

**STAFF REPORT
(Exhibit C-1)**

To: Cowlitz County Hearing Examiner

Agenda Item No.: 1

From: Ron Melin, Senior Environmental Planner
Elaine Placido, Director

Dept. of Origin: Building & Planning

Date Submitted: October 19, 2017

Reviewed and Approved:

For Agenda of: November 2, 2017

Elaine Placido, Director

Expenditure Required: N/A

Re: Open Record Public Hearing

Shoreline Management Substantial Development and Conditional Use Permit application submitted by Millennium Bulk Terminals – Longview, LLC to construct and operate a coal shipping and export terminal, and dredging in and adjacent to the Columbia River, an urban shoreline of statewide significance.

Permit No. 17-0992

Open Record Public Hearing

Attending: Staff will attend.

List of Exhibits:

- C-2 - JARPA (July 13, 2016)
- C-3 - Critical Areas Permit Issued July 19, 2017
- C-4 - Shoreline Application Notice September 8, 2017
- C-5 - Hearing Notice
- C-6 - SEPA Determination
- C-7 - SEPA Final EIS
- C-8 - Shoreline Application Response Document
- C-9 - Coal Export Terminal Wetland Impact Report – Parcel 619530400
(Grette Associates, September 15, 2014)
- C-10 - Conceptual Mitigation Plan (Grette Associates, May 25, 2017)
- C-11 - Sediment Characterization Report (Dalton, Olmsted, Fuglevand, July 12, 2017)
- C-12 - 2017 Dredge Material Management Program (DMMP) Dredge Suitability Determination
- C-13 - Oregon Department of Environmental Quality Acceptance of Dredge Material at Ross Island
- C-14 - Economic & Fiscal Impacts of Millennium Bulk Terminals Longview (Berk, April 12, 2012)

Summary Statement and Staff Recommendation:

The applicant, Millennium Bulk Terminals – Longview, LLC, has filed application for shoreline substantial development and conditional use permits to construct and operate a coal shipping and export terminal within the shoreline jurisdiction of the Columbia River, and to conduct dredging for berthing areas in conjunction with the development of two new docks as part of the coal export terminal. The project area lies within the Urban District designation (Cowlitz County SMP - 1977).

Staff recommends that the Hearing Examiner, at the November 2, 2017 hearing, approve, with **36 conditions**, shoreline substantial development and conditional use permit application No. 17-0992, submitted by Millennium Bulk Terminals – Longview, LLC, to construct and operate a coal export terminal, and to conduct

dredging for berthing areas in conjunction with the development of two new docks, in and adjacent to the Columbia River, an **urban** shoreline of statewide significance.

Recommended Hearing Examiner Action:

Approve with conditions, substantial development and conditional use permit application No. 17-0992 submitted by Millennium Bulk Terminals – Longview, LLC.

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1 APPLICATION 12-04-0375 – 4029 Industrial Way

1.1 Project Location

The project is located at 4029 Industrial Way, Longview, WA, within the northwest and northeast of Sections 35 and 36, Township 8 North, Range 3 West, and southwest and southeast of Sections 25 and 26, Township 8N, Range 3 West, Willamette Meridian, at approximately Columbia River Mile 63, within Parcel numbers 619530400, 61950, 61953, WDNR Aquatic Lands Lease #20-B09222, and BPA parcels 61954 and 6195303. The project will be located on approximately 190-acres, within a 540-acre site. A map depicting the portions of the southern boundary falling within the Urban Shoreline District is found at Sheets 3 and 12 of the JARPA (Exhibit C-2).

1.2 Project Description

Millennium Bulk Terminals – Longview, LLC (MBT-Longview or Applicant) has filed application for a shoreline substantial development permit (Exhibits C-2 and C-4) within the Columbia River shoreline to construct a marine terminal designed to transload coal arriving from the Powder River and Uinta Basins via train. The applicant's operations consist of unloading and stockpiling the coal on an approximately 190-acre upland site, and then transferring the coal via conveyors to load onto ocean-going ships for Pacific markets. The proposed coal export terminal project ("CET" or "Project") will include the construction of two new docks and a trestle within the shoreline. MBT-Longview has also filed application for a shoreline conditional use permit (Exhibits C-2 and C-4) to allow dredging between the shipping lanes and the dock area in the Columbia River to enable ships to reach the new docks.

The application for a shoreline substantial development permit includes the installation of shiploading and associated equipment on Dock 2 for Stage 1 of the Project, allowing the export of approximately 25 million metric tonnes per year (MMTPY) of coal. During Stage 1, Dock 3 will be used as a lay berth. In Stage 2, a second shoreline substantial development permit application will be submitted to allow the installation of shiploading and associated equipment on Dock 3, to increase the export capacity to 44 MMTPY. It is anticipated that the construction of Stage 2 would occur beginning at the completion of Stage 1, within approximately 3 to 5 years.

The Applicant leases 540 acres in Cowlitz County from Northwest Alloys (NWA). The leased area is the location of the former Reynolds Metals Company facility (Reynolds facility). The Reynolds facility was constructed in 1941 to support World War II efforts. Reynolds Metals Company expanded in 1968, and operated as an aluminum smelter until 2001 when smelter operations ceased. The former Reynolds facility had an intensive industrial use and, at the time of its closure in 2001, employed approximately 800 workers, and operated 24 hours per day, 7 days per week. In 2000, Reynolds Metals Company was acquired by Alcoa as a wholly owned subsidiary. In 2001, the Longview facility site assets were sold to Longview Aluminum, but ownership of the land was retained by the Reynolds Metals Company. Longview Aluminum declared bankruptcy in 2003. In 2004, Chinook Ventures purchased Longview Aluminum's assets, including the buildings, structures and equipment, and entered into a long-term land lease with the Reynolds Metals Company, who owns the 540 acres. In 2005, Alcoa transferred ownership of the land from the Reynolds Metals Company to Northwest Alloys, a wholly owned subsidiary of Alcoa, Inc. Northwest Alloys also has an existing Aquatic Lands Lease No. 20-B09222 from the Washington Department of Natural Resources (WDNR) through January 2038 for the adjacent aquatic lands where portions of the Project will be located. The WDNR lease authorizes three 220 foot ship docks for vessel transloading.

Since 2011, the Applicant has completed work to remedy alleged lease violations caused by a prior occupant of the NWA and WDNR property, including:

- Remove unpermitted and unstable structures.

- Remove equipment and storage sheds left behind by Chinook Ventures.
- Dispose of wastes generated during the removal process, including recycling two-thirds of the 260,000 total tons (8,600 semi-truck loads) of materials removed from the site.
- Fix the damaged levy.
- Remove old creosoted pilings from the Columbia River.
- Upgrade the potable water system and employee facilities.
- Restore the dock fire system.
- Repair the landfill cap.
- Clean other equipment and buildings

NWA and the Applicant are also actively engaged in environmental cleanup from historic activities on the property and continue to work with local, state, and federal regulatory agencies to clean up the site. The Applicant's leased area continues to support industrial operations and is currently used as a bulk product terminal that includes both marine and upland facilities.

The 190-acre project area was separated from bulk terminal in the remainder of the Applicant's leased area through a lot boundary adjustment to develop a coal export terminal. The remaining land within the Applicant's leased area is intended to be used for other purposes, including the continued operation of the existing bulk product terminal.

Dredging and Dredge Disposal

Dredging is required to accommodate berthing of fully-loaded Panamax class ships at the new docks (Docks 2 and 3). Existing depths in the berth areas range from -28 to -42 ft CRD and the side slope areas are typically deeper than -20 ft CRD (Exhibit C-2, Sheets 12 and 13).

The Applicant proposes to dredge to a berthing depth of -43 ft CRD with an additional two-foot overdredge allowance (Exhibit C-2, Sheets 12 and 13). All areas of proposed dredging are located over 500 ft from ordinary high water (OHWM). The side slopes would be dredged at 3H:1V to transition to the existing mudline. This would allow a depth of at least -43 ft CRD to be achieved up to the dock face for the entire length of the berth. In order to account for deposition that may occur between permit submittal and construction, the Applicant is requesting authorization for dredging and disposal of up to 350,000 cubic yards from within the project footprint to allow for a volume of deposition equal to 10 percent greater than the volume of the dredge prism shown on JARPA Sheets 12 and 13 (i.e., based on the most current survey, the anticipated dredge volume is 320,000 cubic yards and the permit volume is 10 percent higher). Actual dredging would be limited to that volume necessary to accomplish the depth, overdredge, and area requirements shown on Sheets 12 and 13. The Applicant has proposed specific work windows to the U.S. Army Corps of Engineers (Corps) that would allow Project dredging to be completed over a two-year schedule. The Applicant-proposed work window for dredging is from August to December subject to Corps final approval.

The Applicant will also perform routine maintenance dredging, as needed, consistent with the proposed dredge prism dimensions. Based on sediment accretion rates measured in the berth at the existing dock (Dock 1), it is expected that accretion in the Docks 2 and 3 berthing/navigation basin could represent an annual volume of between approximately 5,000 and 24,000 cubic yards. Maintenance dredging is therefore anticipated to occur on a multi-year basis, or as-needed following extreme-flow events. The Project as proposed would include a 10-year maintenance dredge program for Docks 2 and 3 to dredge up to 100,000 cubic yards of infill as frequently as annually in order to maintain the depths authorized during deepening. Washington's Shorelines Management Act exempts maintenance activities from permit requirements but the maintenance dredging will be authorized by the Corps.

The Applicant has worked through the Dredged Material Management Office (DMMO) at Seattle District Corps to get approval for disposal of the dredged material. A Sampling and Analysis Plan (SAP) was submitted in May 2017 and approved by the Corps and the other Dredged Material Management Program (DMMP) agencies. Sediment samples were collected shortly thereafter from the berthing area and submitted for conventional and chemical analysis. Based on the sediment characterization results, the DMMP agencies issued a Suitability Determination for the characterized material for in-water disposal in the Columbia River. Documentation of the process with the DMMO is referenced in Exhibit C-11: *Sediment Characterization Report*; Exhibit C-12: *2017 Dredge Material Management Program (DMMP) Dredge Suitability Determination*; and Exhibit C-13: *Oregon Department of Environmental Quality Acceptance of Dredge Material at Ross Island*.

Concurrent to their work with the DMMO at the Seattle District Corps, the Applicant is also pursuing authorization from the Portland District Corps pursuant to Section 14 of the Rivers and Harbors as codified in 33 USC 408 (commonly referred to as "Section 408"). During the Section 408 Review, challenges arose in locating a suitable in-water disposal site. The Applicant has proposed to utilize the Ross Island Sand and Gravel site, a site in Oregon outside of the jurisdiction of Cowlitz County. Oregon DEQ has approved this reuse of the sediments (see Exhibit C-13). Approval from the Portland District Corps is pending.

Dock and Trestle Construction

In-Water Work

Most of the approach trestle and the entire dock structure would be located waterward of OHWM and require in-water and above-water construction. In-water dock and trestle construction would primarily involve pile driving.

Pile Driving

Construction of the approach trestle and Docks 2 and 3 would require both impact and vibratory pile driving. Up to 603 36-inch steel piles would be installed below ordinary high water and up to 19 would be installed above ordinary high water (Exhibit C-2, Sheets 3 through 7). Each pile would require use of both vibratory and impact pile drivers. The Applicant has proposed specific work windows that would allow pile driving to be completed over a two-year schedule. For in-water vibratory pile driving, the work window would be January through February. For in-water impact pile driving the work window would be from September to December. The in-water work windows will be determined by the Corps.

Above-water Work

Above-water work would include finishing the dock structures and installation of the materials handling infrastructure. Concrete dock components including pile caps, stringers, and decking would consist of both cast-in-place and pre-cast components. Placement of pre-cast components, such as trestle girder "tees", would be accomplished using barge-based construction equipment. Many concrete components (such as the Docks 2 and 3 decking, crane rails, and pile caps) would need to be cast in place. Appropriate techniques and best management practices (BMPs) would limit potential for uncured concrete coming in contact with surface water. Remaining above-water work including finishing fender systems, railings, etc. would be completed using a combination of barge- and dock-based equipment, as needed.

Materials handling infrastructure including shiploaders and conveyors would be delivered by barge and offloaded by crane directly to the docks and trestle. Barges would not offload materials or equipment on the beach. As much as practicable, infrastructure would be pre-fabricated so that above-water work would largely consist of installation.

Utilities including sanitary sewer, potable water, fire water, process water, electrical, compressed air, telecommunications, and other wiring utilities would be attached to the trestle and dock structure. A water collection system would also be attached to the trestle and dock structure. A comfort station would be constructed where the trestle meets the dock to provide restroom and meal room facilities on the dock. A pump system would be included to convey sewage from the dock to a conveyance system which will connect to the City of Longview’s sewage collection system.

The above-water portion of the dock structures and installation of the marine terminal infrastructure would take place both during and outside of authorized in-water work periods.

Permanent Alterations

The dredge prism is located below -20 ft CRD. While dredging would remove material and temporarily disturb the area (Table 1, below), there would be no significant habitat conversion (e.g., shallow water habitat converted to deep water habitat) resulting from that action. Maintenance dredging would result in future periodic disturbance in this deeper area.

Construction of the approach trestle and docks would result in a permanent structure in aquatic areas (Table 1). Less than 5 percent of pile and less than 10 percent of overwater cover would be in areas shallower than -20 ft CRD.

**Table 1
Permanent Alterations from Project Activities (Aquatic)**

Element	Above -20 ft CRD	Below -20 ft CRD	Total
Dredge Prism (volume/area)	0/0	350,000 ¹ cubic yards	350,000 ¹ cubic yards/ 48 acres
Pile (36-inch), count	Approximately 26	Approximately 577	up to 603 ²
Pile, area	184 ft ²	4,079 ft ²	4,263 ft ²
Overwater cover, total	0.30 acres	4.83 acres	5.13 acres

¹Includes 10% additional volume to account for deposition prior to dredging.

²Up to 622 total piles; 603 would be below ordinary high water and 19 would be in the upland.

Vessel Facilities

The proposed Docks 2 and 3 would be constructed west (downstream) of Dock 1. The docks would be oriented parallel to shore and together would be approximately 2,202 feet in length by 90 feet in width, except where Dock 2 joins the trestle is slightly wider (127 ft in width). Vehicle and pedestrian access and coal transfer to the docks would be provided by a single trestle extending approximately 850 feet from shore, at a slight angle off of perpendicular from shore to join Dock 2. From shore, the trestle would measure 24 feet in width for 700 feet, and 51 feet in width for the final 150 feet. Dock 2 would include a shiploader and associated loading equipment. Dock 3 would be used as a lay berth during Stage 1 of the Project. A second shoreline substantial development permit will be applied for to allow for the installation of a shiploader and associated loading equipment on Dock 3 for Stage 2 of the Project. The main shipping channel in the Columbia River is 43 feet deep at low tide (-43 feet Columbia River Datum). The docks and shiploader would be able to accommodate Panamax-class vessels and Handymax-class vessels. The fleet mix is estimated at approximately 80% Panamax-class vessels and 20% Handymax-class vessels. The Applicant has stated there would be no vessel bunkering at Docks 2 and 3.

Vessels would be loaded using a shiploader that would include an enclosed boom and loading spout. The loading spout would also be telescopic and would be inserted below the deck of the vessel during vessel

loading to avoid and minimize dust dispersion. Shiploader cleanup and washdown would be done with pressurized water and all water would be captured and contained, and then conveyed to upland water-treatment facilities.

Shoreline Elements

Of the actions described above, only a subset would occur in Cowlitz County jurisdictional shoreline areas (200 ft landward of the OHWM and all areas waterward of the OHWM) (See Exhibit C-2, Sheets 3, 12 and 14.) These include:

Stage 1

- 220 linear ft of land-based conveyor delivering material to the approach trestle;
- Two conveyor belt pile-supported foundations;
- The entire approach trestle, including abutment and areas above OHWM (including driving up to 19 36-inch diameter steel piles and 220 linear feet of elevated approach trestle);
- The entire Dock 2 and 3 structures;
- One shiploader;
- The entire dredge prism;
- 230 linear ft of new asphalt road to provide access to the trestle. This includes improvements to existing roads accessing the levee and a small vehicular turnaround. This area is entirely above OHWM. The road would require approximately 1,200 cubic yards of fill; and
- The Off-Channel Slough Mitigation Site which would convert an isolated pond into an off-channel slough habitat complex with a surface connection to the Columbia River.

Stage 2

- A second conveyor; and
- A second shiploader.

Stages 1 and 2 will be permitted under a single Corps authorization. Ship loading facilities for Stages 1 and 2 will be permitted under separate shoreline substantial development permits. Application has been made to Cowlitz County for this Shoreline Substantial Development Permit to construct Docks 2 and 3, and to install shiploading facilities on Dock 2. Application has also been made to the County for a Shoreline Conditional Use Permit for dredging within the shoreline portion of the river. This dredging would allow ship access from the Columbia River navigation channel and berthing at Docks 2 and 3. Stage 2 ship loading facilities, to be located on Dock 3, are not included in the current Shoreline Substantial Development Permit application to Cowlitz County.

As shown on Sheet 14 of the JARPA (Exhibit C-2), all wetlands proposed to be filled are located outside of the shoreline area.

Operations

The facility would be designed for 24-hour operation, seven days per week. At maximum throughput, an average of 2.3 vessels per day, or 70 vessels per month would be loaded. For Stage 1, an estimated 40 vessels per month (1.3 vessels per day) would be loaded

Prior to or during loading, vessels would discharge ballast water. Vessels calling at the Project Site would have exchanged or treated ballast water prior to discharge in accordance with state and federal regulations. Vessels would not typically withdraw ballast water from the Columbia River.

The approach trestle and Docks 2 and 3 would be adequately lighted to meet worker safety requirements to allow 24-hour operation.

Upland Development – Existing Bulk Product Terminal

The existing bulk product terminal is within the Applicant's 540-acre leased area. The terminal includes buildings and equipment used for various activities. The terminal is served by Industrial Way and the Reynolds Lead. Vessels access the terminal from an existing dock (Dock 1), which is located on the Columbia River.

The existing bulk product terminal includes rail facilities, storage, conveyors and transfer stations, vessel facilities, and other buildings and employee-support facilities. The terminal handles a variety of products such as alumina and coal.

Rail Facilities

The existing bulk product terminal is located on the Reynolds Lead, an existing rail line serving several industries and connects via Reynolds Lead and the BNSF Spur to the BNSF main line rail network approximately 7 miles away at Longview Junction. The BNSF Spur consists of a track through Longview Junction yard, across the Cowlitz River Bridge, and through the Longview Switching Company (LVSW) yard. The Reynolds Lead consists of a track from the LVSW yard to the project area. The Reynolds Lead covers the majority of the distance between the project area and the BNSF main line.

Bulk materials are received and shipped by railcars at an unloading area of the existing bulk product terminal called the Central Transfer Tower. The Central Transfer Tower is an enclosed building receiving bulk material from railcars using a gravity fed bin under the rail line.

Storage

Storage of alumina and coal at the existing bulk product terminal occurs in storage tanks. Six vertical storage tanks store bulk material near the southern portion of the facility. Three of these tanks receive material from the Central Transfer Tower for storage prior to shipping the material by truck. Two of the remaining tanks are for the storage of bulk materials that then feed to the last of the six tanks for transfer and shipment by train. Maximum capacity for handling materials varies by tank from 30 to 100 tons per hour (Southwest Clean Air Agency 2014).

The existing bulk product terminal includes four additional storage tanks used during previous smelter operations. Currently, one tank is empty and the other three tanks contain material from previous operations, but are in the process of being emptied by the Applicant. In addition, there are miscellaneous storage tanks on site, including fuel tanks.

The bulk product terminal includes an area in the central portion of the site called the North Plant Potrooms (approximately 600,000 total square feet). Various bulk products from previous operations were stored in these buildings. The potrooms have been cleared by the Applicant but remain available for storage as necessary.

Conveyors and Transfer Stations

The existing bulk product terminal includes a conveyor system extending from the bulk material unloading facilities to the storage tanks or truck loading areas. Existing conveyors are enclosed and use either a wet suppression system or dust-collection equipment to minimize fugitive emissions during the transfer of bulk materials.

Vessel Facilities

The existing bulk product terminal includes Dock 1, which is currently used to unload alumina from vessels and to berth other ships. Dock 1 is directly south of the existing terminal's upland facilities and provides vessels access to the terminal via the Columbia River at the existing berthing area. The dock includes an overwater approach trestle and equipment to unload bulk materials from the vessels. Current vessel traffic at the dock is approximately six to seven ships accessing the dock per year, or less.

Facilities for vessel transloading include a vacuum system used for alumina shipments. The existing ship berth has been periodically dredged to maintain sufficient depth to support alumina shipments and other vessels.

Buildings and Employee-Support Facilities

The existing bulk product terminal includes a former cable plant building, an approximately 270,000-square-foot facility with associated ancillary structures occupying the northwestern corner of the area. The terminal also includes various buildings and employee-support facilities including four office buildings, two cast house buildings, a carbon plant, and several maintenance sheds.

Upland Development – Proposed Coal Export Terminal

The proposed CET would be developed on an approximately 190-acre site within the Applicant's 540-acre leased area, adjacent to the existing bulk product terminal described above. As described on page 8 of this Report, the CET would be constructed in two stages; during Stage 1 approximately 25 MMTPY would be exported, and Stage 2 would increase total export to 44 MMTPY.

Trains would transport coal in unit trains (meaning all the rail cars carry the same commodity) from the BNSF main line at Longview Junction 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 two new docks (Docks 2 and 3) to be located in the Columbia River for export. During Stage 1, Dock 3 would be used as a lay berth. Shiploading equipment and associated facilities would be added to Dock 3 for Stage 2 under a separate shoreline substantial development permit.

Construction of the proposed CET would involve clearing and grading, construction of rail and coal handling facilities including eight storage track loops to provide staging for arriving and departing trains, as well as a tandem rotary dumper, conveyors, stackers, and reclaimers. The stockpile area would be located within the rail loop and consist of four discrete stockpile pads. The stockpile area would require ground improvements, which would entail preloading of the stockpile area. Approximately 2.1 million cubic yards of preloading material (e.g., rock, dirt, concrete or other appropriate material) would be placed on the stockpile area to a height of approximately 35 feet.

Wick drains would be placed within the stockpile area to reduce the time required for preloading, from an estimated 18 months to 9 months. The wick drains would allow groundwater to be expelled from beneath the stockpile area and allow the necessary ground settlement to occur.

The CET could have a maximum annual throughput capacity of up to 44 million metric tons per year with construction of both Stage 1 and 2. Stage 1 could have an estimated annual throughput capacity of 25 MMTPY. The CET would consist of one operating rail track, eight rail tracks for storing up to 8 unit trains (Stage 1 and 2), rail car unloading facilities, a stockpile area for coal storage, and conveyor and reclaiming facilities, in addition to the dock and trestle described above within the shoreline.

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. Vessels would be loaded at Dock 2. Dock 3 would be used as a lay berth in Stage 1. Coal export terminal operations would occur 24 hours per day, 7 days per week. The CET would be designed for a minimum 30-year period of operation.

Development landward of the OHWM will include the following:

The proposed CET facilities would include the following.

- Rail facilities
- Coal stockpile area
- Conveyors, transfer stations, and buffer bins
- Supporting facilities

The following provides a summary of these proposed facilities, based on the project design and project description provided by the Applicant.

Rail Facilities

No improvements are necessary to the BNSF main line, BNSF Spur or the Reynolds Lead that serve the Project area. Rail tracks within the Project area would be modified to accommodate unit train access to and from the coal export terminal. Unit trains would move from the Reynolds Lead into a rail loop system where the trains would be directed to an unloading station to unload coal. The rail loop would have one operating track and eight loop tracks to provide storage for arriving and departing trains, and to allow unit trains to travel to and from the Reynolds Lead. Grade-separated roadways above the rail tracks would be provided to allow access to and within the project area. During Stage 1, it is anticipated that an average of 5 trains per day will arrive and unload, and this will increase to 8 trains during Stage 2.

A portion of the rail loop could be constructed on two parcels currently owned by Bonneville Power Administration (BPA). One parcel contains an access road and substation. To maintain or provide for pedestrian and vehicular access to BPA facilities, the Applicant would construct an access road between the CET access road and the BPA yard, and install a gate to the BPA yard at a location to be determined by BPA. According to the Applicant, BPA will not make a determination whether to sell or grant an easement to the Applicant until after the Corps publishes the National Environmental Policy Act Final EIS for the coal export terminal.

Unit trains would enter the coal export terminal from the east and move through the rail loop in a counter-clockwise direction until the train was contained within the terminal rail loop. The rail loop would be able to accommodate up to 8 unit trains. Once unloaded, trains would be redirected in a clockwise direction on the inner-most rail loop and would then be able to exit the coal export terminal.

Unloading facilities would be constructed to unload coal from rail cars within an enclosed structure. Two rail cars would be simultaneously positioned inside a fully enclosed, metal-clad building (Exhibit C-7, Appendix C, Sheet 5). The unloading facilities would contain equipment to rotate rail cars and discharge the coal from the rail cars into a large hopper (Figure 2-5).

As the tandem rotary dumper rotates the rail cars and begins to unload the coal into hoppers beneath the dumper, sprayers would spray water to avoid and minimize dust dispersion within the enclosed structure. The hopper beneath the rotary dumper would feed coal onto a conveyor at a nominal rate of 7,500 metric tons per hour. The conveyor would move the coal to the stockpile area (Exhibit C-7, Appendix C, Sheets 5 through 13).

During start-up operations of the CET, a rapid discharge (i.e., bottom) unloader, located within an enclosed building, would be used to unload rail cars. The rapid discharge unloader would be retained after start-up operations for potential future use.

Coal Stockpile Area

The inner portion of the rail loop would include coal stockpile storage pads and associated stacking and reclaiming equipment to place and move coal. The open-air stockpile area would consist of four parallel stockpile pads and five berms. The stockpile area would cover approximately 75 acres and would be served by four rail mounted stackers and four bucket-wheel reclaimers that would be associated with conveyors.

The stockpile pads together would be able to hold approximately 1,500,000 metric tons of coal. The pads would vary in length from 2,200 to 2,500 feet and could hold from 360,000 to 400,000 metric tons each. Coal would be stacked to approximately 85 feet above the pads. The pads and berms would be made of low-permeability engineered material. The stockpiles and berms would be graded to allow the water to drain and be collected for treatment and reuse or discharge. The use of low-permeability engineered materials for formation of the pads and berms would control water from entering subsurface soil or groundwater. The Final EIS (Exhibit C-7, p. 4.7-30) concludes there will be no significant adverse impacts from coal dust.

Water Systems

Industrial water supply needed for operations of the coal export terminal and fire protection would be supplied from treated water stored on site from the terminal's water-treatment facility. During dry weather, water would be supplemented from on-site wells as needed. An on-site storage reservoir would provide water required for normal operations (i.e., dust control, stockpile spray, equipment wash-down) and emergency fire demand. A separate pumping system would be designated for the emergency fire system, where appropriate, to provide redundancy and to supply additional pressure where needed. Peak process water demand would be approximately 5,000 gallons/minute (gpm). Peak emergency fire water demand would be approximately 1,500 gpm. Peak potable water demand would be approximately 185 gpm based on anticipated labor force at full build-out. The bulk product terminal's stormwater detention pond would be relocated (Exhibit C-7, Appendix C, Sheet 2) and would store treated stormwater, collected from the bulk product terminal area and treated in the stormwater-treatment facilities. All water (stormwater and process water) within the limits of the proposed rail loop, trestle and docks would be collected and conveyed to new water-treatment facilities (including a new detention pond). Treated water would be used to maintain process water within the new water pond.

Excess treated water would be discharged to the Columbia River at the existing outfall (Outfall 002A, refer to Exhibit C-7, Chapter 4, Section 4.2 for more information). Process water would be used for operations, such as for dust control and sprayers at the tandem rotary dumper, along all conveyers, the stockpile areas and transfer towers and surge bins. Exhibit C-7, Appendix C, provides plan sheets for various project elements. Process water would also be used for wash-down and cleanup of equipment such as conveyors, under-belt plating, bins, hoppers and walkways. All process water—as well as stormwater from the rail loop and those areas within the rail loop, trestle, and docks—would be collected, conveyed, treated, and stored on site. The proposed trestle and docks would have capture and containment measures beneath them and all water captured would be conveyed to water-treatment facilities. Excess treated water would be discharged to the Columbia River. The Final EIS (Exhibit C-7, p. 4.5-43) concludes there will be no significant adverse impacts to water quality.

Conveyors, Transfer Stations, and Buffer Bins

A network of belt conveyors would transport coal from the rail car-unloading facilities to the stockpile area, and from the stockpile area to the vessel-loading facilities, or from rail cars directly to the vessel-loading facilities. Multiple conveyors would connect at transfer stations that would redirect the flow of coal. Buffer bins

might be included as necessary to provide storage capacity in the conveyor system to allow continuous coal reclaiming and transfer. All belt conveyors and transfer stations would be fully enclosed, except for the stockpile area and vessel-loading conveyors, which would be open due to their operational requirements.

Water Drainage and Treatment

Drainage systems would be designed such that runoff within the coal export terminal would be collected for treatment before reuse or discharge. The terminal's water-treatment facility would be designed to treat all surface runoff and process water with capacity to store the water for reuse. Treatment would be as required to meet reuse quality or Ecology's requirements for off-site discharge. Additional water storage would be provided in the coal storage area during large storm events. Water volumes exceeding the demands for reuse would be discharged off site via an existing outfall into the Columbia River. Water released off site would be treated and would meet Ecology's requirements and required permits.

Supporting Facilities

The CET would also include the following support facilities.

- Roadways and bridges to provide vehicular access throughout the coal export terminal
- Service and administration buildings
- Stormwater-management facilities
- Utility infrastructure
- Electrical transformers
- Switchgear and equipment buildings
- Process-control systems

1.3 Shoreline Mitigation Plan

The Applicant submitted a Conceptual Mitigation Plan (Exhibit C-10) evaluating fish and wildlife habitat impacts, discussing onsite and construction impact-minimization measures, and proposing additional fish and wildlife habitat mitigation within the 540-acre MBT-Longview lease area. The Applicant proposes to create an off-channel slough feature as aquatic mitigation ("Off-Channel Slough Mitigation Site"). The Mitigation Plan also evaluates wetland impacts, and proposes off-site wetland mitigation. As shown on Sheet 14 of the JARPA (Exhibit C-2), all wetlands proposed to be filled are located outside of the shoreline. Wetland mitigation, which is entirely distinct from and in addition to the Off-Channel Slough Mitigation Site, is off-site and outside of shoreline areas. Implementing the Conceptual Mitigation Plan is a condition of the Critical Areas Permit issued by the County (see Section 2.10 Critical Areas Permit below). The Final EIS (Exhibit C-7, p. 4.3-16) concludes there will be no significant adverse impacts to wetlands. The Critical Areas Permit (Exhibit C-3) and Final EIS (Exhibit C-7) were not appealed and the Conceptual Mitigation Plan (Exhibit C-10) is not addressed in greater detail in this document.

The Off-Channel Slough Mitigation Site would convert an isolated pond into an off-channel slough habitat complex with a surface connection to the Columbia River. The Off-Channel Slough Mitigation Site is currently located waterward of the Consolidated Diking and Improvement District (CDID) levee, but is separated from the Columbia River by a berm. The Off-Channel Slough Mitigation Site would provide approximately 7.4 acres of new off-channel slough habitat (below OHWM; +11.1 ft CRD) and incorporate emergent and scrub-shrub wetland, and forested riparian habitat. The slough's elevation would range from a minimum of +4 ft CRD up to OHWM to provide a range of habitat at varying river elevations and support a daily, year round surface connection to the Columbia River. It is anticipated that the Off-Channel Slough Mitigation Site would function as highly productive off-channel slough wetland and riparian complex, benefitting smaller subyearling

salmonids as rearing and refuge habitat and larger yearling salmonids of all Evolutionary Significant Units (ESUs) as a net-exporter of primary- and secondary-production.

Construction of the Off-Channel Slough Mitigation Site would entail:

- Excavating the outer berm to a maximum of approximately +22 ft CRD;
- Clearing/grubbing the outer berm of non-native species, leaving mature trees in place to the extent possible;
- Placing fill in the pond to a minimum elevation of +4 ft CRD;
- Excavating an inlet through the outer berm to connect the Site to the Columbia River;
- Placing rock and large woody debris around the inlet for long-term stability;
- Revegetating the Site with native emergent, shrub, and tree species.

The Off-Channel Slough Mitigation Site will be monitored for a 10-year period following project construction. Year 0 will be defined as the first growing season after planting. The Off-Channel Slough Mitigation Site will be monitored once during the growing season of each monitoring year. Monitoring reports will be submitted to Cowlitz County, WDFW, WDOE, and the Corps by December 31 of each monitored year.

Sufficiency of Mitigation

To mitigate shoreline impacts, the Applicant proposes to construct the Off-Channel Slough Mitigation Site. The new dock would reduce productivity and diminish habitat function due to shading, and the new pile area would result in full loss of habitat function in these areas. As discussed in the Conceptual Mitigation Plan (Exhibit C-10), active channel migration (ACM) and shallow water habitat (above -20 ft CRD) provides greater habitat function for juvenile salmonids than deep water habitat (below -20 ft CRD). Per the Corps and EPA (2008), mitigation must be “sufficient to replace the lost aquatic resource functions” (p. 19693). According to that guidance, the sufficiency of mitigation is to be calculated either by an appropriate functional or conditional assessment method, or where not available using a minimum one-to-one acreage or linear foot compensation ratio (Corps and EPA 2008).

Full habitat function loss would occur within the pile footprint (0.01 acre in ACM/shallow water and 0.09 acre in deep water), and diminished habitat function would occur beneath the dock area (0.30 acre in ACM/shallow water and 4.83 acres in waters deeper than -20 ft CRD; 5.13 acre in total). Habitat beneath the dock would still be functional, though at a marginally diminished rate. Further, impacts of dock shading are greater in shallow water than in deep water. For this reason, a strict one-to-one mitigation ratio for dock area would over-compensate for aquatic habitat impacts. Even if a one-to-one ratio was used, the Off-Channel Slough Mitigation Site would satisfy the mitigation criterion, as it would provide 7.4 acres of new aquatic habitat to compensate for impacts to 5.13 acres¹ of habitat.

It should also be noted that the Off-Channel Slough Mitigation Site currently provides low levels of habitat function. As discussed in the Conceptual Mitigation Plan, the pond provides some habit function for non-ESA-listed species such as waterfowl, amphibians, and reptiles. The pond does not provide habitat for ESA-listed salmonids, and (under existing conditions) any that enter at high river levels would likely be stranded. Construction of the Off-Channel Slough Mitigation Site would not result in a net loss of habitat functions. Rather, it would retain and enhance all of the desirable habitat functions that the pond currently provides, and also eliminate the negative function of stranding risk.

¹ This assumes total loss of habitat function from the dock shading. For this reason, pile footprint is not added to the total as it is accounted for within the dock footprint

A function-based assessment would account for the fact that dock shading diminishes rather than eliminates habitat function, that deep water is of less value to juvenile salmonids than ACM/shallow water, and that shading reduces deep water habitat function proportionately less than that of ACM/shallow water. One such function-based assessment method is the Habitat Equivalency Analysis (HEA) model (see Exhibit C-10 for an explanation of the HEA model). A HEA model specific to the lower Columbia River has not been developed or approved by permitting agencies; however, the Port of Longview has developed a project-specific modification to the Lower Willamette River HEA, which was approved by the Corps, NMFS, WDFW, and Ecology. This HEA model has been used.

To determine the sufficiency of the Off-Channel Slough Mitigation Site to offset aquatic impacts, both the impact site and the Mitigation Site have been analyzed using this HEA model. A detailed analysis is presented in the Mitigation Plan. See Conceptual Mitigation Plan included as Exhibit 9. In summary, the Site would generate 203.2 discounted service acre years (DSAYs), and the CET Project's aquatic impacts were calculated at 15.4 DSAYs. Thus, the Site would more than compensate for the aquatic impacts of the Project.

2 FINDINGS

2.1 Comprehensive Plan:

The shoreline application is vested under the 1976 Comprehensive Plan; as such, the project has not, and will not, be reviewed under the newly-adopted (2017) Comprehensive Plan. The 1976 Comprehensive Plan designations are: Land Use element – Industrial Heavy (MH) and Shoreline element – Urban.

The goals and policies of the Comprehensive Plan regarding lands designated MH, and that are applicable to the project, are listed below. Each goal-supporting policy is followed by staff findings pertaining to the conformity of the project with that particular goal or policy.

GOAL: *PROVIDE FOR ADEQUATE LAND TO ACCOMMODATE A MODERATE LEVEL OF ECONOMIC GROWTH IN COWLITZ COUNTY.*

POLICY:

Industrial parks should be planned and provided for the accommodation of industrial growth. Planned industrial parks have the advantage of providing for the orderly development and efficient use of required public and private supporting facilities and services. They are also potentially more compatible with non-industrial land uses.

Staff Finding: The 540-lease area is designated for heavy industrial use and has supported heavy industry for many years but is not designated as an industrial park.

POLICY:

Undeveloped industrial land should be banked for a 10 to 15 year industrial growth period.

Staff Finding: The current Comprehensive Plan was adopted in 1976. The subject industrial land has been developed and used for heavy industry since the 1940s, a period of over 70 years; this policy is inapplicable to the Project area.

POLICY:

Encroachment by incompatible non-industrial land uses should be discouraged in those vacant areas banked for industrial use. Agriculture activities, forestry uses, or open space should be encouraged as the appropriate interim land use for areas banked for industrial use.

Staff Finding: As mentioned before, the Comprehensive Plan was adopted in 1976. The subject industrial land has been used continuously for heavy industry since the 1940s. A vacant portion of the larger 540-acre lease area located north of Industrial Way is banked for industrial use. It is currently used as open space until there are plans for development.

GOAL: 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.

Staff Finding: Sewer and water connections to local utilities have been recently installed and the subject industrial land has been connected to the city sewer system. Potable water is also provided by the local utility.

GOAL: 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.

POLICY:

Industrial activities which discharge pollutants shall adhere to all federal, state, and local pollution abatement requirements. Non-nuisance industrial growth should be encouraged. A "nuisance" industry is one having a pollution problem including odor, noise, or visual pollution which, because of the nature of the industrial activity, cannot be adequately controlled.

Staff Finding: Rail unloading, conveyors, stockpiling activities, and shiploading of coal can create noise and dust during operations. The County hired an independent third-party consultant, ICF, to prepare a SEPA Environmental Impact Statement for the project. ICF's noise technical experts performed a noise analysis for both construction and operations and concluded for construction noise: "The maximum noise level at the closest noise-sensitive receptor (the residence at 104 Bradford Place) during construction is predicted to be 83 A-weighted decibels (dBA), which would occur during pile driving. While not a regulatory noise standard for construction noise, to provide context, this noise level would exceed the FTA/FRA noise level criteria of 80 dBA for construction noise when pile activities occur within approximately 1,500 feet of this residence. The maximum predicted vibration levels at the closest vibration-sensitive receptor (the residence at 104 Bradford Place) would be 72 velocity decibels during pile driving. While not a regulatory standard for vibration during construction, to provide context, this vibration level would not exceed FTA/FRA criteria for maximum allowable vibration from construction at residences. Therefore, while construction of the Proposed Action would emit vibration from pile driving, the vibration would be not be substantive enough to have an adverse impact at the nearest residence." (SEPA Final EIS Section 5.5.5.1 included as Exhibit 6) The SEPA FEIS concludes in the Summary section "Construction of the Proposed Action would result in a temporary increase in noise and vibration. Construction noise would primarily occur during daylight hours and would be generated primarily from construction equipment, such as pile-driving equipment, backhoes, cement mixers, and excavators. The greatest noise levels would result from pile driving. Implementation of the proposed mitigation measure (Table S-2) to monitor and control increased noise at the residence closest to the project area and taking action if a noise impact is detected could reduce construction noise. While construction of the Proposed Action would emit vibration from pile-driving, no adverse vibration impacts during construction are expected at the closest noise-sensitive receptors."

The EIS findings for operation were: "Noise from coal export terminal operations is projected to exceed the Washington State noise standard at one residence (104 Bradford Place). The residence where the exceedance would occur is within the 50-dBA contour, which is the applicable Washington State limit for nighttime noise levels in a residential area when the noise is from an industrial source. The

predicted noise level at the residence is 55 dBA. This predicted noise level is comparable to the current nighttime noise level at this location. Other residences are located outside the noise level limit contours or would be shielded by topography. As described in Section 5.5.3, Methods, no vibration impacts associated with operation of the CET are anticipated. No substantial sources of ground vibration would occur at the project area during operations, and the closest vibration-sensitive receptor is too far away to be affected by vibration from trains on the rail loop in the project area.” (FEIS page 5.5-18 included as Exhibit 6)

According to the EIS (Exhibit C-7, page 5.5-31): *“Noise impacts from coal export terminal operations in the project area could be reduced through terminal design or installing building sound insulation for residences that would be exposed to noise levels above the applicable Washington State maximum permissible noise level as a result of the Proposed Action. Given the preliminary nature of the coal export terminal design and operations, it is not known at this time whether terminal design would prevent noise levels from exceeding the applicable standard at all noise-sensitive receptors. If the design would not prevent exceedance of the maximum permissible noise level (WAC 173-60), mitigation of noise impacts from terminal operations could be addressed by the following measure.” (See recommended permit condition below.)*

The terminal design features to control noise are consistent with this Comprehensive Plan policy. Staff recommends that the following be added as a condition of permit approval to provide monitoring to measure compliance with applicable county noise ordinance: *Monitor and Control Increased Noise from Coal Export Terminal Construction and Operations at Closest Residences. If agreed to by the property owner(s), the Applicant will monitor noise levels at the two residences nearest the project area to detect possible noise impacts from the CET during construction and operations. If no agreement with property owners can be reached, noise monitoring will take place at the residential property line. Noise will be monitored during construction and until at least 6 months after initiation of operations. The Applicant will submit monthly noise reports to Cowlitz County Building and Planning. If the monitoring identifies a noise impact due to coal export terminal operations, the Applicant will reduce the noise exposure with modifications to terminal operations or installation of building sound insulation at the noise receptor.*

Indirect noise impacts are anticipated to occur from vehicle and rail traffic. The EIS at page 5.5-20 concluded: *“Vehicles traveling to and from the project area, mainly on Industrial Way, represent a potential source of noise impacts during operations. As illustrated in Section 5.3, Vehicle Transportation, the annual average daily traffic on Industrial Way would increase approximately 5.7% under the CET. In general, a doubling of average daily traffic would be required to increase the Ldn from vehicular traffic by 3 dBA at the noise-sensitive receptors. In general, changes in a noise level of less than 3 dBA - as would be expected from the increase in traffic under the CET - would not be noticed by the human ear. Therefore, no noise-related indirect impacts from operations would be expected.”*

At full coal export terminal operations, rail operations serving the CET would add 16 trains daily on the Reynolds Lead and BNSF Spur (8 loaded and 8 empty trains). Rail operations serving the CET would increase rail traffic-related noise along the Reynolds Lead and BNSF Spur primarily as a result of sounding train horns for public safety. *“Train engineers are required by Federal Railroad Administration (FRA) rules to sound locomotive horns at least 15 seconds, and not more than 20 seconds, in advance of public at-grade crossings. In addition, LVSW operating rules require train engineers to sound locomotive horns at private at-grade crossings. These sounding of horns would occur with or without track improvements on the Reynolds Lead and BNSF Spur that would allow higher train speed through the grade crossings. Potential noise impacts were based on levels of potential impact (moderate impact or severe impact) defined in FTA/FRA guidance, which compares the existing level of noise exposure to the change in noise exposure with CET-related trains.” (FEIS,*

page 5.5-20, included as Exhibit C-7) The EIS at page 5.5-20 concluded: *“An estimated 193 receptors representing approximately 229 residences would be exposed to a moderate noise impact, and an estimated 49 receptors representing approximately 60 residences would be exposed to a severe noise impact with CET-related trains. These impacts would be the same with or without track improvements to the Reynolds Lead because the train noise would be dominated by the locomotive horn sounding at grade crossings. CET-related trains without horn sounding would not result in noise impacts for train speeds at 10 or 20 miles per hour on the Reynolds Lead.”*

Horn sounding could be eliminated by establishing a Quiet Zone on the Reynolds Lead, which includes enhanced safety measures at at-grade crossings, such that the use of train horns would not be required. FRA provides detailed instructions on the application process for a Quiet Zone (Federal Railroad Administration 2015). The Applicant does not operate the trains on the Reynolds Lead. The Applicant has indicated that it would support the implementation of a Quiet Zone on the Reynolds Lead should such be sought by Cowlitz County and the City of Longview, but cannot independently cause the establishment of a Quiet Zone.

Recommended Permit Conditions: The following measures are recommended to be included as permit conditions:

MM NV-2. Support Implementation of a Quiet Zone along the Reynolds Lead. To address moderate and severe noise impacts along the Reynolds Lead due to rail traffic, before beginning full operations, the Applicant will coordinate with the City of Longview, Cowlitz County, Longview Switching Company, and the affected community to inform interested parties on the Federal Railroad Administration process to implement a Quiet Zone that will include the 3rd Avenue and California Avenue crossings. Public outreach on the Quiet Zone process will include low-income and minority populations. The Applicant will assist interested parties in the preparation and submission of the Quiet Zone application to the Federal Railroad Administration. If the Quiet Zone is approved, the Applicant will fund the Quiet Zone improvements, which could include electronics, barricades, and crossing gates.

MM NV-3. Explore Feasibility of Reducing Sound Levels. If the Quiet Zone for the Reynolds Lead is not implemented, the Applicant will fund a sound reduction study to identify ways to mitigate the moderate and severe impacts from train noise from Proposed Action-related trains along the Reynolds Lead. The study methods will be discussed with Cowlitz County and the Washington State Department of Health for approval.

Coal dust is analyzed in the EIS in Section 5.7. For operations of the coal export terminal, air quality modeling was performed for the following primary sources of coal dust; transfer and handling of the coal from rail to storage piles; fugitive emissions from coal storage piles; and transfer and handling of coal from piles to ship.

Operation of the CET could result in coal dust emissions, including during the handling and transfer of coal related to rail unloading, ship loading, conveyor transfer, coal-pile development and removal, and wind erosion of coal piles. Coal transfers would occur in enclosed areas (e.g., rotary coal car dump facility, conveyors) and open areas (e.g., coal storage piles).

Unloading facilities would unload coal from rail cars within an enclosed structure. The unloading facilities would contain equipment to rotate rail cars and discharge the coal from the rail cars into a large hopper. As the tandem rotary dumper rotates the rail cars and begins to unload the coal into hoppers beneath the dumper, sprayers would spray water to avoid and minimize dust dispersion within the enclosed structure.

A network of belt conveyors would transport coal from the rail car unloading facilities to the stockpile area, and from the stockpile area to the vessel-loading facilities, or from rail cars directly to the vessel-loading facilities. All belt conveyors and transfer stations would be fully enclosed, except for the stockpile area and vessel-loading conveyors, which would be open due to their operational requirements. The coal stockpile area would have a dust suppression system. Vessels would be loaded using shiploaders that would include enclosed boom and loading spout. The loading spout would also be telescopic and would be inserted below the deck of the vessel during vessel loading to avoid and minimize dust dispersion.

Table 5.7-3 in the EIS summarizes the estimated maximum annual and monthly deposition at the project fence line. As stated in the EIS, *“The estimated maximum monthly coal dust deposition (0.31 g/m²/month) would be below the trigger level for sensitive areas (2.0 g/m²/month). Within a few thousand feet of the project area, the annual deposition of coal dust is estimated to be less than 0.1 g/m².”*

The EIS coal dust analysis made the following conclusions:

- **Project area.** *Estimated maximum monthly deposition of coal dust within the project area would be below the threshold of 2.0/m²/month (New Zealand Ministry of Environment 2001) used for this analysis.*
- **Reynolds Lead and BNSF Spur, Cowlitz County:** *Estimated maximum PM₁₀ and PM_{2.5} concentrations from coal dust emissions plus background would be below applicable NAAQS. Estimated maximum and average monthly deposition of coal dust would be below the threshold of 2.0/m²/month (New Zealand Ministry of Environment 2001) used for this analysis.*

The Applicant has committed to implementing the following measure to mitigate impacts related to coal dust:

To address coal dust emissions from rail cars, the Applicant will not receive coal trains unless the coal has been appropriately shaped in the rail cars and surfactant applied at the mine area.

Recommended Permit Conditions: To mitigate impacts related to coal dust, Staff recommends that following 4 measures be included as permit conditions:

1. *To address coal dust emissions, the Applicant shall monitor coal dust during operation of the Proposed Action at locations approved by the Southwest Clean Air Agency. A method for measuring coal dust concentration and deposition will be defined by the Southwest Clean Air Agency. If coal dust levels exceed nuisance levels, as determined by the Southwest Clean Air Agency, the Applicant shall take further action to reduce coal dust emissions. Potential locations to monitor coal dust concentration and deposition shall be along the facility fence line in close proximity to the coal piles, where the rail line enters the facility and operation of the rotary dumper occurs, and at a location near the closest residences to the project area, if agreed to by the property owner(s). The Applicant shall conduct monthly reviews of the concentration and deposition data and maintain a record of data for at least 5 years after full operations, unless otherwise determined by the Southwest Clean Air Agency. If measured concentrations exceed PM air quality standards, the Applicant will report this information to the Southwest Clean Air Agency, Cowlitz County and Ecology. The Applicant shall gather 1 year of fence line data on PM_{2.5} and PM₁₀ prior to beginning operations and maintain the data as reference. This data shall be reported to the Southwest Clean Air Agency, Cowlitz County, and Ecology.*

2. *To address coal dust emissions, the Applicant shall meet with the Southwest Clean Air Agency prior to the start of operations to design and implement a coal dust awareness and investigation system for community members in Cowlitz County. The system shall be available in both English and Spanish to receive complaints or concerns, investigate, respond, resolve, and report findings to the complainant and Southwest Clean Air Agency. The system shall be available during operation of the Proposed Action. The Applicant shall operate the system or provide funding for Southwest Clean Air Agency to operate the system. A report shall be submitted annually to Cowlitz County and the City of Longview and posted on Southwest Clean Air Agency website.*
3. *To address coal dust emissions, the Applicant shall not receive coal trains unless surfactant has been applied at the BNSF surfactant facility in Pasco, Washington for BNSF trains traveling through Pasco. While other measures to control emissions are allowed by BNSF, those measures were not analyzed in this EIS and would require additional environmental review. For trains that do not have surfactant applied at the BNSF surfactant facility in Pasco, because it is not yet operational, the Applicant shall work with rail companies to implement advanced technology for application of surfactants along the rail routes for Proposed Action-related trains.*
4. *Provide Information to the Columbia River Gorge Commission. To address statewide public interests and concern of coal dust emissions, the Applicant will attend at least one Columbia River Gorge Commission public meeting per year and be available to present information on coal dust emissions and rail traffic related to the Proposed Action and discuss concerns.*

Visual Pollution: As noted in the FEIS in Section 3.3, construction of the Proposed Action would result in a low level of impact on aesthetics and visual quality. The Proposed Action would result in a moderate level of impact from the Dibblee Beach viewpoint.

Staff recommends implementation of the following mitigation to modify lighting and appearance of facility surface to minimize visual impacts and reduce impacts on viewers at this viewpoint.

To minimize the aesthetic, light, and glare impacts, the Applicant shall:

- *Use directional lighting with full box cut-off fixtures, or equivalent, and use motion- or user-controlled light systems, where practicable and feasible.*
- *Use neutral colors to blend with or complement surrounding environment for non-safety-related structures and equipment, and use nonreflecting materials and finishes, where practicable and feasible.*

POLICY:

Industrial growth should be evaluated for its environmental impact. If adverse environmental impacts exceed the beneficial environmental impacts, the activity should be re-designed such that the beneficial environmental impacts equal or exceed the adverse environmental impacts.

Staff Finding: The proposed Millennium Coal Export Terminal Project is designed to provide a long-term, viable site for transloading coal from rail to ocean-going ships. A SEPA Environmental Impact Statement has been prepared in which the impacts of the proposed Project have been evaluated and appropriate mitigation measures proposed. Among other mitigation measures, the Applicant has submitted a mitigation plan that proposes aquatic habitat mitigation within the MBT-Longview leased area, immediately upstream of the bulk terminal. It will provide substantial compensation for aquatic impacts and entails creating an off-channel slough habitat with associated emergent, scrub-shrub, and riparian vegetation, exceeding adverse impacts to the shoreline.

The adverse environmental impacts of the proposed redevelopment are met or exceeded by the benefits provided through mitigation. See Exhibit C-7, Section 2.11 for mitigation measures provided

for environmental impacts. Those mitigation measures that are relevant to the shoreline permit decision are included in this staff report as recommended permit conditions.

POLICY:

Industrial activities located on the county's rivers should be encouraged to maintain existing public access to the shoreline which will not conflict with the industrial activity.

Staff Finding: There is no existing public access to the shoreline within the MBT-Longview leased area and this will not change with the proposed Coal Export Terminal.

POLICY:

Industrial activities located on the Columbia River should be designed to utilize the shoreline as efficiently as possible.

Staff Finding: The rationale for this policy is the fact that the Columbia River is a working river that is used for international commerce, and that banked industrial areas on the Columbia are a scarce resource that should not be consumed by allowing uses that are not water-dependent or water-oriented to locate there. The project is a water-dependent use and has been designed to use the shoreline and the river as efficiently as possible.

GOAL: 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.

POLICY:

New industries should be located in those areas of the county where existing housing is in close proximity and where such housing may be easily expanded to meet the housing requirements to the industries.

Staff Finding: The project is located in unincorporated Cowlitz County, adjacent to the City of Longview. 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. The Applicant has projected the need for 135 full time employees for operation of the terminal. The new employment generated by the CET is anticipated to be comprised of a workforce already living in the housing market area and would not require new housing.

POLICY:

Industrial development should be provided with fire protection as required by the fire district serving the activity. All new industrial development should be located in a fire district.

Staff Finding: The Cowlitz 2 Fire & Rescue District and American Medical Response (AMR) provide emergency medical services and fire protection for the project area. Like any new industrial development, the CET would place new demands on Cowlitz Fire & Rescue protection services. Required fire and life safety systems would be installed in the project area according to fire code standards. These systems would be regularly inspected and maintained. The Applicant would also maintain a surface water storage pond with a reserve of 0.36 million gallons for fire suppression. The Proposal meets this policy as it is located in a fire district and will be provided with fire protection as required by the Cowlitz 2 Fire & Rescue District.

GOAL: ENCOURAGE INDUSTRIAL DIVERSIFICATIONS SO THAT THE COUNTY'S ECONOMY IS LESS VULNERABLE TO THE CYCLICAL FLUCTUATIONS OF ONE OR TWO DOMINANT INDUSTRIES.

Staff Finding: The MBT-Longview Coal Export Terminal would add a new industry and new jobs to the County's economy. Its operation would be the only coal transloading terminal in the area, and therefore help achieve this goal.

GOAL: INDUSTRIAL GROWTH IN SHORELAND AREAS OF THE COUNTY SHOULD BE PLANNED SO THAT UNIQUE RECREATION AND ENVIRONMENTAL FEATURES COMMON TO THESE AREAS ARE PROTECTED.

Staff Finding: There are no parks and recreation facilities near the Project site and the EIS found the CET would not result in direct impacts on parks and recreation facilities. The CET 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 of Stages 1 and 2, the CET would introduce approximately 70 additional ships per month (840 per year) to the Columbia River. Although the CET 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 from both Stage 1 and Stage 2, the CET would result in an approximate 46% increase over current river vessel traffic. While this would be a substantial increase, the growth in vessels would be planned to operate primarily in the navigation channel, and operations would be similar to current vessel traffic. Therefore, the CET would not result in any direct impacts on parks and recreation facilities; this growth would be consistent with this goal.

SHORELINE MANAGEMENT DISTRICTS: A system of categorizing shoreline area is required by the State Shorelines Management Act, in order to plan and effectively manage our shoreline resources. The shorelines of the county are divided into the four environments below. These environmental designations are based on the capabilities of the various shoreline areas to accommodate human activities, while at the same time, furthering the goals of the Shorelines Management Act and this section. Developments must be planned and constructed so that the objectives of the environments are achieved.

Staff Finding: The proposed project area received an "urban" shoreline environmental designation many years ago and has been occupied with urban uses since 1941. Per the Comprehensive Plan and Ecology's shoreline regulations, urban districts are "those shoreline areas suitable for intensive recreation, residential, industrial, and commercial development." The urban shoreline is most appropriate for an industrial development such as this proposal for a rail unloading and shiploading terminal and stockpile/re-handling operation.

Conclusion: The project is a compatible use within the Heavy Manufacturing designation. The project is a compatible and permitted use within an urban shoreline district and complies with the review criteria for granting a shoreline substantial development permit; therefore this project is consistent with both elements of the Plan. Later in this report it will be explained how the project is or is not in compliance with the Shoreline Management Act and the Cowlitz County Shoreline Management Master Program.

2.2 Zoning

The site is zoned Heavy Manufacturing (MH). *"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.” (Cowlitz County Code 18.10.235 Heavy manufacturing (MH) – Purpose)

The proposed development, being a water-dependent coal transloading (import by rail and export by ocean-going vessels) and re-handling stock yard, is a permitted use in the MH zoning classification.

2.3 Site Description

The Applicant is proposing to develop a CET on approximately 190 acres located within a larger 540-acre leased area that has previously been used for a Bulk Product Terminal and before that an aluminum processing facility. A high tension power transmission line corridor crosses the Property. The property is bisected by Industrial Way (SR 432). Property on the north side of Industrial way is vacant and vegetated, and is within the city limits of Longview. A portion of the property south of Industrial Way (within County limits) continues to be used by MBT-Longview for a number of industrial and related activities. MBT-Longview currently operates a separate terminal for bulk products including: the receipt, storage and transport of alumina from ship to rail or truck; the receipt, storage, and transportation of coal for Weyerhaeuser Company from rail to truck; and could handle other bulk products. The Bulk Product Terminal use will remain as a separate use and will operate independently from the coal export terminal on a separate portion of the property. MBT-Longview is in the process of further developing the Bulk Product Terminal and is actively seeking potential tenants.

There are a number of existing upland structures on the Project Site. These structures house a variety of industrial related activities, including the storage of bulk materials, laboratories, maintenance buildings, and administrative offices. Some of these buildings may be either demolished or repaired as needed.

Within the adjacent Bulk Product Terminal area, Dock 1 is a vessel off-loading facility with an approach trestle that serves only the existing Bulk Product Terminal. The aquatic portion of the proposed coal export terminal Project Site is immediately downstream from Dock 1. There are two pile dikes composed of creosote-treated wooden piles, which are owned and maintained by the Corps and extend from the shoreline towards the navigation channel.

Upland Areas - The upland portions of the Project Site footprint have been altered from their natural condition; consisting of developed industrial infrastructure and facilities, constructed contaminant disposal facilities, or undeveloped areas of vegetation with historical hydrology altered by diking, ditching or fill. Vegetated areas include a capped contaminant disposal facility, which consists of grasses and vetches. Other vegetated portions of the Project Site are predominantly unpaved areas surrounded by industrial infrastructure. Plant species are mostly weedy, and often invasive, including reed canarygrass, Scot’s broom, Canada thistle, and bull thistle.

Wetland Areas - Wetlands and ditches are present in the Project footprint and are located entirely outside of the shoreline (see Sheet 14 of the JARPA (Exhibit C-2). Review of on-site wetlands is occurring in conjunction with the Corps and is addressed in the Critical Areas Permit (Exhibit C-3) that was issued by the County. Wetlands within the proposed coal export terminal footprint (Project Site) (Parcel 619530400) are described in the *Coal Export Terminal Wetland Impact Report-Parcel 619530400* (Grette Associates 2014)(Exhibit C-9), and summarized below. A prior tenant conducted unpermitted land clearing and/or filling on a portion of the Project Site. Three areas have been identified that were wetlands prior to 2010, but are no longer present as a result of those actions: P1 (4.80 acre), P3 (1.23 acres), and an area that was previously part of Wetland A (2.07 acres). These are characterized as “pre-impact wetlands” in the delineation report. There are five existing wetlands part or all of which are within the Project footprint: Wetland A (6.28 acres), Wetland C (3.38 acres), Wetland Z (11.22 acres), Wetland Y (3.40 acres), and Wetland P2 (2.65 acres).

Wetlands within adjacent MBT-Longview parcels are described in two additional delineation reports. The *Bulk Product Terminal Wetland and Stormwater Ditch Delineation Report-Parcel 61953* (Grette Associates 2014) describes five wetlands in Parcel 61953: Wetland D (5.43 acres), Wetland E (9.46 acres), Wetland F (0.45 acres), Wetland G (2.60 acres) and Wetland H (0.24 acres). The *Bulk Product Terminal Shoreline Wetland Delineation Report-Parcel 61950* (Grette Associates 2014) describes one additional wetland, Wetland X (0.44 acres), located in Parcel 61950. These wetlands all are located outside of the Project footprint.

Shoreline Areas - Shoreline vegetation is limited due to extensive diking and riprap along the Columbia River. In some areas at the Project Site, vegetation exists in a narrow strip between the dike and the river. This is primarily composed of willow, red elderberry, cottonwood, rushes, sedges, and various non-native shrubs and grasses including Himalayan blackberry. In others it is limited to grasses growing on the dike. Submerged areas are almost entirely unvegetated.

Aquatic Habitats - Shallow water habitat exists primarily below elevation +4 feet (ft) Columbia River Datum (CRD) due to the presence of the dike above that elevation. A shallow water flat extends from about +4 ft to -10 ft CRD parallel to the shoreline and varies from approximately 300 to 550 ft in width. Beyond approximately -10 ft CRD the substrate slope increases, down to between -30 and -40 ft CRD. Because of the steepness of the slope, nearly all of this area is below -20 ft CRD. Deep water substrate is unvegetated silty sand.

2.4 Off-Channel Mitigation Site

The Applicant is proposing to construct an Off-Channel Slough Mitigation Site. This action would convert a 6.1 acre pond with associated wetlands to a 7.4 acre off-channel slough habitat site with associated wetlands and riparian vegetation. Refer to Exhibit C-8, Section 8, page 95 - for a detailed description.

Wetland Areas – Wetlands within proposed mitigation site are addressed *Off-Channel Slough Mitigation Site* wetland delineation report (Grette Associates 2017). These include four Palustrine Emergent Seasonally Flooded (PEMC) wetlands (Wetlands Q1, Q2, Q3, and Q4). Each of the four wetlands is present along the fringe of the pond and are classified as Depressional according to the hydrogeomorphic classification system.

2.5 Shoreline Master Program (SMP) and Shoreline Management Act (SMA):

The shoreline application is vested under the 1977 Shoreline Management Master Program (SMP). All proposed developments in or adjacent to state shorelines must be consistent with the goals, policies, and regulations of the SMP and the SMA (RCW 90.58). A shoreline substantial development permit is required for the project because it meets the definition of substantial development and it lies within the jurisdictional area of the Columbia River, an urban shoreline of statewide significance.

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 the Proposed Action, are permitted uses on urban shorelines per the SMP. (Exhibit C-7, FEIS, page 3.1-16)

The following review includes an analysis of the project's consistency with the goals and policies for development along shorelines of statewide significance and the regulatory criteria in the following SMP

use categories: “Landfill and Dredging”, “Ports and Water Related Industries”, and “Construction and Operations.”

Construction activities of approved projects are authorized for a period of five years from the date of final approval, provided that activity on the project commences within two years of final approval.

Landfill and Dredging: *Dredging or landfill operations (aka, filling, grading and excavation) with urban shorelines are to be considered as a conditional use.*

All dredging or spoils disposal operations shall be subject to the following regulations:

- a. Dredging operations shall conform to the operating standards specified on any federal and state permits required for such operations. Operations not requiring federal or state permits shall have similar standards imposed as conditions of obtaining a permit.*
- b. Dredge spoils exceeding the department of ecology criteria for toxic sediments shall be disposed of on land. The results of chemical and physical analyses of the spoils material shall be forwarded to the administrator prior to the beginning of dredging operations.*
- c. Dredge spoils disposal sites shall be completely enclosed by dikes of sufficient capacity to allow for the settling of sediment before entrapped water leaves the diked area. The outside face of the dikes shall be sloped at 1-1/2 to 1 (horizontal to vertical) or flatter and seeded with grass or otherwise protected to prevent erosion. Outlet structures in dikes shall be placed so that water discharged within the dikes will take the longest possible time to reach the outlet and shall be designed so that only the clearest water is allowed to return to the receiving waters.*

Finding: Two new docks (Dock 2 and Dock 3) would be constructed specifically for the coal export terminal (Exhibit C-2, JARPA Sheets 2-11). Dredging is required to provide access to and from the Columbia River navigation channel, berthing at Docks 2 and 3, and to provide an adequate turning basin in the vicinity of Docks 2 and 3 (Exhibit C-2, Sheets 12 and 13). Dredging is required to accommodate berthing of fully-loaded Panamax class ships at Docks 2 and 3. Existing depths in the berth areas range from -28 to -42 ft CRD and the side slope areas are typically deeper than -20 ft CRD (Exhibit C-2, Sheets 12 and 13).

The Applicant proposes to dredge to a berthing depth of -43 ft CRD with an additional two-foot overdredge allowance (Exhibit C-2, Sheets 12 and 13). All areas of proposed dredging are located over 500 ft from ordinary high water (OHWM). The side slopes would be dredged at 3H:1V to transition to the existing mudline. This would allow a depth of at least -43 ft CRD to be achieved up to the dock face for the entire length of the berth. In order to account for deposition that may occur between permit submittal and construction, The Applicant is requesting authorization for dredging and disposal of up to 350,000 cubic yards from within the project footprint to allow for a volume of dredging and deposition equal to 10 percent greater than the volume of the dredge prism shown on JARPA Sheets 12 and 13 (i.e., based on the most current survey, the anticipated dredge volume is 320,000 cubic yards and the permit volume is 10 percent higher). Actual dredging would be limited to that volume necessary to accomplish the depth, overdredge, and area requirements shown on JARPA Sheets 12 and 13.

In addition to this initial dredging approval, the Applicant is also seeking authorization to the extent required to perform routine maintenance dredging consistent with the proposed dredge prism dimensions. Based on sediment accretion rates measured in the berth at Dock 1, it is expected that accretion in the Docks 2 and 3 berthing/navigation basin could represent an annual volume of between approximately 5,000 and 24,000 cubic yards. Maintenance dredging is therefore anticipated to occur on a multi-year basis, or as-needed following extreme-flow events. The Project as proposed would

include a 10-year maintenance dredge program for Docks 2 and 3 to dredge up to 100,000 cubic yards of infill as frequently as annually in order to maintain the depths authorized during deepening.

As noted in Section 1.2 Project Description, the Applicant has proposed to deposit dredge materials at the Ross Island Sand and Gravel site, a site in Oregon outside of the jurisdiction of Cowlitz County. Oregon DEQ has approved this reuse of the sediments. Approval from the Corps Portland District is pending.

Overall, dredging and disposal may occur over one or two construction seasons. Because the Project Site will continue to be subject to river sediment deposition, future maintenance dredging is anticipated on a one to two year basis to maintain adequate berthing and navigation depths for this facility (-43 ft CRD). The area and volume of maintenance dredging would be determined as-needed.

To avoid and minimize potential impacts, the Project includes flow lane disposal of maintenance dredged material to keep the dredged material in aquatic areas and maintain sediment transport processes within the Columbia River system. Use of dredged materials would be used otherwise only as part of agency-approved mitigation.

The project has been designed to avoid, minimize, and mitigate adverse environmental impacts, including potential impacts to fish.

Conclusion: This Project meets all three criteria. The proposed dredging is controlled by and will conform to the standards specified by the Corps in their Section 10 Rivers and Harbor Act Permit, thus meeting criteria 1. The dredge spoils have been characterized and do not exceed the Department of Ecology criteria for toxic sediments. The proposed dredge site for construction dredging is a permitted site in Oregon, controlled and managed by Oregon Department of Environmental Quality (DEQ).

Ports and Water-Related Industries: Port facilities and water-related industries shall be permitted on urban shorelines. 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.
- b) Compliance with other applicable use regulations in this program is required.

Finding: The Applicant has applied for Shoreline Substantial Development for the Project and a Shoreline Conditional Use Permit for the dredging of the new berth areas and for access to the navigable channel of the Columbia River. The proposed project is a bulk material transloading facility. The project is a water-related and a water-dependent use and is a permitted use within the Urban Shoreline designation. The applicant has agreed to provide copies of all federal and state permits, authorizations and other licenses upon receipt. The remainder of this staff report will discuss how compliance with other applicable SMMP regulations has been achieved.

Conclusion: This project meets this criterion. Staff recommends that a condition requiring the applicant to provide copies of all federal and state permits, authorizations and other licenses to this department be placed on the permit.

Construction and Operation Regulations: *All shoreline projects must be constructed in accordance with the SMP construction and operation regulations, which include erosion control best management practices.*

Finding: Vegetation will be left below OHWM to the maximum extent possible, and otherwise replanting will occur where removed for placement of rock for long-term stability around the inlet to the Off-Channel Slough Mitigation Site. Waste materials, fuel and chemicals, and other debris will not be released or deposited in the water. Strict erosion control requirements will be in place prior to any ground disturbing activities consistent with county, state, and federal requirements, including the National Pollution Discharge Elimination System (NPDES) Construction Stormwater General Permit requirements.

Conclusion: The project complies with the Construction and Operations Regulations. A condition requiring compliance with the SMP construction and operation regulations should be placed on the permit.

2.6 Shorelines of Statewide Significance

Proposals located on shorelines of statewide significance must meet six criteria listed on page 2 of the SMP and in the Revised Code of Washington (RCW 90.58.020) as follows:

- a. *Recognize and protect statewide interest over local interest. The state has an interest in maintaining the public health, safety and welfare, maintaining public access to rivers of statewide significance, and preserving and protecting aquatic and riparian resources.*

Finding: The shoreline management act gives preference and priority to industrial and commercial developments which are particularly dependent on shoreline location or use (RCW 90.58.020). Shipping is a statewide interest and use because it is uniquely dependent on use of the state shoreline. The project will promote statewide interest by allowing a second shipping terminal to be established on the 540-acre leased site and used in interstate and international commerce. The proposed use of the site for receipt and transloading onto ocean going ships of a stable supply of coal promotes economic production by providing an on-going water-dependent use that provides employment opportunities, a source of tax revenue to several local governmental jurisdictions, and contributes to the economic health of the state by providing a source of interstate shipping along a shoreline of statewide significance

The County and Ecology have published an Environmental Impact Statement (Exhibit C-7) that includes noise and dust surveys. The EIS shows that any adverse impacts to public health can be reduced to acceptable levels by employing noise and dust suppression technology, which the applicant intends to exploit.

The site does not currently provide public access and there are no plans to include public access to the shoreline of the site as public access over the proposed rail lines and transloading facilities would create safety issues for the general public.

The Conceptual Mitigation Plan should result in no net loss of functions and values of aquatic and riparian resources; the mitigation site will be preserved and protected in perpetuity. Staff recommends that a condition requiring the mitigation site to be preserved and protected in perpetuity be placed on the permit.

Conclusion: Public health, safety and welfare will be maintained. Aquatic and riparian resources will be enhanced, created, preserved, and protected. The following condition should be placed on the permit:

The Off-Channel Slough Mitigation Site shall be preserved and protected in perpetuity. The Mitigation Site shall be monitored for a 10-year period following project construction. Year 0 will be defined as the first growing season after planting. The Site shall be monitored once during the growing season of each monitoring year. Monitoring reports shall be submitted to Cowlitz County, WDFW, WDOE, and the Corps by March 31 of the year following each monitored year.

b. *Preserve the natural character of the shoreline:*

Finding: Trees and tall shrubs around the conveyor to the shiploader on Docks 2 would likely be regularly trimmed or removed, slightly reducing organic material delivered to the river, shade for the upper beach area and shoreline, and native foraging, resting, and perching opportunities to passerine birds. The 45- to 50-foot-wide area that would be affected is small relative to the approximately 5,000 linear feet of vegetated shoreline in the project area.

The Off-Channel Slough Mitigation Site would convert an isolated pond into an off-channel slough habitat complex with a surface connection to the Columbia River. The Site is currently located waterward of the CDID levee, but is separated from the Columbia River by a berm. The Site would provide approximately 7.4 acres of new off-channel slough habitat (below OHWM; +11.1 ft CRD) and incorporate emergent and scrub-shrub wetland, and forested riparian habitat. The slough's elevation would range from a minimum of +4 ft CRD up to OHWM to provide a range of habitat at varying river elevations and support a daily, year round surface connection to the Columbia River. It is anticipated that the site would function as highly productive off-channel slough wetland and riparian complex, benefitting smaller subyearling salmonids as rearing and refuge habitat and larger yearling salmonids of all ESUs as a net-exporter of primary- and secondary-production. The work would include clearing/grubbing the outer berm of non-native species, leaving mature trees in place to the extent not inconsistent with operations and revegetating the Site with native emergent, shrub and tree species.

Conclusion: The character of the shoreline onsite will be maintained and enhanced in appropriate areas. The Off-Channel Slough Mitigation Site will be preserved and protected in perpetuity. Staff recommends that a condition of permit approval require compliance with the applicant's plans and drawings.

c. *Address uses that result in long-term benefit:*

Finding:

The Applicant determined there is sufficient Asian market demand for U.S. low-sulfur coal to warrant the development of a coal export terminal in the western United States for shipping Powder River Basin and Uinta Basin coal to Asian markets. Japan, South Korea, and Taiwan lack substantial coal resources and depend exclusively on foreign imports. According to the Applicant, Pacific Northwest ports are well positioned to provide western U.S. coal to trade partners in Japan, South Korea, and Taiwan at rates that are competitive in the international marketplace, and to provide a diversification of coal supply to those importing countries. The Applicant has designed the facility for a minimum 30-year operation (Exhibit C-7, FEIS, page 2-11).

Other Long term beneficial aspects of this project to the Cowlitz County community, such as tax revenue, jobs, and the facilitation of the cleanup and reuse of industrial lands have been addressed

elsewhere in this staff report, including in the discussion of shoreline permit criterion (a) above and in the *Economic & Fiscal Impacts of Millennium Bulk Terminals Longview* (Berk, April 12, 2012) (Exhibit C-14).

Conclusion: This project meets this criterion.

d. *Protect the resources and ecology of the shoreline:*

Finding: The project area is on the right bank of the Columbia River, approximately 5 miles downstream of the confluence of the Cowlitz River and the Columbia River. Longview and Kelso were developed on the floodplain of the Columbia and Cowlitz Rivers. The shoreline of the Columbia River in this area has been extensively disturbed and modified both during and subsequent to the introduction of the CDID pile dikes and levees in the 1920s. The installation of these facilities controlled flooding and erosion along the river's shoreline. These pre-existing flood protection measures allowed Reynolds to develop the property starting in 1941. Reynolds utilized extensive amounts of fill behind the levees to raise the elevation of the property from between 5 and 10 ft. to an even 11 ft. starting with the construction of the South Plant in 1941 (Bechtel Engineering 1968).

The majority of the project area is located behind the CDID #1 levee that is operated and maintained by CDID #1. The average elevation of the project area is 13.9 feet North American Vertical Datum of 1988 (NAVD88) (16.4 feet Columbia River Datum), and the levee averages 33.9 feet NAVD88 (36.4 feet Columbia River Datum) (Anchor QEA 2014). The portion of the project area waterward of the CDID #1 levee is within the floodway of the Columbia River.

Construction and operational changes associated with the proposed new docks and trestle would occur on the river side of the existing levee system, where the floodplain is constrained by the levee alignment. Any time construction occurs adjacent to the water, the potential of water contamination from construction materials, sediments, or hazardous materials exist. Such contamination could have detrimental impacts to aquatic species. Potential short-term impacts to shoreline resources and ecology may occur. Because construction activities within the OHWM, floodplain and adjacent to stormwater drainage ditches could increase the possibility of bank erosion, water turbidity and water contamination from construction equipment, sediments, or hazardous materials, conservation measures should include erosion control and stormwater BMPs and compliance with the conditions of WDFW's HPA.

The Columbia River would be permanently altered and benthic (i.e., river bottom) habitat removed by the placement of piles. A total of 603 of the 622 36-inch-diameter steel piles required for the trestle and docks would be placed below the ordinary high water mark, permanently removing an area equivalent to 0.10 acre (4,263 square feet) of benthic habitat.

Impacts on riparian vegetation would be limited to approximately 0.05 acre, or 0.5% of the total riparian vegetation in the project area, including black cottonwood and willow trees, and understory shrubs such as red-osier dogwood and Himalayan blackberry. These impacts would occur as a result of construction of the trestle conveyor that connects the upland conveyors to Docks 2 and 3.

Conclusion: To ensure adequate protection of aquatic resources, water quality, and ecology, Staff recommends that a condition of shoreline permit approval require compliance with the terms and conditions of WDFW's HPA that are also consistent with and pertinent to the SMA and SMP goals, policies and regulations.

Proper erosion control devices should be installed using BMPs prior to construction. All BMPs should be properly maintained throughout project construction. A condition requiring such should be placed on the permit.

Because construction activities and heavy industrial operations in general often involve some use of liquid fuels, lubricating oils and other hazardous materials, Staff recommends that an additional condition be applied that directs the applicant to take certain precautions and direct actions should a spill of some hazardous material occur in or near the water. Any spills, soil or debris accidentally entering the water during construction shall be immediately contained and removed by approved methods. All construction project work in the area shall cease immediately until clean-up of such spills is completed. If a spill does occur, or if an oil sheen or distressed or dying fish are observed in the project vicinity, the permittee shall immediately report to appropriate authorities, including as applicable the United States Coast Guard, USEPA, emergency response authorities and DOE at its Southwest Regional Spill Response Office.

To ensure that construction workers are aware of the activities allowed by the permit and any restrictions thereof, the applicant should provide a copy of the permit and conditions to the contractor and post it on site. In addition, department staff should have access to the site to ensure compliance with permit and its conditions. A condition requiring such shall be placed on the permit.

e. *Increase public access to publicly owned shoreline areas:*

Finding: No public access currently exists on the site and there are no plans to provide public access to the shoreline through the site. There are no parks or recreation facilities within 500 feet of the project site; 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. Recreational users of the Trail share the use of the river with commercial vessels, including oceangoing cargo ships. Existing access to the Trail (boat launches) near the project area are located at Rainier Riverfront Park in Rainier, OR, approximately four miles upstream, and at Willow Grove Boat Launch, approximately four miles downstream. The project would not decrease access to the shoreline within or near the project area.

Conclusion: The project will not interfere or impede with the public use of the shoreline.

f. *Increase the public's recreational opportunities on these shorelines:*

Finding: As explained in d. above, the project would not decrease access to the shoreline within or near the project area, and for the same reason the project should not decrease the public's recreational opportunities on the shorelines near and downstream of the project area. The project 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. (Exhibit C-7, FEIS, page 3.1-14). The number of vessel transits in the vicinity of the CET site for 2014 was 3,638 (Exhibit C-7, Table 5.4-7, page 5.4-19). *The Proposed Action at full capacity 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 ocean-going ships. With the additional vessels, the Proposed Action would result in an approximate 46% increase over current river vessel traffic. While this would be a substantial increase, the vessels would operate in the navigation channel except when arriving or departing the proposed docks under the assistance of tugs, and operations would be similar to current vessel traffic. Recreational boats are smaller and are not limited to using the navigation channel, and the*

Willow Grove and Rainier Riverfront Park boat launches are distant from the project area. Therefore, it is not expected that recreational boaters would be substantially affected by vessels and tugs using the proposed docks. The Proposed Action would not result in indirect impacts on parks and recreation facilities or on agricultural land. (Exhibit C-7, page 3.1-15).

Conclusion: The project will not alter the public's access to recreational opportunities on the shoreline nor cause any direct impacts on parks and recreation facilities.

2.7 Shorelines Conditional Use:

The SMP directs that dredging in the Columbia River in the Aquatic environment and landfills on urban shorelines are to be considered a conditional use. The applicant is proposing to conduct dredging for access and berthing at Dock 2 and 3. No landfill within the urban shoreline is proposed. Conditional uses must comply with the five criteria listed in WAC 173-27-160 and the four criteria listed in the SMP on page 25. To satisfy both sets of criteria, the proposal must:

2.7.1 Conditional Use Criterion #1 - Be consistent with the goals and policies of the SMA and SMP

The following are the applicable goals and policies found within the SMP and explanation as to why the proposed project is or is not consistent with them.

Circulation Goal: *When necessary to develop facilities for any of the various modes of transportation on the shorelines of Cowlitz County, these features must not endanger the life, property, or rights of others, nor debilitate the quality of life enjoyed by the public.*

This goal applies to circulation facilities (i.e., highways, freeways, and railways) that are constructed on the shorelines of the County. The project does not propose to develop any circulation facilities in the shorelines area. Rather, the project will use existing Industrial Way for vehicular access to the site, and will use existing rail lines outside the shoreline area to transport coal from the Powder River Basin and Uinta Basin to the Coal Export Terminal. The Project will require construction of internal circulation roads and rail facilities but these are located outside the shoreline area and not intended for use by the general public. While it is not the development of a transportation facility as referenced above, the Project does include dredging to allow access from the shipping lanes to the proposed Docks 2 and 3. The dredging is subject to permit approval by the Corps and is subject to federal regulations. To the extent this Circulation Goal applies to the Project, the Project is consistent.

Conservation Goal: *"Encourages best management practices of the continued sustained yield of replenishable resources of the shorelines and preserve, protect, and restore those unique and non-renewable resources."*

The site was zoned and developed for heavy industrial use decades ago, and site does not contain any known renewable resources or unique non-renewable resources. Dredging will be required to provide vessel transport from the shipping lanes in the Columbia River to the docks. The project is consistent with this goal and its objectives by protecting the shoreline to the extent feasible, and creating the Off-Channel Slough Mitigation Site. The Site would provide approximately 7.4 acres of new off-channel slough habitat (below OHWM; +11.1 ft CRD) and incorporate emergent and scrub-shrub wetland, and forested riparian habitat. The slough's elevation would range from a minimum of +4 ft CRD up to OHWM to provide a range of habitat at varying river elevations and support a daily, year round surface connection to the Columbia River. It is anticipated that the Site would function as highly productive off-channel slough wetland and riparian complex, benefitting

smaller subyearling salmonids as rearing and refuge habitat and larger yearling salmonids of all ESUs as a net-exporter of primary- and secondary-production. The EIS prepared for the project establishes that no degradation of the shoreline area and no significant adverse impacts to water quality or fisheries will occur, and also that appropriate professional consideration has been given to protection of endangered species, primarily salmon. The project is consistent with the Conservation Goal.

Economic Development Goal: "To encourage the establishment and development of industrial and commercial activities in Cowlitz County on shorelines that require the land-water interface for productive efforts."

The proposal is a marine transloading terminal, it is water dependent and requires a land-water interface. The proposal helps to fulfill this SMP goal.

Economic Development Objective:

"Those economic developments proposed on the shorelines must effectively operate without reducing the environmental quality of the surrounding and adjacent shoreline area, or the quality of life of county residents."

The project includes a mitigation plan that offsets anticipated environmental impacts of the surrounding and adjacent shoreline area, including a Conceptual Mitigation Plan designed to specifically address and mitigate for wetland fill through provision of new or enhanced wetlands and impacts to the aquatic habitat through the establishment of an Off-Channel Slough. The proposed operation is an industrial activity on land that has been used for industrial activity for over seventy years. The proposed coal export terminal will be used to receive coal by rail which will be unloaded and stockpiled before being conveyed to the docks where it will be loaded onto ocean-going vessels. The rail unloading will occur within an enclosed building, and the conveyors will be covered. The site design includes use of water to control dust. No processing, heating, or other activity will take place onsite that would result in air, water or solid emissions that would reduce the environmental quality of the site or nearby properties. Noise emitted by off-loading the rail, conveying the material to stockpile area, and loading onto vessels will be within state mandated maximum noise levels, and traffic will be managed; operations will therefore have no significant adverse effect on the quality of life of county residents. The proposal will provide a new local industry that will contribute to the Cowlitz County economy and tax revenues. Those new revenues will enhance the ability of the county, school district, port district, and other public agencies to perform their various functions to the betterment of their constituents. Also see discussion above in Section 2.6.a for additional information on economic benefits and Exhibit C-14, *Economic & Fiscal Impacts of Millennium Bulk Terminals Longview* (Berk, April 12, 2012).

The project meets the first part of this two-pronged objective relating to maintaining environmental quality of the shoreline; however, whether or not the project meets the objective pertaining to not reducing the quality of life of county residents is subject to discussion. In the SEPA FEIS, which will be discussed later in this report, significant impacts were identified for nine (9) elements. "Unavoidable and significant adverse environmental impacts could remain for nine environmental resource areas: social and community resources; cultural resources; tribal resources; rail transportation; rail safety; vehicle transportation; vessel transportation; noise and vibration; and air quality" (FEIS, page S-41). With the exception of the demolition of the Reynolds plant, all of the identified potential significant unavoidable and adverse impacts are due to rail or vessel transportation, which results in potential impacts to residents who live and or work in proximity to the BNSF mainline and spur, the Reynolds Lead and the Columbia River. The applicant has demonstrated an on-going willingness to work with County staff to identify measures to avoid, minimize and mitigate the impacts of this project. Staff recognizes that the inability to meet an

objective is not the same as failing to meet a regulatory requirement. Failure to fully meet an objective is not sufficient reason to deny a permit.

Economic Development Policies: (The following policies apply to private industrial development along shorelines)

Ports and Water-Related Industry: Ports are centers for water-borne traffic and as such, have become gravitational points for industrial/manufacturing firms.

c) *The cooperative use of dock parking, cargo handling, and storage facilities shall be strongly encouraged in waterfront industrial areas.*

The larger 540-acre leased area contains dock parking, cargo handling and storage facilities. The Applicant is proposing that 190 acres within the larger area be used for the coal export terminal, including a minimum 175-acres for coal stockpiling and rail unloading. The coal handling at full buildout will require two new docks and two shiploaders immediately downriver of the existing dock as the existing dock does not provide adequate space for the berthing of two Panamax ships. The coal export terminal will make use of an existing developed waterfront industrial site. The proposed single purpose coal material handling proposed here does not require cargo handling or storage facilities, and only a few parking spaces. The project is consistent with this policy.

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.*

The existing infrastructure system will satisfactorily serve the proposed development. The road and rail lines serving the project are located upland and no new roads or rail corridors will be required. Electricity will be brought to the site to power the conveyor system motors pursuant to Cowlitz PUD protocols. The project is consistent with this policy.

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.*

The property has been used as a private port and marine terminal since the 1960s. The Long-Bell Lumber Company sold 400 acres of its Columbia River waterfront property west of the Weyerhaeuser mill to the Reynolds Metals Company in 1941, and the site was developed as an aluminum reduction plant just months before the United States entered World War II. The upland portion of the Former Reynolds Plant site was developed with a variety of facilities and structures associated with the aluminum smelter and cable plant. In 1966-1969, Reynolds constructed a pier and dock for unloading raw materials from ships in the Columbia River. The area near the dock has been dredged since that time to maintain access to the dock.

The project area was designated urban by Cowlitz County in 1977. This recognized that the shorelines on this site would be used for port services. Development of the project site is not a duplication of port services within the Port's service regions. The Applicant proposes to build a coal export terminal sufficient in throughput to take advantage of economies of scale and allow for efficient transfer of coal from rail to ships. The Applicant is proposing a facility with a throughput capacity of 44 MMTPY at full buildout of Stages 1 and 2, to be competitive with existing and proposed international competitors. The Applicant has determined that the proposed terminal must

be capable of supporting vessels in the Panamax class (or larger) and operate at least two shiploaders.

The Applicant has determined that moving coal by rail is the most cost-effective method to get product to market. The site needs to be geographically located to minimize rail transportation rates. In short, a site is needed that is both on the existing rail system and is on a route as short and direct to the West Coast as possible. The Applicant has determined that the site must be able to accommodate Panamax vessels in order to be attractive to buyers/sellers of coal. Ships in this class need deep-water access of at least 42 feet bws. The Applicant has determined that rail transportation rates and trans-Pacific shipping time/costs are important factors in the cost of coal deliveries to Asian markets. Existing transfer facilities with an owner unwilling to lease or sell for a coal terminal in 2010 were not considered as potential options. As a privately owned company, The Applicant does not have condemnation authority like a public port or a railroad.

There is no viable existing port site for this project from Portland to Longview, and the proposed project site is designated for heavy industry and has operated as a marine terminal and private port facility for decades. Locating the Project on this site would not result in wasteful duplication of port services. The project is consistent with this policy.

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.

This policy was implemented when Cowlitz County designated the project area as urban to authorize ports and water-related industries. The larger 540-acre leased area contains one pier and dock that were constructed in 1966-1969 for unloading raw materials from ships in the Columbia River. The area near the dock has been dredged since that time to maintain access to the dock. For docks 2 and 3 to be fully functional, dredging would be required to allow vessel access between the navigation channel and the docks.

According to application materials, the docks are the minimum size needed to berth two ships to provide the desired throughput. The trestle and conveyor connecting the shore to the shiploaders is enclosed to protect the river from falling materials, and is designed to be narrow to reduce shading or shadowing to protect fish habitats.

The project is not expected to interfere with other water-dependent uses in this area of the river. The project has been carefully planned to minimize adverse impacts on shoreline resources. The site for the proposed marine terminal is designated for Heavy Industrial use in the Cowlitz County Comprehensive Plan and is further designated as urban in the SMP, making this location suited for the project. The project is consistent with this policy.

g) Because a large impact cannot be avoided due to ports and port-related uses, preference will be given to develop and redevelopment of existing port areas.

The proposal is the redevelopment of approximately 190 acres of a site used since the 1940s for industrial activities and since the late 1960s for port facilities, including a marine terminal. The project is consistent with this policy.

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 [environments], and considered as a conditional use on natural shorelines.

The proposed development is a port and water-related, and the proposed subject property is designated as an urban environment. The project is consistent with this policy.

The project is also consistent with the other policies for Ports and Water-Related Industry. Policy 5(a) applies to ports and is not applicable to other water-related industry. Policy 5(b) relates to locating sewage treatment, water reclamation, desalinization, and power plants, and is therefore not applicable here. The project is consistent with these other economic development policies related to Ports and Water-Related Industry.

Historical/Cultural Goal: *"Protect, preserve, and restore those historical, cultural, educational, and scientific sites in the shorelines of Cowlitz County for the general public."*

According to Section 3.4 of the FEIS, the subject property does not contain cultural resources or artifacts (Exhibit C-7, FEIS, page 3.4-11), but is considered for designation as an historic district (Exhibit C-7, Section 3.4.4.3, beginning on page 3.4-12). The Former Reynolds Plant would be demolished to make way for the coal handling facilities and coal stockpile area. Cultural resources investigations for the CET included an inventory of aboveground buildings, structures, and archaeological landscape features associated with the Former Reynolds Plant; exploratory deep testing for potential archaeological resources buried beneath the industrial development; and consideration of impacts to other resources such as the Lewis and Clark National Historic Trail. As a result of the inventory, the Reynolds Plant Historic District is proposed. The Corps and the Washington State Historic Preservation Officer (SHPO) have agreed that the Former Reynolds Plan consisting of 39 contributing resources is eligible for listing in the National Register of Historic Places (NHRP).

The Corps is carrying out Section 106 compliance of the National Historic Preservation Act (NHPA). The compliance process includes the development of a Memorandum of Agreement (MOA) between the Corps, the Advisory Council on Historic Preservation, the Washington State Historic Preservation Officer, MBT-Longview, Cowlitz County, and the City of Longview for resolution of adverse effects from redevelopment of the site. The MOA contains a number of stipulations setting forth obligations of the Applicant triggered upon commencement of demolition of the Former Reynolds Plant. Adherence to the MOA stipulations will be a condition of Corps approval of the Section 10 and Section 404 federal permits.

A condition of permit approval should be that in the event of the discovery of cultural and/or archeological sites during construction, further excavation shall be halted and the applicant shall immediately notify the Washington State Department of Archaeology and Historic Preservation and copy such notification to the Cowlitz County Department of Building and Planning. Overall, the project is consistent with the Historical/Cultural Goal.

Recreation Goal: *"To assure that recreational opportunities, adequate to satisfy the diversity of demands from the region's population, are provided."*

As noted previously, there are no parks and recreation facilities immediately near the Project site and the EIS found the Project would not result in direct impacts on parks and recreation facilities. Existing recreational opportunities would not be adversely affected by the Project (Exhibit C-7,

page 3.1-14) The Project 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 Stage 1 and 2 construction, the CET would introduce an average of 70 additional ships per month (840 per year) to the Columbia River. The Project site does not current provide access to the shoreline area, nor are there any plans to provide access as it would not be safe for the public. Although the CET 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 CET would result in an approximate 46% increase over current river vessel traffic within the navigation channel. While this would be an increase, the vessels would only operate in the navigation channel, and operations would be similar to current vessel traffic. Per the EIS (Exhibit C-7, page 3.1-15): “*Recreational boats are smaller and are not limited to using the navigation channel, and the Willow Grove and Rainier Riverfront Park boat launches are distant from the project area. Therefore, it is not expected that recreational boaters would be substantially affected by vessels and tugs using the proposed docks.*” Therefore, the CET would not result in any direct impacts on parks and recreation facilities. The project is consistent with the Recreation Goal.

Residential Goal: “*Establish criteria for safe, orderly residential growth in suitable areas of the shorelines of Cowlitz County*”

The Goal has four objectives:

- 1) *To determine the suitable density of residential development with regard to natural features, necessary supportive facilities, utilities, and sanitary requirements.*
- 2) *To assure that proposed residential developments are compatible with or enhance the aesthetic quality of the area.*
- 3) *To ensure that such proposed residential developments do not serve as focal points of environmental degradation by wastes generated or as a magnet for unwarranted other developments in the shorelines.*
- 4) *To the extent possible, planned unit development should be encouraged within the shoreline area.*

This goal relates to locating residential development in certain shoreline areas. The project will not modify, or hinder the locating of residential uses in the urban shoreline area. The project is consistent with the Residential Goal.

Public Access Goal: “*To assure the safe and reasonable access for the public to public property in the shorelines of Cowlitz County.*”

As described with respect to goals discussed above, the project is privately owned and the Project should not affect access for the public to public property in the shorelines of Cowlitz County. Existing public access would not be adversely affected by the Project. [Exhibit C-7, page 3.1-14) The project is consistent with the Public Access Goal.

Other General Shoreline Uses (Goals and Policies)

Goal: *Developments within shorelines of Cowlitz County must be for the betterment of the lifestyle of the citizens of Cowlitz County, and so located to prevent ecological debilitation from occurring.*

This goal was followed in designating the project area as Urban Environment to authorize ports and water-related industries, while designating the large majority of the County for more limited uses under the Conservancy and Rural Environments. The Applicant proposes a redevelopment

of a shoreline industrial site for a project that requires a land-water interface to access interstate shipping channels which is a use encouraged under the Economic Development Goal and its Policies. With respect to this goal, the proposed coal export terminal will add to the county's tax base as well as the other junior taxing districts with jurisdiction. Adherence to other local, state, and federal development and environmental regulations should help to ensure ecological debilitation is prevented. Other short and long term benefits of the project are addressed in sections 2.6 above. The project is consistent with this Goal.

Objectives:

- 1) *To encourage those uses which are necessary to maintain or improve the health, safety and welfare of the citizens when such uses must occupy shorelines.*

As stated above with regard to the goal supporting this objective, the designation of this area as an Urban Environment and reserving other areas for more limited uses in the Conservancy and Rural Environments maintains, protects and improves the health, safety and welfare of the citizens of Cowlitz County and the State. Also, as previously discussed, the proposal is a coal export facility which is water dependent; such facilities cannot exist and function except on shorelines. Through the preparation and consideration of the EIS, the review of the project in light of the applicable Shoreline Policies and Regulations, and by the inclusions of the conditions recommended in this staff report, this project should not negatively impact the health, safety and welfare of the citizens. The project is consistent with this objective.

- 2) *To locate those necessary uses and design facilities on the shorelines in such a manner as to retain or improve the physical and aesthetic quality of the natural environment.*

The shoreline of the Columbia River in this area has been extensively disturbed and modified both during and subsequent to the introduction of the CDID pile dikes and levees in the 1920s. The installation of these facilities controlled flooding and erosion along the river's shoreline. The project will include the construction of two new docks and a trestle within the shoreline. Impacts on riparian vegetation would be limited to approximately 0.05 acres, or 0.5% of the total riparian vegetation in the project area, including black cottonwood and willow trees, and understory shrubs such as red-osier dogwood and Himalayan blackberry. These impacts would occur as a result of construction of the trestle conveyor that connects to Docks 2 and 3.

The proposed Docks 2 and 3 would be constructed west (downstream) of Dock 1. The docks would be oriented parallel to shore and together be approximately 2,202 feet in length by 90 feet in width, except where Dock 2 joins the trestle and is slightly wider (127 feet in width). Vehicle and pedestrian access and coal transfer to the docks would be provided by a single trestle extending approximately 850 feet from shore, at a slight angle off of perpendicular from shore to join Dock 2. From shore, the trestle would measure 24 feet in width for 700 feet, and 51 feet in width for the final 150 feet. The width of the docks and trestle has been designed to minimize impacts on fishery resources.

The site will be used as an industrial coal transloading facility. To compensate for wetland fill within the upland area, the Applicant has proposed the development of an Off-Channel Slough Mitigation Site. The Off-Channel Slough Mitigation Site would convert an isolated pond into an off-channel slough habitat complex with a surface connection to the Columbia River. It is anticipated that the Off-Channel Slough Mitigation Site would function as highly productive off-channel fish and wildlife habitat area, particularly benefitting smaller subyearling salmonids as rearing and refuge habitat and larger yearling salmonids of all ESUs as a net-exporter of primary- and secondary-production. The Off-Channel Slough Mitigation Site will provide additional habitat and ecological functions,

thus maintaining an equilibrium in the overall ecology of the shoreline. While the Site would incorporate wetland elements (emergent and shrub-scrub wetland) as valuable components of fish and wildlife habitat, these wetland elements are distinct from the off-site wetland mitigation and are not included as part of the proposal to offset Project wetland impacts as addressed in the Conceptual Mitigation Report (Exhibit C-10). The project will have a no net loss effect on the habitat function and values within the shoreline environment. The project is consistent with this objective.

3) *To encourage the multiplicities of use in proposed shoreline area developments.*

The larger 540-acre leased site contains a separate existing bulk products terminal. The proposal is to redevelop a 190-acre portion of the site into a coal export terminal, creating an additional use within the 540-acre site. The project is consistent with this objective.

4) *To retain or improve the degree of public access to shorelines.*

Public access to shorelines will not be affected by the proposal as discussed in Section 2.6.e above, and in Section 3.1 Land and Shoreline Use of the EIS (Exhibit C-7). The project is consistent with this objective.

Policies:

1) *Dredging Policies:* *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*

The Applicant has filed application for a shoreline conditional use permit to allow dredging between the shipping lanes and the dock area in the Columbia River to enable ships to reach the dock. A detailed discussion of dredging operations and the disposal of dredge spoils is in Section 1.2 above. As addressed there, dredging would be limited to that volume necessary to accomplish the depth, overdredge, and area requirements shown on JARPA Sheets 12 and 13 (Exhibit C-2). The Applicant has proposed specific work windows that would allow Project dredging to be completed over a two-year schedule. The anticipated work window for dredging is from October 1st to December 31st. Disposal of the dredge materials will comply with the plans and requirements of the applicable agencies. The EIS identified that standard best management practices for working in aquatic areas would be followed to maintain acceptable construction water-quality conditions during construction. See EIS at pages S-22 and S-23 (Exhibit C-7). The project is consistent with this policy.

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 alternatives of depositing material on land is more detrimental to shoreline resources than depositing it in water areas.*

As addressed above in Section 1.2, the Applicant has worked through the Dredged Material Management Office (DMMO) at Seattle District Corps to get approval for disposal of the dredged

material. A Sampling and Analysis Plan (SAP) was submitted in May 2017 and approved by the Corps and the other Dredged Material Management Program (DMMP) agencies. Sediment samples were collected shortly thereafter from the berthing area and submitted for conventional and chemical analysis. Based on the sediment characterization results, the DMMP agencies issued a Suitability Determination for the characterized material for in-water disposal in the Columbia River. Documentation of the process with the DMMO is enclosed as JARPA Attachments 1 through 3 (Exhibit C-2).

Concurrent to their work with the DMMO at the Seattle District Corps, the Applicant is also pursuing authorization from the Portland District Corps pursuant to Section 14 of the Rivers and Harbors as codified in 33 USC 408 (commonly referred to as "Section 408"). During the Section 408 Review, challenges arose in locating a suitable in-water disposal site. The Applicant has proposed to utilize the Ross Island Sand and Gravel site, a site in Oregon outside of the jurisdiction of Cowlitz County. Oregon DEQ has approved this reuse of the sediments. Approval from the Corps Portland District is pending. Use of dredged materials would be used otherwise only as part of agency-approved mitigation. The EIS determined that the dredging and disposal of dredged material will not have an adverse impact on the environment. The project is consistent with this policy.

- c) *Dredging of bottom materials for the single purpose of extending ones property shall be discouraged.*

Dredging is proposed only to provide a navigation channel between the docks and the Columbia River shipping lanes. It is not for the purpose of extending the Project site, nor will the proposed dredging extend the property into the Columbia River. The project is consistent with this policy.

- 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.*

The JARPA (Exhibit C-2) includes sheets identifying the dredge area, navigation channels, turning and moorage basins. The project is consistent with this policy.

- 2) *Landfill Policies:* *Landfill is the creation of dry upland area by the filling or depositing of sand, soil or gravel to a wetland area.*

The CET would not fill or deposit sand, soil or gravel to a wetland area within the shoreline nor cause the creation of dry upland area within the shoreline area. This policy does not apply to the proposal.

- 3) *Shorelines Protection Works (SPW) Policies:* *Shoreline protection works shall include bulkheads, breakwaters, jetties, groins, levees, berms, retaining walls, riprapping, dikes, and the like.*

The SPW policies have been implemented in the SMP regulations by authorizing SPW for projects in the urban environment where intensive development for water dependent industrial uses is promoted.

- a) *SPW 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.*

The project is designed to avoid, minimize, and mitigate adverse environmental impacts to the shore/and or "wetland" and the natural shoreline. A small volume of riprap will be placed along the

inlet of the Off-Channel Slough Mitigation Site to protect the long-term stability of the inlet. The majority of the riprap is located above OHWM to avoid impacts to natural shoreline area. The impacts to ecological impacts in upland area within 200 feet of OHWM have been identified, studied, and mitigated. A Critical Areas Permit was issued for the project (Exhibit C-3) which addressed wetland impacts and approved mitigation to any unavoidable impacts to a wetland and its buffer. The proposal is consistent with this policy.

b) Consider the effect of a proposed SPW on public access to publicly owned shorelines.

The proposed SPW around the inlet to the Off-Channel Slough Mitigation Site would not be located on public lands, nor would it affect public access to publicly owned shorelines. The project is consistent with this policy.

c) SPW should be designed to blend in with the surroundings and not to detract from the aesthetic qualities of the shoreline.

The location is designated urban where water dependent, industrial uses are a preferred use. Other higher quality shoreline areas of the County are designated as natural, conservancy or rural. The shoreline will be enhanced with mitigation below the OHWM. The proposed riprap will be sloped and should provide a better aesthetic quality than a traditional vertical pier or bulkhead. The project is consistent with this policy in the context of the urban shoreline environmental designation.

e) 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."

The SPW will be located primarily above OHWM. A small volume would be placed along the inlet channel of the Off-Channel Aquatic Mitigation Site to protect the inlet's stability. None would be placed for the purpose of creating land. Therefore, compliance with the Landfill policies is not required- See discussion in Section 2.4 above. The project is consistent with this policy.

f) 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.

The Off-Channel Slough Mitigation Site would convert an isolated pond into an off-channel slough habitat complex with a surface connection to the Columbia River and is intended to mitigate for wetland fill within the upland (non-shoreline area) of the site. The majority of the proposed riprap will be placed on the site above the OHWM. A small volume would be placed along the inlet channel of the Off-Channel Aquatic Mitigation Site to protect the inlet's stability, and is intended to restore and enhance the natural character of the shoreline. This design will protect the natural character of the shoreline and should be a condition of permit approval. The project is consistent with this policy.

g) The use of non-rock riprap should be strongly discouraged. The use of abandoned automobiles for SPE is to be prohibited.

The project will install only clean rock in the riprap used to stabilize the bank. The Department recommends that this requirement be made a condition of permit approval. The project is consistent with this policy.

h) 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. This policy does not apply. Existing CDID flood protection dikes will remain in place.

4) Piers Policies: *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 detailed description of the dock design and construction practices is set forth in Section 1.2-above. In summary, two docks (Docks 2 and 3) would be constructed west (downstream) of the existing Dock 1. The docks would be oriented parallel to shore and together be approximately 2,202 feet in length by 90 feet in width, except where Dock 2 joins the trestle and is slightly wider (127 feet in width). Vehicle and pedestrian access and coal transfer to the docks would be provided by a single trestle extending approximately 850 feet from shore, at a slight angle off of perpendicular from shore to join Dock 2. At full buildout, each dock would include a shiploader and associated loading equipment; during Stage 1 a shiploader and associated loading equipment would be installed only on Dock 2. Dock 3 would be used as a lay berth during Stage 1. The main shipping channel in the Columbia River is 43 feet deep at low tide (-43 feet Columbia River Datum). The docks and shiploaders would be able to accommodate Panamax-class vessels and Handymax-class vessels.

a) The use of floating docks should be encouraged in those areas where scenic values are high and where conflicts with recreational boaters and fisherman will not be impaired.

The site has been used for industrial purposes consistently since 1941 starting first as an aluminum smelter which included a bulk product terminal (Dock 1). Dock 1 is existing dock and trestle located immediately upstream of the proposed location for Docks 2 and 3. Scenic values at the location are not high. Recreational boaters and fisherman using the river for fishing or boating currently must take account of commercial vessels, including large oceangoing ships. A floating dock would not be feasible for shiploading. The project is consistent with this policy.

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.

Shore trolling is not the preferred method of fishing in the lower Columbia, and hog lines – the preferred method – are not prevalent in the project area. Construction of the approach trestle and Docks 2 and 3 would require the installation of up to 622 36-inch steel open piles. Of this total, up to 603 would be installed below ordinary high water and up to 19 would be installed above ordinary high water (Exhibit C-2, JARPA Sheets 3 through 7). The project is consistent with this policy.

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.

The site is not a new major waterfront development. This project is the redevelopment of an existing industrial site which would include two new docks which is consistent with the uses and activities allowed in the urban designation. This policy contemplates community docks in waterfront development indicating that such development that would be subject to this policy are waterfront developments that are accessible to the public, which is not the circumstance here. This policy does not apply.

- d) *In providing for boat docking facilities in the Master Program, local governments should consider the capacity of the shoreline uses to absorb the impact of waste discharge from boats including gas and oil spillage.*

The risk of an oil spill at Docks 2 and 3 would primarily be during bunkering (refueling) operations. The Applicant has committed to no bunkering at Docks 2 and 3. If this changes and bunkering is proposed at Docks 2 and 3, the Applicant will notify Cowlitz County and Ecology who will determine if additional environmental review is required before bunkering operations are conducted. The project is consistent with this policy.

- 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.*

Design features of the Project that would avoid and minimize the potential release of hazardous materials during operations include enclosures for all belt conveyors and transfer points moving coal to and from the rail unloading facilities to the stockyard or shiploading facilities. The Project involves coal loading by conveyor onto ocean-going vessels at two new docks on the Columbia River for export. During Stage 1, a shiploader and associated loading equipment would be installed only on Dock 2 and Dock 3 would be used as a lay berth. The Project would incorporate best management practices to prevent, reduce, or eliminate the discharge of pollutants to the stormwater system or watercourses from material delivery and storage. As described in Section 3.6 of the FEIS (Exhibit C-7): *“Operation of the Proposed Action is not expected to encounter hazardous materials in the project area that could pose risks to human health and the environment. Operation of the Proposed Action would occur concurrently with, but would be independent of, environmental remediation and monitoring as required in the final cleanup action plan for the former Reynolds facility. The remedial and monitoring activities associated with the former Reynolds facility would be carried out in accordance with all applicable regulations and would be coordinated to avoid contact and exposure to operations personnel and the environment. Furthermore, remedial and monitoring activities associated with the final cleanup action plan would result in bringing previously contaminated soils and groundwater to levels that are protective of human health and the environment, thereby reducing the potential for exposure for sensitive receptors.*

Operations of the Proposed Action could introduce new sources of hazardous materials such as fuel, oil, grease, lubricants, hydraulic fluids, solvents, and acids and would generate small quantities of hazardous waste. Locomotives (with fuel capacity of approximately 5,000 gallons) and fuel trucks (with fuel capacity of up to approximately 4,000 gallons) would travel to and from the project area and could also release fuel during operations. Some of these materials can be classified as hazardous; however, these hazardous material products would generally be stored and used in small quantities. The Applicant is responsible for reporting and responding as required by federal, state, and local laws.

As with construction, the transport, use, storage, and disposal of hazardous materials would be compliant with applicable federal, state and local regulations such as the RCRA, U.S. Department of Transportation Hazardous Materials Regulations, and other regulations identified in Section 3.6.1, Regulatory Setting. The Applicant would follow regulations governing the storage of hazardous materials and the separation of hazardous materials in designated storage areas. Water quality would be protected from polluted stormwater runoff as a result of the Applicant complying with the requirements of the NPDES Industrial Stormwater Permit.” The project is consistent with this policy.

5) Restoration - Past developments and the uses made of some areas have proven to be beyond the maintenance capability of the owners. Frequently, abandonment of the site has occurred leaving unsightly debris and dilapidated structures. Restoration to a natural state or aesthetic new uses of such areas may be desirable. The cost of removal of dilapidated structure remains and recontouring of land may present financial prohibitions to such restoration. Some method of financial compensation for rehabilitation of these areas should be considered.

The Applicant has leased an existing industrial site and is undertaking a privately-funded extensive cleanup of hazardous materials and redevelopment of the site. As described in Section 3.6.4.2 of the FEIS (Exhibit C-7): “The remediation history for the study area is presented in Appendix H, Hazardous Materials Remediation History. In 2007, Northwest Alloys signed an Agreed Order (AO No. DE-8940) with Ecology to complete a remedial investigation and feasibility study (RI/FS). The purpose of the RI/FS was to investigate the nature and extent of impacts at the site and identify cleanup options. From 2011 through 2014, the Applicant tested soils and completed laboratory analyses as part of the RI/FS. In May 2014, Northwest Alloys submitted a second RI/FS, detailing over 18,000 chemical measurements of soil, surface water, groundwater and sediment along with extensive testing and engineering to support possible cleanup alternatives.

Ecology held a public comment period from June 2 through August 1, 2014, which included several public workshops and a formal hearing. Following the public comment period, Ecology prepared a Responsiveness Summary in January 2015, and has developed a draft cleanup action plan. Ecology will then select cleanup standards and points of compliance in the final cleanup action plan. A cleanup action plan is typically prepared after the RI/FS has been finalized and a preferred remedial alternative has been selected. The plan is based on information and technical analyses generated during the RI/FS and consideration of public comments and community concerns.

A draft cleanup action plan and draft consent decree was released in 2016 for a 60-day public comment period (Washington State Department of Ecology 2016). The comment period ended March 18, 2016. A responsiveness summary will be prepared to address public comments and then the reports will be finalized. Likely remedial technologies will include a combination of, but not necessarily all of, the following: removal, consolidation, capping, groundwater treatment, and monitored natural attenuation treatments. Property owner Northwest Alloys, Inc. (a subsidiary of Alcoa, Inc.) and the Applicant are legally responsible for the cleanup, including paying for and performing the work.

FEIS Appendix H, Hazardous Materials Remediation History, provides an overview of the remedial action process, screening levels by media, remediation activities prior to the RI/FS, remediation of the project area, remediation of the Applicant’s leased area, chemicals of concern, and final remedial actions.” The project is consistent with this policy.

- a) Those existing non-conforming uses in shorelines which are not currently active for the use intended, or pose a hazard to health, safety, or public welfare should be considered as potentially restorable sites.

The site is designed as urban and existing uses are heavy industrial which is allowed outright in an urban environment. There are no non-conforming uses on the site. This policy does not apply.

- b) Restoration of such areas to satisfy public needs within the physical parameters of the highest environmental classification possible should be considered.

The site is privately owned and the application is for a privately-owned coal export terminal. This policy does not apply.

- c) *In order that area improvements do not become an issue of public agencies in competition with free enterprise, all efforts toward a partnership between government and private enterprise for development should be regarded.*

The site is privately owned and the application is for a privately-owned coal export terminal. As a result, restoration of the site for public needs and purposes is not required. As noted above, the site is undergoing a privately-funded remediation clean-up. This policy does not apply.

- d) *Compensation for the financial expenditures by private citizens involved in restoration and reclamation of derelict land areas should be made through (1) tax relief over to private enterprise, or (2) public acquisition procedures and subsequent re-sale or public facility development, or (3) public acquisition of use access.*

The site is not a derelict land area. This policy does not apply.

Policy 6, “Solid Waste Disposal” relates to solid waste disposal, which is inapplicable here. The project is consistent with these other policies.

Overall, the project is consistent with the Other General Shoreline Uses Goals and Policies.

Conclusion: The coal export terminal and stockpile yard will be consistent with the goals and policies of the SMA and SMP. The project meets conditional use criterion #1.

2.7.2 Conditional Use Criterion #2 - Not interfere with the normal public use of public shorelines.

No public use exists on the Project site and none is proposed. Construction and Operation of the Project will not interfere with normal use of public shorelines elsewhere on the Columbia River. As noted in Section 3.1 of the FEIS (Exhibit C-7 page 3.1-14), *“The Proposed Action would not directly 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. There are no other parks or recreation facilities in the study area. Therefore, the Proposed Action would not result in any direct impacts on parks and recreation facilities.* And on page 3.1-15: *“The Proposed Action at full capacity 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 ocean-going ships. With the additional vessels, the Proposed Action would result in an approximate 46% increase over current river vessel traffic. While this would be a substantial increase, the vessels would operate in the navigation channel except when arriving or departing the proposed docks under the assistance of tugs, and operations would be similar to current vessel traffic. Recreational boats are smaller and are not limited to using the navigation channel, and the Willow Grove and Rainier Riverfront Park boat launches are distant from the project area. Therefore, it is not expected that recreational boaters would be substantially affected by vessels and tugs using the proposed docks. The Proposed Action would not result in indirect impacts on parks and recreation facilities or on agricultural land.”* The project meets conditional use criterion #2.

2.7.3 Conditional Use Criterion #3 - Be compatible in use and design with other permitted uses in the area and be compatible with uses planned for the area under the comprehensive plan and shoreline master program.

As was discussed previously in the Comprehensive Plan and Zoning section of this report, the subject parcel carries the preferred shoreline environmental designation, Comprehensive Plan use designation and zoning designation that allows the proposed use. The project is compatible with other authorized and planned uses in the area. The site has been used as, and is planned for, water-dependent industrial uses. The site is located between a Weyerhaeuser lumber facility and an undeveloped site owned by the Port of Longview. As noted on page 3.1-15 of the FEIS (Exhibit C-7), *“The Proposed Action would be compatible with land use conditions in the indirect impacts study area and the existing concentration of industrial land uses along the Columbia River, in particular the Weyerhaeuser and Port facilities immediately upriver from the project area.”* There are residential uses located farther to the north, north of Industrial Way and the approximately 340-acre Mint Farm Industrial Park. *“Most land uses outside the corridor of industrial and transportation/utility uses along the Columbia River are located at least 1 mile from the project area. Furthermore, the residential uses to the north on Mount Solo are approximately 0.5 mile north of the project area. Other residential neighborhoods to the north are buffered from the project area by Mount Solo.”* (Exhibit C-7, FEIS, page 3.1-15) The proposal incorporates numerous measures to ensure that the proposal is compatible with existing and projected land uses in the area, including noise suppression and air quality mitigation. The project meets conditional use criterion #3.

2.7.4 Conditional Use Criterion #4 - Cause no significant adverse effects to the shoreline environment.

As noted on page 3.1-14 of the FEIS (Exhibit C-7), *“The Proposed Action would modify existing land use in the project area by replacing the existing industrial uses with a new export terminal. The export terminal 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. The Proposed Action would be a more intensive industrial use of the project area than under existing conditions. However, because the project area and surrounding area already contain industrial uses, the Proposed Action would not change the land use of the project area substantially.”*

The project includes a mitigation plan that offsets and mitigates anticipated environmental impacts. No processing, heating, or other activity will take place onsite that would result in air, water or solid emissions that would reduce the environmental quality of the site or nearby properties.

Noise emitted by off-loading the rail, conveying the material to stockpile area, and loading onto vessels will be within state mandated maximum noise levels, and traffic will be minimal; operations will therefore have no significant adverse effects to the shoreline environment.

A comprehensive list of the recommended mitigating conditions for the permit is included below in Section 4. The project meets conditional use criterion #4.

2.7.5 Conditional Use Criterion #5 - Cause no substantial detrimental effect to the public interest.

The applicant has taken into account all possible effects of the project that could be detrimental to the public interest and is committed to employing mitigating measures in order to offset impacts

wherever or whatever that impact might be. The Applicant will provide mitigation to compensate for the wetland fill in the upland areas of the site; they will mitigate for environmental impacts; they will use dust and noise suppression technology; and they will use erosion control best management practices.

The public interest will be also be positively affected through the improvement in the quality of life of the citizens by promoting long-term and stable economic development as a result of the project. As described in the EIS, the benefits of MBT Longview's proposed CET are many. Specifically, The Applicant commissioned Berk to conduct an economic and fiscal impact study of the proposed CET. Among other things, the Berk Study found that in addition to the creation of hundreds of new jobs and the associated tax benefits that would be generated, the proposed CET would also attract additional regional improvements to the freight transportation network along the River. The Berk Economic Study (Exhibit C-14) shows that the proposed CET will result in the addition of 1,350 construction jobs for the multi-year period of construction and approximately 135 full time family-wage jobs during operations.

In addition to considering the economic benefit of the proposed CET based on the jobs created, the additional tax base generated for the City of Longview and Cowlitz County, and the overall improvement to the local economy (as a result of a direct economic construction output of approximately \$232 million and the addition of 2,600 indirect and induced jobs resulting from construction).

The project's benefits also flow from the now completed Columbia River Channel Deepening Project. The deepening project was designed to be utilized by public and private ports on the lower Columbia- in the geographic area leased by MBT-Longview- who also seek to engage in trade with the Far East. The direct beneficiaries of the Deepening Project were the local ports on the lower Columbia River. These ports (including the Ports of Vancouver, Woodland, Kalama, Longview, Portland and St. Helens) realized the significant economic benefits that come from a deeper channel, and entered into cost-sharing agreements with the federal government on that basis. Shipping in interstate commerce must occupy the shorelines and the project as designed will promote the public welfare, while also protecting the aquatic environment to the maximum extent practicable. The project will mitigate anticipated environmental impacts through onsite and mitigation, which will provide off-channel habitat for juvenile salmonids and revegetation of native species. The project does not affect existing public access to the river and beach area for fishing and other recreational uses, or affect public access and recreational opportunities on the Columbia River.

A summary of the impacts identified in the FEIS is included below in Section 2.11 and a comprehensive list of the recommended mitigating conditions for the permit is included below in Section 4. The project meets conditional use criterion #5.

Overall Conclusion: The project will comply with the five criteria listed in WAC 173-27-160 and the four criteria listed in the SMP.

2.8 Cumulative Impacts

Per WAC 173-27-160(2): In the granting of all conditional use permits, consideration shall be given to the cumulative impact of additional requests for like actions in the area. For example, if conditional use permits were granted for other developments in the area where similar circumstances exist, the total of the conditional uses shall also remain consistent with the policies of RCW 90.58.020 and shall not produce substantial adverse effects to the shoreline environment.

The potential cumulative impacts of the dredging activity that requires the CUP, as well as the operations of the CET have been studied as part of the SEPA EIS (Exhibit C-7, Chapter 6). The SEPA EIS, including Chapter 6 were reviewed in the preparation of this staff report. Past and present actions have contributed to the existing condition of resources at the project area, in the surrounding region, in the Columbia River, and along the rail route serving the project area. Past and present actions include prior industrial development in the project area, Applicant's leased area, and along the lower Columbia River, including the industrial facilities adjacent to the Applicant's leased area, developments at the Port of Longview, ongoing development at the Mint Farm Industrial Park, and changes to container shipping in the lower Columbia River. Other past and present actions include the development of transportation infrastructure, including the BNSF Railway Company (BNSF) main line, Reynolds Lead and BNSF Spur, Interstate 5 (I-5), State Route (SR) 432 (Industrial Way), and dredging of the Columbia River navigation channel, as well as the ongoing maintenance of this infrastructure. An inventory of reasonably foreseeable future actions that could contribute to cumulative impacts on resources analyzed for the proposed dredging activity that requires a conditional use permit and the CET was developed including projects that would include new dredging requiring a Shoreline conditional use permit as well as new dock construction and introduction of additional vessel traffic. The study included a review of the Barlow Point Master Plan Project. No permit applications have been filed; however, the Master Plan has been prepared identifying high-level concepts of facilities, rail configuration, waterfront development, etc. for 280-acre site on Columbia River. Development concepts include multiuse, dry-bulk cargo loading, wharf improvements, storage areas, auto import/export, LNG terminals, biofuel import/blending/processing/transfer, etc. Proposal to change comprehensive plan land use designation for Barlow Point from Mixed Use Residential/Commercial to Heavy Industry.

Operation of the proposed CET would result in a new industrial use that would be consistent with the land use character of the project area and the surrounding vicinity. Projects associated with the Barlow Point Master Plan Project would change the land use of the site to more intensive industrial uses or would provide transportation improvements to support industrial uses. Projects associated with the Barlow Point Master Plan Project would be accounted for in local land use planning through an amendment to the comprehensive plan land use designation for the site. Therefore, the Proposed Action and cumulative project would not contribute to cumulative impacts on land use.

The proposed CET would result in new development in the shoreline area regulated by the Cowlitz County Shoreline Management Master Program (SMP). Projects associated with the Barlow Point Master Plan Project would be expected to result in new development in shoreline areas regulated by the Cowlitz County or City of Longview SMPs. The proposed CET, in combination with this cumulative project, would contribute to cumulative impacts on shoreline use due to the development of new structures and uses in the shoreline area. These impacts would be permanent but would represent a small portion of the Columbia River shoreline area in the study area. The proposed CET, in combination with this cumulative project, would be required to demonstrate consistency with the policies and use regulations of the applicable local SMP and would require Shoreline Substantial Development Permits and, potentially, Conditional Use Permits. As described above, the proposed CET is consistent with the policies of the SMA and SMP and is recommended for approval of a Shoreline conditional use permit.

2.9 Other Permits and Approvals

Other local, state and federal governmental approvals may be required for this type of development. It is the applicant's responsibility to ascertain the requisite permits and obtain them. Obtaining a shorelines permit does not relieve the applicant of the necessity of acquiring all requisite local, state and federal permits for this project.

2.10 Critical Areas

The proposed project site contains two Critical Areas within the jurisdiction of the Cowlitz County SMP, consisting of two Fish and Wildlife Habitat Conservation Areas (FWHCAs) and one Wetland. The Columbia River is a DNR Type S stream which, per the Cowlitz County critical areas ordinance, is regulated as a FWHCA. The river has a 150' riparian habitat area (RHA) in which development is regulated. Much of the RHA along the proposed project site is developed and regularly maintained as the CDID levee, consisting of a gravel access road and mowed grasses. Downstream of Dock 1, a thin band of riparian vegetation is present along most of the waterward toe of the levee, consisting primarily of shrubs and small trees. Upstream of Dock 1 the shoreline widens between the toe of the levee and the river, with the vegetation consisting of larger trees and shrubs. One riparian wetland is present within this area (Wetland X). This Category III wetland is located waterward of the levee and is within the RHA. Per the Cowlitz County critical areas ordinance, this wetland is regulated as a FWHCA and has an 80' buffer. Wetland X, located immediately upstream of Dock 1, is a Riverine wetland dominated by shrub vegetation. Wetland X, a Category III wetland, is regulated by the Cowlitz County critical areas ordinance. The 80' buffer surrounding the wetland consists primarily of shrubs and trees, as well as the maintained grasses on the CDID levee. No development is proposed within Wetland X or its buffer. The proposed project has both in-water and upland components within the RHA, which requires a Level II Habitat Assessment. The applicant has prepared and submitted a Critical Areas Assessment and a Biological Assessment which detail the existing conditions and proposed impacts to these areas. They have also prepared and submitted a mitigation and monitoring plan which provides mitigation for the proposed impacts and meets the intent of the CAO. The proposed in-water structures are also located within the regulated 100 year floodplain and floodway of the Columbia River. The applicant has submitted the required hydraulic analysis which has been reviewed and approved by staff.

Cowlitz County Department of Building and Planning issued Critical Areas Permit Number 17-06-3166 on July 19, 2017. The permit included the following conditions to ensure consistency with the Cowlitz County Critical Areas Ordinance (CCC 19.15):

- 1) **GENERAL:** Construction shall proceed in compliance with the plans and specifications submitted to this department and stamped as received on May 22, 2017 and supplemented on May 25, 2017. Any proposed changes or modifications to these plans and specifications, including those required by other agencies, shall require additional regulatory review and approval by the Department of Building and Planning prior to implementation.
- 2) **WETLANDS:** To address impacts on wetlands affected by placement of fill, the Applicant has prepared a comprehensive mitigation plan in coordination with the Corps, Ecology, and Cowlitz County. The Applicant has submitted a "Conceptual Mitigation Plan", prepared by Grette Associates, dated May 25, 2017, for approval by the US Army Corps of Engineers, Washington Department of Ecology and Cowlitz County. All mitigation work shall be completed in accordance with the mitigation plans approved by Cowlitz County or any other applicable regulatory agencies with jurisdiction, including the US Army Corps of Engineers.

All work shall follow the findings and recommendations contained within the "Millennium Coal Export Terminal Critical Areas Assessment Report," prepared by Grette Associates, received May 25, 2017, revised July 11, 2017 (p.73-75), as detailed in the "Conceptual Mitigation Plan", prepared by Grette Associates, dated May 25, 2017, 2017.

Mitigation and Monitoring (MM): Mitigation and monitoring for wetland and wetland buffer impacts shall be carried out as specified in Section 7 of the "Conceptual Mitigation Plan" prepared by Grette Associates, dated May 25, 2017. As stated in the document, the period of monitoring and maintenance shall be no less than ten years.

Dredge Disposal: Disposal of dredged material within the jurisdiction of Cowlitz County shall be in water. Should it become necessary to dispose of dredged material upland within a wetland or wetland buffer, or any other critical area or its buffer, MBT-Longview shall apply for a grading permit and critical areas permit. Further, if it becomes necessary to dispose of dredged material upland within shorelines jurisdiction, MBT-Longview shall apply for a shoreline substantial development permit. To protect wetland areas from being filled with dredged materials, the Applicant shall obtain all permits required for the disposal of dredge spoils required by all local, state and federal governmental authorities with jurisdiction based upon the location and manner of disposal, including but not limited to any necessary grading permit.

- 3) F&W HABITAT CONSERVATION AREAS: All work shall follow the findings and recommendations contained within the "Conceptual Mitigation Plan" prepared by Grette Associates, dated May 25, 2017, as approved by Cowlitz County or any other applicable regulatory agencies with jurisdiction including the US Army Corps of Engineers.

Dredge Disposal: Disposal of dredged material within the jurisdiction of Cowlitz County shall be in water. Should it become necessary to dispose of dredged material upland within the riparian habitat area or any other critical area or its buffer, MBT-Longview shall apply for a grading permit and critical areas permit. Further, if it becomes necessary to dispose of dredged material upland within shorelines jurisdiction, MBT-Longview shall apply for a shoreline substantial development permit.

Mitigation and Monitoring (MM): Mitigation and monitoring for impacts to aquatic and riparian habitat areas shall be carried out as specified in Section 9 of the "Conceptual Mitigation Plan" prepared by Grette Associates, dated May 25, 2017. As stated in the document, the period of monitoring and maintenance shall be no less than 10 years unless terminated earlier by consensus of the permitting agencies and the application.

SEPA Conditions: In addition, to protect aquatic species, the following mitigation measures from the April 28, 2017 FEIS shall be implemented as conditions of permit approval:

- *MM FISH-1. Implement Best Available Noise Attenuation Methods for Pile Driving. To minimize underwater noise impacts on fish during pile driving, the Applicant will employ the best available noise attenuation methods during pile driving. These methods may include, but are not limited to, confined bubble curtain, temporary noise attenuation pile, double-walled noise attenuation pile, or other similar technology. The Applicant is currently proposing use of a confined bubble curtain, but other methods may be found to be better at attenuating noise impacts during the Endangered Species Act Section 7 consultation or by the time construction begins. Should other methods in the future prove to attenuate underwater noise better than a confined bubble curtain, those methods will be employed.*
- *MM FISH-2. Implement a "Soft-Start" Method during Pile-Driving. To minimize underwater noise impacts on fish during pile driving, the Applicant will commence impact pile-driving using a "soft-start," or other similar method. The "soft-start" method is a method of slowly building energy of the pile driver over the course of several pile strikes until full energy is reached. This "soft-start" method cues fish and wildlife to pile-driving commencing and allows them to move away from the pile-driving activity.*
- *MM FISH-3. Monitor Pile-Driving and Dredging Activities for Distress to Fish and Wildlife. To minimize the potential harm to marine mammals, diving birds, or fish, a professional biologist will observe the waters near pile-driving and dredging activities for signs of distress from fish and wildlife during these activities. If any fish or wildlife species were to show signs of distress during*

pile driving, the biologist will issue a stop work order until the species are recovered, moved, or relocated from the area. The Applicant will immediately report any distressed fish or wildlife observed to the appropriate agencies (i.e., Washington Department of Fish and Wildlife, U.S. Fish and Wildlife Service, and National Marine Fisheries Service) and determine the appropriate course of action.

- *MM FISH-4. Conduct Eulachon Surveys. Should in-water work occur between December and May, the Applicant will conduct advance underwater surveys at least 1 year before in-water work would occur for eulachon (adult, eggs and larvae) within those areas where in-water work would occur (i.e., Docks 2 and 3 and the dredge prism). Surveys would be conducted starting in December when water temperatures are near 40 degrees Fahrenheit (°F) in the lower Columbia River, which appears to trigger river entry for adults, and continue through May, when larval eulachon have generally hatched and drifted out of the system. Survey design and results would be provided to Washington Department of Fish and Wildlife and National Marine Fisheries Service. If adult or larval eulachon or eulachon eggs are observed and in-water work is proposed, the Applicant would coordinate with the fish and wildlife agencies on the appropriate measures to avoid and minimize impacts on eulachon and implement those measures.*
 - *MM FISH-5. Conduct Fish Monitoring during Hydraulic Dredging Operations. The Applicant will develop and implement fish community monitoring in coordination with the Washington Department of Fish and Wildlife, U.S. Fish and Wildlife Service, and National Marine Fisheries Service. Fish community monitoring will include surveys conducted prior to dredging to identify fish species and life-stages present in the area to be dredged. As part of the coordination with the Washington Department of Fish and Wildlife, U.S. Fish and Wildlife Service, and National Marine Fisheries Service measures to reduce the entrainment of fish anticipated to be present during dredging will also be developed, which may include timing restrictions for hydraulic dredging. The Applicant will also develop and implement dredge entrainment monitoring for hydraulic dredging, in coordination with the Washington Department of Fish and Wildlife, U.S. Fish and Wildlife Service, and National Marine Fisheries Service. Dredge entrainment monitoring will involve screening the dredge output at the point of discharge (i.e., barge) to determine the number, life-stage, and species of fish entrained by hydraulic dredging. The information gathered during dredge monitoring will be provided to the Washington Department of Fish and Wildlife, U.S. Fish and Wildlife Service, and National Marine Fisheries Service.*
- 4) FREQUENTLY FLOODED AREAS: The dock and all in-water ancillary facilities shall be designed to withstand regulatory flood flows and the additional hydraulic forces associated with debris hangup on the structure during floods or high water events.
 - 5) MAINTENANCE OF PERMIT: The Permittees shall maintain the activity authorized by this Permit in good condition and in conformance with the terms and conditions of this Permit. The Permittees shall notify Cowlitz County immediately should the authorized activity cease or be abandoned. Such action may require restoration of the area.
 - 6) PROJECT REVISIONS: The applicant shall contact the Building and Planning Department to discuss any plan changes prior to implementation.

The appeal period ended on August 18, 2017 and no appeals were filed.

2.11 State Environmental Policy Act

Cowlitz County Department of Building and Planning, as co-lead agency under the State Environmental Policy Act, issued a Draft EIS on April 30, 2016. See Draft EIS (Exhibit 6) for entire list of organizations and business who provided comments on the DEIS. Cowlitz County and Ecology prepared a SEPA Final EIS that included responses to each comment received on the Draft EIS that satisfactorily addresses all of the significant responses and questions received. The Draft and Final EIS are included as Exhibit 6 to this staff report.

The Cowlitz County Code required that an appeal of the adequacy of the EIS was to be filed by August 18, 2017. CCC 19.11 and Chapter 43,21C Revised Code of Washington. BNSF Railway Company filed a precautionary appeal on May 12, 2017. That appeal was withdrawn by BNSF on August 24, 2017.

The Applicant issued a Notice of Action under RCW 43.21C.080 that established a deadline for appealing the EIS. No appeal was filed.

The SEPA EIS was reviewed and considered in the preparation of this Staff Report. It should be noted that the EIS was prepared based on the full build-out of both stages (Stage 1 and Stage 2) of the Project, and includes an analysis of impacts that could occur at completion of Stage 2. The application for this shoreline substantial development and conditional use permit is for Stage 1 only, and proposes the export of approximately 25 MMTPY of coal.

The following is a summary of the EIS findings and the County's proposed permit conditions where mitigation is recommended. In many cases the citation to the mitigation condition is provided without detailing all of the language of the mitigating condition. These recommendations are included in Section 4 Staff Recommendation.

2.11.1 Summary of SEPA FEIS Findings

Twenty-three (23) environmental areas were studied in the EIS plus greenhouse gas (GHG) emissions. Four (4) elements (land and shoreline use, geology and soils, surface waters and floodplains; and energy and natural resources) were identified as not having impacts that would require mitigation.

Nineteen (19) elements were determined to have potential impacts requiring mitigation but not all of these impacts were characterized as being "significant impacts". Of the 19 elements, 10 elements had impacts that were characterized as not significant. A sample of EIS statements for those elements is as follows:

- Land Use – *"Construction of the Proposed Action would not result in direct or indirect impacts on land and shoreline use."* (FEIS, page 5-11)
- Groundwater – *". . . operation of the proposed coal export terminal is not expected to degrade groundwater quality due to the low recharge rates of soil in the project area. Surface runoff treatment would minimize any infiltration of contaminant-laden runoff into the ground."* (FEIS 4.4-22) *"The Proposed Action likely would not affect groundwater at the wellfield at the Mint Farm Industrial Park because the wellfield draws water from the deep aquifer, and as previously mentioned, there is a confining impervious layer of clay and silt separating the two aquifers."* (FEIS 4.4-23)
- Water Quality – construction *"Overall the demolition activities associated with the Proposed Action would not be expected to cause a measurable impact on water quality."* (FEIS, page S-23) *"No significant long-term changes in the baseline condition in the study area would be expected to*

persist.” (FEIS, page S-23) Operations – “Coal dust is not anticipated to have a significant impact on water quality.” (FEIS, page S-23)

- *GHG Emissions – “Implementation of proposed mitigation measures (Table S-2) to develop a mitigation plan, reduce emissions, and improve efficiencies would reduce greenhouse gas emissions attributable to the Proposed Action. With implementation of proposed mitigation, there would be no unavoidable and significant adverse environmental impacts from greenhouse gas emissions.” (FEIS, page S-39)*

Significant impacts were identified for nine (9) elements *“Unavoidable and significant adverse environmental impacts could remain for nine environmental resource areas: social and community resources; cultural resources; tribal resources; rail transportation; rail safety; vehicle transportation; vessel transportation; noise and vibration; and air quality”* (FEIS, page S-41). With the exception of the demolition of the Reynolds plant, all of the identified potential significant unavoidable and adverse impacts are due to the rail or vessel transportation, not to the construction or operation of the CET itself.

Mitigation is proposed in the FEIS for all except an alleged potential for an increased cancer risk from diesel particulate matter (DPM) from locomotive emissions. As noted below, the Applicant offers that the EPA program regulating locomotive emissions constitutes reasonable mitigation of potential DPM impacts. The Applicant believes that if the mitigation measures are successfully implemented, the impacts would be eliminated or reduced to a level of less than significant. Below are statements related to elements of the environment with identified potential unavoidable and significant adverse impacts:

- Social and Community Cohesion and Public Services: *“If a Quiet Zone is implemented, it would eliminate the need for Proposed Action-related trains to sound horns as they approach the at-grade crossings, and it would eliminate the potential disproportionately high and adverse effect on minority and low-income populations. However, without approval and implementation of a Quiet Zone, the Proposed Action’s disproportionately high and adverse effect on minority and low-income populations would be unavoidable and significant.”* (FEIS, page S-41).

“With the current track infrastructure on the Reynolds Lead, a Proposed Action-related train traveling during the peak traffic hour would result in a vehicle-delay impact at four public at-grade crossings (Industrial Way, Oregon Way, California Way, and 3rd Avenue) in minority and low-income areas in 2028. This would constitute a disproportionately high and adverse effect on minority and low-income populations. The disproportionate impacts related to vehicle delay would not occur with planned improvements to the Reynolds Lead. Without the planned improvements to the Reynolds Lead, the Proposed Action’s disproportionately high and adverse vehicle delay effects on minority and low-income populations would be unavoidable and significant.” (FEIS, page S-41)

“Use of Tier 49 locomotives by BNSF and UP would reduce but not eliminate the disproportionately high and adverse effects in the Highlands neighborhood related to increased risk of greater than 10 cancers per million from diesel particulate matter inhalation. This impact would be unavoidable and significant.” (FEIS, page S-41) The FEIS did not propose mitigation, however the Applicant has suggested that the EPA program regulating locomotive emissions constitutes reasonable mitigation of potential DPM impacts.

- Historic and Cultural: *“Demolition of the Reynolds Metals Reduction Plant Historic District would be an unavoidable and significant adverse environmental impact, as described in Section S.7, Unavoidable and Significant Adverse Environmental Impacts. A Memorandum of Agreement is*

currently being negotiated between the Corps, Cowlitz County, Washington State Department of Archaeology and Historic Preservation (DAHP), City of Longview, BPA, National Park Service, potentially affected Native American tribes, and the Applicant. If it is successful, the Memorandum of Agreement could resolve this impact in compliance with Section 106 of the National Historic Preservation Act.” (FEIS, page S-15)

- **Tribal Resources:** “Construction and operation of the Proposed Action could result in indirect impacts on tribal resources through Proposed Action-related activities causing physical or behavioral responses in fish and affecting aquatic habitat. These impacts could reduce the number of fish surviving to adulthood and returning to areas east of Bonneville Dam (Zone 6), which could affect the number of fish available for harvest by Native American tribes. Proposed Action-related trains would travel through areas adjacent to and within the usual and accustomed fishing areas of Native American tribes and could restrict access to tribal fishing areas in the Columbia River. Because other factors besides rail operations affect fishing opportunities, such as the number of fishers, fish distribution, timing, and duration of fish migration periods and seasons, the extent to which Proposed Action-related trains would affect tribal fishing is difficult to quantify. Making a determination of significance related to treaty-reserved rights is not determined in this EIS.” (FEIS, page S-42)
- **Rail Transportation:** “Three segments on the BNSF main line routes in Washington State (Idaho/Washington State Line–Spokane, Spokane–Pasco, and Pasco–Vancouver) are projected to exceed capacity with projected baseline rail traffic in 2028. Proposed Action-related trains would contribute to these three segments exceeding capacity in 2028, based on the analysis in this EIS and assuming existing infrastructure. It is expected that BNSF would make the necessary investments or operating changes to accommodate the rail traffic growth, but it is unknown when these actions would be taken or permitted. If improvements to increase capacity were not made, Proposed Action-related trains would contribute to these capacity exceedances and could result in an unavoidable and significant adverse impact on rail transportation.” (FEIS, page S-42)
- **Rail Safety:** “Proposed Action-related trains would add rail traffic along rail routes in Cowlitz County and Washington State, which would increase the potential for train accidents. LVSW, BNSF, and UP could improve rail safety through investments or operational changes, but it is unknown when those actions would be taken or permitted. Therefore, the Proposed Action could result in an unavoidable and significant adverse impact on rail safety.” (FEIS, page S-42)
- **Vehicle Transportation:** “With current track infrastructure on the Reynolds Lead and BNSF Spur, four public at-grade crossings would operate below the benchmark used for the analysis if one Proposed Action-related train travels during the peak traffic hour in 2028. With planned track improvements to the Reynolds Lead and BNSF Spur, two public at-grade crossings would operate below the benchmark used for the analysis if two Proposed Action-related trains travel during the peak traffic hour in 2028. While improvements for rail and road infrastructure have been proposed, it is unknown when these actions would be permitted and implemented. Therefore, the Proposed Action at full operations in 2028 could result in an unavoidable and significant adverse impact on vehicle transportation at certain at-grade crossings in Cowlitz County.” (FEIS, page S-42)
- **Vessel Transportation:** “If a Proposed Action-related vessel incident such as a collision or allision occurred, the impacts could be significant, depending on the nature and location of the incident, the weather conditions at the time, and the discharge of oil. Although the likelihood of a serious Proposed Action-related vessel incident is very low, there are no mitigation measures that could completely eliminate the possibility of an incident or the resulting impacts.” (FEIS, page S-43)
- **Noise and Vibration:** “The Proposed Action would add 16 trains per day on the Reynolds Lead and BNSF Spur and increase average daily noise levels. Noise levels would exceed applicable criteria for noise impacts at noise-sensitive locations. The noise impacts would occur near at-grade crossings on the Reynolds Lead from train-horn noise intended for public safety. Railroad noise is

exempt from Washington State and local noise standards; however, it is possible for communities to work with the Federal Railroad Administration to apply for and implement a Quiet Zone to limit train horn sounding. The Applicant will work with the City of Longview, Cowlitz County, LVSW, the affected community, and other applicable parties to apply for and support the implementation of a Quiet Zone. However, if a Quiet Zone is not implemented and Proposed Action-related train horns are sounded for public safety, then the noise impacts would remain and would be an unavoidable and significant adverse impact.” (FEIS, page S-43)

- **Air Quality:** *“Project design measures, best management practices, and compliance with environmental permits, plans, and authorizations that are assumed as part of the Proposed Action would reduce air quality impacts related to construction and operation of the coal export terminal. Based on the inhalation-only health risk assessment, diesel particulate matter emissions from Proposed Action-related train locomotives traveling along the Reynolds Lead, BNSF Spur, and BNSF main line in Cowlitz County would result in areas of increased cancer risk at or above 10 cancers per million which would represent an unavoidable and significant adverse impact.” (FEIS, page S-43)* As noted below in Section 2.11.24, the EIS acknowledges that the risk calculations are highly conservative and likely overestimate the actual incremental inhalation cancer risk from the proposal. *“The cancer risk analysis follows standard approaches including use of the conservative assumption of continuous lifetime exposure. This overstates cancer risk even for residential locations where people typically spend more time, because individuals are mobile, spending time in locations other than their residence on an average day and even changing residences over a lifetime. Cancer risk is further overstated for land uses where people spend less time, such as commercial and industrial locations where people typically spend even less time than at residential locations.” (FEIS page 6.5-19).* The Applicant has offered that the EPA program regulating locomotive emissions constitutes reasonable mitigation of potential DPM impacts.

2.11.2 Land and Shoreline Use

Construction of the Proposed Action would not result in direct or indirect impacts on land and shoreline use. Operation of the Proposed Action would be consistent with the comprehensive plan designation, zoning ordinance, critical areas ordinance, and shoreline master program for the project area. The Applicant would be required to obtain the appropriate land use, shoreline, and critical areas permits from Cowlitz County and Ecology to ensure compliance and consistency with the applicable land use and shoreline management programs. No mitigation is required beyond what is required under the conditions of the Critical Areas Permit issued by Cowlitz County.

2.11.3 Social and Community Resources

Construction of the Proposed Action would have negligible impacts on social and community cohesion and access to public services.

Proposed Action-related trains would increase noise from rail traffic in Archie Anderson Park, along the Highlands Trail, and in Gerhart Gardens Park. Proposed Action-related trains would be required to sound their horns for public safety at at-grade crossings per federal regulations. Implementation of the proposed mitigation measure (Table S-2) to support the implementation of and fund a Quiet Zone along the Reynolds Lead would reduce noise impacts at Archie Anderson Park and along the Highlands Trail.

Recommended Permit Conditions:

Horn sounding could be eliminated by establishing a Quiet Zone, which includes enhanced safety measures at at-grade crossings, such that the use of train horns would not be required. FRA provides detailed instructions on the application process for a Quiet Zone (Federal Railroad Administration 2015).

Although implementation of a Quiet Zone is outside of the control of the applicant, the following measures are recommended to be included as permit conditions:

- *MM NV-2. Support Implementation of a Quiet Zone along the Reynolds Lead. To address moderate and severe noise impacts along the Reynolds Lead due to rail traffic, before beginning full operations, the Applicant will coordinate with the City of Longview, Cowlitz County, Longview Switching Company, and the affected community to inform interested parties on the Federal Railroad Administration process to implement a Quiet Zone that will include the 3rd Avenue and California Avenue crossings. Public outreach on the Quiet Zone process will include low-income and minority populations. The Applicant will assist interested parties in the preparation and submission of the Quiet Zone application to the Federal Railroad Administration. If the Quiet Zone is approved, the Applicant will fund the Quiet Zone improvements, which could include electronics, barricades, and crossing gates.*
- *MM NV-3. Explore Feasibility of Reducing Sound Levels. If the Quiet Zone for the Reynolds Lead is not implemented, the Applicant will fund a sound reduction study to identify ways to mitigate the moderate and severe and impacts from train noise from Proposed Action-related trains along the Reynolds Lead. The study methods will be discussed with Cowlitz County and the Washington State Department of Health for approval.*

2.11.4 Utilities

Construction activity would generate a modest demand for potable water that would be partially offset by the reduction in water demand from the existing use in the project area. Construction of the Proposed Action is not anticipated to result in significant impacts on water and sewer service.

Operation of the Proposed Action would create new sanitary sewage flows and new water demand. New sanitary sewer flows from the Proposed Action would be small and would be offset by the reduction in flows from the existing uses in the project area. Industrial process wastewater would be treated in the on-site water treatment facility, used on site, and would not add new demands to public sewer and wastewater utilities.

The Proposed Action would use potable municipal water supplies for domestic uses such as drinking, sinks, and toilets. The Proposed Action would not use potable water supplies for industrial needs and would not place new demands on the Longview water supply.

No mitigation is required.

2.11.5 Minority and Low-Income Populations

Construction activities would not have disproportionately high and adverse effects on minority and low-income populations.

Proposed Action-related trains would be required to sound their horns for public safety at at-grade crossings, and noise levels would exceed applicable criteria at noise-sensitive receptors near four public at-grade crossings on the Reynolds Lead (3rd Avenue, California Way, Oregon Way, and Industrial Way). Because there are minority and low-income populations adjacent to the Reynolds Lead rail line in Cowlitz County, the Proposed Action would have a disproportionately high and adverse effect on minority and low-income populations if no measures were implemented to mitigate this noise impact. Implementation of the proposed mitigation measure (Table S-2) to support the creation of a Quiet Zone along the Reynolds Lead would remove the disproportionately high and adverse noise effect on minority

and low-income populations. Other mitigation measures, such as directional horns, may be available to avoid or minimize impacts from train horns.

Recommended mitigation and permit conditions related to horn sounding are included above in Section 2.11.2 Social and Community Resources.

The FEIS found that *“based on the inhalation-only health risk assessment, diesel particulate matter emissions primarily from Proposed Action-related train locomotives traveling along the Reynolds Lead, BNSF Spur, and BNSF main line in Cowlitz County would result in areas of increased cancer risk. The maximum modeled cancer risk increase in the City of Longview would be 50 cancers per million in the Highlands neighborhood, a low-income and minority community. This impact would constitute a disproportionately high and adverse effect on minority and low-income populations and would be unavoidable and significant, as described in Section S.7, Unavoidable and Significant Adverse Environmental Impacts.”* (FEIS, page S-14)

The EIS explains that the risk calculations are highly conservative and likely overestimate the actual incremental inhalation cancer risk from the proposal. “The cancer risk analysis follows standard approaches including use of the conservative assumption of continuous lifetime exposure. This overstates cancer risk even for residential locations where people typically spend more time, because individuals are mobile, spending time in locations other than their residence on an average day and even changing residences over a lifetime. Cancer risk is further overstated for land uses where people spend less time, such as commercial and industrial locations where people typically spend even less time than at residential locations.” (FEIS, page. 6.5-19). To provide context for the increased cancer risk related to diesel particulate matter, the EIS provides the Cowlitz countywide baseline of 300 cancers per million from inhalation of pollutants generally and notes that an increase of 10 cancers per million would represent an approximately 3% increase in inhalation risks. (FEIS, page. 5.6-20).

Additional Information presented by Proponent: Locomotive emissions are regulated by the U.S. Environmental Protection Agency under Section 213 of the Federal Clean Air Act. EPA’s regulation of locomotive emissions has become more stringent over time and this is expected to continue. “In June 2008, EPA finalized a three-part program that dramatically reduces emissions from diesel locomotives of all types -- line-haul, switch, and passenger rail. The rule cuts particulate matter (PM) emissions from these engines by as much as 90 percent and oxides of nitrogen (NOx) emissions by as much as 80 percent when fully implemented. The standards are based on the application of high-efficiency catalytic after treatment technology for freshly manufactured engines built in 2015 and later.” <https://www.epa.gov/regulations-emissions-vehicles-and-engines/regulations-emissions-locomotives>. These regulations will affect all locomotives. Irrespective of whether they serve unit trains, manifest trains, or passenger trains, EPA’s regulations will substantially reduce the impact of DPM.

2.11.6 Aesthetics, Light and Glare

Construction of the Proposed Action would result in a low level of impact on aesthetics and visual quality.

The Proposed Action would result in a moderate level of impact from the Dibblee Beach viewpoint.

Implementation of the following mitigation to modify lighting and appearance of facility surface to minimize visual impacts would reduce impacts on viewers at this viewpoint.

- *MM ALG-1. Modify Lighting and Appearance of Facility Surfaces to Minimize Visual Impacts. To minimize the aesthetic, light, and glare impacts, the Applicant will:*

- *Use directional lighting with full box cut-off fixtures, or equivalent, and use motion- or user-controlled light systems, where practicable and feasible.*
- *Use neutral colors to blend with or complement surrounding environment for non-safety-related structures and equipment, and use nonreflecting materials and finishes, where practicable and feasible.*

2.11.7 Cultural Resources

Construction of the Proposed Action would demolish 30 of the 39 identified resources in the study area that contribute to the historical significance of the Reynolds Metals Reduction Plant Historic District. The Proposed Action would adversely affect cultural resources associated with the Reynolds Metals Reduction Plant Historic District through the demolition of buildings and structures that contribute to the Reynolds Metals Reduction Plant Historic District. A Memorandum of Agreement is currently being negotiated between the U. S. Army Corps of Engineers, Cowlitz County, Washington State Department of Archaeology and Historic Preservation (DAHP), the City of Longview, BPA, the National Park Service, potentially affected Native American tribes, and the Applicant. If it is successful, the Memorandum of Agreement could resolve this impact in compliance with Section 106 of the National Historic Preservation Act.

Routine operations and maintenance of the Proposed Action are not expected to affect cultural resources in the study area. Remaining portions of the Reynolds Metals Reduction Plant Historic District would no longer be eligible for listing in the National Register of Historic Places, due to a loss of integrity caused by the removal. The CDID #1 levee and BPA Longview Substation would remain individually eligible for listing in the National Register of Historic Places.

The **Section 106 Agreement** will be included as a condition of the Federal Record of Decision. The Agreement is expected to include the following stipulations:

- Archaeological resources in the project area discovered during construction could be vulnerable to inadvertent disturbance during routine operations and maintenance. If previously undocumented archaeological resources are encountered in the project area during routine operations, they would be addressed through implementation of an Inadvertent Discovery Plan.
- Preparation of an Inadvertent Discovery Plan and implementation of proposed mitigation to monitor ground-disturbing activities would address potential construction impacts on unidentified archaeological resources.
- *MM CR-1. Monitor Ground-Disturbing Activities. To protect archaeological resources that may occur in subsurface deposits, the Applicant will have a qualified professional archaeologist monitor ground-disturbing activities. If archaeological resources are discovered, construction could be halted in the area until the Corps, in consultation with the Department of Archaeology and Historic Preservation and the tribes, determine the appropriate course of action.*

No additional mitigation is required.

2.11.8 Tribal Resources

Construction activities of the Proposed Action could cause physical or behavioral responses in fish and would affect aquatic habitat. These impacts could reduce the number of fish surviving to adulthood and returning to areas upriver of Bonneville Dam, thereby affecting the number of fish available for harvest

by the tribes. However, implementation of proposed mitigation measures identified below would reduce the Proposed Action's potential impacts on fish and would reduce potential impacts on tribal resources

Proposed Action-related trains would travel along the BNSF main line adjacent to the Columbia River and could result in increased at-grade crossing delays to tribal fishers' access to traditional fishing sites compared to conditions under the No-Action Alternative. Specifically, Proposed Action-related trains could affect access via designated roads to the managed tribal fishing sites on the Washington side of the Columbia River. Tribal fishers also access the river at multiple unmapped locations using unimproved, at-grade crossings. Proposed Action-related trains also could delay tribal fishers' access to these unmapped traditional fishing locations.

Operation of the Proposed Action could cause physical or behavioral responses in fish and affect aquatic habitat. These impacts could reduce the number of fish surviving to adulthood and returning to areas east of Bonneville Dam, thereby affecting the number of fish available for harvest by the tribes. Coal dust particles could enter the aquatic environment through movement of coal into and around the project area during terminal operations and during rail transport, but would not be expected to affect behavior or survival of fish significantly.

Implementation of proposed mitigation measures to reduce the Proposed Action's potential impacts on fish would reduce potential impacts on tribal resources and fish.

- MM WQ-2. Develop and Implement a Coal Spill Containment and Cleanup Plan.
- MM FISH-1. Implement a Best Available Noise Attenuation Methods for Pile-Driving.
- MM FISH-2. Implement a "Soft-Start" Method during Pile-Driving.
- MM FISH-3. Monitor Pile-Driving and Dredging Activities for Distress to Fish and Wildlife.
- MM FISH-4. Conduct Eulachon Surveys.
- MM FISH-5. Conduct Fish Monitoring during Hydraulic Dredging Operations.

2.11.9 Hazardous Materials

Impacts, such as a release associated with the routine transport, use, storage, and disposal of hazardous materials (e.g., fuels, solvents; coal is not a hazardous material) during construction, could occur; however, all construction activities would be required to comply with applicable federal, state, and local regulations.

Operation of the Proposed Action could introduce new sources of hazardous materials, such as fuel, oil, grease, lubricants, hydraulic fluids, solvents, and acids. Because these substances would be used and stored in small quantities, spills would be expected to be small and rapidly cleaned up and reported, as required by federal, state, and local laws. If a release of hazardous materials in the project area were to result from a collision or derailment, emergency response and cleanup measures would be implemented as required by the federal and state law, including Washington State regulations under RCW 90.56.

The following measure would mitigate the risk of a spill on site:

- MM WQ-1. Locate Spill Response Kits Near Main Construction and Operations Areas.

2.11.10 Geology and Soils

Construction of the Proposed Action would involve ground-disturbing activities such as grading, railroad and road construction, and excavating for foundations, which could increase soil erosion in the project

area. The on-site erosion hazard is relatively low due to the flat condition of the site. Bare soils could be exposed during construction, resulting in the potential for soil erosion from rainfall or wind. Implementation of best management practices would be expected to reduce the potential for erosion.

Underlying soils at the project area could affect Proposed Action-related structures and infrastructure through corrosion or settlement. Impacts related to corrosion could be avoided through standard engineering and construction methods. Potential impacts associated with compaction and settlement of underlying sediments in the coal stockpile areas are addressed in the project design through preloading, which involves installing wick-drains to expel the water and compacting the soils beneath the stockpile areas prior to operations to improve its load-bearing capacity and consolidate the soils to avoid further settlement during operations. The design shall be provided for approval by Cowlitz County in the Grading and Excavation Permit application.

Operation of the Proposed Action could expose people and structures to potential impacts involving catastrophic events such as strong seismic ground shaking, seismic-related ground failure (liquefaction), and landslides. The Proposed Action would be required to comply with applicable building codes. A geotechnical report would also be prepared as part of the Proposed Action to inform project design and construction techniques that could reduce potential risks associated with ground shaking and liquefaction. Additionally, preloading the stockpile areas would reduce the susceptibility of the soils to liquefaction and would reduce the potential for damage to proposed structures that occur in the immediate vicinity of the preloading area. Other geologic hazards, such as landslides are not anticipated to affect the Proposed Action.

No mitigation is required.

2.11.11 Surface Waters and Floodplains

Construction of the Proposed Action could affect surface water in the study area by altering drainage patterns from heavy equipment/staging areas, construction of Docks 2 and 3 and removal of existing pile dikes in the Columbia River, and water used for construction. Construction activities could redirect drainage and increase erosion, which could introduce sediment to the surrounding drainage system. This could result in the need for additional channel maintenance; however, this is unlikely because the Applicant would be required to comply with erosion and sediment control best management practices and the requirements of an NPDES Construction Stormwater Permit. No significant impacts on surface water and floodplains are anticipated during construction of the Proposed Action.

Operations would use water in ways very similar to construction, including dust suppression (i.e., coal dust), washdown water, and fire-protection systems. Impacts on surface water and floodplains resulting from operation of the Proposed Action would be considered low. Operations would include modifications to the existing stormwater management system to accommodate the Proposed Action and address anticipated operational needs, and will be subject to approval as part of the amended NPDES permit for the site. Compliance with the conditions likely to be outlined in the required permits would reduce impacts on surface water and floodplains. No significant adverse impacts on surface water and floodplains related to operational water needs or use are anticipated.

No mitigation is required.

2.11.12 Wetlands

Construction of the Proposed Action would result in 24.10 acres of permanent wetland loss. Loss of wetlands would result from placing fill material to construct the rail loops and facilities associated with the transfer and stockpiling of coal. Compliance with applicable federal, state, and local permits to place fill in wetlands and implementation of proposed mitigation would compensate for the loss of wetlands. Impacts during construction would also include filling 0.57 acre of a 3.40-acre wetland. Implementation of the proposed mitigation to prepare a comprehensive wetland mitigation plan would offset the impact.

Impacts on wetland water quality would not be likely to occur, as runoff from the project area would be directed to on-site drainage systems and would be treated and reused on site, or discharged in accordance with a NPDES Construction Stormwater Permit that would be required during construction.

Vegetation for one wetland would likely be affected by coal dust deposition from stockpile activities. Coal dust deposition on vegetation would depend on the dust load, climatic conditions, and physical characteristics of the vegetation. Potential impacts related to coal dust deposition would be reduced by project design measures, best management practices, and permit requirements to control dust emissions. Implementation of proposed coal dust mitigation would further reduce impacts.

The following measure has been included as a condition of approval of the Critical Areas Permit to mitigate for the wetland loss. The Applicant has submitted a Conceptual Mitigation Plan to the Corps, Ecology and Cowlitz County and it is currently under review.

- MM WTL-1. *Prepare a Comprehensive Mitigation Plan. To address impacts on wetlands affected by placement of fill, the Applicant will prepare a comprehensive mitigation plan in coordination with the Corps, Ecology, and Cowlitz County. The mitigation plan will address the general requirements for mitigation planning consistent with all current local, state, and federal guidance and regulations.*

2.11.13 Groundwater

Preloading would involve installing wick-drains to expel water and consolidate soils. Preloading could temporarily disrupt existing drainage and groundwater recharge patterns in the shallow aquifer within the study area. Changes to groundwater recharge patterns on the deep and shallow aquifers would not result in a significant impact. Groundwater required for dust suppression would represent approximately 6.5% of the original groundwater extraction rights⁴, which would not have a significant impact on groundwater supply.

Construction of the Proposed Action could degrade groundwater quality. Leaks and spills during construction could introduce contaminants to groundwater. Implementation of proposed mitigation to locate spill response kits in the project area could reduce impacts on groundwater. Stormwater generated during construction would be collected and treated in compliance with the required NPDES Construction Stormwater Permit prior to discharge and, thus, would not be expected to degrade water quality in the Columbia River, which is the source of shallow aquifer groundwater recharge.

Construction activities would not significantly affect the deep-water aquifer. Additionally, construction of the Proposed Action would not likely affect the wellfield at the Mint Farm Industrial Park, which pulls municipal water from the deep-water aquifer.

Operations under the separate permit would not be expected to change groundwater recharge patterns measurably. Potential impacts on groundwater recharge or effects on groundwater supply during operations of the Proposed Action are not considered significant. The potential for infiltration of surface

water containing coal dust would be relatively low based on the low recharge rates of the soil characteristics that exist in the study area. Thus, the potential for coal dust or constituents of coal to infiltrate and affect groundwater quality is relatively low. Operation of the Proposed Action would be unlikely to affect groundwater quality significantly. If a release of hazardous materials were to occur, the rail operator would implement emergency response and cleanup actions as required by federal and state law. A potential release of hazardous materials would not be expected to affect groundwater significantly. Operations would not likely affect the wellfield at the Mint Farm Industrial Park.

The following measure would mitigate the risk of a spill on site:

- MM WQ-1. Locate Spill Response Kits Near Main Construction and Operations Areas.

2.11.14 Water Quality

Construction activities would disturb soil, which could result in impacts on water quality. The Applicant would be required to obtain an NPDES Permit and to avoid and minimize impacts on water quality. Monitoring and reporting would be required and would document if short-term or long-term impacts were occurring. Construction of the Proposed Action would require in-water work, including dredging, that would disturb sediment on the river bottom and temporarily increase turbidity. Additionally, a long-term increase in the exposure of creosote in the project area could occur from removing the existing pile dikes. The Applicant would be required to use standard best management practices for working in aquatic areas, and follow permit requirements that would help maintain acceptable water quality conditions during construction. Demolition of the existing structures in the project area has the potential to affect water quality by disturbing soil or debris that could contain hazardous or toxic materials (i.e., asbestos, lead). This impact would be minimized by collecting and removing all concrete and other structural debris and collecting and treating all stormwater from the site prior to discharge to surface waters. The Applicant will be required to use best management practices in compliance with the NPDES Permit to reduce the potential for demolition-related pollutants to enter and contaminate surface waters. Overall, the demolition activities associated with the Proposed Action would not be expected to cause a measurable impact on water quality.

A spill or release of potential contaminants required for the operation and maintenance of heavy equipment and machinery (e.g., diesel fuel, oils) could affect water quality if they were either released directly into surface waters or transported and discharged to surface or groundwater. During operations and maintenance, relatively small quantities (less than 50 gallons) of this amount would be handled. Potential releases could be limited in their extent and duration with rapid and appropriate spill response and cleanup.

Coal could enter water as either coal dust or as the result of a coal spill. The potential risk for exposure to toxic chemicals contained in coal would be relatively low as these chemicals tend to be bound in the matrix structure and not quickly or easily leached. Coal dust particles would likely be transported downriver by river flow and either carried out to sea or distributed over a sufficiently broad area that a measurable increase in concentrations of toxic chemicals in the Columbia River would be unlikely. Potential impacts related to coal dust deposition would be reduced by the use of surfactants and load profiling for Proposed Action-related trains. Coal spilled into the water could occur in Washington State along the rail routes. Cleanup efforts would be implemented quickly and it would be expected that the majority of the spilled coal would be recovered.

Implementation of proposed mitigation to locate spill response kits in the project area during construction could reduce potential impacts from hazardous materials or fuels on water quality.

- MM WQ-1. *Locate Spill Response Kits Near Main Construction and Operations Areas. The Applicant will locate spill response kits throughout the project area during construction and operations. The spill response kits will contain response equipment and personal protective equipment appropriate for hazardous materials that will be stored and used during construction and operations. Site personnel will be trained in the storage, inventory, and deployment of items in the spill response kits. Spill response kits will be checked a minimum of four times per year to ensure proper-functioning condition, and will otherwise be maintained and replaced per manufacturer recommendations. Should a spill response kit be deployed, the Applicant will notify Cowlitz County and Ecology immediately. The Applicant will submit a map indicating the types and locations of spill response kits to Cowlitz County and Ecology for approval prior to beginning construction and operations.*
- MM WQ-2. *Develop and Implement a Coal Spill Containment and Cleanup Plan. To limit the exposure of spilled coal to the terrestrial, aquatic, and built environments during coal handling, the Applicant will develop a containment and cleanup plan. The plan will be reviewed by Cowlitz County and Ecology and implemented prior to beginning export terminal operations. In the event of a coal spill in the aquatic environment by the Applicant during export terminal operations, action will be taken based on the specific coal spill, and the Applicant will develop a cleanup and monitoring plan consistent with the approved containment and cleanup plan. This plan will include water quality and sediment monitoring to determine the potential impact of the coal spill on the aquatic habitat and aquatic species. The Applicant will develop the cleanup and monitoring plan in coordination with Cowlitz County, Ecology, and the Corps. The cleanup and monitoring will be similar in scope to the monitoring completed for the Aquatic Impact Assessment (Borealis 2015) associated with a coal spill in British Columbia, Canada, in 2014.*

Implementation of the following measures could reduce the risk of coal dust affecting water quality.

- MM CDUST-1. Monitor and Reduce Coal Dust Emissions in the Project Area.
- MM CDUST-3. Reduce of Coal Dust Emissions from Rail Cars.

2.11.15 Vegetation

Clearing and grading during construction would permanently remove approximately 26 acres of upland forest (including a small area of riparian zone), scrub-shrub, and herbaceous vegetation; approximately 24 acres of wetland vegetation; and approximately 151 acres of previously developed industrial area. Although no special-status plant species have been recorded in the project area, special-status plant species have the potential to occur based on the presence of potentially suitable habitat. Permanent removal of vegetation during construction could be mitigated through implementation of a County-approved revegetation plan consistent with the Cowlitz County Critical Areas Ordinance 19.15.170. Construction and staging activities along the edges of the project area could temporarily disturb adjacent vegetation.

Impacts on vegetation during operations would include the possible colonization by noxious weeds, spills of coal or other materials associated with vessel loading and transport activities, and altering vegetation as part of maintenance activities.

Operations in the project area and when transporting coal by rail could generate coal particles and fugitive coal dust, which could be deposited on vegetation, soils, and sediments. Coal transported by vessel would be in enclosed cargo holds and coal dust would not likely result in significant deposition on vegetation along the vessel route in the Columbia River. Impacts from operations could include

vessel wake impacts on vegetation along the lower Columbia River. The magnitude of potential impacts would depend on vessel characteristics (i.e., vessel design, hull shape, vessel weight and speed, angle of travel relative to the shoreline, proximity to the shoreline), currents and waves, tidal stage, water depth, and shoreline characteristics (i.e., slope of the shoreline, shoreline vegetation, soil erodibility).

The Department recommends that the EIS-Proposed mitigation to conduct a special-status plant survey prior to construction be included as a permit condition.

- *MM VEG-1. Conduct Rare Plant Surveys Prior to Construction. To ensure that threatened, endangered, or rare plants are not affected, the Applicant will conduct rare plant surveys of the project area, including the ditches and stormwater conveyance features. Surveys for rare plants will be performed for those rare plants that may occur in Cowlitz County, according to the Washington Natural Heritage Program. Surveys will be performed prior to any Proposed Action-related ground disturbance and during the appropriate survey windows for each species. If such plant species are found, the Applicant will notify and consult with the Washington State Department of Natural Resources, and the U.S. Fish and Wildlife Service (if federally protected species are found). The Applicant and the agencies will work together to determine the appropriate conservation and mitigation measures should potential impacts on any rare plants be possible as a result of ground disturbing activities.*

To ensure disturbed native vegetation is restored after construction, the Department recommends that mitigation to replant disturbed areas with suitable native vegetation be included as a permit condition.

- *MM VEG-2. Conduct Aquatic Vegetation Surveys Prior to Construction. To ensure that aquatic plants along the shoreline of the Columbia River are not affected, the Applicant will conduct an aquatic plant survey along the shoreline of the project area prior to commencing in-water work associated with construction of Docks 2 and 3 and construction-related dredging, including all areas within the shallow water zone adjacent to the proposed docks. If areas of aquatic vegetation are found, the Applicant will notify the Washington State Department of Natural Resources, Cowlitz County, and the U.S. Fish and Wildlife Service, and work with these agencies to develop appropriate conservation or mitigation measures before beginning any in-water work.*

Implementation of proposed mitigation measures could avoid and minimize the invasion and colonization of noxious weeds and is recommended as a permit condition. Best management practices, prevention, and control measures would also reduce potential vegetation impacts.

- *MM VEG-3. Replant Areas Temporarily Disturbed during Construction. To ensure that disturbed native vegetation is restored, after construction the Applicant will replant vegetated areas temporarily disturbed during construction with native vegetation suitable for site conditions post-construction. The Applicant will monitor replanted vegetation annually for 5 years and will ensure the survival of 80% of all replanted vegetation. The Applicant will submit annual monitoring reports to Cowlitz County.*
- *MM VEG-4. Develop and Implement a Revegetation Plan. To mitigate permanent removal of vegetation from project construction, the Applicant will develop and implement a revegetation plan for the project area. This plan will be approved by Cowlitz County prior to implementation and will be consistent with the Cowlitz County Critical Areas Ordinance (CCC 19.15).*
- *MM VEG-5. Control Noxious Weeds. To limit further invasion and colonization of noxious weeds on disturbed land, the Applicant will monitor for noxious weeds during construction and operations and remove noxious weeds that invade new areas of the site. The Applicant will*

coordinate with the Cowlitz County Noxious Weed Control Board if Class A and B noxious weeds are detected.

Potential impacts related to coal dust deposition from Proposed Action-related trains would be reduced using surfactants and load profiling. Implementation of proposed coal dust mitigation would further reduce impacts related to coal dust from the project area and during rail transport.

- MM CDUST-3. Reduce Coal Dust Emissions from Rail Cars.
- MM WQ-2. Develop and Implement a Coal Spill Containment and Cleanup Plan.

2.11.16 Fish

Construction activities including installing and removing piles and the dredging and disposal of dredged materials could temporarily affect fish due to increased turbidity. While not anticipated to cause physical damage, increased turbidity could result in behavioral responses in fish.

Installation of structural steel piles during construction of the Proposed Action would generate underwater noise during pile driving, which could affect fish in several ways, ranging from alteration of behavior to physical injury or mortality.

The following mitigation measures have been required as a condition of approval of the Critical Areas Permit:

- MM FISH-1. *Implement Best Available Noise Attenuation Methods for Pile Driving. To minimize underwater noise impacts on fish during pile driving, the Applicant will employ the best available noise attenuation methods during pile driving. These methods may include, but are not limited to, confined bubble curtain, temporary noise attenuation pile, double-walled noise attenuation pile, or other similar technology. The Applicant is currently proposing use of a confined bubble curtain, but other methods may be found to be better at attenuating noise impacts during the Endangered Species Act Section 7 consultation or by the time construction begins. Should other methods in the future prove to attenuate underwater noise better than a confined bubble curtain, those methods will be employed.*
- MM FISH-2. *Implement a “Soft-Start” Method during Pile-Driving. To minimize underwater noise impacts on fish during pile driving, the Applicant will commence impact pile-driving using a “soft-start,” or other similar method. The “soft-start” method is a method of slowly building energy of the pile driver over the course of several pile strikes until full energy is reached. This “soft-start” method cues fish and wildlife to pile-driving commencing and allows them to move away from the pile-driving activity.*
- MM FISH-3. *Monitor Pile-Driving and Dredging Activities for Distress to Fish and Wildlife. To minimize the potential harm to marine mammals, diving birds, or fish, a professional biologist will observe the waters near pile-driving and dredging activities for signs of distress from fish and wildlife during these activities. If any fish or wildlife species were to show signs of distress during pile driving, the biologist will issue a stop work order until the species are recovered, moved, or relocated from the area. The Applicant will immediately report any distressed fish or wildlife observed to the appropriate agencies (i.e., Washington Department of Fish and Wildlife, U.S. Fish and Wildlife Service, and National Marine Fisheries Service) and determine the appropriate course of action.*

- *MM FISH-4. Conduct Eulachon Surveys. Should in-water work occur between December and May, the Applicant will conduct advance underwater surveys at least 1 year before in-water work would occur for eulachon (adult, eggs and larvae) within those areas where in-water work would occur (i.e., Docks 2 and 3 and the dredge prism). Surveys would be conducted starting in December when water temperatures are near 40 degrees Fahrenheit (°F) in the lower Columbia River, which appears to trigger river entry for adults, and continue through May, when larval eulachon have generally hatched and drifted out of the system. Survey design and results would be provided to Washington Department of Fish and Wildlife and National Marine Fisheries Service. If adult or larval eulachon or eulachon eggs are observed and in-water work is proposed, the Applicant would coordinate with the fish and wildlife agencies on the appropriate measures to avoid and minimize impacts on eulachon and implement those measures.*

Pile installation, dredging, and dredge material disposal during construction of the Proposed Action would increase turbidity and underwater noise, which could result in adverse physical or behavioral responses in fish. The following mitigation measure has been required as a condition of approval of the Critical Areas Permit:

- *MM FISH-5. Conduct Fish Monitoring during Hydraulic Dredging Operations. The Applicant will develop and implement fish community monitoring in coordination with the Washington Department of Fish and Wildlife, U.S. Fish and Wildlife Service, and National Marine Fisheries Service. Fish community monitoring will include surveys conducted prior to dredging to identify fish species and life-stages present in the area to be dredged. As part of the coordination with the Washington Department of Fish and Wildlife, U.S. Fish and Wildlife Service, and National Marine Fisheries Service measures to reduce the entrainment of fish anticipated to be present during dredging will also be developed, which may include timing restrictions for hydraulic dredging. The Applicant will also develop and implement dredge entrainment monitoring for hydraulic dredging, in coordination with the Washington Department of Fish and Wildlife, U.S. Fish and Wildlife Service, and National Marine Fisheries Service. Dredge entrainment monitoring will involve screening the dredge output at the point of discharge (i.e., barge) to determine the number, life-stage, and species of fish entrained by hydraulic dredging. The information gathered during dredge monitoring will be provided to the Washington Department of Fish and Wildlife, U.S. Fish and Wildlife Service, and National Marine Fisheries Service.*

Operation of the Proposed Action would generate and disperse coal dust in the aquatic environment which could affect fish. The following mitigation measures are recommended.

- MM CDUST-1. Monitor and Reduce Coal Dust Emissions in the Project Area.
- MM CDUST-3. Reduce Coal Dust Emissions from Rail Cars.

Operation of the Proposed Action could affect fish from coal spills. The following mitigation measure is recommended.

- MM WQ-2. Develop and Implement a Coal Spill Containment and Cleanup Plan.

2.11.17 Wildlife

Approximately 151.1 acres of the project area consist of previously developed and disturbed land that generally does not support wildlife.

Installation of structural steel piles during construction of the Proposed Action would generate underwater noise during pile driving, which could affect marine mammals and diving birds and cause physical or behavioral responses.

- MM FISH-2. Implement a “Soft-Start” Method during Pile-Driving.

Pile installation, dredging, and dredge material disposal during construction of the Proposed Action would increase turbidity and underwater noise, which could result in adverse physical or behavioral responses in marine mammals, diving birds, and terrestrial animals.

- MM FISH-3. Monitor Pile-Driving and Dredging Activities for Distress to Fish and Wildlife.

Impacts on wildlife due to increased potential vessel strikes and underwater noise from additional vessel traffic for the Proposed Action would not be significant. Regarding vessel strikes, while the behavior of a pinniped (such as a seal) in the path of an approaching vessel in the study area is uncertain, it is likely that a pinniped would have the ability to avoid and swim away from the vessel. Additionally, pinniped vessel strikes are rare, pinnipeds in the Columbia River would likely be habituated to existing Columbia River vessel traffic, and vessel speed would be less than 14 knots. Therefore, the potential risk for a vessel collision with a pinniped in the study area would not be considered significant. Similarly, it is expected that Proposed Action-related vessel underwater noise impacts on pinnipeds would not be significant because peak hearing frequencies of pinnipeds in the study area are generally outside of the noise frequencies generated by vessels, and these species are habituated to existing Columbia River noise levels.

Operation of the Proposed Action would generate and disperse coal dust in the aquatic and terrestrial environment. Coal dust could affect wildlife through physical or toxicological means.

- MM CDUST-1. Monitor and Reduce Coal Dust Emissions in the Project Area.
- MM CDUST-3. Reduce Coal Dust Emissions from Rail Cars.

Operation of the Proposed Action could affect wildlife from coal spills.

- MM WQ-2. Develop and Implement a Coal Spill Containment and Cleanup Plan.

2.11.18 Energy and Natural Resources

Construction activities of the Proposed Action would require the consumption of energy and natural resources. Energy consumption would include the use of electricity, diesel fuel, gasoline, oil, and natural gas to provide lighting, power tools and equipment, and transport employees and materials to and from the project area. Construction would also consume natural resources including water, gravel, fill dirt, steel, and wood. The demand for construction-related energy and natural resource consumption would be minor compared to current demand, and could be met by existing local and regional supply.

Electricity, gasoline, oil, propane, and diesel fuel would be the primary energy types used in the project area during operations, and fuel consumption would increase due to increased train, vessel, and vehicle transits to and from the project area. The demand for energy would not be significant compared to current demand and is anticipated to be met by the existing local and regional supply.

Operation of the Proposed Action would consume natural resources including water, gravel, fill dirt, and wood. Water demand during operations would be met by the on-site water management system,

designed to collect and treat runoff for reuse, as well as from existing groundwater wells. All of the stormwater would be processed through the water treatment facility prior to reuse. Groundwater would be sourced from existing production wells with approved water rights, and there would be no need for new wells. The demand for gravel, dirt, and wood during operation of the Proposed Action is anticipated to be met by existing local and regional supply considering the availability of these resources.

No mitigation is required.

2.11.19 Rail Transportation

Proposed Action-related trains and baseline rail traffic during full operations (Stages 1 and 2)² would exceed capacity on certain main line route segments with current infrastructure. The FEIS analyzes the impacts of the Project at full build-out of approximately 8 trains per day. *“Operation of the Proposed Action would result in the indirect impacts on rail transportation described below. Impacts were determined by comparing the baseline rail traffic in 2028 with the anticipated rail capacity in 2028 and evaluating if the addition of Proposed Action-related trains could cause the capacity of a segment to be exceeded, or contribute to the capacity of a segment being exceeded. As noted in Section 5.1.3.2, Impact Analysis, 2028 baseline rail traffic estimates are based on linear extrapolation of data collected between 2010 and 2013 for the Washington State Rail Plan. Rail traffic is highly dynamic and fluctuates as a result of changing demand. The projected 2028 rail traffic volumes are intended to provide a “snapshot” of rail traffic volumes. The rail traffic volumes do not represent actual volumes for 2028 because uncertainties exist and the actual volume of freight rail traffic in 2028 cannot be predicted with precision. (Exhibit 6 FEIS, page 5.1-16). If all 16 Proposed Action-related trains use the segment between Vancouver and Longview Junction (UP trains), the 2028 volume on this segment in Cowlitz County south of Longview Junction would be 89 trains daily and would exceed capacity without improvements (80 trains daily). Proposed Action-related trains would contribute to this segment exceeding capacity if no improvements were made to expand capacity by 2028. It is expected that BNSF and UP would make the necessary investments or operating changes to accommodate the growth in rail traffic, but it is unknown when these actions would be taken or permitted.”* (Exhibit 6, FEIS, page 5.1-17)

- *MM RT-1. Notify BNSF and UP about Operations on Main Line Routes. To allow for adequate planning to address Proposed Action-related trains contributing to segments exceeding capacity on main line routes in Washington State, the Applicant will notify BNSF and UP before each identified operational stage (Stage 1a, Stage 1b, and Stage 2) begins that will change average daily rail traffic on main line routes in Washington State. The Applicant will prepare a report to document the notification of BNSF and UP and changes to average daily rail traffic. The report will be submitted to BNSF, UP, Washington State Department of Transportation, Utilities Transportation Commission, and Cowlitz County at least 6 months before the change in average daily rail traffic.*

2.11.20 Rail Safety

The EIS predicts that the Proposed Action would increase the potential for train accidents by adding loaded and empty Proposed Action-related rail traffic on rail routes in Washington State (FEIS, page 5.2-7). *The predicted number of accidents for loaded Proposed Action-related trains on BNSF main line*

² The Applicant has submitted an application for a shoreline substantial development permit for Stage 1 shiploading equipment on Dock 2 only. A second shoreline substantial development permit will be requested for the installation of a shiploader on Dock 3 for Stage 2.

varies between 0.22 accidents per year (once every 4 years) to 2.59 accidents per year. (FEIS, page 5.2-8)

- MM RT-1. Notify BNSF and UP about Operations on Main Line Routes.

2.11.21 Vehicle Transportation

Operation of the Proposed Action would increase rail traffic at grade crossings, which would result in vehicle delay impacts during the peak vehicle traffic hour at certain crossings along the Reynolds Lead, BNSF Spur, and BNSF main line.

- MM VT-1. *Notify Local Agencies about Operations on the Reynolds Lead and BNSF Spur. To address vehicle delay impacts at grade crossings on the Reynolds Lead and BNSF Spur, the Applicant will notify Cowlitz County, City of Longview, Cowlitz Fire District, City of Rainier (Oregon), Port of Longview, and Cowlitz-Wahkiakum Council of Governments before each identified operational stage (Stage 1a, Stage 1b, and Stage 2) that will change average daily rail traffic on the Reynolds Lead and BNSF Spur. The Applicant will prepare a memorandum to document the changes to average daily rail traffic. The memorandum will be submitted to these agencies at least 6 months before the change in average daily rail traffic.*

2.11.22 Vessel Transportation

Operation of the Proposed Action would increase vessel traffic that would increase the likelihood of a vessel incident. The FEIS analyzes the impacts of the Project at full build-out of an average of 2.3 vessels per day. During Stage 1, an average of 1.3 vessels per day (40 vessels per month) would be loaded. *“River Pilots would pilot the incoming and outgoing vessels (from Astoria inland and vice versa) and direct docking and undocking maneuvers. At least two tugs would be used to assist with docking and undocking maneuvers for each arriving and departing Proposed Action-related vessel. Therefore, at least two tugs would be active in the vicinity of the docks four times per day on average. The pilot would determine the appropriate size and horsepower of the tugs depending on factors such as the size of the vessel, the weather conditions, and the currents at the time of maneuvers. (FEIS, page 5.4-36) “In general, the River Pilots and Bar Pilots avoid overtaking situations where one vessel passes another from behind. Thus, the most likely collision scenario is an inbound vessel meeting an outbound vessel. The River Pilots have identified specific points on the river where conditions are not suitable for vessels to pass each other, and they carefully manage transits to avoid two vessels meeting in those locations and instead manage the vessel transits so if they do need to pass each other, it is at a safe area.” (FEIS, page 5.4-42)*

The EIS notes: *“Therefore, although there would be an increase in risks compared to existing conditions, the overall risk of a Proposed Action-related vessel resulting in an allision to or from the project area would be low.” (EIS, page 5.4-41) “As noted in Section 5.4.4.2, Vessel Traffic, Other Vessels, the Columbia and Willamette Rivers provide important fisheries for commercial, tribal, and recreational purposes. Although these smaller vessels are not restricted to the navigation channel, they often cross the river to access various locations in the study area. Particularly during periods of high fishing activity, there would be an increased chance for a vessel incident to occur. However, in general, because these smaller vessels are not restricted to the channel and must by law yield to oncoming large commercial vessels, the potential for a collision between a smaller vessel and a Proposed Action-related vessel would be low. Although it is not possible to predict the types of vessels that might be involved in a future incident, the incident modeling does show a very small increase in the potential for collisions involving fishing (0.04 incident per year) and recreational (0.01 incident per year).” (FEIS, page 5.4-42)*

- MM VS-1. *Attend Lower Columbia River Harbor Safety Committee Meeting. The Applicant will attend at least one Lower Columbia River Harbor Safety Committee meeting per year before beginning operations and every year during operations. The Applicant will provide notification of attendance to Cowlitz County.*
- MM VS-2. *Notify if Bunkering at Docks Occurs. The risk of an oil spill at Docks 2 and 3 would primarily be during bunkering (refueling) operations. The Applicant has committed to no bunkering at Docks 2 and 3. If this changes and bunkering is proposed at Docks 2 and 3, the Applicant will notify Cowlitz County and Ecology who will determine if additional environmental review is required before bunkering operations are conducted.*

2.11.23 Noise and Vibration

Construction and operation of the Proposed Action is projected to result in noise levels that would exceed applicable noise standards at one noise-sensitive receptor. *“The residence where the exceedance would occur is within the 50-dBA contour, which is the applicable Washington State limit for nighttime noise levels in a residential area when the noise is from an industrial source. The predicted noise level at the residence is 55 dBA. This predicted noise level is comparable to the current nighttime noise level at this location. Other residences are located outside the noise level limit contours or would be shielded by topography.”* (FEIS, page 5.5-18)

- MM NV-1. *Monitor and Control Increased Noise from Coal Export Terminal Construction and Operations at Closest Residences. If agreed to by the property owner(s), the Applicant will monitor noise levels at the two residences nearest the project area to detect possible noise impacts from the Proposed Action during construction and operations. Noise will be monitored during construction and until at least 6 months after initiation of operations. The Applicant will submit monthly noise reports to Cowlitz County Building and Planning. If the monitoring identifies a noise impact due to coal export terminal operations, the Applicant will reduce the noise exposure with modifications to terminal operations or installation of building sound insulation at the noise receptor.*

Operation of the Proposed Action would result in moderate and severe noise impacts at noise-sensitive receptors along the Reynolds Lead from rail traffic noise related to sounding train horns for public safety if mitigation is not implemented.

- MM NV-2. *Support Implementation of a Quiet Zone along the Reynolds Lead. To address moderate and severe noise impacts along the Reynolds Lead due to rail traffic, before beginning full operations, the Applicant will coordinate with the City of Longview, Cowlitz County, Longview Switching Company, and the affected community to inform interested parties on the Federal Railroad Administration process to implement a Quiet Zone that will include the 3rd Avenue and California Avenue crossings. Public outreach on the Quiet Zone process will include low-income and minority populations. The Applicant will assist interested parties in the preparation and submission of the Quiet Zone application to the Federal Railroad Administration. If the Quiet Zone is approved, the Applicant will fund the Quiet Zone improvements, which could include electronics, barricades, and crossing gates.*
- MM NV-3. *Explore Feasibility of Reducing Sound Levels. If the Quiet Zone for the Reynolds Lead is not implemented, the Applicant will fund a sound reduction study to identify ways to mitigate the moderate and severe impacts from train noise from Proposed Action-related trains along the Reynolds Lead. The study methods will be discussed with Cowlitz County, Ecology, and Washington State Department of Health for approval.*

2.11.24 Air Quality

The FEIS concluded that operation of the Proposed Action would increase the cancer risk from diesel particulate matter emissions, primarily from Proposed Action-related train locomotive emissions based on an estimate for the 8 trains at full build-out (Stage 2).

The FEIS found that based on the inhalation-only health risk assessment, diesel particulate matter emissions primarily from Proposed Action-related train locomotives traveling along the Reynolds Lead, BNSF Spur, and BNSF main line in Cowlitz County would result in areas of increased cancer risk. The maximum modeled cancer risk increase in the City of Longview would be 50 cancers per million in the Highlands neighborhood, a low-income and minority community.

The FEIS explains that the risk calculations are highly conservative and likely overestimate the actual incremental inhalation cancer risk from the proposal. *“The cancer risk analysis follows standard approaches including use of the conservative assumption of continuous lifetime exposure. This overstates cancer risk even for residential locations where people typically spend more time, because individuals are mobile, spending time in locations other than their residence on an average day and even changing residences over a lifetime. Cancer risk is further overstated for land uses where people spend less time, such as commercial and industrial locations where people typically spend even less time than at residential locations.”* (FEIS, page 6.5-19). To provide context for the increased cancer risk related to diesel particulate matter, the EIS provides the Cowlitz countywide baseline of 300 cancers per million from inhalation of pollutants generally and notes that an increase of 10 cancers per million would represent an approximately 3% increase in inhalation risks. (FEIS, page 5.6-20).

Additional Information provided by Proponent: For additional context, the American Cancer Society estimates the average cancer risk for males in the overall U.S. population from all sources (not just inhalation) to be 1 in 2 (500,000 per million) and for females the risk is 1 on 3 (333,333 per million). www.cancer.org/cancer/cancer-basics/lifetime-probability-of-developing-or-dying-from-cancer.html. An increase of 10 cancers per million would represent an approximately 0.002% to 0.003% increase in overall cancer risk in Cowlitz County.

Locomotive emissions are regulated by the U.S. Environmental Protection Agency under Section 213 of the Federal Clean Air Act. EPA’s regulation of locomotive emissions has become more stringent over time and this is expected to continue. *“In June 2008, EPA finalized a three-part program that dramatically reduces emissions from diesel locomotives of all types -- line-haul, switch, and passenger rail. The rule cuts particulate matter (PM) emissions from these engines by as much as 90 percent and oxides of nitrogen (NOx) emissions by as much as 80 percent when fully implemented. The standards are based on the application of high-efficiency catalytic after treatment technology for freshly manufactured engines built in 2015 and later.”* <https://www.epa.gov/regulations-emissions-vehicles-and-engines/regulations-emissions-locomotives>. These regulations will affect all locomotives. Irrespective of whether they serve unit trains, manifest trains, or passenger trains, EPA’s regulations will substantially reduce the impact of DPM.

The Applicant asserts that the EPA program regulating locomotive emissions constitutes reasonable mitigation of potential DPM impacts.

2.11.25 Coal Dust

Operation of the Proposed Action would emit and deposit coal dust in the project area due to coal handling and transport activities. Coal dust is analyzed in the EIS in Section 5.7. For operations of the coal export terminal, air quality modeling was performed for the following primary sources of coal dust;

transfer and handling of the coal from rail to storage piles; fugitive emissions from coal storage piles; and transfer and handling of coal from piles to ship.

Operation of the CET could result in coal dust emissions, including during the handling and transfer of coal related to rail unloading, ship loading, conveyor transfer, coal-pile development and removal, and wind erosion of coal piles. Coal transfers would occur in enclosed areas (e.g., rotary coal car dump facility, conveyors) and open areas (e.g., coal storage piles).

Unloading facilities would unload coal from rail cars within an enclosed structure. The unloading facilities would contain equipment to rotate rail cars and discharge the coal from the rail cars into a large hopper. As the tandem rotary dumper rotates the rail cars and begins to unload the coal into hoppers beneath the dumper, sprayers would spray water to avoid and minimize dust dispersion within the enclosed structure.

A network of belt conveyors would transport coal from the rail car unloading facilities to the stockpile area, and from the stockpile area to the vessel-loading facilities, or from rail cars directly to the vessel-loading facilities. All belt conveyors and transfer stations would be fully enclosed, except for the stockpile area and vessel-loading conveyors, which would be open due to their operational requirements. The coal stockpile area would have a dust suppression system. Vessels would be loaded using shiploader that would include enclosed boom and loading spout. The loading spout would also be telescopic and would be inserted below the deck of the vessel during vessel loading to avoid and minimize dust dispersion.

Table 5.7-3 in the EIS summarizes the estimated maximum annual and monthly deposition at the project fence line. As stated in the EIS, the estimated maximum monthly coal dust deposition (0.31 g/m²/month) would be below the trigger level for sensitive areas (2.0 g/m²/month). Within a few thousand feet of the project area, the annual deposition of coal dust is estimated to be less than 0.1 g/m².

The EIS coal dust analysis made the following conclusions.

- Project area. Estimated maximum monthly deposition of coal dust within the project area would be below the threshold of 2.0/m²/month (New Zealand Ministry of Environment 2001) used for this analysis.
- Reynolds Lead and BNSF Spur, Cowlitz County: Estimated maximum PM₁₀ and PM_{2.5} concentrations from coal dust emissions plus background would be below applicable NAAQS.
- Estimated maximum and average monthly deposition of coal dust would be below the threshold of 2.0/m²/month (New Zealand Ministry of Environment 2001) used for this analysis

The following mitigation measures have been recommended by the Applicant to be included as conditions of approval of the future **Notice of Construction (Air) Permit**, and Staff recommends they become conditions of approval of the shoreline permits as well:

- MM CDUST-1. *Monitor and Reduce Coal Dust Emissions in the Project Area. To address coal dust emissions, the Applicant will monitor coal dust during operation of the Proposed Action at locations approved by the Southwest Clean Air Agency. A method for measuring coal dust concentration and deposition will be defined by the Southwest Clean Air Agency. If coal dust levels exceed nuisance levels, as determined by the Southwest Clean Air Agency, the Applicant will take further action to reduce coal dust emissions. Potential locations to monitor coal dust concentration and deposition will be along the facility fence line in close proximity to the coal piles, where the rail line enters the facility and operation of the rotary dumper occurs, and at a location near the closest residences to the project area, if agreed to by the property owner(s). The Applicant will conduct monthly reviews of the concentration and deposition data and*

maintain a record of data for at least 5 years after full operations, unless otherwise determined by the Southwest Clean Air Agency. If measured concentrations exceed PM air quality standards, the Applicant will report this information to the Southwest Clean Air Agency, Cowlitz County and Ecology. The Applicant will gather 1 year of fence line data on PM2.5 and PM10 prior to beginning operations and maintain the data as reference. This data will be reported to the Southwest Clean Air Agency, Cowlitz County, and Ecology.

- *MM CDUST-2. Establish Reporting Process for Coal Dust Complaints in Cowlitz County. To address coal dust emissions, the Applicant will meet with the Southwest Clean Air Agency prior to the start of operations to design and implement a coal dust awareness and investigation system for community members in Cowlitz County. The system will be available in both English and Spanish to receive complaints or concerns, investigate, respond, resolve, and report findings to the complainant and Southwest Clean Air Agency. The system will be available during operation of the Proposed Action. The Applicant will operate the system or provide funding for Southwest Clean Air Agency to operate the system. A report will be submitted annually to Cowlitz County and the City of Longview and posted on Southwest Clean Air Agency website.*

Proposed Action-related trains during operations would emit coal dust while traveling on rail lines in Washington State. Along the Reynolds Lead and BNSF Spur in Cowlitz County, the estimated maximum PM10 and PM2.5 concentrations from coal dust emissions plus background would be below federal and state air quality standards, and the estimated maximum and average monthly deposition of coal dust would be below the benchmark used for the analysis. Along the BNSF Main Line in Cowlitz County, the estimated maximum PM10 and PM2.5 concentrations from coal dust emissions plus background would be below federal and state air quality standards, and the estimated maximum monthly deposition (at 100 feet from the rail line) and average monthly deposition (at 50 feet from the rail line) of coal dust would be slightly above the benchmark used for the analysis. Along the BNSF Main Line in the Columbia River Gorge, the estimated maximum PM10 and PM2.5 concentrations from coal dust emissions plus background would be below federal and state air quality standards, and the estimated maximum monthly deposition (at 50 feet from the rail line) and average monthly deposition (at 50 feet from the rail line) of coal dust would be slightly above the benchmark used for the analysis. Along the BNSF Main Line in Washington outside of Cowlitz County and the Columbia River Gorge, the estimated maximum PM10 and PM2.5 concentrations from coal dust emissions plus background would be below federal and state air quality standards, and the estimated maximum and average monthly deposition of coal dust would be below the benchmark used for the analysis.

Overall, the impacts of PM₁₀ and PM_{2.5} emissions from Proposed Action-related trains would not be significant because emissions would be below applicable federal and state air quality standards. While the average and maximum monthly deposition of coal dust on the BNSF main line in Cowlitz County (50 and 100 feet, respectively) and Columbia River Gorge (50 feet) was estimated to be above the benchmark used for the analysis, no state or federal standards apply, and this would be an unavoidable but not significant impact. Implementation of proposed mitigation to reduce coal dust emissions from rail cars and provide information to the Columbia River Gorge Commission could reduce coal dust impacts.

The following mitigation measures have been recommended by the Applicant to be included as conditions of approval of the future **Notice of Construction (Air) Permit**, and Staff recommends they become conditions of approval of the shoreline permits as well:

- *MM CDUST-3. Reduce Coal Dust Emissions from Rail Cars. To address coal dust emissions, the Applicant will not receive coal trains unless surfactant has been applied at the BNSF surfactant facility in Pasco, Washington for BNSF trains traveling through Pasco. While other measures to control emissions are allowed by BNSF, those measures were not analyzed in this*

EIS and would require additional environmental review. For trains that will not have surfactant applied at the BNSF surfactant facility in Pasco, before beginning operations, the Applicant will work with rail companies to implement advanced technology for application of surfactants along the rail routes for Proposed Action-related trains.

- MM CDUST-4. *Provide Information to the Columbia River Gorge Commission. To address statewide and regional public interests and concern of coal dust emissions, the Applicant will attend at least one Columbia River Gorge Commission public meeting per year and be available to present information on coal dust emissions and rail traffic related to the Proposed Action and discuss concerns.*

2.11.26 Greenhouse Gas Emissions

Findings related to greenhouse gas emissions are from the FEIS. Construction of the Proposed Action would generate greenhouse gas emissions from operation of construction equipment, employees commuting to and from the project area, and construction materials delivered to and from the project area. Construction would also contribute to greenhouse gas emissions by clearing vegetation and removing surface soil from the project area, both of which store carbon. The analysis estimated construction activities related to the Proposed Action from 2018 to 2020 would result in greenhouse gas emissions in Cowlitz County of approximately 27,812 metric tons of carbon dioxide equivalent (CO₂e).

Greenhouse gas emissions were estimated for operational activities that would occur in Cowlitz County. Total emissions related to Proposed Action operations in Cowlitz County were estimated to be 568,778 metric tons of CO₂e, with annual emissions of 39,640 metric tons of CO₂e in 2028 when the coal export terminal would be fully operational. This would be the equivalent to adding approximately 8,300 passenger cars to the road each year.

GHG/Coal Markets

The FEIS discusses the impacts of the proposal from GHG emissions from terminal construction and operation, as well as from indirect sources such as rail, vessels, and end-use combustion of coal in Asia. The FEIS concludes that (1) the 2015 U.S. and International Energy Policy scenario (2015 EP Scenario) is intended to represent existing conditions under which the Proposed Action would operate; (2) the 2015 EP Scenario is the most representative of current U.S. policy of the scenarios modeled, and consequently is the preferred scenario for the analysis (Table 5.8-11); and (3) the average net annual emissions during full operations for the 2015 EP Scenario is an increase of 1.99 million metric tons per year (mmtpy) CO₂e. (See FEIS, page 5.8-20).

The FEIS states that “emissions attributable to operations of the Proposed Action under the 2015 U.S. and International Energy Policy scenario are considered adverse and significant.” (FEIS, page 5.8-20). The FEIS also states “the net increase in greenhouse gas emissions under the preferred scenario identified in Section 5.8.1, *Greenhouse Gas Emissions*, would increase the risk and magnitude of projected climate change impacts; and that] [t]he potential climate change impacts from global climate change that would affect Cowlitz County and Washington State are described in [Section 5.8.2]. (FEIS, page 5.8-25).

However, the FEIS also concludes that with regard to climate change impacts on the Proposed Action, there is no difference in climate change impacts to the project area as between the Proposed Action and No Action alternatives. In describing the impacts of the No Action Alternative, the FEIS concludes: “Ongoing and expanded operations in the project area would be affected by climate change as described for the Proposed Action. These impacts could include possible service disruptions from low water levels, flooding, and wildfires, as well as impacts to local resource areas.” (FEIS, page 5.8-40).

Furthermore, the FEIS concludes that total net new emissions under the 2015 EP Scenario -- 1.99 mmtpy CO₂e from 2018-2018 -- are not attributable to coal combustion; rather they are almost entirely attributable to indirect GHG sources associated with rail and vessel operations. These indirect emissions arise largely outside of Cowlitz County. In fact the FEIS concludes that under the 2015 EP Scenario the project would result in negative emissions from end-use combustion (i.e., a total reduction of -8.55 million metric tons GHG from 2018-2038). See Tables 5.8-7 (FEIS, page, 5.8-17).

While the FEIS takes a hard look at GHGs and commodity markets, there is uncertainty in the analysis -- both in terms of the level of emissions and the level of impact. For instance, the FEIS acknowledges the inherent difficulty in modeling commodity markets over wide geographic and temporal timeframes:

“The international coal market is a global commodity market such that changes in supply or demand in one country can affect coal prices and distribution patterns globally. The global nature of the coal market was demonstrated most recently in the fall of 2016, when China reduced production capacity and international coal prices shot up by 50% over a 2-month period.” (FEIS, Vol. III, Coal Market Assessment (CMA) 1-5)

The FEIS recommends a mitigation condition that would require Millennium to develop a plan to mitigate 100% of the greenhouse gas emissions identified in the 2015 EP Scenario, which for operations at maximum capacity is 1.99 mmtpy CO₂e from 2028 through 2038. The plan must be approved by the Washington State Department of Ecology. For mitigation that occurs in Cowlitz County, the plan will be approved by Cowlitz County and Ecology. The plan must be ready to implement prior to the start of full operations. (See FEIS, Section 5.8.1.8.)

However, there is no specific Federal, State or local emission reduction requirements or targets directly applicable to the Proposed Action, and there are no generally acceptable emission level thresholds against which to assess potential local or global impacts of GHG emission. See *NWIW, Findings of Fact, Conclusions of Law and Decision, 6.2.4*. In addition, the Department of Ecology has not provided a basis to determine how and why the various GHG intensity considerations that are proposed in federal and state regulations and guidance -- as described in the FEIS -- apply to the Proposed Action. (FEIS, page 5.8-20)

The County will continue consultation with the Department of Ecology and/or the Southwest Clean Air Agency to determine the appropriate basis for and level of greenhouse gas mitigation to apply to a state issued permit. If, however, the Applicant volunteers mitigation, then County will recommend it be added as a condition to the **Notice of Construction (Air) Permit** and **Shoreline Substantial Development Permit**.

2.11.27 Changes to Project as a Result of Comments on the SEPA DEIS

The SEPA comments received prompted the Applicant to provide additional details on their wetland mitigation plan. No changes to the initial terminal construction plans were prompted by comments received on the DEIS.

2.12 Shoreline Public Notice and Comments

Staff determined the shoreline application was complete on September 5, 2017. Public notice of the application was posted on the property and distributed to neighboring property owners within 300 feet of the subject property and to agencies and parties of interest on September 8, 2017. The comment period ended October 8, 2017. A total of 8,120 comments were received by the County during the comment period. Of the total, 7,975 (98.2 percent) were duplicates of the same e-mailed comment, mailed comment or postcard submitted by individuals. The County transmitted all comments to the Applicant to prepare a

shoreline comments response document (Exhibit C-8). It is Staff's opinion that the Applicant has sufficiently responded to all comments and concerns raised during the shoreline notice comment period.

3 CONCLUSIONS

The individual findings and conclusions stated previously establish that this proposal either meets, or if conditioned as recommended below, will meet: 1) the standards established in the Shoreline Management Master Program; 2) the six criteria for granting a substantial development permit on a shoreline of statewide significance; and 3) the five criteria for granting a conditional use permit on a shoreline of statewide significance. Completion of this project, if constructed as conditioned below, will therefore be consistent with the Shoreline Management Act, the County's Shoreline Management Master Program and existing land uses in the project area.

4 STAFF RECOMMENDATION

Staff recommends Shoreline Substantial Development and Conditional Use Permit No. 17-0992 be approved subject to the following conditions:

1. Construction shall proceed consistent with the plans, specifications and supporting documents submitted to this department with, and in support of, the application for the Shoreline Substantial Development and Conditional Use permits. Any proposed changes or modifications to these plans, specifications and documents, including those required by other agencies, shall require additional regulatory review and approval by the Director of Cowlitz County Building and Planning prior to implementation.
2. Construction and operation of the Project shall comply with all Cowlitz County, Washington State, and Federal permit conditions.
3. The permittee shall provide a copy of this permit, conditions of approval, and drawings to all contractors performing any of the authorized work.
4. Construction waterward of the OHWM shall be tied to the schedule and conditions of other federal and state agencies, provided such conditions are consistent with and pertinent to the SMA and SMP goals, policies and regulations. Pursuant to this condition, the applicant shall provide the Director of Cowlitz County Building and Planning with copies of all local, state and federal permits associated with the project.
5. The Applicant shall provide to the Director of Cowlitz County Building and Planning and the Washington State Department of Ecology an annual report of compliance with mitigation requirements of any and all County or State-issued permits that require a mitigation component.
6. Wetland and aquatic mitigation shall be implemented according to the "Conceptual Mitigation Plan" prepared by Grette Associates dated May 25, 2017, or as amended, assuming such amendment is mutually agreed upon by all agencies with jurisdiction and the Applicant.
7. The Off-Channel Slough Mitigation Site shall be preserved and protected in perpetuity. The Mitigation Site shall be monitored for a 10-year period following project construction. Year 0 will be defined as the first growing season after planting. The Site shall be monitored once during the growing season of each monitoring year. Monitoring reports shall be submitted to Cowlitz County, WDFW, WDOE, and the Corps by March 31 of the year following each monitored year.

8. The offsite wetland mitigation site shall be preserved and protected in perpetuity by recording a conservation easement or some other means. The Mitigation Site shall be monitored for a 10-year period following project construction unless terminated earlier by consensus of the permitting agencies and the Applicant. Year 0 will be defined as the first growing season after planting. The Site shall be monitored once during the growing season of each monitoring year. Monitoring reports shall be submitted to Cowlitz County, WDFW, WDOE, and the Corps by March 31 of the year following each monitored year.
9. Stormwater and erosion control must be provided in accordance with the applicable Chapters of Title 16 of the Cowlitz County Code. Additionally, the applicant is responsible for compliance with all other applicable local, state and federal stormwater and erosion control permitting requirements.
10. Any spills, soil or debris accidentally entering the water during construction shall be immediately removed by approved methods. All project work in the related construction zone shall cease immediately until cleanup of such spills is completed. If a spill does occur, or if an oil sheen or distressed or dying fish are observed in the project vicinity, the permittee shall immediately contact DOE at its Southwest Regional Spill Response Office, (360) 407-6300.
11. The Applicant shall locate spill response kits throughout the project area during construction and operations. Spill response kits shall contain response equipment and personal protective equipment appropriate for hazardous materials that will be stored and used during construction and operations. Site personnel shall be trained in the storage, inventory, and deployment of items in the spill response kits. Spill response kits shall be checked a minimum of four times per year to ensure proper-functioning condition, and shall otherwise be maintained and replaced per manufacturer recommendations. Should a spill response kit be deployed, the Applicant shall notify the Director of Cowlitz County Building and Planning and Ecology immediately. The Applicant shall submit a map indicating the types and locations of spill response kits to the Director of Cowlitz County Building and Planning and Ecology for approval prior to beginning construction and operations.
12. To limit the exposure of spilled coal to the terrestrial, aquatic, and built environments during coal handling, the Applicant shall develop a containment and cleanup plan. The plan shall be reviewed by the Director of Cowlitz County Building and Planning and Ecology and implemented prior to beginning export terminal operations. In the event of a coal spill in the aquatic environment by the Applicant during export terminal operations, action shall be taken based on the specific coal spill, and the Applicant shall develop a cleanup and monitoring plan consistent with the approved containment and cleanup plan. This plan must include water quality and sediment monitoring to determine the potential impact of the coal spill on the aquatic habitat and aquatic species. The Applicant shall develop the cleanup and monitoring plan in coordination with the Director of Cowlitz County Building and Planning, Ecology, and the Corps. The cleanup and monitoring must be similar in scope to the monitoring completed for the Aquatic Impact Assessment (Borealis 2015) associated with a coal spill in British Columbia, Canada, in 2014.
13. To ensure that threatened, endangered, or rare plants are not affected, the Applicant shall conduct rare plant surveys of the project area, including the ditches and stormwater conveyance features. Surveys for rare plants shall be performed for those rare plants that may occur in Cowlitz County, according to the Washington Natural Heritage Program. Surveys shall be performed prior to any Proposed Action-related ground disturbance and during the appropriate survey windows for each species. If such plant species are found, the Applicant must notify and consult with the Washington State Department of Natural Resources, and the U.S. Fish and Wildlife Service (if federally protected species are found). The Applicant shall work with the agencies to determine the appropriate conservation and mitigation measures should potential impacts on any rare plants be possible as a result of ground disturbing activities.

14. To ensure that aquatic plants along the shoreline of the Columbia River are not affected, the Applicant shall conduct an aquatic plant survey along the shoreline of the project area prior to commencing in-water work associated with construction of Docks 2 and 3 and construction-related dredging, including all areas within the shallow water zone adjacent to the proposed docks. If areas of aquatic vegetation are found, the Applicant shall notify the Washington State Department of Natural Resources, Cowlitz County, and the U.S. Fish and Wildlife Service, and work with these agencies to develop appropriate conservation or mitigation measures before beginning any in-water work.
15. To ensure that disturbed native vegetation is restored, after construction the Applicant shall replant vegetated areas that were temporarily disturbed during construction with native vegetation suitable for site conditions post-construction. The Applicant shall monitor replanted vegetation annually for 5 years and must ensure the survival of 80% of all replanted vegetation. The Applicant shall submit annual monitoring reports to the Director of Cowlitz County Building and Planning.
16. To mitigate permanent removal of vegetation from project construction, the Applicant shall develop and implement a revegetation plan for the project area. This plan must be approved by the Director of Cowlitz County Building and Planning prior to implementation and must be consistent with the Cowlitz County Critical Areas Ordinance (CCC 19.15).
17. To limit further invasion and colonization of noxious weeds on disturbed land, the Applicant shall monitor for noxious weeds during construction and operations and remove noxious weeds that invade new areas of the site. The Applicant shall coordinate with the Cowlitz County Noxious Weed Control Board if Class A and B noxious weeds are detected.
18. To allow for adequate planning to address Proposed Action-related trains contributing to segments exceeding capacity on main line routes in Washington State, the Applicant shall notify BNSF and UP before each identified operational stage (Stage 1a, Stage 1b, and Stage 2) begins that will change average daily rail traffic on main line routes in Washington State. The Applicant shall prepare a report that documents the notification of BNSF and UP and tracks changes to average daily rail traffic. The report must be submitted to BNSF, UP, Washington State Department of Transportation, Utilities Transportation Commission, and the Director of Cowlitz County Building and Planning at least 6 months before the change in average daily rail traffic.
19. To address vehicle delay impacts at grade crossings on the Reynolds Lead and BNSF Spur, the Applicant shall notify the Director of Cowlitz County Building and Planning, City of Longview, Cowlitz Fire District, City of Rainier (Oregon), Port of Longview, and Cowlitz-Wahkiakum Council of Governments before each identified operational stage (Stage 1a, Stage 1b, and Stage 2) that will change average daily rail traffic on the Reynolds Lead and BNSF Spur. The Applicant shall prepare a memorandum to document the changes to average daily rail traffic. The memorandum must be submitted to these agencies at least 6 months before the change in average daily rail traffic.
20. Beginning in 2018, the Applicant shall attend at least one Lower Columbia River Harbor Safety Committee meeting per year before beginning operations and every year during operations. The Applicant shall provide notification of attendance to the Director of Cowlitz County Building and Planning.
21. Bunkering operations at Docks 2 and 3 shall be prohibited, unless reviewed and approved by the Director of Cowlitz County Building and Planning and Ecology via subsequent shoreline permit application.
22. In order to minimize the impact of light or glare on adjacent properties or the Columbia River, the

Applicant shall:

- Use directional lighting with full box cut-off fixtures, or equivalent, and use motion- or user-controlled light systems, where practicable and feasible.
- Use neutral colors to blend with or complement surrounding environment for non-safety-related structures and equipment, and use nonreflecting materials and finishes, where practicable and feasible.

23. Where noise levels are concerned, operation of the terminal shall be in accordance with the provisions of WAC Chapter 173-60.
24. Pursuant to condition 23 above, and if agreed to by the property owner(s), the Applicant shall monitor noise levels at the two residences nearest the project area to detect possible noise impacts from the CET during construction and operations. If the property owners are not agreeable, noise monitoring shall be done at the residential property line. Noise shall be monitored during construction and until at least 6 months after initiation of operations. The Applicant must submit monthly noise reports to the Director of Cowlitz County Building and Planning. If the monitoring identifies a noise impact due to coal export terminal operations, the Applicant shall reduce the noise exposure by implementing appropriate noise attenuation methods.
25. To address moderate and severe noise impacts along the Reynolds Lead due to rail traffic, (e.g. horn blowing) before beginning full operations, the Applicant shall coordinate with the Director of Cowlitz County Building and Planning, the City of Longview, Longview Switching Company, and the affected community to inform interested parties on the Federal Railroad Administration process to implement a Quiet Zone that will include the 3rd Avenue and California Avenue crossings. Public outreach on the Quiet Zone process must include low-income and minority populations. The Applicant shall assist interested parties in the preparation and submission of the Quiet Zone application to the Federal Railroad Administration. If the Quiet Zone is approved, the Applicant shall fund the Quiet Zone improvements, which could include electronics, barricades, and crossing gates.
26. If a Quiet Zone for the Reynolds Lead is not implemented, the Applicant shall fund a sound reduction study to identify ways to mitigate the moderate and severe impacts from train noise from Proposed Action-related trains along the Reynolds Lead. The study methods shall be discussed with the Director of Cowlitz County Building and Planning and the Washington State Department of Health for approval.
27. To address coal dust emissions, the Applicant shall monitor coal dust during operation of the Proposed Action at locations approved by the Southwest Clean Air Agency. The method for measuring coal dust concentration and deposition must be defined by the Southwest Clean Air Agency. If coal dust levels exceed nuisance levels, as determined by the Southwest Clean Air Agency, the Applicant shall take further action to reduce coal dust emissions. The Applicant shall conduct monthly reviews of the concentration and deposition data and maintain a record of data for at least 5 years after full operations, unless otherwise determined by the Southwest Clean Air Agency. If measured concentrations exceed PM air quality standards, the Applicant must report this information to the Director of Cowlitz County Building and Planning, the Southwest Clean Air Agency, and Ecology. The Applicant shall gather 1 year of fence line data on PM_{2.5} and PM₁₀ prior to beginning operations and maintain the data as a reference. This data must be reported to the Director of Cowlitz County Building and Planning, the Southwest Clean Air Agency, and Ecology.
28. To address coal dust emissions, the Applicant shall meet with the Southwest Clean Air Agency prior to the start of operations to design and implement a coal dust awareness and investigation system for community members in Cowlitz County. The system must be available in both English and Spanish to better receive complaints or concerns, investigate, respond, resolve, and report findings to the complainant and Southwest Clean Air Agency. The system shall be available during operation of the

CET. The Applicant will operate the system or provide funding for Southwest Clean Air Agency to operate the system. A report must be submitted annually to the Director of Cowlitz County Building and Planning, the Southwest Clean Air Agency and the City of Longview and posted on Southwest Clean Air Agency website.

29. To address coal dust emissions, the Applicant shall not receive coal trains unless surfactant has been applied at the BNSF surfactant facility in Pasco, Washington for BNSF trains traveling through Pasco. For trains that will not have surfactant applied at the BNSF surfactant facility in Pasco, before beginning operations, the Applicant shall work with rail companies to implement advanced technology for application of surfactants along the rail routes for CET-related trains. Any proposed non-surfactant emission control measures will require additional environmental review.
30. To address statewide public interests and concern of coal dust emissions, the Applicant shall attend at least one Columbia River Gorge Commission public meeting per year and be available to present information on coal dust emissions and rail traffic related to the Proposed Action and discuss concerns.
31. To reduce greenhouse gas emissions from construction equipment, the Applicant shall provide a fuel efficiency training program to locomotive, vessel, and construction equipment operators.
32. To reduce emissions from vessel and locomotive idling in the project area, the Applicant shall implement an anti-idling policy.
33. The Applicant shall evaluate the use of electric cars for company cars, incentivize the use of electric vehicles by providing charging stations, and develop an incentive program for carpooling.
34. Representatives from Cowlitz County Building and Planning shall be allowed to inspect the authorized activity at any time deemed necessary to ensure that the project is being, or has been, accomplished in accordance with the terms and conditions of this permit.
35. The permittee shall maintain the activity authorized by this permit in good condition and in conformance with the terms and conditions of this permit. Current best practices shall be incorporated for the safe and efficient operation and maintenance of the facility. The permittee shall notify the Director of Cowlitz County Building and Planning immediately should the authorized activity cease or be abandoned. Such action may require restoration of the area.
36. The applicant shall comply with Construction and Operation Regulations in the Cowlitz County Shoreline Master Program (attached to permit).

Attachments: SMP Construction and Operation Regulations