial uses requiring frontage on navigable waters.	The proposed action would redevelop a contaminated waterfront industrial site with an industrial use containing water-dependent and water-related uses as defined in WAC 173-26-020.

Use Activity Regulations:	Response
2) A permit for commercial development may be granted subject to the following regulations:	
a) Commercial buildings of more than 35 feet above average ground grade shall be allowed as a conditional use.	<i>This regulation would not apply to the proposed action.</i>
b) Any commercial structure or facility except one which requires or is dependent on direct, contiguous access to the water shall be set back from the ordinary high water mark by a minimum of ten feet, as measured on a horizontal plane.	<i>The proposed docks are the only commercial facility associated with the proposed action that is within 10 feet of the ordinary high water mark. The docks depend on direct, contiguous access to the water.</i>
c) Parking facilities shall not be located within ten (10) feet of the ordinary high water mark, as measured on a horizontal plane.	<i>No parking facilities would be located within the shoreline jurisdiction with the proposed action.</i>
Ports and Water-Related Industries	
Urban District	
1) Port facilities and water-related industries shall be permitted on urban shorelines.	<i>As defined under WAC 173-26-20(43), a “water-related” use “means a use or portion of a use which is not intrinsically dependent on a waterfront location but whose economic viability is dependent upon a waterfront location.” Because the proposed action involves the export of coal by oceangoing vessels, the proposed action is a water-related and water-dependent use and is therefore permitted on urban shorelines.</i>
2) Any person proposing a development, expansion or alteration, or any phase thereof which constitutes a complete project, of a port facility or water-related industry, shall apply for a permit.	<i>Applications for a SSDP and a CUP as appropriate would be submitted for the proposed action.</i>
3) A permit for a port facility or water-related industry, or any expansion or alteration thereof which constitutes a complete project, may be granted a permit subject to compliance with local ordinances and the following regulations:	
a) Demonstration of compliance with the regulations specified on any federal and state permits required for such facilities and operations, by presentation of an application for each permit or other means satisfactory to the administrator.	<i>The applicant for the proposed action would obtain all required federal and state permits. These include, but are not limited to, permits and authorizations pursuant to Section 10 of the Rivers and Harbors Act, Section 404 of the Clean Water Act, Hydraulic Project Approval, Section 401 water quality certification, and NPDES permits, and the proposed action would comply with the terms of the permits.</i>
b) Compliance with other applicable use regulations in this program is required.	<i>This application for the SSDP and shoreline CUP will address all applicable shoreline use regulations.</i>
4) Water storage of logs shall be permitted subject to the following minimum regulations:	
a) No feasible dry land storage area is available, except emergency or short-term storage of logs may be in water regardless of the availability of dry and storage areas. Logs shall not be stored so that a complete waterway is blocked for public	<i>The proposed action does not involve the water storage of logs. Therefore, this regulation does not apply.</i>

Use Activity Regulations:	Response
boating or public access through log storage areas along waterway.	
Roads and Railroads	
1) Whenever necessary to locate roads, location shall be subject to road location standards set forth in the Forest Practices and Shoreline Management Special Report, found under Forest Practices and Shoreline Management, pages 34 - 36.	<i>The proposed action would improve Dike Road, an existing roadway, but would not locate new roads within shoreline jurisdiction. Therefore, this regulation does not apply.</i>
Urban District	
1) Non-motorized trails shall be permitted within urban shorelines	<i>The proposed action does not include non-motorized trails. Therefore, this regulation does not apply.</i>
2) Railroads shall be permitted within urban shorelines.	<i>The proposed action would not locate railroads within shoreline jurisdiction. Therefore, this regulation does not apply.</i>
3) Future construction of all roads, highways, freeways, and access roads shall assure compliance with existing county rules and regulations addressing such construction.	<i>The improvements to Dike Road within the shoreline jurisdiction under the proposed action would comply with applicable county rules and regulations.</i>
4) All public roads and railroads shall not impede non-motorized public access to public shorelines.	<i>The project area is an active industrial site and there is no existing public access. Therefore, this regulation does not apply.</i>
5) All private roads must meet the road specifications as outlined in the Forest Practices and Shoreline Management Special Report, found under Forest Practices and Shoreline Management, pages 34 - 36.	<i>The proposed action would improve Dike Road, an existing roadway, but would not develop new private roads within shoreline jurisdiction. The improvements to Dike Road within shoreline jurisdiction under the proposed action would comply with applicable county rules and regulations. Therefore, this regulation does not apply.</i>
Shoreline Works and Structures	
1) Riprapping and other bank stabilization measures shall be located, designed and constructed so as to avoid the need for channelization and to protect the natural character of the streamway. In all environments, the use of non-rock riprap material shall be considered as a conditional use, and the use of abandoned automobiles for SWS shall be prohibited.	<i>The proposed action does not involve any new riprapping or other bank stabilization measures within the shoreline jurisdiction. Therefore, this regulation does not apply.</i>
Urban District	
1) Shoreline works and structures are allowed anywhere on urban shorelines.	<i>The proposed action would not create any new shoreline protection works within the shoreline jurisdiction. Therefore, this regulation does not apply.</i>

Cowlitz County Critical Areas Protection

The Proposed Action would result in development within designated critical areas, including geologically hazardous areas, critical aquifer recharge areas, wetlands, frequently flooded areas, and fish and wildlife habitat conservation areas. Potential impacts on these critical areas have been

assessed in the SEPA Geology and Soils Technical Report (ICF International 2016h), SEPA Surface Water and Floodplains Technical Report (ICF International 2016k), SEPA Groundwater Technical Report (ICF International 2016l), SEPA Fish Technical Report (ICF International 2016e), SEPA Wildlife Technical Report (ICF International 2016m), SEPA Vegetation Technical Report (ICF International 2016n), and SEPA Wetlands Technical Report (ICF International 2016o) prepared for the Proposed Action. Furthermore, the Proposed Action would be required to obtain a critical areas permit, and any necessary mitigation measures would be required as a condition of the permit. With these mitigation measures, any impacts on regulated critical areas would be offset or minimized such that there would be no net loss of critical area functions and values. Therefore, the Proposed Action would be consistent with the public policy related to critical areas protection.

3.1.2 No-Action Alternative

The following sections describe the potential land use impacts attributable to the construction and operation of the No-Action Alternative.

3.1.2.1 Construction: Direct Impacts

Under the No-Action Alternative, although the coal export terminal would not be constructed, new construction, demolition, or related activities to develop the project area into an expanded bulk product terminal would occur on previously developed upland portions of the project area. Upland areas of the site are zoned Heavy Industrial and it is assumed that newly proposed industrial uses in these upland areas could be permitted in the future. Construction of new buildings could involve demolition and replacement of existing buildings and new or modified permits. However, no new docks would be built and no new dredging would occur. As with the Proposed Action, construction of the No-Action Alternative would introduce a new or expanded industrial activity to the project area, which would result in the following potential direct impacts due to construction activities. Limitations of property use are expected because of contamination that may be left on the project area.

3.1.2.2 Construction: Indirect Impacts

The No-Action Alternative would not result in indirect construction impacts on land and shoreline use because construction would be limited to the project area. These activities would not change land and shoreline use outside the project area during construction.

3.1.2.3 Operations: Direct Impacts

The No-Action Alternative would continue and expand the existing bulk product terminal use on the project area and the Applicant's leased area. The following direct impacts on land use may result from the operation of the No-Action Alternative.

Land and Shoreline Use

Modify Existing Land Uses on the Project Area

As with the Proposed Action, the No-Action Alternative would expand existing or introduce a new industrial use to the project area. However, because the project area and surrounding area already contain industrial uses, the No-Action Alternative would not change the land use character of the

project area substantially and would be generally consistent with other land uses in the 500-foot study area, except for the two single-family residential uses, as discussed below. As discussed above, land use within the 500-foot study area is already characterized by the presence of many industrial and transportation/utility land uses. The No-Action Alternative would be consistent with these industrial and transportation/utility land uses, including the Weyerhaeuser facility, the Port Industrial Marine property, and the Mint Farm Industrial Park located just outside the 500-foot study area.

Introduce Expanded or New Industrial Use near Residential Land Uses

Two single-family residential uses are located adjacent to the project area within the 500-foot study area. These uses currently coexist with existing industrial uses on the project area and nearby. Therefore, the No-Action Alternative would not likely directly affect the adjacent residential uses regarding land use compatibility. Potential impacts on these residential uses related to noise, air quality, and transportation (i.e., vehicular and rail traffic) are discussed in the respective technical reports.

Parks and Recreation Facilities and Agricultural Areas

The No-Action Alternative would not directly affect parks and recreation land uses because of the distance between the project area and such uses, nor would it have the potential to result in direct impacts on agricultural land uses.

3.1.2.4 Operations: Indirect Impacts

The No-Action Alternative would be compatible with land use conditions within the broader Longview-Kelso study area. In particular, the No-Action Alternative would be consistent with the existing concentration of industrial land uses along the Columbia River. Downstream from the project area, the Closed BMP Facility would separate the No-Action Alternative from the currently undeveloped Barlow Point property. Furthermore, the Port may redevelop the Barlow Point property in the future, and such port-related land uses, which are expected to include a marine facility and other industrial activities as discussed in the Port's Comprehensive Scheme of Harbor Improvements, would be compatible with the No-Action Alternative land use. The large-lot residential and agricultural land uses downstream from Barlow Point are approximately 1 mile from the project area and would be separated from the project area by the Barlow Point property and the Closed BMP Facility. Therefore, the No-Action Alternative would not impact the land use conditions in this area.

The No-Action Alternative would not impact land use conditions in the remainder of the Longview-Kelso study area indirectly. Most land uses outside the corridor of industrial and transportation/utility uses along the Columbia River are separated from the project area by at least 1 mile. Furthermore, the nearest residential uses to the north on Mount Solo (aside from the two residences adjacent to the project area) are located approximately 0.5 to 0.75 mile from the project area and are buffered by dense vegetation on Mount Solo. More densely developed residential neighborhoods to the north are buffered from the project area by Mount Solo.

The No-Action Alternative could increase rail and truck traffic due to expanded coal, alumina, and industrial chemical handling operations. This increase in rail and truck traffic would be compatible with existing industrial land uses along these transportation corridors. Land uses adjacent to the rail lines currently coexist with rail traffic, including the transportation of coal and other commodities,

and the No-Action Alternative would not change the land uses along the rail corridors. Overall, the operation of the No-Action Alternative may not result in indirect impacts on land or shoreline use.

3.1.2.5 Consistency with Zoning, Land Use Plans, and Public Policies

The No-Action Alternative would be consistent with the stated purpose of the existing Heavy Manufacturing County zoning designation and would comply with the permitted uses and associated development standards and requirements. The No-Action Alternative, like the Proposed Action, would maintain and expand the industrial use of the project area and would be consistent with the current Heavy Industrial designation of the project area in the *Cowlitz County Comprehensive Plan*, as well as the Economic Resource Lands – Industrial designation in the draft updated Cowlitz County Comprehensive Plan.

As with the Proposed Action, the No-Action Alternative would be required to obtain a critical areas permit for any development within designated critical areas, including any required mitigation measures, and as a result would be consistent with public policy related to critical areas protection. The No-Action Alternative would also need to comply with legal restrictions or covenants tied to cleanup of the project area.

Overall, the No-Action Alternative would be consistent with zoning and public land use plans policies applicable to the project area.

3.2 Mitigation

Based on the findings in this technical report, the co-lead agencies (Cowlitz County and Washington State Department of Ecology) determined mitigation measures are not required.

Chapter 4 Required Permits

The Proposed Action would require the following permits related to land use and shoreline use.

- **Shoreline Substantial Development—Cowlitz County Department of Building and Planning.** The Proposed Action would result in new development within the shoreline area regulated by the County SMP. Therefore, it would require an SSDP from Cowlitz County.
- **Shoreline Conditional Use Permit—Cowlitz County Department of Building and Planning/Washington State Department of Ecology.** The Proposed Action may require dredging activities on urban shorelines. Dredging is a conditional use on urban shorelines, and therefore the Proposed Action would require a CUP from Cowlitz County.
- **Critical Areas Permit—Cowlitz County Department of Building and Planning.** The Proposed Action would be constructed in designated critical areas, and therefore would require a Critical Areas Permit.
- **Building and Site Development Permits—Cowlitz County Department of Building and Planning.** The Proposed Action would require building and site development permits, such as fill and grade permits, plumbing permits, fire permits, mechanical permits, etc., from the Cowlitz County Department of Building and Planning for any earthwork, construction of new structures or alteration of existing structures.

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Appendix A

Properties and Land Use in the Study Area

Appendix A

Properties and Land Use in the Study Area

Table A-1. Properties within 500-Foot Study Area—Proposed Action

Property Owner	Tax Parcel(s)	Acres	Zoning	Land Use
Port of Longview	106980100, 106970100, 106990100	25.51	HI	Vacant
City of Longview (CDID #1)	107080100, 107090100, 10219, 619530201	32.80	HI and MU-C/I	Diking right-of- way
BNSF Railway	61948, 61951, WI3100003	16.47	MH	Railroad right-of- way
Bonneville Power Administration	6195303, 61954, 1021401	46.99	MH and MU-C/I	Substation
3 B's Land & Gravel, LLC	106850100, 106930100	11.83	HI	Vacant land
Private	106880100	4.94	HI	Single-family residence
Private	106870100	2.52	HI	Parcel with small outbuildings
Private	106860100	2.38	HI	Single-family residence
Northwest Alloys, Inc.	619530400	271.55	MH	Closed Reynolds landfill (westernmost portion), existing MBTL facilities
Northwest Alloys, Inc.	61953	86.81	MH	Existing MBTL bulk terminal
Northwest Alloys, Inc.	61950	60.00	MH	Shoreline berm at existing MBTL terminal
Northwest Alloys, Inc.	10213	100.47	MU-C/I	Vacant land
Northwest Alloys, Inc.	1021501	0.06	MU-C/I	Vacant building
USA	61954	22.00	MH	BPA Substation
Washington State Department of Transportation	SR 432 (Industrial Way)	N/A	No Zoning	Transportation right-of-way

Source: Cowlitz County, 2014
 MH: Heavy Manufacturing (Cowlitz County)
 HI: Heavy Industry (City)
 MU-C/I: Mixed Use – Commercial/Industrial (City of Longview)