

3.1 Land and Shoreline Use

Land and shoreline use refers to how land and shorelines are developed for various purposes, including residential, commercial, parks and recreation, agricultural, and industrial uses. It also refers to the preservation or protection of land for natural uses. Development projects, such as the Proposed Action, must be compatible with surrounding land uses and must comply with all state and local regulations and policies governing land and shoreline use.

This section describes land and shoreline use and zoning in the study areas, and the consistency of the Proposed Action with land use plans and public policies. It then describes impacts on land and shoreline use that could result from construction and operation of the Proposed Action and No-Action Alternative. This section also presents the measures identified to mitigate impacts resulting from the Proposed Action.

3.1.1 Regulatory Setting

Laws and regulations relevant to land and shoreline use are summarized in Table 3.1-1.

Table 3.1-1. Regulations, Statutes, and Guidelines for Land and Shoreline Use

Regulation, Statute, Guideline	Description
Federal	
Clean Water Act (33 USC 1251 <i>et seq.</i>)	Authorizes EPA 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 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. Cowlitz County is required to designate and protect critical areas under the GMA, but is otherwise not required to fully plan under GMA.
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.

Regulation, Statute, Guideline	Description
Local	
Cowlitz County Shorelines Management Regulations (CCC 19.20)	Adopted in 1977 in accordance with requirements of the SMA and Cowlitz County shorelines management regulations. Defines goals, policies, and objectives that apply to development within shoreline areas of Cowlitz County. A draft update is currently in public review; adoption is expected in fall 2016.
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.
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.
<i>Cowlitz County Comprehensive Plan</i> (Cowlitz County 1976)	Adopted in 1976 and amended in 1981 to manage Cowlitz 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.
Notes: USC = United States Code; EPA = U.S. Environmental Protection Agency; WAC = Washington Administrative Code; RCW = Revised Code of Washington; County = Cowlitz County government; GMA = Growth Management Act; SMA = Shoreline Management Act; Ecology = Washington State Department of Ecology; CCC = Cowlitz County Code	

3.1.2 Study Area

The study area for 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 (Figure 3.1-1). The study area for each element of this resource varies, as presented in this section.

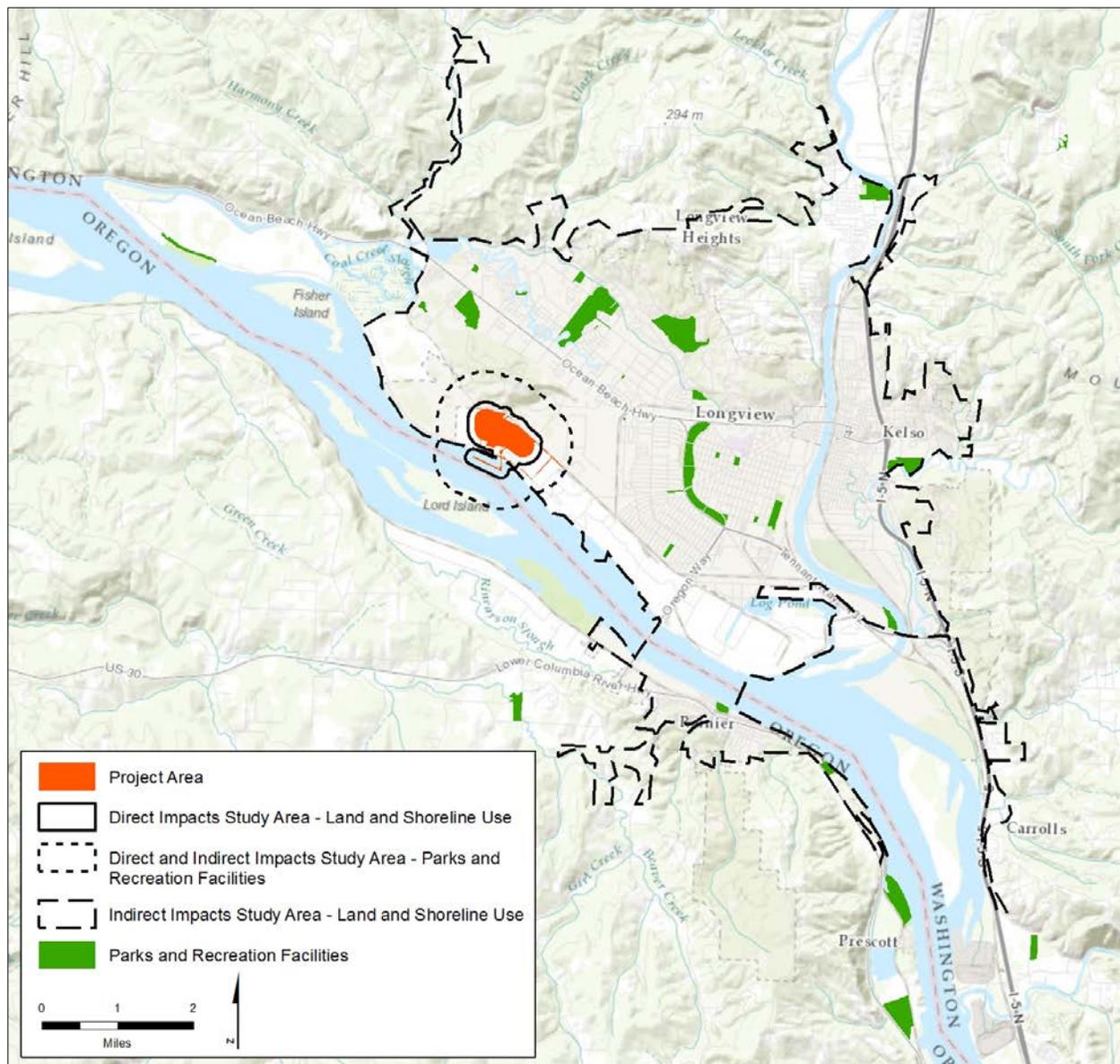
3.1.2.1 Land and Shoreline Use, including Zoning and Consistency with Comprehensive Plans

For direct impacts, the study area for land use and shoreline use is the project area and the area within 500 feet of it, including the Columbia River. For indirect impacts, the study area is the Longview-Kelso urban area and nearby unincorporated areas of Cowlitz County.¹

When assessing consistency with zoning regulations, comprehensive plans, and other public plans and policies, the study area is the project area and the area within 500 feet of it.

¹ 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.

Figure 3.1-1. Land and Shoreline Use Study Areas



3.1.2.2 Parks and Recreation Facilities

For direct and indirect impacts, the study area for parks and recreation facilities is the area within 0.5 mile of the project area; it also includes 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.

3.1.2.3 Agricultural Land

For direct impacts, the study area for agricultural land is defined as the project area. For indirect impacts, the study area is defined as the area within 500 feet of the project area.

3.1.3 Methods

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

3.1.3.1 Information Sources

A variety of data sources were used to evaluate the land and shoreline use characteristics of the study areas and to define applicable public policies. These sources included field surveys, geographic information systems data, census data, comprehensive plans and shoreline master programs for Cowlitz County (County), other public policy documents, government and private business websites, and other documents. A full inventory of data sources used in the land use analysis is provided in the *SEPA Land and Shoreline Use Technical Report* (ICF International and BergerABAM 2016).

3.1.3.2 Impact Analysis

The impact analysis assesses whether the changes to land and shoreline use in the project area would be compatible with surrounding land uses and with applicable land use plans and policies, zoning ordinances, and shoreline regulations. In general, the assessment of the compatibility of land and shoreline use is based on the types of uses, their intensities, and their proximity to one another.

3.1.4 Existing Conditions

This section describes the existing environmental conditions in the study areas related to land and shoreline use that could be affected by the construction and operation of the Proposed Action and the No-Action Alternative.

3.1.4.1 Land Use Plans and Public Policies

Land use and shoreline resources in the study areas are guided by a variety of land use plans and public policies, which include comprehensive plans, shoreline master programs (SMPs), transportation plans, critical area regulations, and other plans. The applicable land use plans and public policies are discussed in detail in the *SEPA Land and Shoreline Use Technical Report*. The *Cowlitz County Comprehensive Plan* (Comprehensive Plan) (Cowlitz County 1976), *Shorelines Management Master Program for Cowlitz County, Washington* (SMP) (Cowlitz County 1977), and Cowlitz County Critical Areas Protection ordinance are summarized below.

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. The County is not required to fully plan under the GMA, but counties not fully planning under the GMA are required to prepare a comprehensive plan with elements defined in Revised Code of Washington (RCW) 36.70.330.

The Comprehensive Plan designates the project area as Heavy Industrial (Cowlitz County 1976). The plan states that the purpose of the industrial classification is to “assure the presence of adequate

amounts of land for industrial growth in Cowlitz 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). The *SEPA Land and Shoreline Use Technical Report* includes the applicable Comprehensive Plan map for the project area. The technical report also summarizes the eight goals in the Comprehensive Plan that relate to the Heavy Industrial designation.

The March 2015 draft Comprehensive Plan map and April 2015 draft Comprehensive Plan text that are part of the current update designate the project area as Economic Resource Lands – Industrial. The draft Comprehensive Plan is in review by the Cowlitz County Planning Commission and adoption by the Board of County Commissioners is anticipated in late 2016.

Cowlitz County Shoreline 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 County’s current SMP was approved in 1977. It includes four basic shoreline environment designations: natural, conservancy, rural, and urban. The Columbia River, part of the project area, is a shoreline of statewide significance. The areas under shoreline jurisdiction in the project area include the Columbia River and all areas within 200 feet of the ordinary high water mark (OHWM) (Figure 3.1-2). The County’s 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). 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 populations of Cowlitz County. Figure 3.1-2 shows the regulated shoreline jurisdiction within the project area.

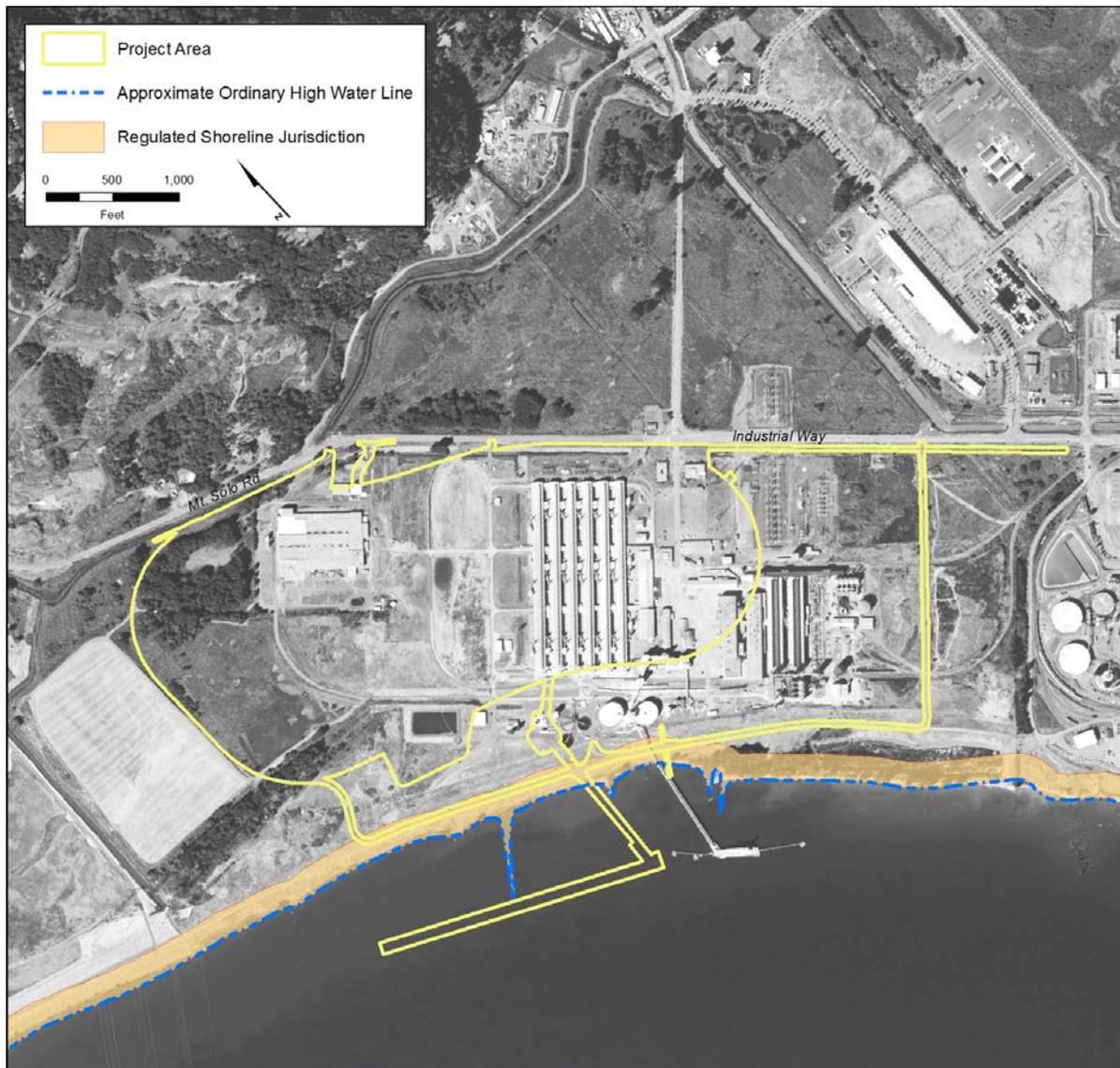
The County’s SMP establishes use regulations for 21 shoreline use activities. These use regulations supplement other land use regulations and identify the shoreline management issues that must be addressed to implement the goals of the SMP. According to these regulations, ports and water-related industries are permitted uses in urban shorelines.

To achieve the overall goals of the Shoreline Management Act, the County’s 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 County’s SMP is undergoing a comprehensive update to meet the requirements of the revised 2003 and 2011 Shoreline Master Program Guidelines based on Washington Administrative Code (WAC) 173-26. 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 the Washington State Department of Ecology (Ecology) and adoption by the Cowlitz County Board of Commissioners. Adoption of the SMP is anticipated in late 2016.

Portions of the shoreline just downstream from the project area are under the jurisdiction of the City of Longview. The City of Longview updated SMP became effective August 10, 2015.

Figure 3.1-2. Regulated Shoreline Jurisdiction



Cowlitz County Critical Areas Protection

CCC 19.15, the Cowlitz County Critical Areas Ordinance, 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 2014). Frequently flooded areas and fish and wildlife habitat conservation areas are found along the shoreline of and within the Columbia River.

These plans and policies set the context for land use and shoreline development in the study areas.

3.1.4.2 Land Use and Shoreline Resources

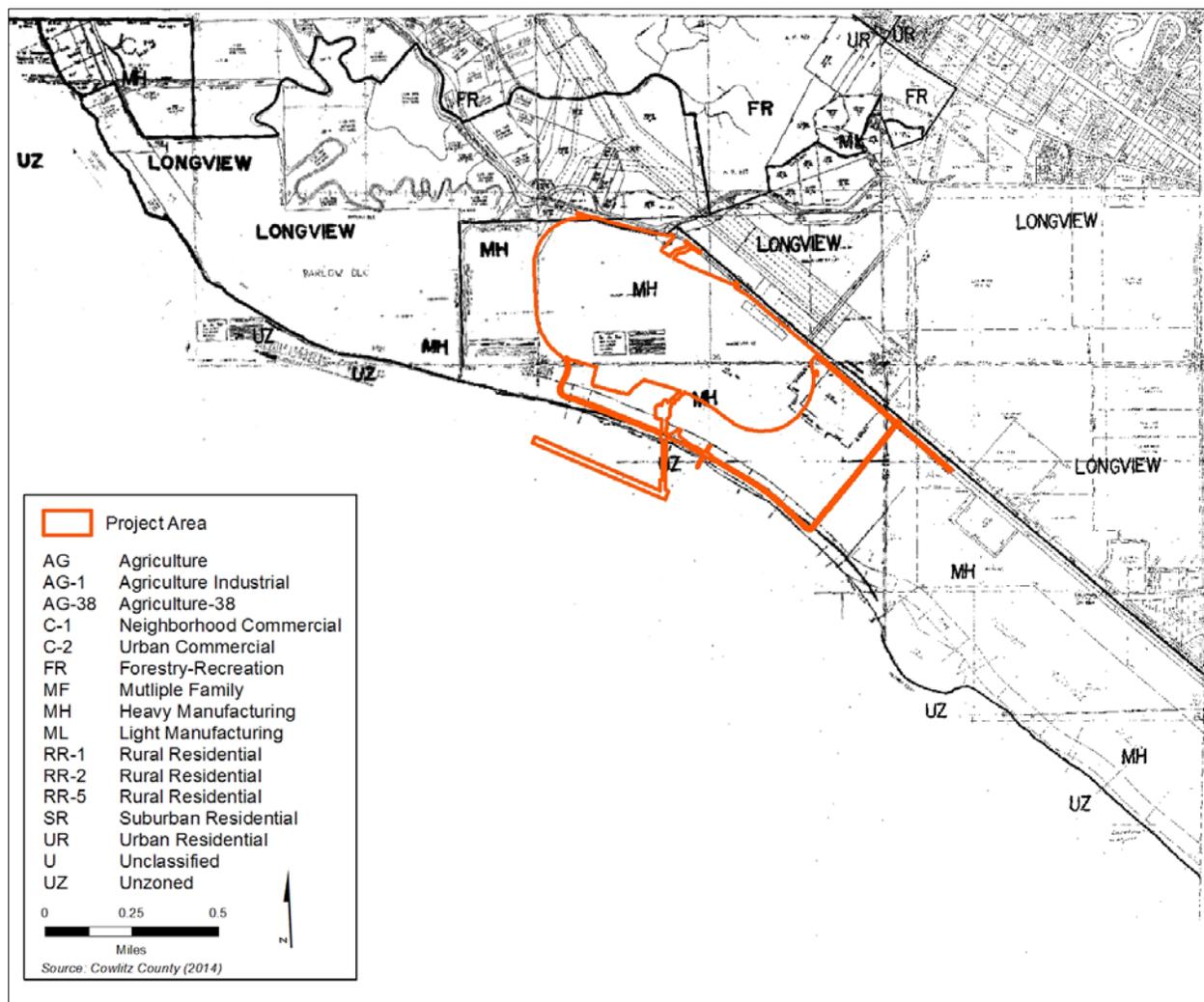
The following section presents the characteristics of the existing environment related to land use and shoreline resources by study area.

Project Area

The project area is in unincorporated Cowlitz County and is subject to Cowlitz County Code (CCC). County zoning regulations are established in the Land Use Ordinance (CCC 18.10). The zoning regulations establish permitted uses, various building and lot dimension standards, and other requirements for development in Cowlitz County. The zoning regulations are the principal tool for implementing the goals and policies of the Comprehensive Plan (Cowlitz County 1976).

The project area is zoned Heavy Manufacturing, as shown in Figure 3.1-3.

Figure 3.1-3. Cowlitz County Zoning



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

... 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.

The project area is an approximate 190-acre upland portion primarily within the Applicant’s leased area, as well as the in-water area where two 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 Railway Company (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.

The Applicant’s leased area has been in 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 site in May 2000 and remains the owner, and the Applicant now operates the existing facility on a ground lease with Northwest Alloys (Washington State Department of Ecology 2014). 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. Today, portions of the project area are used for industrial purposes,² but 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 to address contamination from the former aluminum smelting and casting uses (Washington State Department of Ecology 2014).

The Applicant states that facilities in the project area include four office buildings, maintenance sheds, potlines for storing 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 and rail facilities associated with the Reynolds Metals Company operations. The project area also overlaps with two parcels currently owned by BPA and

² A full list of existing uses in the project area and the Applicant’s leased area is provided in the *SEPA Land and Shoreline Use Technical Report* (ICF International and BergerABAM 2016).

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 rail line.

While most of the project area is developed, its undeveloped western limit consists of open areas of grass and wetlands, and there is an approximate 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 Improvement District (CDID) #1.

Figure 3.1-4 shows the existing land uses in the vicinity of the project area; land uses in the broader Longview-Kelso study area are discussed further in this section.

500-Foot Study Area

The 500-foot study area includes portions of unincorporated Cowlitz County and the City of Longview. Unincorporated areas of Cowlitz County are subject to the zoning provisions of CCC 18.10, which is described in the previous section. Areas in Longview are subject to the zoning established by Title 19 of the Longview Municipal Code (LMC).

The zoning designations for parcels within the 500-foot study area are provided in the *SEPA Land and Shoreline Use Technical Report*. The parcels in the City of Longview are within the Heavy Industrial and Mixed Use – Commercial/Industrial zones (City of Longview 2014).

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.

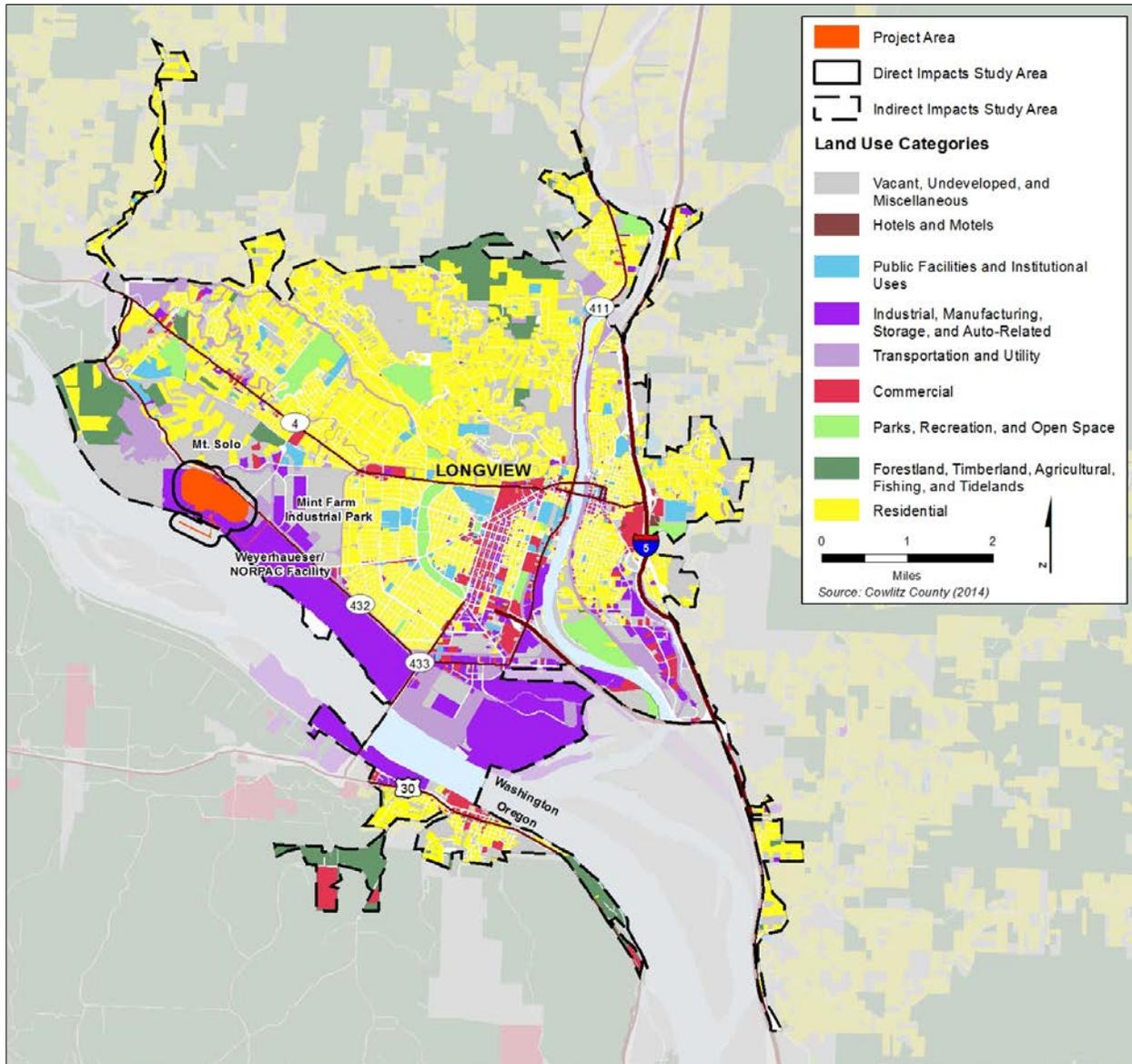
LMC 19 states the Mixed Use – Commercial/Industrial zone is intended to

... 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 establishes dimensional standards (i.e., minimum lot size, frontage, setbacks; maximum building heights, and maximum impervious area) for the Heavy Industrial and Mixed Use – Commercial/Industrial zoning districts.

The 500-foot study area contains predominantly industrial, transportation/utility land uses, along with two single-family residences. A portion of the 500-foot study area is occupied by an existing bulk products terminal within the Applicant's leased area, which includes upland facilities, a dock on the Columbia River capable of receiving Panamax-sized vessels, and rail and road connections. The bulk products terminal is used by the Applicant to import, store, and transfer bulk alumina and coal. Alumina imported by ship is stored and then transferred by rail to an Alcoa smelter near Wenatchee, Washington. 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.

Figure 3.1-4. Existing Land Use



Industrial Way (State Route 432) is northeast of the project area. Trains on the Reynolds Lead deliver and ship alumina and coal from the existing 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.

Immediately west of the project area is the closed Black Mud Pond (BMP) facility, which previously served the Reynolds Metals Company facility. A cryolite recovery plant was constructed in 1953 as part of the Reynolds facility. 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 BMP impoundment, which was formally closed in 1992, has been subject to an

approved ongoing maintenance and monitoring program overseen by Ecology. No further remedial activities related to the closed BMP facility are required in the final cleanup action plan.

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

Two single-family residences are across Industrial Way/Mt. Solo Road from the project area and are the only residential uses in the 500-foot study area. These houses are on wooded lots set back from the street.

While no formally designated recreation areas 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 on the Columbia River passes by the project area (Lower Columbia Estuary Partnership 2014).

No agricultural land or activities occur in the 500-foot study area.

The *SEPA Land and Shoreline Use Technical Report* lists the parcels and associated land uses located in the 500-foot study area.

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 Cowlitz 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 in this study area (Figure 3.1-1).

The Longview-Kelso study area includes a 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, 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), Industrial Way (State Route 432), Interstate 5, State Route 433, and State Route 411 through Longview and Kelso, Washington, along with U.S. Route 30 (US 30) in Rainier, Oregon. Another prominent transportation link in the Longview-Kelso study area is the BNSF main line and the Columbia & Cowlitz Railway. The BNSF main line generally runs along the Columbia and Cowlitz Rivers, with spurs serving downtown Longview and the industrial areas along the Columbia River, including the project area (BNSF Spur and Reynolds Lead). The Columbia River is a key marine transportation link serving the Longview-Kelso study area. 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. Other major industrial uses include the 550-acre Weyerhaeuser Company lumber products manufacturing site/North Pacific Paper Corporation facility along the Columbia River; the Port of Longview's 478-acre Port Industrial Marine property, which includes eight marine terminals; and 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. The Barlow Point property, an undeveloped area downstream (west) of the project area along the Columbia River and within the City of Longview, was recently purchased by the Port for future port improvements (Port of Longview 2011).

Aside from the two residences located across Industrial Way/Mt. Solo Road from the project area, nearby residential uses include several single-family residences on Mount Solo, a steep hill 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. 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.

Development in Kelso is concentrated primarily between the Cowlitz River and Interstate 5. Land use patterns are characterized by commercial uses along Ocean Beach Highway. Residential uses exist further north and south of the corridor, and there is 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. As in Longview, residential uses in Kelso are predominantly low-density, single-family, detached dwellings.

As shown in Figure 3.1-1, 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.

The Lewis and Clark Bridge (State Route 433) spans the Columbia River upriver 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.

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. The *SEPA Land and Shoreline Use Technical Report* identifies the locations of the major public facilities in the Longview-Kelso study area.

3.1.4.3 Parks and Recreation Facilities

There are no parks or recreation facilities in the 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 must share the use of the river with 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). The nearest boat launches are located at Rainier Riverfront Park in Rainier, across the Columbia River and approximately 4 miles upstream, and at Willow Grove Boat Launch, approximately 4 miles downstream. The *SEPA Land and Shoreline Use Technical Report* includes a map of these nearby park and recreation uses.

3.1.4.4 Agricultural Land

As defined previously, the study area for agricultural land uses is the project area and the area within 500 feet of it. There are no agricultural zoned land or agricultural land uses in the study area.

3.1.5 Impacts

This section describes the potential direct and indirect impacts related to land and shoreline use that would result from construction and operation of the Proposed Action and No-Action Alternative.

3.1.5.1 Proposed Action

This section describes the potential impacts that could occur in the study areas as a result of construction and operation of the Proposed Action.

Construction would proceed in two stages and would last approximately 9 years. Construction activities would include building demolition, site preparation (e.g., clearing, grading, and earthwork), ground preloading in preparation for coal stockpiles, equipment installation, rail loop construction, dredging, and in-water and upland construction of docks, trestles, and conveyors. As construction of the initial stages of the Proposed Action is completed, start-up operations would commence while the remainder of the Proposed Action is under construction. Therefore, both construction and operational activities would occur at the project area during part of the overall construction period. Construction of the coal export terminal would temporarily generate traffic, noise, dust, smoke, vibration, and other impacts.

Construction—Direct Impacts

Chapter 2, *Project Objectives, Proposed Action, and Alternatives* describes construction-related activities within the project area. These activities would not change land and shoreline use in the project area.

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.

Operations—Direct Impacts

Operation of the Proposed Action would result in direct impacts. Operations-related activities are described in detail in Chapter 2, *Project Objectives, Proposed Action, and Alternatives*. In operation, the Proposed Action could have a maximum annual throughput capacity of up to 44 million metric tons per year. The Proposed Action would consist of one operating rail track, eight rail tracks for storing up to eight unit trains, rail car unloading facilities, a stockpile area for coal storage, conveyor and reclaiming facilities, two new docks in the Columbia River (Docks 2 and 3), and shiploading facilities on the two docks. Trains would transport coal in unit trains (meaning all the rail cars would carry the same commodity) 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 vessels at Docks 2 and 3. Dredging of the

Columbia River would be required to provide access to and from the Columbia River navigation channel and for berthing at Docks 2 and 3. Vehicles would access the project area from Industrial Way, and vessels would access the project area via the Columbia River and berth at Dock 2 or 3. Terminal operations would occur 24 hours per day, 7 days per week.

Land Use and Shoreline Resources

Direct operations-related impacts on land and shoreline use are discussed below.

Modify Existing Land and Shoreline Uses in 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 the 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, except for the two single-family residential uses discussed below, the land use character of the project area would remain generally consistent with other land uses in the 500-foot study area.

Introduce New, Intensive Industrial Use near Residential Land Uses

The Proposed Action would introduce new, intensive industrial uses near two single-family residences north of the project area. These residences currently coexist with industrial uses in the project area and nearby. Therefore, the Proposed Action would not directly affect these uses with respect to land use compatibility.

Parks and Recreation Facilities

Because there are no parks and recreation facilities 500-foot study area, the Proposed Action would not result in direct impacts on parks and recreation facilities.

The Proposed Action would not affect 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 of construction, the Proposed Action would introduce approximately 70 additional ships per month (840 per year) to the Columbia River. Although the Proposed Action would add commercial ship traffic to the river, recreational users (such as those using the river for fishing or boating) currently must take account of commercial vessels, including large oceangoing ships. With the additional vessels, the Proposed Action would result in an approximate 46% increase over current river vessel traffic.³ 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.

³ 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 Chapter 5, Section 5.4, *Vessel Transportation*, Table 5.4-7.

Agricultural Land

There are no agricultural zoned land or agricultural land uses in the study area. Therefore, the Proposed Action would not result in any direct impacts on agricultural land uses.

Operations—Indirect Impacts

Operations-related activities are described in Chapter 2, *Project Objectives, Proposed Action, and Alternatives*.

Land Use and Shoreline Resources

The Proposed Action would be compatible with land use conditions in the broader Longview-Kelso study area, and would be consistent with the existing concentration of industrial land uses along the Columbia River, in particular the Weyerhaeuser and Port facilities upriver from the project area.

The Proposed Action would not change land use patterns in the remainder of the Longview-Kelso study area. 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 residential uses to the north on Mount Solo are approximately 0.5 to 0.75 mile from the project area. More densely developed residential neighborhoods to the north are buffered from the project area by Mount Solo. Land uses in the Rainier, Oregon portion of the study area would continue to be separated from the project area by the Columbia River, thus, the Proposed Action would not affect land use conditions in the Rainier area.

While the Proposed Action would increase rail traffic, this traffic would not alter land use because existing land uses currently coexist with rail traffic, including the transportation of coal. The Proposed Action would increase commercial ship traffic along the Columbia River. However, the Columbia River is currently used for marine transportation. The additional ship traffic would be consistent with this ongoing use.

The Proposed Action would not introduce a substantial new population that would generate demand for parks 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 Proposed Action would not affect land use trends or conditions in the Longview-Kelso study area.

Consistency with Zoning

The Proposed Action would be consistent with the existing Heavy Manufacturing zoning designation and would comply with the permitted uses and associated development standards and requirements. 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. Per CCC 18.10.236, 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. Overall, the Proposed Action would be consistent with existing zoning regulations.

Consistency with Land Use Plans and Public Policies

The Proposed Action's consistency with the Cowlitz County Comprehensive Plan, SMP, and Critical Areas Protection Ordinance are summarized below. A full discussion of the Proposed Action's consistency with all applicable land use plans and public policies is provided in the *SEPA Land and Shoreline Use Technical Report*.

Cowlitz County Comprehensive Plan

As discussed above, the current 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 Cowlitz 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 in the *SEPA Land and Shoreline Use Technical Report*.

The Proposed Action would also be consistent with the Economic Resource Lands – Industrial designation of the project area in the draft updated 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 Shoreline Management Master Program

The Proposed Action would result in development within the shoreline area regulated by the County's 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.

The 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.

Newly proposed dredging is a conditional use on urban shorelines. Therefore, new development on the project area would require a Shoreline Substantial Development Permit for any new structures within the shoreline jurisdiction, and a Conditional Use Permit for proposed dredging activities.

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. The Applicant 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 policy related to critical areas protection.

The Proposed Action's consistency with the applicable policies and use activity regulations of the SMP are discussed in the *SEPA Land and Shoreline Use Technical Report*.

3.1.5.2 No-Action Alternative

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

Construction—Direct Impacts

Although the coal export terminal would not be constructed under the No-Action Alternative, 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.

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.

Operations—Direct Impacts

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

Land and Shoreline Resources

Direct operations-related impacts on land and shoreline resources are discussed below.

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. Land use within the study area is already characterized by the presence of many industrial and transportation/ utility land uses.

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 rail transportation, vehicle transportation, noise, and air quality (are discussed in Chapter 5, Sections 5.1, *Rail Transportation*; 5.3, *Vehicle Transportation*; 5.5, *Noise and Vibration*; and 5.6, *Air Quality*).

Parks and Recreation Facilities and Agricultural Land

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.

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

Consistency with Zoning, Land Use Plans, and Public Policies

The No-Action Alternative would be consistent with the stated purpose of the County's existing Heavy Manufacturing zoning designation and would comply with the permitted uses and associated development standards and requirements. The No-Action Alternative 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 Comprehensive Plan, as well as the Economic Resource Lands – Industrial designation in the draft update of the Comprehensive Plan.

The No-Action Alternative could result in development within the shoreline jurisdiction that would require a Shoreline Substantial Development Permit from the County. Development under the No-Action Alternative would be expected to be consistent with the objective of the urban designation of the site. 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 site.

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

3.1.6 Required Permits

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

- **Shoreline Substantial Development—Cowlitz County Department of Building and Planning.** The Proposed Action would result in new development in the shoreline area regulated by the County's SMP. Therefore, it would require a Shoreline Substantial Development Permit.
- **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. New dredging is a conditional use on urban shorelines; the Proposed Action would require a Conditional Use Permit from the County. The Conditional Use Permit requires final approval from Ecology.
- **Critical Areas Permit—Cowlitz County Department of Building and Planning.** The Proposed Action would be constructed within 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.

3.1.7 Potential Mitigation Measures

The Proposed Action would be compatible with surrounding industrial land uses and consistent with the existing zoning and comprehensive plan designations for the project area. Although the Proposed Action would introduce a new industrial use nearby the two single-family residences adjacent to the project area, the Proposed Action would not directly affect these uses with respect to land use compatibility. Therefore, no land use and shoreline use mitigation measures are required.

3.1.8 Unavoidable and Significant Adverse Environmental Impacts

There would be no unavoidable and significant adverse environmental impacts on land and shoreline use.