

13 September 2013

Jon Wagner, Senior Planner
City of Vancouver Development Review Services
P.O. Box 1995
Vancouver, WA 98668-1995

RE: Tesoro Savage Vancouver Energy Distribution Terminal – Request for Determination of Land Use Consistency

Dear Mr. Wagner:

Tesoro Savage Petroleum Terminal LLC (the Applicant) is proposing to construct the Tesoro Savage Vancouver Energy Distribution Terminal (the Facility) at the Port of Vancouver (Port) in the City of Vancouver (City). At full build-out, the Facility will be able to receive up to an average of 360,000 barrels of crude oil per day by rail, store it on site, and pipe the oil onto marine vessels. Pursuant to Revised Code of Washington Chapter 80.50 and Washington Administrative Code Title 463, the Applicant has submitted an application for site certification to the Washington State Energy Facility Site Evaluation Council (EFSEC).

Under the applicable state laws and agency rules, EFSEC has the sole authority to approve permits for the construction of energy facilities in Washington and to recommend that the Governor issue the necessary site certification agreement. As part of the review process, EFSEC will review the project and determine whether it is consistent with local land use regulations. The rules contemplate receipt of a certificate of compliance with land use plans and zoning ordinances from the local agencies with jurisdiction.

To assist in the City's review of the proposed Facility and to facilitate the issuance of a determination of consistency, the Applicant has prepared an application for City review. While the City will not be issuing permits or approvals for the project because the Facility is subject to EFSEC's jurisdiction, the application is being made consistent with the requirements typical of a facility of this type and the Applicant will pay the review fees that normally apply to such an application.

Because this application does not request the issuance of a permit or approval, we do not anticipate that the normal review process would apply. For example, in the case of this Facility, the City would not issue a determination that the application is fully complete, a notice of application, or a SEPA determination and decision. Rather, the City would conduct an administrative review and issue a determination as to whether the project is consistent, or can be made to be consistent, with the adopted City zoning and land use standards.

Mr. Jon Wagner

RE: Tesoro Savage Vancouver Energy Distribution Terminal – Request for Determination of
Land Use Consistency

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We look forward to working with the City on this request. Should you have any questions or need additional information to support the City's review, please contact me at 360/823.6114 or by e-mail at helen.devery@abam.com.

Sincerely,



Helen Devery

Vice President and Senior Planner

HD:bpc

cc: Kelly Flint and David Corpron, Savage Services
Patty Boyden, Port of Vancouver

Project Narrative for Land Use
Consistency Review
Site Plan Review
Shoreline Substantial Development Permit
Critical Areas Permit
Archaeological Predetermination Review
Tree Permit



Tesorosavage
Vancouver Energy Distribution Terminal

Submitted to
City of Vancouver
Vancouver, Washington

September 2013

Tesoro Savage Vancouver Energy Distribution Terminal

Project Narrative

Site Plan Review

Shoreline Substantial Development Permit

Critical Areas Permit

Archaeological Predetermination Review

Tree Permit

Applicant:

Tesoro Savage Petroleum Terminal LLC

6340 South 3000 East, Suite 600

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Submitted to:

City of Vancouver

Vancouver, Washington

September 2013

Submitted by:

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PROJECT NARRATIVE
Tesoro Savage Energy Distribution Terminal

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- Appendix B – Cultural Resources Report**
- Appendix C – Application for Site Certification Geotechnical Sections**
- Appendix D – Transportation Impact Analysis Technical Report**
- Appendix E – Preliminary Stormwater Pollution Prevention Plan and SPCC Plan Outline**
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- Appendix G – Level V Tree Plan, Port of Vancouver, USA Clark Public Utilities Electrical Substation**

TESORO SAVAGE VANCOUVER ENERGY DISTRIBUTION TERMINAL PROJECT NARRATIVE

1.0 INTRODUCTION & REQUEST

Tesoro Savage Petroleum Terminal LLC (the Applicant) is proposing to construct and operate the Tesoro Savage Vancouver Energy Distribution Terminal (Facility) at the Port of Vancouver, USA (Port). At full build-out, the Facility will be able to receive up to an average of 360,000 barrels of crude oil per day by rail, store the oil on site, and load the oil onto marine vessels primarily for delivery to refineries located on the United States West Coast (the proposed project). The narrative is being provided to the City to demonstrate compliance with the City's land use regulations and development standards in support of the Applicant's request for a Site Certification Agreement (SCA) made to the Washington State Energy Facility Site Evaluation Council (EFSEC) under Chapter 80.50 RCW and Title 463 WAC. The application for SCA was submitted to EFSEC on August 29, 2013.

A pre-application conference was held for the proposed project with City representatives on June 27, 2013 (PRJ-143550/PIR-34550). This narrative addresses the proposed project's conformance with regulations associated with the permits and approvals identified in the City's Pre-Application Conference Report, dated June 27, 2013.

2.0 PROJECT DESCRIPTION

2.1 Project Location

The proposed Facility will be constructed at the Port within the City of Vancouver (City) in Clark County (County), Washington. The Facility includes construction and operations in different "Areas" of the Facility site, each area serving different functions. The site is located on the north (Washington) shore of the Columbia River. State Route (SR) 501 (Lower River Road) is located immediately to the north of the site. Interstate 5 (I-5) is located approximately 2.5 miles east. Rail access to the site is available from the east. See Figure 1 for a map of the vicinity of the site. Each Facility area is described in further detail below. The entire Facility will be constructed on approximately 41.5 acres.

The Port is located from approximately 103 to 106 river miles (RM) from the Pacific Ocean on the Columbia River at the head of the deepwater navigation channel. The total land area of the Port is approximately 2,127 acres, including approximately 800 developed acres and 500 acres planned for future development. Marine operations include five terminals and 13 berths. The Port handles 400 to 500 vessel calls per year and approximately 5 million metric tons of cargo yearly, including grain, scrap steel, bulk minerals, pulp, automobiles, refined petroleum products, and other bulk liquids. More than 2,300 people are directly employed by businesses at the Port.

The site is located in the SE ¼ of Section 18, NW ¼ of Section 19, and the NW and NE ¼ of Section 20, Township 2 North, Range 1 East WM. Berths 13 and 14 are located at approximately Columbia RM 103.5. Table 1 summarizes the project site areas discussed in detail below.

Table 1. Project Development Summary

Project Element	Site Location	Area (acres)
Area 200 – Unloading and Office	5501 NW Lower River Road NE ¼ Section 19, & S ½ Section 18, T2N, R1E WM Parcels: 152799-000, 152903-000	7.59
Area 300 – Storage	No site address N ½ Section 20, T2N, R1E WM Parcel: 152173-000	20.84
Area 400 – Marine Terminal	No site address NW ¼ Section 20, T2N, R1E WM Parcels: 152166-000, 503030-000, 503030-003	4.97
Area 500 – Transfer Pipelines	No site address NE ¼ Section 19 & NW ¼ Section 20, T2N, R1E WM Parcels: 152184-000, 152177-000, 152179-000, 986027-146, 986027-027, 50303-001, 152166-000	2.20
Area 600 – West Boiler	No site address SW ¼ Section 19, T2N R1E WM Parcel:152799-000	0.45
Rail Infrastructure	5501 NW Lower River Road N ½ Section 19, & S ½ Section 18, T2N, R1E WM Parcels: 152799-000, 152903-000, 152905-000, 152798-000	5.45

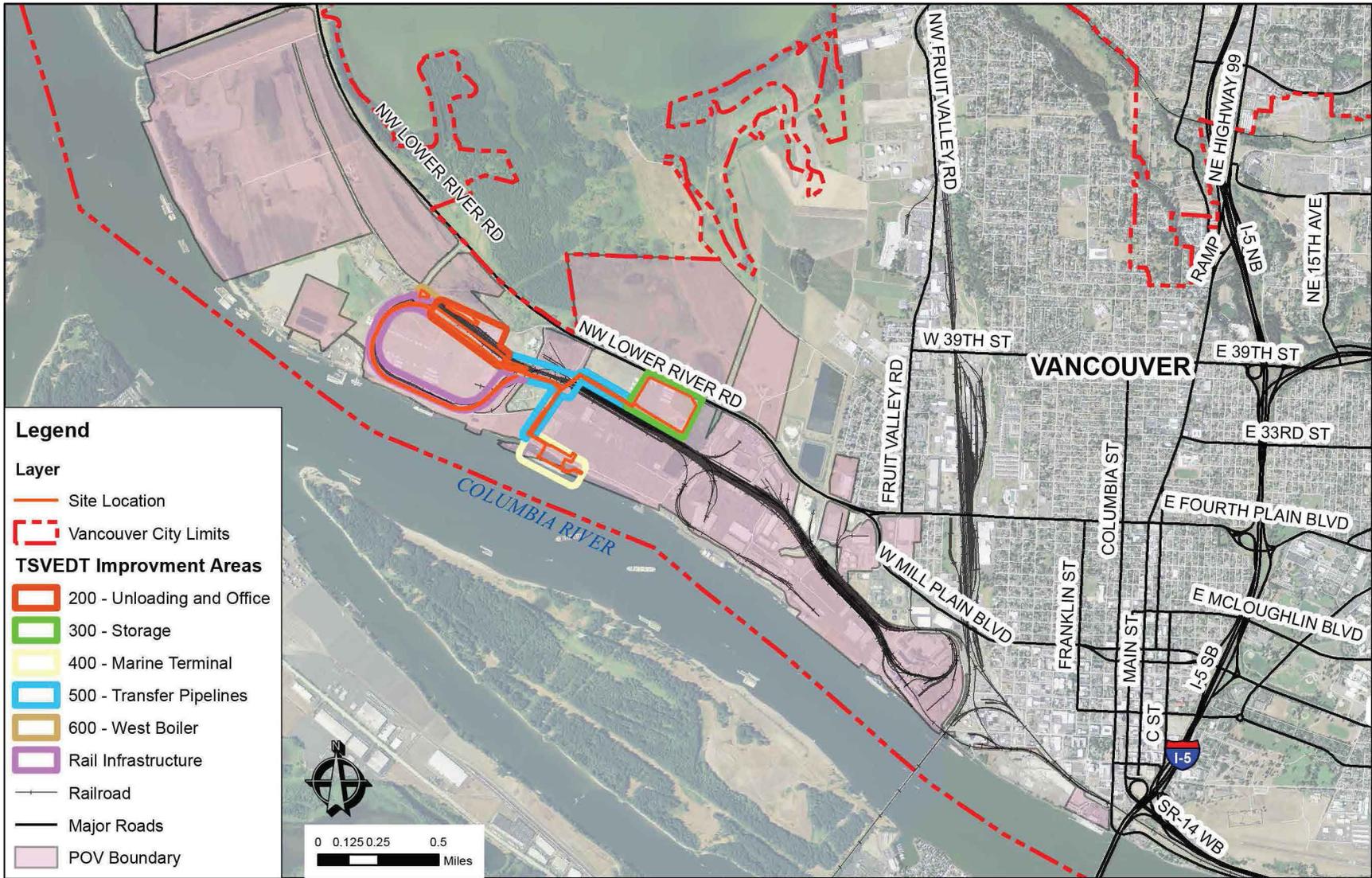


Figure 1. General Vicinity Map

2.2 Project Elements

As described above, the Facility includes construction and operations in different “Areas” of the overall Facility site, each area serving different functions. The sections below explain the proposed project elements by area of the project (see Appendix A for Plan Sheets).

2.2.1 Area 200 – Administrative/Support and Rail Unloading

Area 200 is located at 5501 NW Lower River Road in Vancouver. The following Facility elements will be located in Area 200: administrative and support buildings, parking, rail access to the rail unloading facility, and the rail unloading facility. Area 200 will be accessible from an unnamed private road owned and maintained by the Port. Area 200 facilities will be constructed on approximately 7.59 acres.

2.2.2 Area 300 – Storage

Area 300 is located at the Port’s Parcel 1A on the south side of NW Lower River Road, just east of the existing Farwest Steel facility. The following Facility elements will be located in Area 300: product storage tanks and associated secondary containment, the Area 300 Boiler Building, and associated control and ancillary systems. Area 300 will be accessible from NW Gateway Avenue. Area 300 facilities will be constructed on approximately 20.84 acres.

2.2.3 Area 400 – Marine Terminal

Area 400 is located at existing Port berths 13 and 14 on the Columbia River south of the current Subaru facility. The following Facility elements will be located in Area 400: product conveyance and loading facilities located on the dock, marine vapor control units (MVCUs), emergency containment and response equipment, a fire water pump and foam building, and control and ancillary facilities associated with vessel loading. This area will be accessed from Gateway Avenue and Harborside Drive by a driveway to be constructed with the project. Area 400 will be constructed on approximately 4.97 acres.

2.2.4 Area 500 – Transfer Pipelines

Area 500 consists of a non-exclusive easement located within Terminal 5, Parcel 1A, Terminal 4, and corridors adjacent to existing private Port roads. Area 500 includes the corridors for the approximately 38,500 lineal feet of transfer pipelines that will connect the Unloading (Area 200), Storage (Area 300), and Marine Terminal (Area 400) portions of the project. See Figure 2 for existing conditions along the transfer pipeline corridor. Area 500 will be constructed on approximately 2.20 acres.

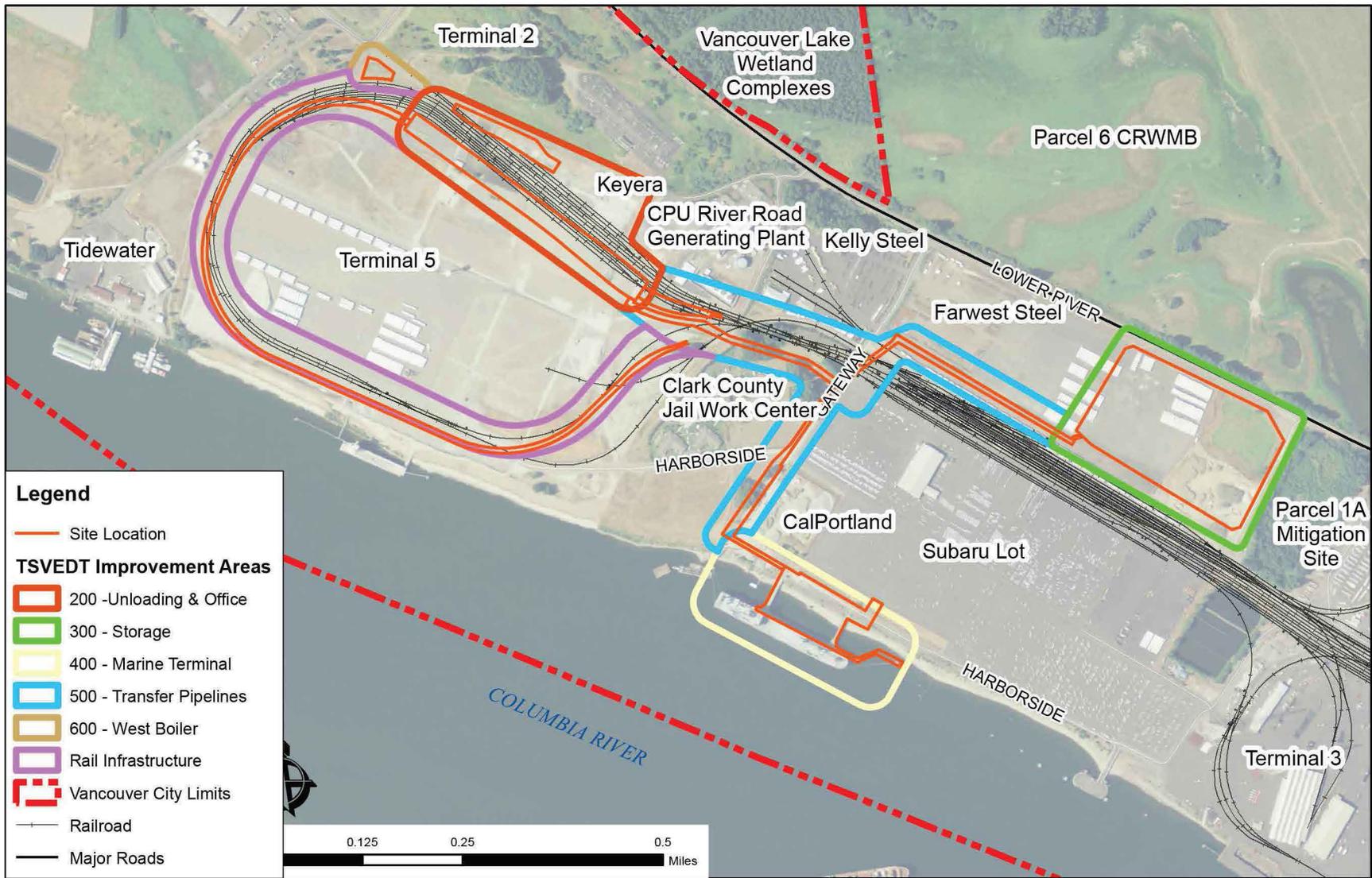


Figure 2. Existing Conditions

2.2.5 Area 600 – West Boiler

Area 600 is located at the northwest corner of Terminal 5. The Area 600 Boiler Building and its associated parking will be constructed at this location. Area 600 will be accessed from Old Lower River Road and a private road owned and maintained by the Port. See Figure 2 for existing conditions at Area 600. Area 600 facilities will be constructed on approximately 0.45 acre.

2.2.6 Rail Infrastructure

The project will require the construction of two additional rail loops (tracks 4106 and 4107) consisting of approximately 18,000 lineal feet of new rail located on approximately 5.45 acres at Terminal 5. Existing Terminal 5 rail associated with the West Vancouver Freight Access Project (WVFA) will be shifted; the shifting of existing facilities has been previously permitted, will be performed by others, and was not included within the Applicant's request for Site Certification. A third rail loop (track 4105) is permitted for general Port use. This track may be transferred to exclusive use by the Facility once a sustained average volume of 120,000 barrels per day is received by the Facility.

2.3 Construction Schedule

It is anticipated that construction will occur over approximately 9 months beginning as soon as permits are issued.

3.0 EXISTING CONDITIONS

3.1 Site

Area 200/Rail Infrastructure – are located in the area generally defined as Terminal 5. Terminal 5 is the former location of aluminum processing facilities owned and operated by Evergreen Aluminum LLC (Evergreen) and the Aluminum Company of America (Alcoa). The site has been the location of intensive historic industrial use, dating back to the 1940s when Alcoa first developed the site for aluminum smelting operations, which continued through the early 2000s when aluminum processing activities on the property ended. See Figure 3 for an aerial photograph of the site before the demolition of the aluminum smelting operations. The Port completed the purchase of the Evergreen and Alcoa properties in 2009; with the exception of the on-site water tower and the dock structure in the Columbia River, all structures of the former aluminum processing plants have been removed and remediation has been conducted at the site in accordance with Washington State Department of Ecology (Ecology) approvals.

The Terminal 5 site is currently developed and used for the outdoor storage of wind turbine components and other cargoes and contains multiple rail lines for Port operations. The rail on the site represents the westernmost segment of the West Vancouver Freight Access (WVFA) project, a rail improvement project that is under construction at the Port. See Figure 2 for existing conditions at Terminal 5.



Figure 3. Historical Aerial Photo

Area 300 - was developed by the Port for laydown and industrial development and is currently partially occupied by a temporary steel scrap storage yard. See Figure 2 for existing conditions at Parcel 1A

Area 400 - Berths 13 and 14 were developed by the Port in the early 1990s and most recently have been used as vessel layberths. The dock consists of two access trestles and T docks with associated mooring elements. The access trestles and T docks consist of steel pile-supported concrete decks with a steel pile fender system. Four steel pile-supported concrete breasting dolphins are connected to the T docks by steel-grated walkways. Three steel pile-supported concrete mooring dolphins are located between the shoreline and the T docks. The navigation channel of the Columbia River in this area is maintained artificially at a depth of -43 feet and the Port maintains the berths to the same depth. The nearshore habitat drops off rapidly and, as a result, there is little shallow water habitat or transition zone. Columbia River water volumes are managed by upstream dams, and there is no functioning floodplain within the project site. Sediments in the area of the project are predominantly silts, sands, and clays, with very little gravel or cobble present. There is no in-stream large woody debris or any backwater or side channel habitat at the project site. See Figure 2 for existing conditions at berths 13 and 14

Area 500 – includes portions of terminal 5, Parcel 1A, Terminal 4, and corridors adjacent to existing private Port roads.

Area 600 – is currently vacant and was the entryway to the Evergreen/Alcoa site.

3.2 Surrounding Uses

Area 200 – is located on the Port’s Terminal 5 property. Terminal 5 has been the location of intensive historic industrial uses dating back to 1940s when the site was first developed for aluminum smelting operations through the early 2000s when aluminum processing activities on the property ended. The Port purchased Terminal 5 in 2009 and, with the exception of the on-site water tower and the dock structure in the Columbia River, all structures of the defunct aluminum processing plants have been removed. The Terminal 5 site is currently developed for the outdoor storage of wind turbine components and other cargoes and contains a rail loop including multiple rail lines for Port operations. The rail on the Terminal 5 site represents the westernmost segment of the WVFA project, as described above.

Uses immediately surrounding Area 200 are as follows:

- North: Old Lower River Road (Port private road), Port Parcel 2 used for wetland, habitat and tree mitigation and a Bonneville Power Administration electrical substation
- East: Keyera Energy propane distribution facility (Keyera), Clark County Jail Work Center (Jail Work Center) (approximately 600 feet to the east), and the Clark Public Utilities (CPU) River Road Generating Plant (100 feet to the northeast)

- South: Cargo laydown and bulk potash handling facility (under construction)
- West: Tidewater Barge Lines and Tidewater Terminal Company (Tidewater)

The Keyera propane facility is located on an approximately 4-acre parcel consisting of rail unloading, three 80,000-gallon storage tanks, truck loading racks, and a small office building. The Jail Work Center is located on approximately 18.3 acres and has three buildings. The in-custody and work release buildings are housing units with a total of 224 beds. The kitchen and warehouse building contains food and laundry service equipment and a jail industries warehouse. The CPU River Road Generating Plant is a 248 megawatt combined-cycle combustion natural gas turbine facility located on approximately 16 acres.

BHP Billiton plans to construct a potash export facility on approximately 50 acres at Terminal 5. The approvals received for the project in 2012 included an additional rail loop track and a 301,400-square-foot storage building, administrative and maintenance building, fuel station, conveyors, surge bin and shiploaders, and marine berthing facilities (Vancouver Hearings Examiner 2011). Initial grading and ground improvements have been completed.

Tidewater occupies approximately 23 acres and includes an office building for the corporate headquarters for Tidewater and a marine terminal for Tidewater Barge lines. The terminal handles containers and serves as a maintenance and operations facility including marine and upland facilities.

Area 300 – As part of the proposed project, crude oil storage tanks will be located on Parcel 1A on the south side of NW Lower River Road just east of Farwest Steel (3703 NW Gateway Avenue). This site was first developed by the Port for industrial use beginning in the early 2000s and is temporarily partially occupied by a steel scrap storage yard operated by Pacific Coast Shredding.

Uses immediately surrounding Area 300 are as follows:

- North: Lower River Road (SR 501) and Columbia River Wetland Mitigation Bank
- East: Parcel 1A wetland
- South: Port rail system and the Subaru of America automobile import facility
- West: Farwest Steel

The Columbia River Wetland Mitigation Bank is a 154-acre mitigation bank developed by Mitigation Banking Services in partnership with the Port. It includes 78 acres of enhanced wetlands and 25.5 acres of created wetlands. Credits from the wetland work on site are available for purchase to off-set wetland impacts on other properties. The Parcel 1A wetland is an approximately 10-acre parcel previously enhanced by the Port for wetland impacts on other properties. The Subaru facility is a port of entry to offset automobiles and consists of an approximately 70-acre parking and storage facility, a processing building, and facilities for rail car and

truck loading. Farwest Steel is a steel fabricator and distributor and occupies an approximately 20-acre parcel, which was purchased from the Port in 2011. The site includes an office building and fabrication/warehouse building.

The surrounding properties are all zoned IH, with the exception of the Columbia River Wetland Mitigation Bank located north of Lower River Road which is zoned Greenway (see Figure 4). The Greenway zone is intended to encourage the preservation of agricultural and wildlife use on land which is suited for agricultural production and is valuable for wildlife habitat (VMC 20.450.020(B)(2)).

Area 400 – Ship or barge loading will occur at existing berths 13 and 14 on the Columbia River south of the current Subaru facility. These berths were developed by the Port in 1994 and have most recently been used as layberths.

Uses immediately surrounding Area 400 are as follows:

- North and East: Subaru of America automobile import facility
- South: Columbia River
- West: CalPortland Aggregate Yard

The Subaru site is described above and the CalPortland site is an approximately 8-acre aggregate yard where various sand and gravels are received by barge and truck, stored on-site and shipped by truck.

The surrounding properties are all zoned IH (see Figure 4).

Area 500 – The area encompasses the planned transfer pipeline routes used for transferring crude oil between the project elements. The pipeline routes will be located primarily in existing rail and roadway corridors.

Properties adjacent to the pipeline routes are all industrial, with the exception of the Jail Work Center, previously described above, which is located south and west of the pipeline routes.

The surrounding properties are all zoned IH (see Figure 4).

Area 600 – The structure housing the west boiler will be located on the northwest corner of Terminal 5. This area is currently a vacant gravel pad surrounded by access roads to Terminal 5. It was previously part of the former aluminum facility on Terminal 5 and was the location of an electrical transmission tower for power lines.

Uses immediately surrounding Area 600 are as follows:

- North: Old Alcoa Facility Access Road and Parcel 2 mitigation site
- East and South: Terminal 5 rail loop
- West: Tidewater

These areas are described above.

The surrounding properties are all zoned IH (see Figure 4).

Rail Infrastructure – rail infrastructure improvements required to support the Facility will be constructed at Terminal 5. The Facility will include the construction of two additional rail loops (tracks 4106 and 4107), in addition to the improvements described above for the WVFA project. Existing Terminal 5 rail associated with the WVFA will be shifted; the shifting of existing facilities will be performed by others, has been previously permitted, and was not included within the Applicant's request for Site Certification. A third rail loop (track 4105) is permitted for general Port use. This track may be transferred to exclusive use by the Facility once a sustained average volume of 120,000 barrels per day is received by the Facility.

The rail infrastructure improvements are located on Terminal 5. Surrounding land uses are industrial with the exception of the Jail Work Center located to the east of the existing rail loop.

The surrounding properties are all zoned IH (see Figure 4).

Residential Areas – The residence nearest to the proposed Facility is an isolated rural house owned by the Port and located at 6818 NW Old Lower River Road approximately 3,100 feet (0.6 mile) northwest of the proposed location of the boiler/steam plant for the rail car unloading facility. In addition, the Jail Work Center is located off Gateway Avenue between the elements of the proposed project. This facility opened in 2000 and includes 224 beds in a minimum security setting.

3.3 Existing Structures/Topography

Topographically, the site is flat, and +/-99 percent of it is covered with impervious surfaces related to the historic development associated with the former aluminum smelting facilities, recent Port paving improvements, and other Port development. The parts closest to the Columbia River slope steeply from the top of the cut bank down to the shoreline, where slopes exceed 25 percent from the top of the bank to the riprapped shoreline. Elevation ranges from about 11 feet above mean sea level (MSL) at the shoreline to about 33 feet above MSL in the northern portions of the study area.

The only structures on the site are a water tower owned by the Port located near the center of tax lot 152799-000 in Area 200, and the existing dock at Area 400 (berths 13 and 14).

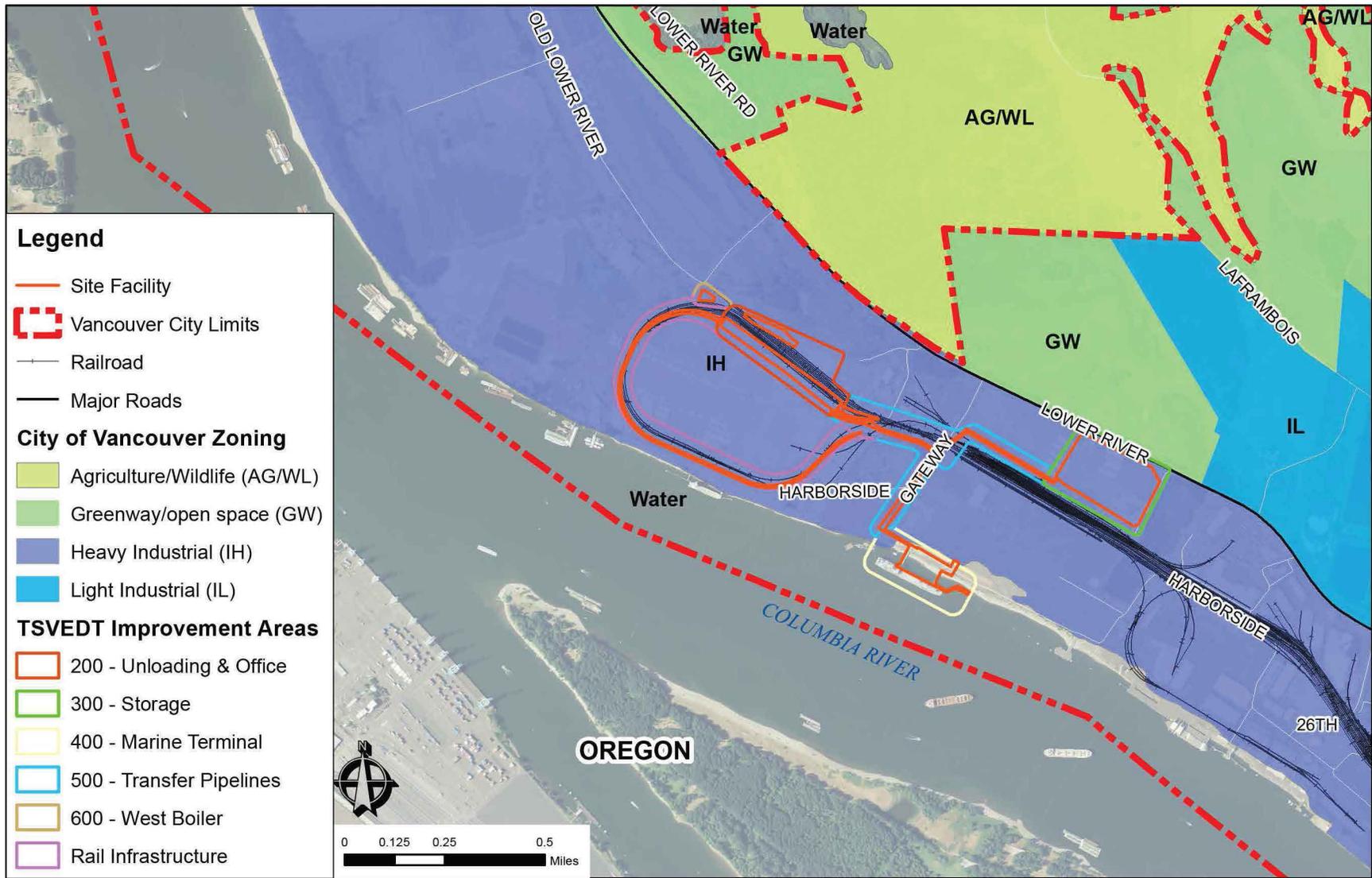


Figure 4. City of Vancouver Zoning in Site Vicinity

3.4 Roadways, Access, and Transit

Roadways and Access

Starting at the location of the project site, the extended road network includes NW Lower River Road (State Route 501), which is a state highway and a major truck route with a 50-mile per hour (mph) speed limit at the project site. Approximately 1.5 miles east of the site, NW Lower River Road connects to the Mill Plain Extension (a principal arterial with a 35-mph speed limit) and West Fourth Plain Boulevard (a primary arterial and state route with a 35-mph speed limit). West Mill Plain and West Fourth Plain boulevards connect to I-5 approximately 2.5 miles east of the site.

The existing roadway system in the area of the project is shown on Figure 5. The roadways that are within the vicinity of the project include:

Interstate 5 – The main interstate highway on the West Coast, I-5 generally runs parallel to the Pacific Ocean and U.S. Highway 101 from Mexico to Canada. I-5 serves some of the country’s largest cities, including Seattle, Portland, Sacramento, Los Angeles, and San Diego. This significant interstate freeway generally provides four travel lanes, but expands to six lanes in the region of the Fourth Plain Boulevard exit. Other exits in the vicinity of the project site, from south to north, include SR 14, Mill Plain Boulevard, East 39th Street/SR 500, and Main Street.

SR 501 (NW Lower River Road and Mill Plain Boulevard) – This highway is co-managed by WSDOT and the City and is a major truck route with a 50-mph speed limit at the project site. West of I-5, the road leads out of the downtown Vancouver area along Mill Plain Boulevard and then along Lower River Road west of the Fourth Plain Boulevard/Mill Plain Boulevard intersection. As Mill Plain Boulevard, the highway has five lanes of travel and urban design features including a landscaped median, bicycle lanes, and sidewalks. West of the Fourth Plain Boulevard intersection, the highway becomes more rural in nature, slimming down to two travel lanes with left-turn lanes provided at major intersections. The highway generally has wide paved shoulders and fog line striping for bicycle travel and there is a multi-use path at intermittent locations along the south side of the road.

Fourth Plain Boulevard – This is a principal arterial and state route with a 35-mph speed limit and primary access route for car and truck traffic from I-5 to the Port and the project site. West Mill Plain and West Fourth Plain boulevards connect to I-5 approximately 2.5 miles east of the site. Fourth Plain Boulevard extends west from I-5 through the northern section of downtown Vancouver, and merges into SR 501 (NW Lower River Road). Fourth Plain Boulevard is generally composed of two lanes and a turning lane. The bordering properties are both residential and commercial.

Old NW Lower River Road (public) – This two-lane local access road extends south from NW Lower River Road (SR 501) and then west to provide access to local industrial businesses before it circles back to SR 501 to the northwest. The road provides access to the west end of the Port’s Terminal 5, Tidewater Barge Lines,

Tidewater Terminal Company, Hickey Marine, the West Van Material Recovery Center, and Old NW Lower River Road (private).

Old Alcoa Facility Access Road (private) – This is a private road that extends east from the public Old Lower River Road where the roadway turns from southbound to westbound. This private road has two lanes of travel, a 15-mph posted speed limit, and no sidewalks. The road, which is maintained by the Port, provides access into Port property, particularly to Area 200, the location of the proposed rail car unloading building and administrative and support buildings. The roadway continues past the project site and ends approximately 800 feet to the east at a gate and the Keyera facility. The roadway continues on to NW Lower River Road but is not open to general traffic.

NW Gateway Avenue – Gateway Avenue is the main entrance to Terminal 5 at the Port. This private roadway has two travel lanes with partial sidewalks, and on-street parking is allowed. The roadway gives access to Terminal 4 and Terminal 5, the Jail Work Center, and CalPortland. The Port is constructing a new overpass for Gateway Avenue that will span Port rail lines with grade-separated access; September 2013 project completion is anticipated. An additional access will be provided into the Terminal 5 loop, with June 2015 completion anticipated.

Fruit Valley Road – This roadway is a two lane minor arterial with a center turn lane and a 25 and 35 mph speed limit. It is an east/west connection to Fourth Plain Boulevard and serves as an access point to both 39th street to I-5 and mid-town Vancouver, and connects to Lakeshore Drive/78th Street, which offers access to I-5 further north. The roadway is located through mixed zoning, including residential, school zone and industrial.

39th Street – This minor arterial connects Fruit Valley Road to I-5. It includes a grade separated crossing of the BNSF Railway and surface streets.

Table 2 summarizes the characteristics of the existing roadways within the project area.

Table 2. Existing Transportation Facilities and Roadway Designations

Roadway	Classification	Cross Section	Speed Limit	Sidewalks	Bicycle Lanes	Median	On-Street Parking
Fourth Plain Boulevard	Principal Arterial	3-5 lane	35 mph	Partial	Yes	TWLTL ¹	No
Mill Plain Boulevard (SR 501)	Principal Arterial (State Highway Route)	5-lane	35 mph	Yes	Yes	Raised	Partial
Lower River Road (SR 501) ²	Principal Arterial (State Highway Route)	2-5 lane ³	45-50 ⁴	No ⁵	No ⁶	No	No

Roadway	Classification	Cross Section	Speed Limit	Side-walks	Bicycle Lanes	Median	On-Street Parking
Gateway Avenue	Private Street	2-lane	Not Posted	Partial (east side)	No	No	Yes
Old Lower River Road	Local Street	2-lane	Not Posted	No	No	No	No
39th Street	Local Street	2-lane	25	Yes	Yes	No	Partial

¹ TWLT = two-way left-turn lane with exclusive turn lanes at major street intersections.

² NW Lower River Road (SR 501) is both a Principal Arterial and state highway from Fourth Plain Boulevard to the City Limits, and then only a state highway route west of Gateway Avenue.

³ Cross-section changes from 5 lanes east of 26th Avenue to 2 lanes west of 26th Avenue, with left-turn lanes at major intersections.

⁴ Posted speed changes from 45 mph east of Centennial Industrial Park to 50 mph west of Centennial Industrial Park.

⁵ There is a new two-way multiuse trail along the south side of NW Lower River Road (SR 501) extending from Gateway Avenue east along the Farwest Steel property as well as the frontage of the proposed Facility in the area of the tank farm.

⁶ Although not formally designated as bike lanes, there is fog line striping and sufficient paved shoulder on both sides of SR 501 for bicycle travel.

Parking

With the exception of Area 400, no existing designated parking is located within the areas proposed for construction on the project site. Area 400 contains existing parking for the existing berths and was approved in 1993 by Clark County.

Public Transit

Public transit does not serve the site. C-TRAN (the area's public transit provider) Route No. 25 is the transit route closest to the site. It travels on West Mill Plain and Fruit Valley Road, approximately 1.5 miles east of the site. The Port is currently developing a multi-modal path that would provide access from the proposed Facility site to the existing terminus of this transit route.

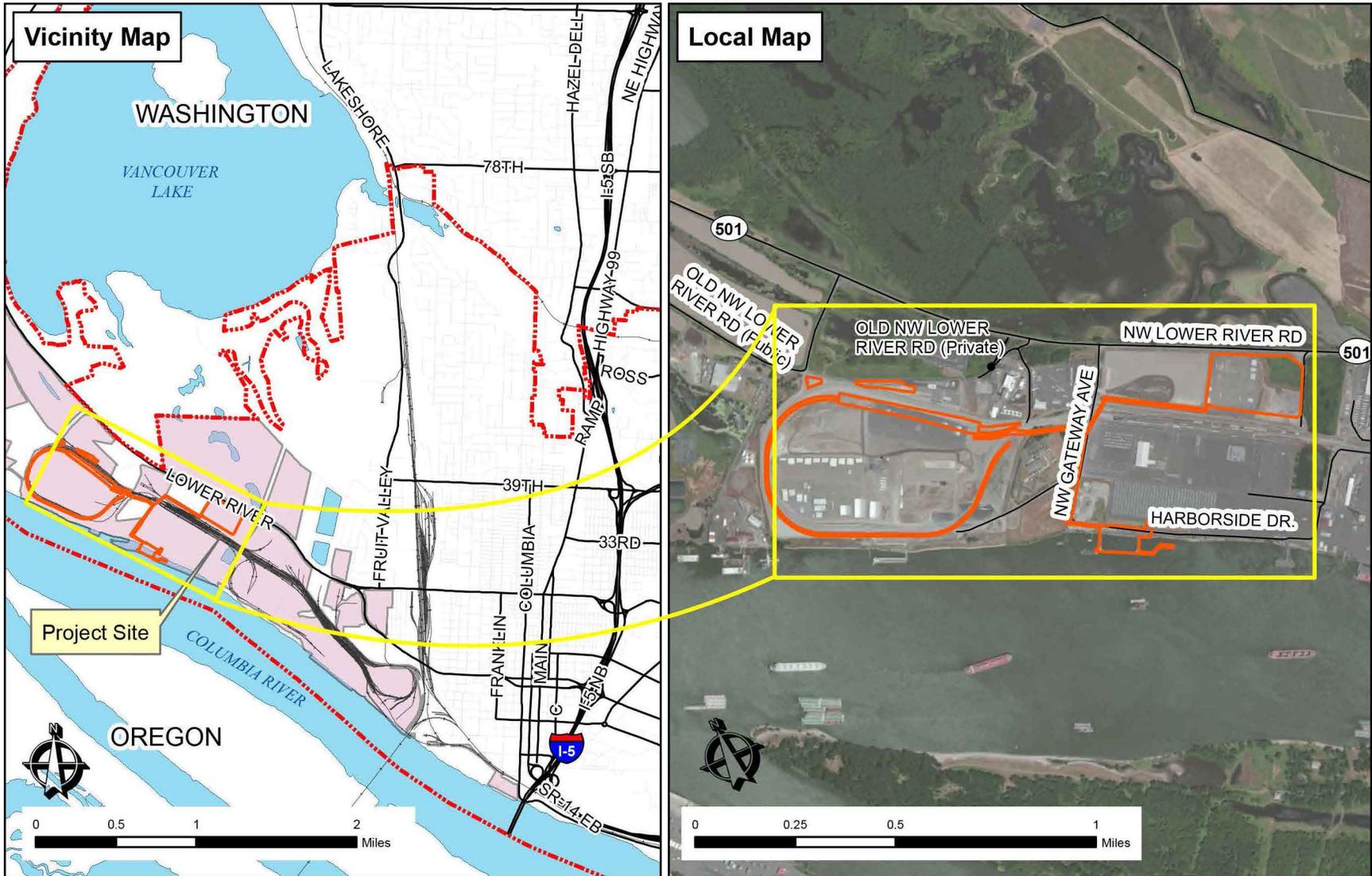


Figure 5. Existing Roadway Transportation System

3.5 Utilities and Stormwater

The Port is currently served with City water and sanitary sewer. In addition, the Port operates a private water system and maintains stormwater facilities on site. Potable water and existing fire hydrants are currently available on or adjacent to all of the locations involved in the proposed project.

Water

The proposed project location is currently served by City water and a Port-operated private water system. According to the pre-application conference report (lines 1397-1398), City records show an existing 12-inch, 14-inch, and 16-inch ductile iron (DI) main in NW Old Lower River Road, a 16-inch DI main in SR 501, and a 10-inch DI main in NW Harborside Drive in the dock area. Existing fire hydrants are currently available on or adjacent to all areas of the proposed project with an estimated minimum fire flow of 3,500 gallons per minute. Consistent with City standards as stated in the pre-application report (lines 1407-1430), the proposed project will meet Fire Marshal pipe size requirements.

Sanitary Sewer

Sanitary sewer service is available along the south side of Area 300, and the nearest connection point westward for Areas 200, 400 and 600 is a manhole located just south of the Clark Public Utilities River Road Generating Plant. As stated in the pre-application report (lines 1496-1501), the construction of public sewers will not be required.

Electrical

Electrical service to the proposed project site is available from the existing Clark Public Utilities distribution system.

Stormwater

Manmade surface water conveyance features at the site consist of an existing sediment pond located southwest of the proposed Area 200 unloading and office area, and existing stormwater treatment swales located at Terminal 4. The sediment pond is a temporary construction feature and will be removed when construction is complete. The swales at Terminal 4 were designed to collect and treat the Terminal 4 Subaru lot as well as to infiltrate the stormwater.

3.6 Comprehensive Plan and Zoning

The City of Vancouver has designated the site as Industrial (IND) in the City of Vancouver Comprehensive Plan and is zoned as Heavy Industrial (IH). The IH zoning of the site allows a variety of industrial uses, including the proposed Facility, which is classified as a “warehouse/freight movement” as defined in Section 20.160.020 of the VMC. The VMC also permits “railroad yards” within the IH zone.

This definition is:

Uses involved in the storage and movement of large quantities of materials or products indoors and/or outdoors; associated with significant truck and/or rail traffic. Examples include free-standing warehouses associated with retail furniture or appliance outlets; household moving and general freight storage; cold storage plants/frozen food lockers; weapon and ammunition storage; major wholesale distribution centers; truck, marine and air freight terminals and dispatch centers; bus barns; grain terminals; and stockpiling of sand, gravel, bark dust or other aggregate and landscaping materials.

“Warehouse/Freight Movement” is listed in Table 20.440.030–1 in VMC 20.440 as a permitted use within the IH zone. In addition, “railroad yards” is listed as a permitted use within the IH zone.

The zoning of the adjacent parcels is IH, with the exception of parcels located north of Area 300. Land north of NW Lower River Road (SR 501) near Area 300 is zoned Greenway (VMC 20.450).

3.7 Archaeology

According to the Clark County Archaeological Predictive Model, the site is within Level A and/or high (80 to 100 percent) probability on the County archaeological predictive model. There are no mapping indicators of archaeological site buffers. Archaeological Investigations Northwest, LLC (AINW) reviewed records available online from the Washington Information System for Architectural and Archaeological Records Data and materials in the AINW library to determine whether archaeological or historic-period resources had been identified within or near the project APE. The records search was also done to determine if surrounding areas had been previously surveyed for archaeological resources that might extend into the project site.

As shown in Table 3 below, AINW identified that several cultural resource studies have been previously conducted within the project area and archaeological resources have been previously recorded in the vicinity of, but not within, the current project site.

Table 3. Previously Recorded Cultural Resource Studies

Author	Date	Area Investigated	Findings
Thomas and Welch	1982	Parcel 1A	<ul style="list-style-type: none"> • 20th century dairy farm (outside site) • Section of original Lower River Road (outside site) • Dredge fill from shoreline to 800 ft inland
Forgeng and Reese	1993	Parcel 1A	<ul style="list-style-type: none"> • No cultural resources • Dredge fill up to 5.3 ft deep on the southern half
King	1995	Parcel 2 (north of site)	<ul style="list-style-type: none"> • 45CL408 (outside site)

Author	Date	Area Investigated	Findings
Thomas	1995	Cogentrix Power Plant (north of site)	<ul style="list-style-type: none"> No cultural resources Dredge fill up to 10 to 15 ft deep
Moore et al.	1997	Jail Work Center	<ul style="list-style-type: none"> No cultural resources Dredge fill up to 4 ft deep Sterile native soils identified
Ellis and Mills	1998	Jail Work Center	<ul style="list-style-type: none"> No cultural resources
Becker and Roulette	2003	Terminal 5	<ul style="list-style-type: none"> No cultural resources Dredge fill up to 20 ft deep on Columbia River bank and up to 4 to 9 ft thick further inland
Zehendner and Fagan	2008	Columbia River shoreline	<ul style="list-style-type: none"> No cultural resources Dredge fill deposition has substantially changed the shape and elevation of shoreline
Reese	2009a	Terminal 4 Parcel 1A	<ul style="list-style-type: none"> No cultural resources Dredge fill
Reese	2009b	Terminal 4 Pond Reconstruction	<ul style="list-style-type: none"> No cultural resources Dredge fill 3 to 6 m (10 to 20 ft)
Fagan and Zehendner	2009	Terminal 5	<ul style="list-style-type: none"> No cultural resources Dredge fill deposition has substantially changed the shape and elevation of shoreline
Hetzel et al.	2009	West Vancouver Freight Access Terminal 5 Jail Work Center	<ul style="list-style-type: none"> No cultural resources Dredge fill
Chapman and Blaser	2010	Terminal 5	<ul style="list-style-type: none"> No cultural resources Dredge fill
Davis and Ozbun	2011	Parcel 2 (north of site)	<ul style="list-style-type: none"> No cultural resources Sterile native soils identified
Jenkins and Davis	2012	Parcel 2 (north of site)	<ul style="list-style-type: none"> No cultural resources Sterile native soils identified
Fuld and Reese	2012	Jail Work Center	<ul style="list-style-type: none"> No cultural resources Dredge fill and disturbance

As described above, several studies within the project area have noted that dredge fill deposits from 4 to 20 feet thick cover the site. Based on the historical evidence of extensive fill deposits and the fact that several archaeological surveys and subsurface testing projects have found no evidence of intact archaeological deposits within or adjacent to the project area, an archaeological survey was not completed for this project. The cultural resources report is attached as Appendix B.

3.8 Shorelines

The shoreline jurisdiction includes the waterbody, 100-year floodplain, and/or all areas within 200 feet of the ordinary high water mark (OHWM). Portions of the project area are located within the water, 100-year floodplain and/or 200 feet within the OHWM and are therefore subject to the Shoreline Management Act. A Shoreline Substantial Development Permit (SDP) is required for the project. Section 4.3 of this narrative addresses the project's consistency with the City's Shoreline Master Program (SMP).

3.9 Natural Conditions

3.9.1 Soils

Clark County GIS data identifies the following soil types on the site (as shown in Figure 6).

- Water (WAT), for areas mapped below the OHWM
- Sauvie silty clay loam, 0 to 8 percent slopes (SpB)
- Newberg silt loam, 0 to 3 percent (NbA)
- Fill land (Fn)
- Sauvie silt loam, 0 to 3 percent slopes (SmA)
- Pilchuck fine sand, 0 to 8 percent slopes (PhB)

As noted below, the site has been mapped by the City as being susceptible to soils liquefaction, a geologic hazard area per Section 20.740.130 of the critical areas protection provisions of the VMC.

3.9.2 Vegetation

The upland areas of the proposed Facility are located on developed portions of an existing industrial site, which in its current state provides very little native vegetation. Vegetation is limited to portions of the pipeline route near berths 13 and 14 and the Jail Work Center, and areas of the rip rap bank of the Columbia River. These areas are primarily grass and weedy herbaceous vegetation, with approximately 25 cottonwood and pine trees at the Jail Work Center and approximately three willows and other shrubs on the rip rap shoreline.

3.9.3 Critical Areas

3.9.3.1 Fish and Wildlife Habitat

Clark County GIS data indicate that the project site consists of a riparian habitat conservation area and riparian buffer. Project activities at Area 400 (berths 13 and 14) are located within the aquatic zone, standard riparian management area (RMA) and riparian buffer (RB) area of the Columbia River. The RMA is defined as land 100 feet from the OHWM; the RB extends an additional 75 feet landward from the RMA along the Columbia River. The riparian boundaries are measured landward from the biological OHWM and are limited by existing impervious surfaces. The existing riparian habitat is of lower value due to historical industrial land uses which have functionally isolated the riparian area from the Columbia River. Impervious surfaces

include existing roadways, material laydown areas, compacted soil, access trestles, and stormwater facilities.

Vegetation within the functional portion of the riparian habitat at the site consists primarily of approximately three small-diameter black cottonwood (*Populus balsamifera* ssp. *trichocarpa*), willows (*Salix* spp.), non-native false indigo bush (*Amorpha fruticosa*), and Himalayan blackberry (*Rubus armeniacus*). The bank is armored with riprap, and above the riprap, there is a narrow band of ruderal grass/forb habitat.

The terrestrial portion of the riparian buffer most likely provides a small amount of habitat for wildlife species that can tolerate a wide range of habitat conditions and are conditioned to living in industrialized environments (e.g., ground squirrels, rabbits, opossum, raccoons, coyote, and common rodent species). In addition to these terrestrial mammals, the riparian buffer likely provides a small amount of seasonal foraging habitat for resident and migratory songbirds and shorebirds, as well as raptors.

Riparian habitats are defined by Washington Department of Fish & Wildlife (WDFW) as a priority habitat for the important hydrologic, water quality, and habitat functions they provide (WDFW 2008). However, due to the highly altered nature of the riparian habitat at the site (i.e. riprap armored bank, minimal riparian vegetation, lack of structural complexity), riparian habitat at the project site does not provide any significant hydrologic, water quality or habitat functions.

Small upland stands of black cottonwood are present on the Jail Work Center property which is part of the proposed pipeline route. These are small stands dominated almost exclusively by a closed canopy black cottonwood overstory, with occasional Oregon ash (*Fraxinus latifolia*) and limited understory vegetation. These stands are isolated from other forested areas in the vicinity by industrial infrastructure including rail tracks, roads, fences, and other paved surfaces. The isolated nature of these stands limits their habitat function and values. However, they do likely provide refuge and foraging habitat for migratory songbirds and small mammals as well as perching and nesting habitat for raptors. This area does not meet the designation of Fish and Wildlife Habitat Conservation Areas per VMC 20.740.110(A)(1).

Conditions below the OHWM of the Columbia River at the site of the proposed project are typical of those associated with an industrial reach of the Columbia River. The navigation channel of the river and berths 13 and 14 are maintained artificially at a depth of approximately 43 feet while actual depths are greater, and the natural fluvial processes of the river have been altered. A sloping sandy beach below the riprapped bank extends into deeper water and is exposed at lower water levels.

3.9.3.2 Frequently Flooded Areas

Portions of the site are within the 100-year floodplain and floodway of the Columbia River. The Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps #53011C0363D and 364D include the project area. The maps indicate that most of the area is located in Zone X and outside the Special Flood Hazard Area representing the 100-year floodplain. The 100-year flood elevation is designated as 30 feet NAVD 88 and extends generally to the top of the bank along berths 13 and 14 in Area 400. Figures 7 and 8 indicate the mapped floodplain.

In addition, an isolated floodplain is located in Area 300, as shown on FEMA Map Number 53011C0364D, and in a portion of Area 500. The Port filled Area 300 as authorized by City permit GRD2012-00025 and the area is now above the 100-year flood elevation. The floodplain within Area 500 is completely surrounded by land above the 100-year flood elevation, which separates it from overland flooding from the Columbia River or Vancouver Lake.

3.9.3.3 Geologic Hazards

VMC 20.740.130 defines Geologic Hazard Areas to include Landslide, Seismic, and Erosion control hazard areas.

Seismic Hazard Areas include areas with Low to Moderate, Moderate, Moderate to High, or High liquefaction susceptibility or peat deposits, areas of fill, site class C to D, D, D to E, E and F and fault rupture hazard areas. Clark County GIS data indicates the area as having a Moderate to High Susceptibility for liquefaction (as shown in Figure 9). As indicated in section 3.8.1, portions of the site are composed of fill soils. Clark County GIS data indicates the site as within site class C to D, D, D to E and E.

Geologic mapping completed in the vicinity of the Facility has not identified evidence of historical or geologically recent surface rupture crossing the site. Potentially active faults have not been mapped or inferred within the site boundaries. As stated in the geotechnical information provided in the Application for Site Certification (see Appendix C), the project is located in a regional tectonic regime that is capable of producing earthquakes of magnitude (M) 9 or greater. The convergence of the Juan de Fuca and the North American tectonic plates results in folding and faulting of rocks where sudden movement along faults generate strong ground motions.

Active faults have not been identified at the project site. Ground motion during an earthquake could lead to settlement and the loss of some load bearing capacity for both shallow and deep foundations when soil liquefaction occurs. Lateral spreading can occur during ground shaking as blocks of soil move horizontally toward unsupported banks such as the Columbia River. The site is located in a high liquefaction susceptible soil area (Palmer et al. 2004).

Erosion Control Hazard Areas include soils designated as having a severe erosion hazard or bank erosion hazard. The 1972 Soil Survey for Clark County indicates both the Sauvie and Pilchuck soils as having severe erosion hazards only where subject to flooding. There are areas of the site with these soils types that are located within isolated 100 year floodplain areas which would not be subject to moving water which would create erosion hazards. Clark County GIS data indicates small areas of the bank erosion hazards on Terminal 5, but construction is not proposed in those areas.

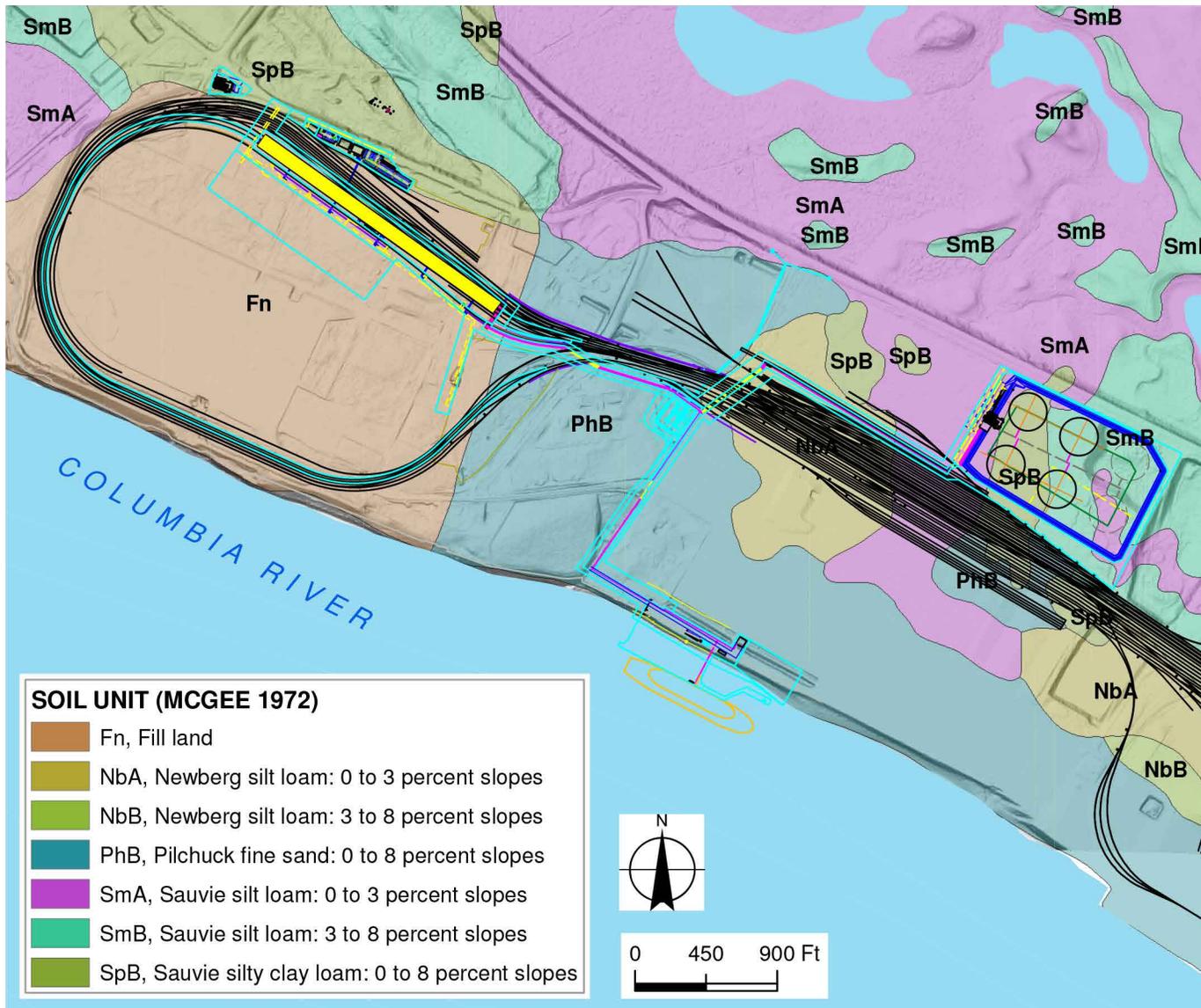


Figure 6. Soil Map

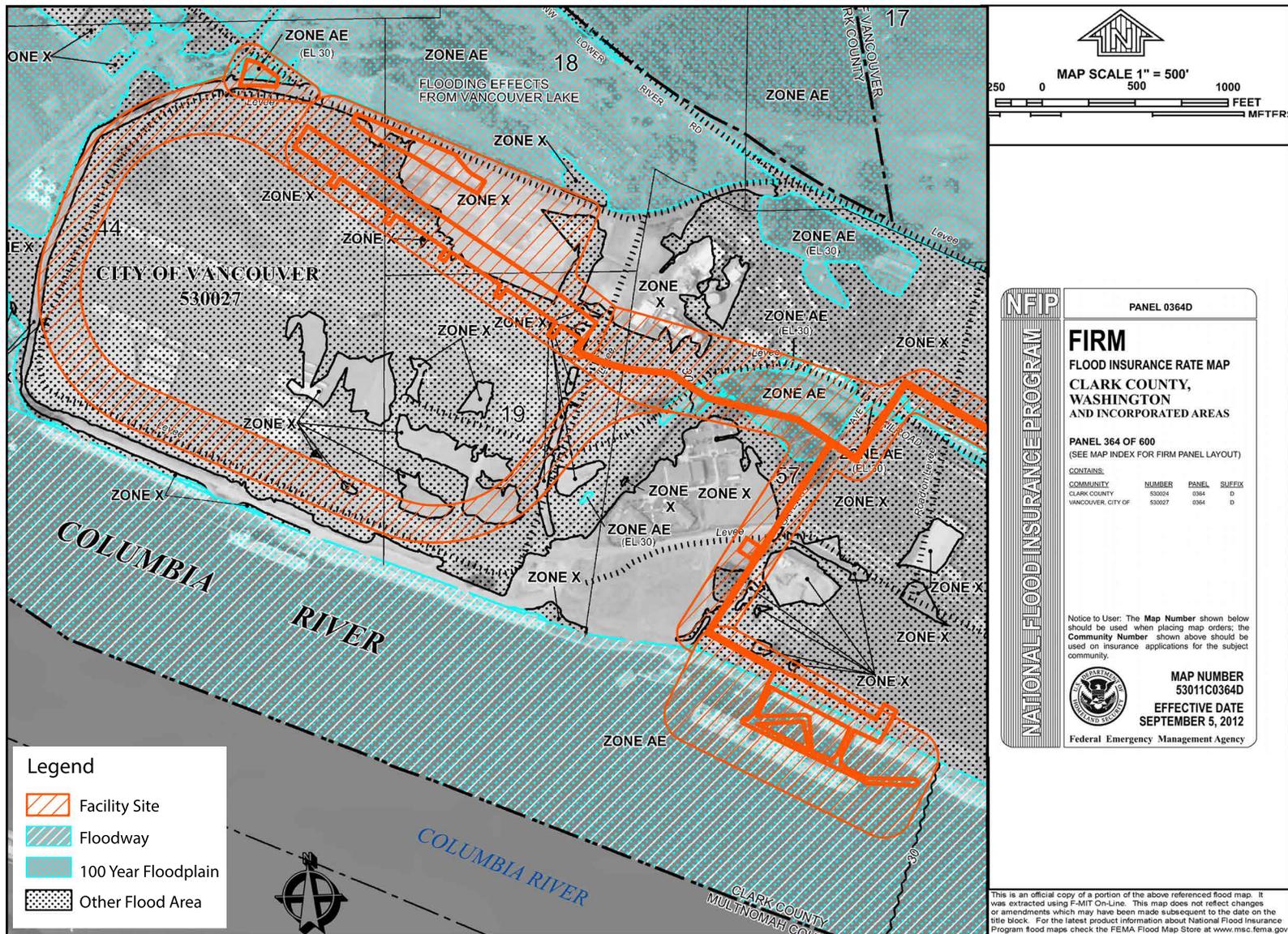


Figure 7. Mapped Floodplains -West

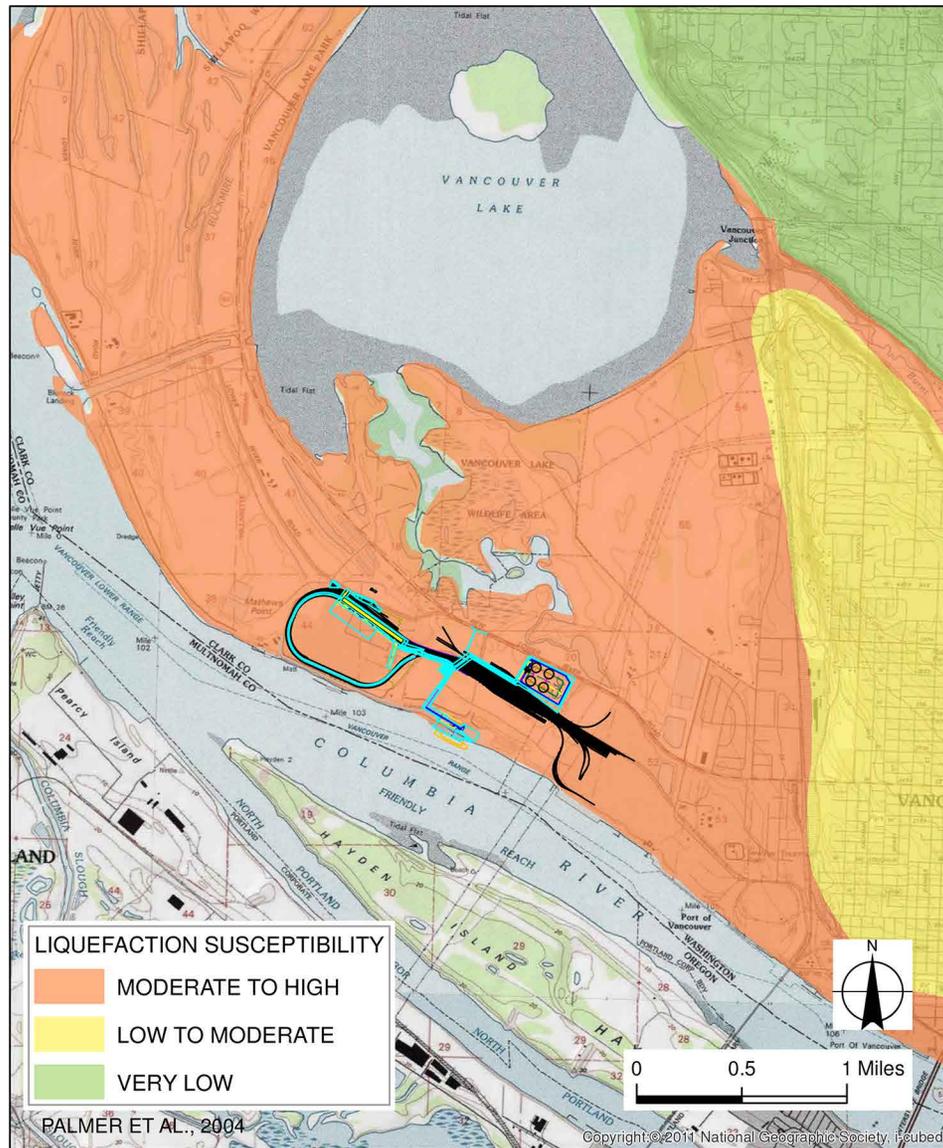


Figure 9. Site Liquefaction Susceptibility

3.9.3.4 Wetlands

The National Wetlands Inventory (NWI) map for Vancouver, Washington, U.S. Geological Survey Quadrangle (U.S. Fish & Wildlife Service [USFWS] 1989) indicates the presence of numerous wetlands within the project vicinity, including five wetland polygons on the portion of the project site that encompasses Parcel 1A (Figure 10).

Wetland types mapped on Parcel 1A include:

- PEMA – Palustrine Emergent Temporarily Flooded
- PEMC – Palustrine Emergent Seasonally Flooded
- PFOA – Palustrine Forested Temporarily Flooded
- PFOC – Palustrine Forested Seasonally Flooded

The NWI mapping is a coarse-scale mapping tool, and does not always reflect the presence or absence of wetland features at a given site. The NWI identifies much of Port Parcel 1A as having wetland characteristics, but wetland delineations conducted on the parcel prior to its initial development in 1996 documented significantly less wetland than identified by the NWI (The JD White Company 1993).

Nine wetlands, totaling approximately 16 acres in size, were present on Parcel 1A prior to development of that parcel (The JD White Company 1993), but these wetlands were all filled through permitted actions. Development on Parcel 1A was initiated in 1996. U.S. Army Corps of Engineers (USACE) permit number 96-1850 authorized impacts to 9.92 acres of emergent wetlands on the parcel.

In 2012, the Port applied for and received permission to fill a 1.76-acre isolated emergent wetland in the northeast corner of Parcel 1A, which was hydrologically and functionally isolated and was filled in 2012.

The NWI also identified two isolated wetlands located north of the Jail Work Center. The boundaries of these wetlands were delineated in 2006 and 2007 in association with the Port's WVFA project (The JD White Company 2007). These wetlands were filled as part of that project in 2007 under a USACE nationwide permit (NWP-2007-721) and an Ecology administrative order (AO No. 6902).

No other wetlands are present within the project site. Field investigations conducted on May 28 and June 26, 2013 included a visual reconnaissance to document the presence of any potential wetlands. All portions of the project site above the OHWM are either impervious, paved, or gravel-covered surfaces, or are grassy areas clearly dominated by upland vegetation and have neither the potential to accumulate or detain surface water or precipitation nor any visible hydrologic features that indicate the potential presence of wetlands. It has been determined, therefore, that there are no wetlands present on the project site.

There are two wetland mitigation sites present in the vicinity of the project site. The Parcel 1A wetland mitigation site, located immediately east of Parcel 1A, was established in 1994 under USACE permit number 94-00061. This approximately

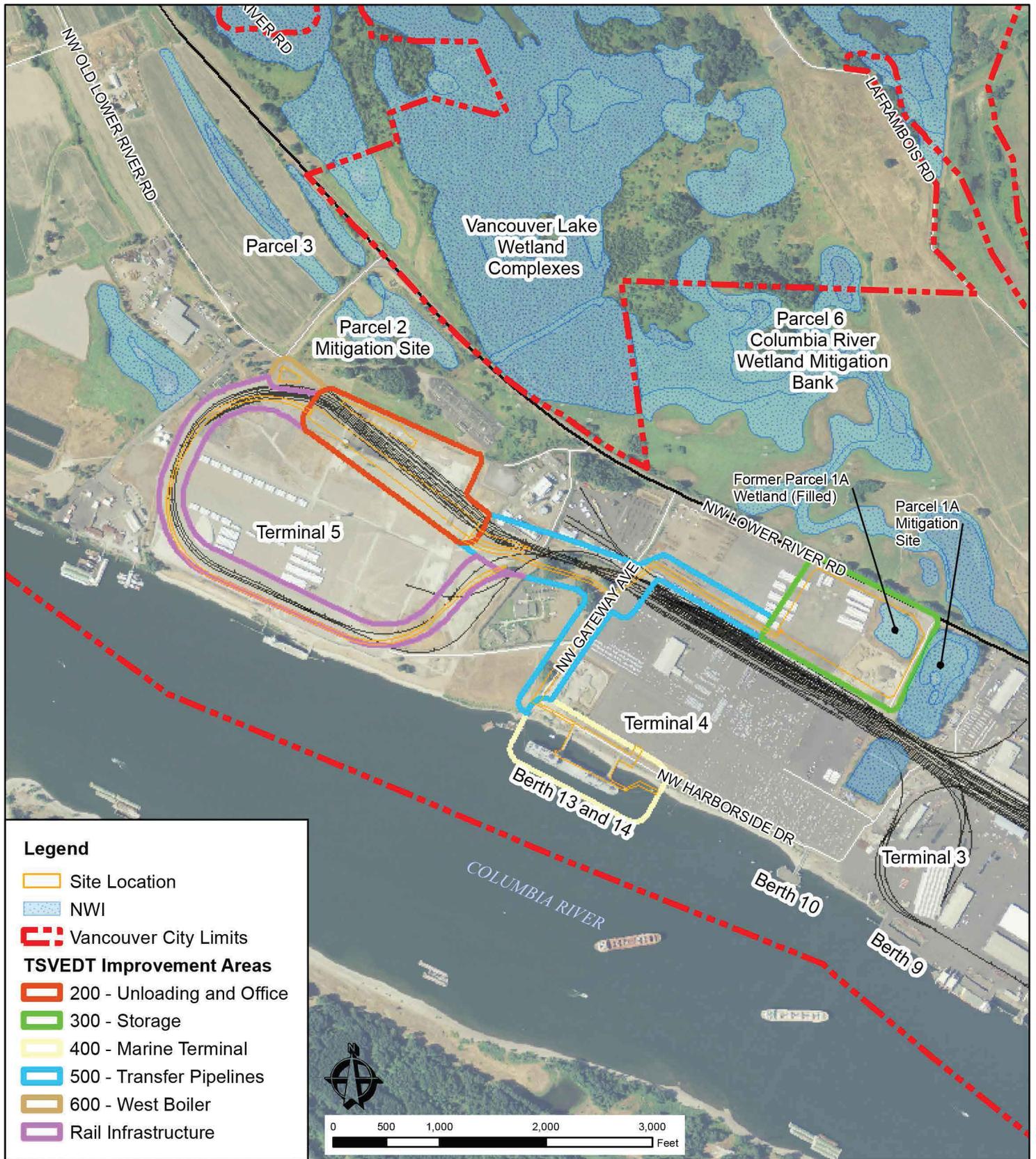


Figure 10. Wetlands

7.9-acre wetland is a depressional, palustrine forested wetland (PFO), vegetated with mature black cottonwood trees and a variety of native shrubs and herbaceous species.

The Parcel 2 wetland mitigation site is an approximately 16.4-acre mitigation site, situated on an approximately 31.3-acre parcel north of the existing Terminal 5 site. The mitigation site was established in 2000, under USACE permit number 96-1850, for wetland impacts associated with the initial development of Parcel 1A. The mitigation site received final approval from the USACE in 2007. The site is currently a mosaic of forested, scrub-shrub, and emergent vegetation.

4.0 REGULATORY COMPLIANCE

4.1 Vancouver Municipal Code

4.1.1 VMC Title 11: Streets and Sidewalks

The project does not include any proposed improvements to existing streets or sidewalks. Primary vehicular access to the proposed project will be to the office building and two support buildings located in Area 200.

Area 200 - These facilities will be located on the north side of the Terminal 5 loop adjacent to the private Old Alcoa Facility Access Road. Access driveways to this roadway will be constructed for two parking lots – one with 20 stalls and another with 78 stalls. Bicycle parking will be considered for incorporation into the site design. No improvements are proposed to the Old Alcoa Facility Access Road.

Area 300 - Area 300 will be accessed from a shared drive with Farwest Steel from NW Lower River Road. Area 300 is not anticipated to require full-time staffing and parking will be provided for routine maintenance needs.

Area 400 - Area 400 will be accessed by Gateway Avenue, Harborside Drive, and a newly constructed driveway. An existing asphalt area at berths 13 and 14 in Area 400 will be used by project staff during shiploading operations.

Area 600 - Area 600 will not be occupied full time, but parking will be provided for maintenance vehicles, and access will be from NW Old Lower River Road.

The Applicant will construct, operate, and maintain Facility driveways in compliance with City and Port standards; the City will maintain ownership and operation of NW Old Lower River Road.

4.1.2 Transportation Concurrency (VMC 11.070)

Based on the Kittelson & Associates Transportation Impact Analysis Technical Report (see Appendix D) it is estimated that, at full project build-out, the project as proposed will result in approximately 332 additional daily trips, 48 weekday AM peak hour trips (40 in, 8 out), and 46 weekday PM peak hour trips (10 in, 36 out). Traffic generation is based on the anticipation that approximately 110 full-time staff will be employed by the Facility at full build-out. The trip estimates are based on trip

rates from *Trip Generation*, 9th Edition, published by the Institute of Transportation Engineers using data for land use code 110 (Light Industrial).

Based on the results of the transportation impact analysis, the proposed Facility can be developed while maintaining acceptable levels of service and safety on the surrounding transportation system. The analysis developed the following findings:

- All study intersections currently operate acceptably during the weekday AM and PM peak hours and are projected to do so in 2020 and 2025 with Facility development.
- A review of historical crash data identified no safety-related mitigation needs at the study intersections.
- Intersection sight distance is adequate at all study intersections.

4.1.3 VMC Title 14: Water and Sewers

4.1.3.1 Water and Sewers (VMC 14.04, VMC 14.10, and VMC 14.16)

Water

The proposed project location is currently served by City water and a Port-operated private water system. According to the pre-application conference report (lines 1397-1398), City records show an existing 12-inch, 14-inch, and 16-inch ductile iron (DI) main in NW Old Lower River Road, a 16-inch DI main in SR 501, and a 10-inch DI main in NW Harborside Drive in the dock area. Existing fire hydrants are currently available on or adjacent to all areas of the proposed project with an estimated minimum fire flow of 3,500 gallons per minute. Consistent with City standards as stated in the pre-application report (lines 1407-1430), the proposed project will meet Fire Marshal pipe size requirements, including:

Area 200 – The existing 16-inch water main running north-south will be relocated to the west end of the rail unloading building and connected to a new 12-inch water main running primarily east-west along the entire length of the rail unloading facility. A new fire line and process water service will be utilized to serve the Facility needs. A new 12-inch water main will be connected from the east end of the rail unloading area south to the City’s existing 12-inch water main near the Jail Work Center to provide additional system looping. Additional fire protection systems, including hydrants and chemical suppression systems, will be provided in Area 200.

Area 300 – A new 12-inch fire line and 1-1/2” water service will be connected to the existing 16-inch water main in SR 501. The new fire line and water service will extend south to the fire pump skid and boiler building. Additional fire protection systems, including dedicated fire lines hydrants with monitors and chemical suppression systems, will be provided in Area 300.

Area 400 – A connection to the existing 10-inch water main in NW Harborside Drive may be necessary to provide water for fire protection systems and any required fire hydrants.

Area 600 – A new 3-inch water service will be connected to the 16-inch line in Old Lower River Road. The service will extend on site to provide process water for the boiler/steam plant. The West Boiler Building in areas 600 will have the largest water demand, approximately 30 gallons per minute of process water at build-out.

All new fire hydrants within the proposed project will be served by a minimum 8-inch water main, except where a 6-inch main is allowed for dead-end runs shorter than 50 feet, consistent with City standards as stated in the pre-application report (lines 1440-1442).

Separate water services will be provided for each building within the proposed project, and water meters will be located in a non-paved area, located along the property frontage, consistent with City standards as stated in the pre-application report (lines 1444-1445).

Backflow assemblies will be provided for irrigation systems, water service, fire protection lines, and any areas where cross connection will be possible. Backflow assemblies will be constructed and installed per City “Standard Backflow Prevention Details,” as stated in the pre-application report (lines 1447-1449).

Sanitary Sewer

Two existing public sewers cross the proposed project site from the northwest to the southeast.

Area 200 – A public gravity sewer is located north of Area 200 in NW Old Lower River Road. Manhole #21025 marks the headwaters of an 18-inch gravity sewer that flows southeast.

Area 300 – A public gravity sewer and several manholes front the south side of Area 300, north of the rails. An existing 6-inch service lateral extends north to Area 300 from MH P9-7.

Area 400 – An existing public gravity sewer is located north of Area 400 and at the intersection of Gateway and Harborside. Manhole #14411 receives a private pressure sewer from the west and turns the sewer from the northeast to southeast. The sewers continue southeast within an existing public sewer easement.

Area 600 – The boiler/steam plant building in Area 600 is located approximately 800 feet northwest of manhole #21025 described above for Area 200.

The anticipated sanitary sewer discharges include domestic sewerage from the administration and support buildings in Area 200, treated boiler blowdown water (wastewater generated from solids left behind during the steam generation process) in areas 600 and 700, domestic sewerage from a restroom located inside of the boiler building in area 700, and a sump pump located in the pump pit in area 700. Boiler blowdown water will be pre-treated before discharge to the City sanitary sewer

system. New service laterals will be installed to existing manholes. Pre-treatment, sewer connections, and lateral installations will meet applicable City standards. As stated in the pre-application report (lines 1496-1501), the construction of public sewers will not be required.

4.1.3.2 Erosion Control (VMC 14.24)

The project’s grading plans are designed to minimize and control erosion and sedimentation. A site-specific construction Stormwater Pollution Prevention Plan (SWPPP) will be developed and implemented. A preliminary SWPPP and SPCC Plan Outline is included in this application (see Appendix E); this preliminary SWPPP was developed based on the Facility level of design at the time of submittal of the request for Site Certification Agreement. A final construction and operations SWPPP and final SPCC Plan will be developed prior to beginning any Facility-related ground disturbance. Construction best management practices (BMPs) are also listed in Section 5.1 of the Preliminary Stormwater Report (Appendix F)

Construction activities will be sequenced and controlled to limit erosion. Clearing, excavation, and grading will be limited to the areas necessary to construct the project. Interim surface protection measures, including dust control, straw matting, and erosion control blankets, will be required to prevent erosion. Final surface restoration will be completed within 14 days of the area’s final disturbance.

BMPs will be used in accordance with the SWPPP for the project to ensure compliance with City and state regulations. Sediment control measures used throughout construction will be designed based on a 10-year design storm. Water quality measures (other than sediment removal) will be based on the 6-month, 24-hour design storm. All construction practices will emphasize erosion control over sediment control. Temporary cutoff swales and ditches will be installed to route stormwater to the appropriate sediment trap and discharge location. A summary of construction-related BMPs is provided below in Table 4.

Table 4. Construction Source Control BMPs

BMP Devices	Area 200 Unloading & Office	Area 300 Storage	Dock Area 400 Marine Terminal	Pipeline Alignment Area 500 Transfer Pipelines	Area 600 West Boiler	Rail Infrastructure
Silt Fencing	X	X	X	X	X	X
High Visibility Fencing	X	X		X		
Sediment Pond	X	X				
Straw Wattles		X	X	X		
Inlet Protection	X	X	X	X	X	X
Stabilized Construction Entrance	X	X			X	

BMP Devices	Area 200 Unloading & Office	Area 300 Storage	Dock Area 400 Marine Terminal	Pipeline Alignment Area 500 Transfer Pipelines	Area 600 West Boiler	Rail Infrastructure
Temporary Seeding/Mulching		X	X	X	X	
Concrete Washout	X	X				
SWPPP	X	X	X	X	X	X

Additionally, as part of the EFSEC application process, the project will obtain an Individual National Pollutant Discharge Elimination System (NPDES) Stormwater permit that will address erosion control measures to be implemented during Facility construction and operation activities.

4.1.3.3 Stormwater (VMC 14.25)

Stormwater improvements have been analyzed and designed in accordance with City development standards and the Washington State Department of Ecology (Ecology) Stormwater Management Manual for Western Washington. The Preliminary Stormwater Report prepared for the project is contained in Appendix F. The land-disturbing activity that will be carried out by the project will exceed the regulatory threshold of the City’s NPDES Phase II permit for application of the standards for water quality treatment. Therefore, minimum requirements 1 through 9 of the Ecology stormwater manual apply to the project. A detailed discussion of compliance with all minimum requirements is attached in the preliminary stormwater report in Appendix F.

Stormwater from the site will be discharged through manmade conveyances to the Columbia River. The project discharges to existing Columbia River outfalls through existing manmade conveyance pipelines. This project is categorically exempt from the flow control provisions of the stormwater manual. According to Appendix I-E of the manual, the Columbia River is listed as a flow control-exempt water body.

Stormwater treatment technologies will be implemented to treat and monitor stormwater quality in accordance with the required NPDES Industrial Individual Stormwater Permit. All of the permanent surface water runoff will be collected, treated, and conveyed in permanent constructed conveyances from source to discharge. All conveyances constructed with this project will be inlets, pipelines, manholes, and vaults. No permanent above-grade surface waterways will be constructed with this project.

Surface water runoff from the Storage Area will be treated to enhanced water quality standards and discharged to the existing Terminal 4 stormwater system. The capacity of the Terminal 4 stormwater system was sized to accommodate flows from

the Storage Area assuming the entire Parcel 1A was impervious. Discharges will be conveyed through existing pipelines to an existing outfall to the Columbia River.

Discharges from Area 200, Area 600, rail improvements, and portions of Area 500 will be treated to basic levels and discharged to the existing Terminal 5 stormwater system. The Terminal 5 conveyance system flows through manmade conveyance to water quality ponds located west of Terminal 5 for final treatment prior to discharge through an existing outfall to the Columbia River.

Discharges from Area 400 will be treated and conveyed to existing infiltration swales located immediately north of the site. The MVCU, as proposed, may impact approximately 4 percent of the treatment capacity of the bio-swales located immediately south of the Subaru facility. These swales treat water from the 25-acre basin including Subaru, CalPortland, and Marine Terminal Area. To mitigate for loss of treatment capacity of the swale, a new filter strip located along the south side of the southernmost swales will be constructed and will treat stormwater from more than 4 percent of the total basin acreage. No additional stormwater will be infiltrated.

The remaining project, consisting of a portion of Area 500 along the old Gateway Avenue, is considered within the Port's general use area. Stormwater will be collected through existing inlets and a conveyance system and discharged into the Port's stormwater treatment systems at either Terminal 4 or Terminal 5 for treatment prior to discharge through existing outfalls to the Columbia River.

Upland construction activity will not affect any permanent waterways. Existing downstream conveyances, treatment systems and/or infiltration facilities are already receiving stormwater from the Facility areas.

There are no modifications to the impervious surfaces at the existing shipping berths and therefore no stormwater improvements are proposed.

4.1.3.4 Water Resources Protection (VMC 14.26)

The purpose of VMC 14.26 is to "protect water resources in the City by establishing development regulations and minimum standards to reduce the risks of contaminants entering water resources." All operations within the City are subject to this ordinance and must meet the minimum design standards of VMC 14.26.120.

The provisions of VMC 14.26.120 require the design and implementation of BMPs that will minimize the potential for pollutants to come into contact with surface and ground waters. The proposed project will implement the BMPs of VMC 14.26.120 to ensure consistency with these local provisions. The applicable BMPs and how the project conforms are noted below.

Section 14.26.120 Minimum standards.

A. Operational Best Management Practices (BMPs): All operations shall adopt the following best management practices to ensure their operations minimize potential risks to water resources.

- 1. Precautions: The owner/operator shall take precautions to prevent accidental releases of hazardous materials. Hazardous materials shall be separated and prevented from entering Stormwater Drainage Systems, septic systems, and drywells.*
- 2. Hazardous Materials Management: Hazardous materials shall be managed so that they do not threaten human health or the environment or enter water resources.*

Response: The Facility is designed with specific features to reduce the potential for accidental releases of the petroleum during transfer and storage. Onsite operations, including unloading, pumping, transfer, and storage of crude oil and miscellaneous materials, are conducted in covered facilities designed to keep stormwater from entering the structures and mixing with industrial activities. Transfer of crude oil at the dock is completed with a closed piping system where oil transfer will not be exposed to water resources.

Secondary structural containment measures are in place; they consist of containment pans along the unloading terminal, double-bottom tanks with interstitial monitoring for the storage area, and an impervious lined berm that surrounds the storage area and is sized to exceed the storage requirements of 110 percent of the largest tank plus a 100-year rainfall event. Containment systems at the rail unloading building are conveyed to secondary containment storage tanks located near the office building where the contents will be transported off site to a permitted disposal or recycling facility. A series of manually controlled pumps that discharge to hydrodynamic separators, oil/water separators, and water quality filter vaults evacuate the stormwater contained within the storage area berm. During storm events, the pumps are manual on, automatic off. Each time, the pumps must be turned on manually, with the manual on switch located where visual inspection for oil sheen is required.

Parking and access areas are designed with a combination of catch basin filters and filter vaults to treat stormwater runoff. Filter vaults are designed to include an oil-water separating baffle for added protection from miscellaneous oil drips.

Maintenance, including equipment and parts wash, will be conducted in a covered portion of the rail unloading building. All wastewater produced will be pumped to the secondary containment tanks.

Spill containment measures along the pipeline alignment (Area 500) will comply with 40 CFR 112.7 by providing secondary containment, inspections, and contingency planning. The most likely spill event is small drips resulting from nicks,

corrosion pinholes, or gasket seal failures resulting in discharges less than 5 gallons. An example of secondary containment that can address these discharges is to confirm or retrofit all stormwater inlets within the contributory drainage area of the pipeline alignment with spill control devices to contain small oil leaks or spills.

3. Hazardous Material Releases: All hazardous materials that have been released shall be contained and abated immediately, and the hazardous materials recycled or disposed of properly. The City shall be notified of any release of hazardous materials that clearly impact water resources, as soon as possible but no later than 24 hours after the release. The Stormwater Manual provides applicable operational BMPs for spills of oils and hazardous substances.

Response: A comprehensive Spill Prevention, Control and Countermeasures (SPCC) plan will be developed for the Facility which will include a detailed response plan for spills in all areas of the Facility. Spill control and clean up materials will be stored on site and all staff will be trained in appropriate response techniques. The plan will include notification procedures and will include appropriate City departments in the required notifications.

4. Oil/Water Separators: Oil/water separators shall be inspected, cleaned and maintained as stipulated in the Stormwater Manual. The City may allow an operation to modify the regularity of cleanouts if the operation can demonstrate to the City's satisfaction that the separator operates effectively at less frequent cleaning intervals.

Response: Oil/water separators will be installed and maintained as part of the stormwater treatment system. The project will be subject to an individual industrial stormwater permit under the NPDES program which will be issued by EFSEC as part of the SCA. As required by the permit, a final SWPPP will be developed and maintained for site operations and will include specific requirements for the maintenance of BMPs and will be consistent with the Stormwater Manual or other applicable regulatory documents.

5. Pesticide and Fertilizer Management. All pesticides, herbicides, fungicides and fertilizers shall be applied and managed according to the applicable BMPs for landscaping and lawn/vegetation management in the Stormwater Manual, VMC 20.760 Shoreline Management Area, and VMC 20.740 Critical Areas Protection.

Response: The Facility does not contain significant landscape areas that will require pesticide and fertilizer application. Where application is necessary to control plant growth it will comply with application provisions of the VMC along with other state and federal regulations regarding its use.

6. Stormwater Treatment Systems: Stormwater drainage systems and treatment facilities, including, but not limited to, catch basins, wetponds and vaults, biofilters, settling basins, and infiltration systems, shall be cleaned and maintained by the

responsible party designated in VMC 14.25.230 according to the applicable operational BMPs for the maintenance of stormwater, drainage and treatment systems in the Stormwater Manual.

Response: See response to No. 4 above.

8. Operation Closure: At the closure of an operation, all hazardous materials shall be removed from the closing portion of the operation and disposed of in accordance with local, state and federal laws.

Response: Upon closure of the Facility, all crude oil and any hazardous materials used during operation will be removed from the Facility.

In addition to the provisions of VMC 14.26.120, operations that occur within a Special Protection Area must comply with additional development standards found in VMC 14.26.135. (A Special Protection Area is defined as any property that is within 1,900 feet of a municipal water supply well.) Per the City's Water Resources Protection GIS Atlas, the site is not located within a Special Protection Area – the nearest such area is located approximately 6,224 feet northeast of Area 300. The provisions of VMC 14.26.125 also specifies uses that require compliance with VMC 14.26.135. Class II operations are classified as those which manage over 2,200 pounds of hazardous materials per year, which includes crude oil. The following summarizes compliance with the provisions of VMC 14.26.135.

1. Design and Construction: Operations shall be designed, constructed, maintained and operated to minimize the possibility of an unplanned release of hazardous materials to soil or water resources.

Response: The project is designed as a closed system with no crude oil being exposed to the environment. Key design elements to address inadvertent releases include a covered unloading area, dry fit hose connections, spill containment within the rail unloading building, above ground piping, below ground piping with containment, double bottom tanks with leak detection, containment at the storage tank area, stormwater sampling and management, 30 second shut down at the ship loader, pre-booming, and an oil return line.

2. Container/Tank Management: A container or tank holding a hazardous material shall always be closed, except to add or remove materials. Hazardous materials shall also be managed so that they do not damage the structural integrity of the operation or devices containing the material.

Response: As noted above the Facility is designed as a closed system with no tanks being open to the environment. However, there be some losses of air emissions. In addition, the tanks will be constructed with a double tank bottom, with interstitial monitoring to detect leaks should they occur. The tanks will be located in a fully

lined bermed area with the capacity to contain 110 percent of the largest tank and precipitation from a 24-hour, 100-year storm.

3. Container/Tank Condition: All containers and tanks shall be maintained in such a manner as to assure effective operation and prevent the release of hazardous materials

4. Container/Tank Identification: The owner/operator shall label all containers and tanks containing hazardous materials to identify the major risk(s) associated with the contents. This labeling shall conform to applicable sections of the Uniform Fire Code, Occupational Safety and Health standards, and/or the State of Washington's Dangerous Waste Regulations.

Response: All tanks will undergo routine maintenance and monitoring and will be labeled in accordance with applicable regulations.

5. Ancillary Equipment: Any leaking pipe, pump or other ancillary equipment shall be repaired or replaced promptly. Ancillary equipment associated with hazardous materials shall be supported and protected against physical damage and excessive stress.

Response: Leaks will be reported, corrected and any spills will be cleaned up as required by state and federal law.

6. Compatibility: The owner/operator shall use a container or tank made of or lined with materials which are compatible with the hazardous materials to be stored.

Response: The tanks are designed for crude oil. Design elements aimed at preventing inadvertent discharges of oil include:

- The storage tanks will be designed in conformance with applicable industry standards and will be constructed to meet the NFPA 30 requirements of WAC 173-18-330 and associated manufacturing standards, and will include the necessary measures to prevent tank overfill.
- During construction of the tanks industry standard testing techniques will be implemented to ensure the tanks are constructed to the required specifications.
- Cathodic protection of the tank components will be implemented to prevent corrosion.
- Hydrostatic testing of the tanks will be conducted to ensure they will meet operational stresses and loads prior to their receiving any crude oil.
- The tanks will be constructed with a double tank bottom, with interstitial monitoring to detect leaks should they occur.

- The tanks will be located in a fully lined bermed area with the capacity to contain 110 percent of the largest tank and precipitation from a 24-hour, 100-year storm event.

7. *Containment: Container and tank storage areas shall have a containment system that is capable of collecting and holding spills and leaks. This containment shall:*

- Be constructed of an impervious surface with sealed joints.*
- Joints between concrete slabs and slab/foundation interfaces should be eliminated or minimized in the operation;*
- Provide pollution control measures to protect water resources, including run-off collection and discharge from active areas;*
- Be designed to provide secondary containment of 110% of the container's or tank's capacity; or in areas with multiple tanks, 110% of the largest tank or 10% of the aggregate tank volumes, whichever is larger. Secondary containment shall be provided in all areas where hazardous materials are loaded/unloaded, transferred, accumulated or stored;*
- Be compatible with the materials that are being handled; and*
- Be routinely inspected as defined at VMC section 14.26.130C.*

Response: Area 300 includes containment consistent with the above requirements. The tanks will be enclosed by a containment berm approximately 6 feet in height. The containment area will be designed with a capacity at least equal to 110 percent of the volume of the largest tank plus precipitation from a 24-hour, 100-year storm event. This capacity reflects the most stringent of Washington spill prevention and control and National Fire Protection Association (NFPA) requirements and exceeds the requirements for secondary containment under the Federal EPA SPCC oil spill prevention rule. The entire tank containment area will be lined with an impervious membrane to prevent any spills from leaving the containment area via the ground. Stormwater from the containment area will gravity-drain to the berm area sump. The sump will house three manually-operated pumps to convey the stormwater through a treatment system before it discharges to the existing Port stormwater system. Treatment will consist of a hydrodynamic separator, an oil-water separator, and finally a water quality vault. Prior to pumping water out of the sump to the treatment and stormwater system, a visual inspection will be conducted to detect the presence of an oil sheen. If no oil sheen is detected, the sump pumps will be started manually; the pumps will shut off automatically when the low level is reached. If oil products are identified through visual inspection, the sump will be emptied to vacuum trucks, and the oily water disposed of or recycled off site at a permitted location.

8. *Loading Areas: Loading and unloading areas shall be designed, constructed, operated and maintained to:*

- a. *Contain spills and leaks that might occur during loading/unloading;*
- b. *Prevent releases of hazardous materials to water resources;*
- c. *Contain wash waters (if any) resulting from the cleaning of contaminated transport vehicles and load/unload equipment; and*
- d. *Allow for removal as soon as possible any collected hazardous materials resulting from spills, leaks, and equipment cleaning.*

Response: The unloading will occur within a partially enclosed building and will be a closed loop system where crude oil will not have direct exposure to the environment. Approximately five holding tanks, with a total capacity of approximately 1,000 barrels, will be constructed adjacent to the administrative/support area. These tanks will be connected, and will provide secondary containment, to a piping system that will receive inadvertent releases captured in the collection pans. The combined volume of the tanks is sized to contain 110 percent of the contents of a single tank car. Crude oil captured in a collection pan will flow by gravity into a dedicated line, and will be conveyed from the unloading facility to the containment tanks. The tanks will be covered, constructed of steel, and anchored in accordance with applicable seismic design requirements. When capacity has been reached, the tank contents will be removed and disposed of or recycled at an off-site facility with the ability to handle the waste.

Design elements aimed at preventing discharges of oil during unloading will include

- The use of dry fit connectors on hoses connected to the rail car for unloading. Dry fit connectors require the operator to lock the connector into place to allow product flow to begin. When disconnected, all product on either side of the connector remains within the transfer hose or rail car.
- All conveyance of transferred oil occurs within enclosed piping and pumps.
- The unloading area incorporates the following containment systems.
 - Containment pans between rails will capture unanticipated leaks from rail cars stationed in the unloading facility and from any unanticipated discharges from the unloading operations.
 - Materials captured in the containment pans will drain to a dedicated piping system that will convey the liquids to a series of five secondary containment tanks located in Area 200. The five secondary containment tanks will have a total capacity of 1,000 barrels, enough to contain the 110 percent of the contents of a single rail tank car. Should a discharge to these tanks occur, the contents of the tanks would be transferred to vacuum truck(s) to be disposed of at an approved location off site.
 - Piping and pumping systems associated with the unloading area will be contained within concrete trenches and concrete pump basins. These trenches and basins can serve as secondary containment in the event of a release from the piping and pumping equipment. Should a release occur, discharged

materials would be removed from the trenches and basins using vacuum truck(s) to be disposed of at an approved location off-site.

- Ground surfaces between rail tracks in the unloading building will be asphalt or concrete to facilitate material recovery in the event of an unanticipated discharge.

9. *Closure: At closure of an operation, all remaining structures, containers, tanks, liners, and soil containing or contaminated with hazardous materials at concentrations above state and federal regulatory thresholds shall be decontaminated and properly disposed of or managed.*

Response: Upon closure all product will be removed and properly disposed of. EFSEC will have jurisdiction over site restoration per WAC 463-72.

Section 14.26.130 Greater standards for hazardous materials operations

VMC 14.26.130 (B) requires a Spill and Emergency Response Plan (SERP) to be development within 90 days after the date of issuance of the certificate of occupancy. The SERP shall be maintained on site, and shall be made available to the City upon request, updated every five years (or more frequently as needed to reflect changes in operation or practices). VMC 14.26.130(C) and (D) requires operational inspections and a training program. VMC 14.26.130(E) requires a closure plan to detail the means by which the operation will, upon any closure anticipated to be longer than 2 years, remove and properly dispose of hazardous materials, and perform an investigation to confirm the presence or absence of hazardous materials in the soil and ground water, if potential contamination is indicated.

The Applicant will develop an SPCC plan for Facility operations and submit it to EFSEC and the EPA Regional Administrator for review and approval. The purpose of the SPCC plan is to specify (1) the operating procedures the Facility will implement to prevent oil spills; (2) the control measures installed to prevent oil from entering navigable waters or adjoining shorelines; and (3) countermeasures to contain, cleanup, and mitigate the effects of an oil spill that has an impact on navigable waters or adjoining shorelines.

The operations SPCC plan will be developed and implemented in accordance with 40CFR 112 and will meet or exceed the requirements specified within VMC 14.26.

4.1.4 VMC Title 16: Fire Code

As adopted by VMC Title 16, the International Fire Code (IFC) applies to the design of the proposed Facility.

IFC requires access to the project areas for fire and emergency response vehicles. Access to the west boiler (Area 600) and the administrative buildings in Area 200 will be available from Old Lower River Road which meets the minimum standards of the IFC. Access to the Rail Unloading Building in Area 200 will be from a designed fire access lane located on the south side of the building. Access to Area

300 (Storage) will be provided from Lower River Road and adjacent private access roads located on the outside of the containment berm. Access to Area 400 (marine terminal) will be from existing Port roads providing access to the area and surrounding locations.

As stated previously, existing fire hydrants are currently available on or adjacent to all areas of the proposed project with an estimated minimum fire flow of 3,500 gallons per minute. Consistent with City standards as stated in the pre-application report (lines 1407-1430), the proposed project will meet Fire Marshal pipe size requirements.

Fire suppression systems will be installed in several areas of the project in compliance with IFC requirements. Buildings will be fireproofed and emergency egress will be provided in accordance with applicable fire and building codes. All fire suppression systems will be designed to activate automatically and will be equipped with manual trip stations. The design of fire suppression systems for specific proposed project elements is discussed below.

Area 200 – Unloading and Office. The rail car unloading area will be served with single interlock pre-action foam/water sprinkler systems designed to activate as necessary in five segments of the building. Design density will be 0.30 gallon per minute/4,000 square feet with a hose allowance of 500 gallons per minute. The system will include linear heat detectors, gas detectors, temperature monitors, pump monitors, automatic exterior alarm horns and strobes, manual alarm stations, automatic and manual foam release systems, and tamper-resistant systems. Fire hydrants will be located along the south side of the building at 300-foot intervals. All systems will interface with the rail car unloading building control room.

The office and support buildings will be equipped with extinguishers.

Area 300 – Storage. The storage tank area will be served by six foam water sprinkler zones, one per storage tank. Each foam water sprinkler zone will be designed to discharge into the inside of the storage tank it protects. The system will include linear heat detectors and warning horns and strobes, as well as manual alarm and foam release stations. A fire water loop will be provided with hydrants and monitors spaced at a maximum of 300 feet and configured so that each tank can be reached by two hose streams. Each tank will be protected by a fixed 3-percent foam/water suppression system on the seal area surface. All systems will interface with the tank area control room. The east boiler building in Area 300 will be served by adjacent hydrants. Smoke detectors, automatic and manual alarms, and hand held fire extinguishers, will be located as appropriate inside and outside the boiler building as required by local fire code. Based on the construction type and occupancy classification sprinkler systems are not necessary for fire control in the east boiler building.

Area 400 – Marine Terminal. An Emergency Fire Pump and Foam building and two elevated fire monitors will be installed at the marine loading dock, with hydrants connected to the existing on-site water supply. This system is primarily for fires on the berth, but can be used to assist in the event of a vessel fire.

The vessels berthing at the Marine Terminal are required to have on-board fire suppression systems as well as contracts with commercial marine firefighting companies to respond in the event of a shipboard fire.

Area 500 - Transfer Pipelines. The pipeline area will be served by existing and new (as constructed to serve specific Facility areas) hydrants in the vicinity of the pipeline alignment.

Area 600 – West Boiler. The boiler building and area will be served by adjacent hydrants. Smoke detectors, automatic and manual alarms, and hand held fire extinguishers, will be located as appropriate inside and outside the boiler building as required by local fire code. Based on the construction type and occupancy classification sprinkler systems are not necessary for fire control in the Area 600 boiler building.

Rail Infrastructure. The location of rail infrastructure improvements will be served by existing and new (as constructed to serve specific Facility areas) hydrants in the vicinity of the rail loop alignment.

Final compliance with Title 16 and the IFC will be determined through the review of final facility design plans for conformance with applicable building and fire codes by EFSEC. It is anticipated that EFSEC will contract with the City for these reviews. The Applicant has coordinated with the City Fire Department and Fire Marshall in the development of the project design.

4.1.5 VMC Title 17: Building and Construction

Consistent with VMC Title 17, the design of the Facility will be based on the requirements of the International Building Code (IBC), the National Electric Code, the Uniform Plumbing Code, the International Mechanical Code and other codes applicable to the project. Final compliance with these codes will be determined through the review of final Facility design plans by EFSEC. It is anticipated that EFSEC will contract with the City for these reviews.

4.2 VMC Title 20 Land Use and Development Code

4.2.1 Chapter 20.270 Site Plan Review

4.2.1.1 Applicability (VMC 20.270.020)

Section 20.270.020 Applicability

General. All new developments and modifications to existing developments shall require site plan review and approval prior to the issuance of any building permits, establishment of any new uses, or commencement of any site work unless otherwise exempted in this

title. Developments subject to site plan review shall comply with the Vancouver Municipal Code and all other State statutes and applicable laws and regulations.

Response: According to the pre-application conference report (lines 117-118), this project would be subject to a Type II site plan review if not reviewed through the EFSEC process. This narrative demonstrates project compliance with the provisions of the VMC that normally would apply to a development of the scale, location, and intensity of the proposed project. As explained above, this narrative is being provided to the City in support of the application to EFSEC for site certification regulated at the state level by EFSEC, under Chapter 80.50 RCW and Title 463 WAC.

4.2.1.2 Approval Criteria (VMC 20.270.050)

Section 20.270.050 Approval Criteria

A. Compliance with applicable standards. The proposed development shall comply with all applicable design and development standards contained in this Title and other applicable regulations.

Response: The consistency of the proposed project with the applicable development standards is addressed in the responses contained in section 4.0.

B. Adequacy of public facilities. The applicant shall demonstrate availability of adequate public services, e.g., roads, sanitary and storm sewer and water, available to serve the site at the time development is to occur, unless otherwise provided for by the applicable regulations.

Response: Public facilities adequate to serve the proposed project will be in place at the time of development. In this narrative, section 4.1.3.1 addresses sewer and water, sections 4.1.1 and 4.1.2 address roads, and section 4.1.3.3 addresses stormwater.

4.2.2 Industrial Districts (VMC 20.440)

4.2.2.1 IH Zone Uses (VMC 20.440.030)

Response: The proposed project is permitted in the IH zone. Consistent with the City's interpretation as documented by line 149 of the pre-application report, the proposed project meets the definition in VMC 20.160.020 of a warehouse/freight movement use, a permitted use. This definition is as follows:

Uses involved in the storage and movement of large quantities of materials or products indoors and/or outdoors; associated with significant truck and/or rail traffic. Examples include free-standing warehouses associated with retail furniture or appliance outlets; household moving and general freight storage; cold storage plants/frozen food lockers; weapon and ammunition storage; major wholesale distribution centers; truck, marine and air freight terminals and dispatch centers; bus barns; grain terminals; and stockpiling of sand, gravel, bark dust or other aggregate and landscaping materials.

“Warehouse/Freight Movement” is listed in Table 20.440.030–1 in VMC 20.440 as a permitted use within the IH zone. In addition, “railroad yards” is listed as a permitted use within the IH zone.

4.2.2.2 Development Standards (VMC 20.440.040)

All developments must comply with:

1. All of the applicable development standards contained in the underlying zoning district.
2. All other applicable standards and requirements contained in this title.
3. Water Resource Protection Ordinance (Title 14).

Response: This narrative and the application materials associated with it demonstrate the consistency of the project with the applicable provisions of the VMC. The project meets applicable development standards as identified in the table below.

B. Development standards. Development standards are contained in Table 20.440.040-1 of the VMC.

Response: Table 5 below shows project compliance with the applicable development standards.

Table 5. VMC 20.440.040-1 Development Standards

Development Criteria	IH Zone	Proposed
Minimum Lot Size	None	N/A
Maximum Lot Coverage	100%	Approximately 70%
Minimum Lot Width	None	N/A
Minimum Lot Depth	None	N/A
Minimum Setbacks and Screening Standards*	Pursuant to buffering and screening standards contained in VMC Tables 20.925.030-1 and 20.925.030-2. 10 feet with L2 landscaping, along SR 501, 5 foot setback from west and east property lines with L1 landscaping, and 0 foot setback for water dependent uses along the Columbia River.	Proposed setbacks are 60 feet from SR 501 to the nearest fuel storage tank, with at least 5 foot setbacks from the west and east property line. Landscaping includes trees and shrubs consistent with the L2 standard.
Maximum Height	None	Approximately 50 feet (rail unloading)
Minimum Landscaping Requirement (% of total net area)	0%	≤5%; Pursuant to buffering and screening standards contained in VMC Tables 20.925.030-1 and 20.925.030-2. 10% landscaping buffer in parking area of Area 200.

*According to the pre-application report (lines 156-165), minimum setback requirements are not appropriate within the Port. However, the portions of the proposal that border on property not owned by the Port, or have frontage on a public street, will meet applicable landscaping/setback requirements. The landscaping standards will apply to the boundary of Area 300 along NW Lower River Road (SR 501) and between areas 300/500 (Parcel 1A) and Farwest Steel.

4.2.3 Archaeological Resource Protection (VMC 20.710)

The City designates the project site as a Level A archaeological resource zone as illustrated on Figure 20.710-1 of the VMC. Archaeological Investigations Northwest (AINW) prepared a cultural resources report, dated July 5, 2013, for the project that summarizes the findings of other surveys conducted in the project area (Appendix B). The report concludes that there is a low likelihood of encountering cultural material during construction because much of the project area is located on areas of fill material from past dredging activities. However, the report indicates that, if project construction activities are proposed to a depth below that of past dredge deposits and fill, archaeological monitoring will be conducted if soils are excavated to the surface.

Should any archaeological resources be found, ground-disturbing activities will be halted in the area of the find in accordance with RCW 27.53.060 (Archaeological Sites and Resources) and RCW 27.44.020 (Indian Graves and Records). Following the stop work, a professional archaeologist will be called to assess the significance of the find and the Department of Archaeology and Historic Preservation (DAHP) will be notified to define a course of action.

4.2.4 Critical Areas Protection (VMC 20.740)

The critical areas found on the site include fish and wildlife habitat conservation areas, frequently flooded areas, and geologic hazard areas (seismic hazard). Development is proposed, to some extent, in each of these areas as described below.

4.2.4.1 Fish and Wildlife Habitat Conservation Areas (VMC 20.740.110)

Project activities at berths 13 and 14 in Area 400 are located within the riparian management area (RMA) and riparian buffer (RB) area of the Columbia River. The riparian boundaries are measured landward from the biological OHWM and are limited by existing impervious surfaces. The existing riparian habitat is of low value because it is functionally isolated from the Columbia River.

Because the Columbia River is a designated shoreline, and therefore regulated by the City's SMP, compliance with the City's Fish and Wildlife Habitat Conservation Areas regulations is addressed under section 4.3 (Shoreline Master Program) of this narrative. There are no Fish and Wildlife Habitat Conservation Areas that fall outside of a shoreline management area on the project site.

4.2.4.2 Frequently Flooded Areas (VMC 20.740.120)

Current plans include using the existing dock with some modifications that will occur below the 100-year base flood elevation on the site. It is not anticipated that any fill will be placed in the flood fringe or floodway. Therefore, the proposal will not result in a net rise of the 100-year base flood elevation. Further, to ensure any in-water structures included in the proposed project will withstand elevated river levels in flood events, the structures will be approved by a structural engineer licensed in Washington.

A portion of the storage area on Parcel 1A (Area 300) is identified as an isolated floodplain previously approved for fill (PRJ2011-01308/ARC2012-00004/CAP2012-0006/TRE2012-00043). Portions of the transfer pipeline will be located in an isolated floodplain located near the Jail Work Center.

4.2.4.3 Geologic & Seismic Hazards (VMC 20.740.130)

County GIS data indicate that soils within the project site area have moderate-to-high potential for liquefaction or dynamic settlement during seismic events. The geotechnical investigation completed for the project identified site-specific subsurface soil conditions and seismic hazards. Based on the subsurface conditions at the site, it is anticipated that site improvements will be required to mitigate static and seismic settlement and lateral deformations. Ground motion mitigation will adhere to local building codes and standard foundation design for the proposed Facility and associated buildings and pipelines. Liquefaction mitigation may include improving the condition of soils beneath the site to reduce the risk of settlement and large horizontal slope movements during an earthquake. Ground improvement could reduce the seismic lateral load on the dock foundations and reduce the risk of soil and debris sliding into the Columbia River.

Site improvement alternatives include the following:

- Ground improvement techniques such as vibro-replacement (stone columns), soil mixing, jet grouting, vibro-densification.
- Preloading or surcharging with temporary fill soils.
- Pile foundation systems.

Appropriate types of improvements will be selected during final design based on the specified performance criteria for the elements of the Facility. The proposed final design of the Facility will comply with the provisions of the building codes and requirements for seismic hazards that apply to the proposed location. Per VMC 20.740.130(C)(2)(a) and (b) the performance standard for projects in the groundshaking and liquefaction hazard areas is compliance with the building codes adopted by VMC Title 17.

4.2.4.4 Wetlands (VMC 20.740.140)

No wetlands are present within the proposed project site. Biologists from BergerABAM conducted site visits on May 28 and June 27, 2013 to assess the wetland and terrestrial site conditions present throughout the project site. The OHWM of the Columbia River within the vicinity of the marine terminal (Area 400) was also delineated during the May 28, 2013 site visit. All portions of the project site above the OHWM are either impervious, paved, or gravel-covered surfaces, or are upland ruderal grass/forb habitats that are clearly dominated by upland vegetation and have neither the potential to accumulate or detain surface water or precipitation nor any visible hydrologic features that indicate the potential presence of wetlands.

It has been determined, therefore, that there are no wetlands present on the project site.

Land at Parcel 1A, east of Area 300, includes a forested wetland. According to VMC Table 20.740.140-5, the wetland buffer for a Category 3 wetland with a low habitat function is between 40 and 80 feet based on the land use intensity. However, according to VMC 20.740.140(C)(1)(b)(1)(e), areas within buffers that are completely functionally separated from a wetland and do not protect the wetland from adverse impacts may be excluded from the buffer. Because the site of the proposed Facility is completely developed and an existing access road separates it from the Parcel 1A wetland, the buffer will not affect the project site.

4.2.5 Shoreline Management Area (VMC 20.760)

The shoreline jurisdiction includes the waterbody, 100-year floodplain, and/or all areas within 200 feet of the OHWM. Portions of the project area are located within the water, 100-year floodplain and/or 200 feet within the OHWM and are therefore subject to the Shoreline Management Act. Section 4.3 of this narrative addresses the project's consistency with the City's SMP.

The SMP designates the shoreline environment of the upland areas on the site as High Intensity and the areas of the site below the OHWM of the river as Aquatic.

Within the High Intensity and Aquatic designations, according to Table 6-1 of the City's SMP, water-dependent industrial uses are permitted activities. The SMP defines a water-dependent use as follows: "a use or a portion of a use which requires direct contact with the water and cannot exist at a non-water location due to the intrinsic nature of its operations." The purpose of the proposed project is to transfer crude oil from railcars to ships. Consequently, the activities of the proposed project clearly meet the definition of a water-dependent use. Further, per Policy 4.3.5.1, the purpose of the High Intensity designation is "to provide for high-intensity water-oriented commercial, transportation, and industrial uses...." Table 6-1 lists *Water-dependent* industrial uses as permitted in the High Intensity and Aquatic shoreline designations with no setback or height limits.

4.2.6 Tree Ordinance (VMC 20.770)

Impervious surfaces from historic development and recent grading dominate the site. Because the City interprets the provisions of VMC Chapter 20.770 to apply only to the area of existing undisturbed pervious surface, the tree density requirements will not apply to the majority of project site area. The only undeveloped portion of the project is a short section of the proposed pipeline located on the parcel owned by Clark County at the location of the Jail Work Center. A Level V Tree Plan was completed and approved for this area with the Clark Public Utilities Electrical Substation project (TRE2012-00096). The majority of the pipeline route in this area coincides with the tree removal and mitigation approved through TRE2012-00096.

Construction of this portion of the pipeline will result in direct permanent impact to approximately 6,300 square feet of a small, isolated upland cottonwood stand north of the Jail Work Center. This stand contains approximately 273 trees, 171 of which are permitted for removal from 1.1 acres of the stand for the construction of the proposed CPU substation adjacent to that location (TRE2012-00096). These areas are primarily grass and weedy herbaceous vegetation, with approximately 24 cottonwood and pine trees. Construction of the pipeline will require the removal of the trees identified in Table 6 as inventoried in the Level V Tree Plan (see Appendix G).

Table 6. Tree Inventory Data

Tree Number	Species	DBH (inches)
WA56	<i>Populus balsamifera</i> spp. <i>trichocarpa</i>	18
WA57	<i>Populus balsamifera</i> spp. <i>trichocarpa</i>	12
WA58	<i>Populus balsamifera</i> spp. <i>trichocarpa</i>	8
WA77	<i>Populus balsamifera</i> spp. <i>trichocarpa</i>	10
WA78	<i>Populus balsamifera</i> spp. <i>trichocarpa</i>	12
WA130	<i>Pinus contorta</i>	6
WA131	<i>Pinus contorta</i>	6
WA136	<i>Pinus contorta</i>	6
WA137	<i>Pinus contorta</i>	6
WA138	<i>Pinus contorta</i>	6
WA139	<i>Pinus contorta</i>	6
WA140	<i>Pinus contorta</i>	6
WA141	<i>Pinus contorta</i>	6
WA241	<i>Populus balsamifera</i> spp. <i>trichocarpa</i>	6
WA246	<i>Populus balsamifera</i> spp. <i>trichocarpa</i>	10
WA247	<i>Populus balsamifera</i> spp. <i>trichocarpa</i>	10
WA273	<i>Populus balsamifera</i> spp. <i>trichocarpa</i>	8
WA274	<i>Populus balsamifera</i> spp. <i>trichocarpa</i>	14
WA275	<i>Populus balsamifera</i> spp. <i>trichocarpa</i>	16 & 18
WA276	<i>Populus balsamifera</i> spp. <i>trichocarpa</i>	6 & 24
WA277	<i>Populus balsamifera</i> spp. <i>trichocarpa</i>	12
WA278	<i>Populus balsamifera</i> spp. <i>trichocarpa</i>	16

While the proposed pipeline will also pass through a portion of the riparian area, this will occur primarily in an unvegetated portion of the riparian area. Construction of the pipeline will result in the removal of approximately 4,250 square feet of ruderal upland grass/forb habitat near the marine terminal in Area 400. Vegetation within the riparian area consists primarily of small-diameter black cottonwood (*Populus trichocarpa*) and willows (*Salix* spp.), and non-native false indigo bush (*Amorpha fruticosa*), and Himalayan blackberry (*Rubus armeniacus*). No riparian trees or vegetation will be removed.

VMC 20.770.070(B) requires applicants to consider alternative locations for the proposed development that would not require tree removal. The propose pipeline is

necessary to transfer crude oil from the rail unloading building (Area 200), to the storage tanks (Area 300), then to the marine terminal (Area 400). This area of the Port is congested with numerous buildings, rail lines, and grade separation structures. This was the only feasible location for the proposed pipeline. The route was kept as far north as possible to avoid greater tree removal.

VMC 20.770.080 requires a minimum of 30 tree units per acre. Based on a development area of 10,550 square feet, a minimum of eight tree units will be required. VMC 20.770.070(B)(4) allows trees planted in landscaped islands and other areas to meet the tree density requirements. The project will plant buffer landscape trees and parking lot trees in Areas 200 and. The planted trees will be deciduous and will be planted at a minimum of 2-inch caliper and will exceed the eight tree units required for the project.

4.2.7 State Environmental Policy Act (VMC 20.790)

Pursuant to WAC 463-47, EFSEC will act as the lead agency for SEPA compliance. As part of its application to EFSEC, the Applicant has requested that EFSEC make a determination of significance and that EFSEC require that an environmental impact statement (EIS) be prepared. As lead agency, EFSEC will issue a scoping notice to receive comments from the public, other agencies and jurisdictions, and interested tribes. EFSEC will then evaluate the proposal under SEPA through issuance of a draft EIS, followed by a final EIS. Pursuant to RCW 80.50.180 the City's consideration of consistency with local land use and environmental plans and/or regulations is exempt from the requirements of SEPA, RCW 43.21C.030.

4.2.8 Fences and Walls (VMC 20.912)

Response: Security fencing will be installed at Area 300. Consistent with VMC 20.912.050, if fencing will be located within required landscaping setbacks, it will be limited to no greater than 6 feet in height. As permitted by 20.912.060, barbed wire and razor wire, if employed, will only be installed at the top of the fencing and will be no greater than 2 feet in height and oriented inward or vertical.

4.2.9 Impact Fees (VMC 20.915)

Response: VMC 20.915 establishes impact fees for schools, parks and traffic. Pursuant to VMC 20.915.070, school and park impact fees do not apply to nonresidential projects. Traffic impact fees will be calculated based on the number of daily vehicle trips (see section 4.1.2) anticipated for the project and will be paid prior to the beginning of project construction.

4.2.10 Landscaping (VMC 20.925)

The City's policy, as identified in the pre-application report (lines 156-165), is that setback and screening/landscaping requirements are generally not appropriate within the Port on properties bordering other Port property. However, the portions of the proposal that border on property not owned by the Port, or have frontage on a public street, will meet applicable landscaping/setback requirements. The

landscaping standards will apply to the boundary of Area 300 along NW Lower River Road (SR 501) and Farwest Steel.

City standards, as stated in the pre-application report (lines 337-351), will require the north boundary of Area 300 along NW Lower River Road (SR 501) to meet the L2 standard with a 10-foot setback. The west boundary of Area 300, abutting the Farwest Steel site, an IH-zoned parcel, will be subject to the L1 standard with a 5-foot setback.

In addition, as VMC 20.945.040 requires, a minimum of 10 percent landscaping and required perimeter screening will be provided in the parking lot of the administration building in Area 200.

4.2.11 Off-site Impacts (VMC 20.935)

Response: Provisions in VMC 20.935 regulate a project's nuisance impacts on adjacent properties. VMC 20.935 addresses project impacts associated with noise, off-site drainage, smoke and particulate matter, light and glare, and vibration.

Noise: Noise generated by the proposed project will comply with this section and the applicable state statutes. The estimated hourly Leqs at the nearest residences (more than 3,000 feet) are well below the daytime noise level limit of 60 dBA and the nighttime noise level limit of 50 dBA that would apply to long-term operational noise. In addition, the calculated construction sound levels at the housing units of the Jail Work Center (the nearest sensitive receivers to the site at approximately 400 feet from the nearest construction area) would fall within the existing range of measured hourly Leqs.

Construction noise is restricted to between 7 AM and 8 PM by the Vancouver Municipal Code and is exempt from the Washington State noise limits during these hours. Restriction of construction to daytime hours, the temporary nature of construction noise, the distances between the residential uses and most of the construction areas, and the presence of existing noise at nearby sensitive receivers would serve to minimize potential noise impacts from construction activities. If outdoor construction is required outside of these hours, the Applicant will consult with the City, will notify EFSEC in advance, and will not conduct work until EFSEC has reviewed and approved the planned activities.

Off-Site Drainage: Consistent with this chapter, site grading has been designed to avoid stormwater runoff onto other properties through implementation of erosion control BMPs and compliance with VMC 14.24. Stormwater on the site will be collected at approved inlets and conveyed to water treatment facilities before being released to the Columbia River.

Smoke and Particulate Matter: In regards to smoke and particulate matter, the project will be subject to air quality permitting. As part of its Application for Site Certification, the Applicant has submitted a Notice of Construction and Prevention

of Significant Deterioration permit application. EFSEC will review these applications and, should the Facility be approved, issue permits consistent with applicable local, state, and federal regulations for air emissions.

Lighting: The project proposes to install outdoor lighting in various areas. This lighting will include low-level lighting around exits (minimum 2 foot-candles) and general outdoor lighting (from 0.2 to 5 foot-candles) including ground level operating areas, roadways, fuel storage areas, and shiploading, rail car unloading, and parking areas. This lighting will be provided for operator access and safety under regular operating conditions. Precise detailed placement of lighting fixtures has not yet been determined, but outdoor lights will be a combination of pole-mounted and structure-mounted lights and likely will be standard streetlight height (20 to 40 feet).

Outside lighting likely will be placed above doorways, walkways, and stairs around the exteriors of buildings and ancillary equipment. Generally, lighting angles will be determined by an evaluation of the economics of fixture wattage, light patterns, and light levels.

Spot lighting will be provided for illumination-level enhancement where needed around loading equipment maintenance areas and stairwells and catwalks. This lighting will be higher in intensity than general outside lighting (up to 32 foot-candles), but will be limited to specific areas. This lighting can be adjusted to minimize light spillover or direct glare in response to specific site conditions. Lighting will be directed down and away from adjacent properties.

4.2.12 Parking and Loading (VMC 20.945)

Per VMC Table 20.945.070-2 and confirmed in lines 381-382 of the pre-application report, Warehouse/Freight Movement uses require 1 parking space per 2,000 square feet of floor area for industrial uses and 1 parking space per 400 square feet for office uses. Table 77 lists the total number of parking spaces required for each structure.

Table 7. Proposed Parking

Area/Building	Building Size (square feet)	Parking Stalls Required
Administration and Support Buildings, Area 200	6,800	17
Rail Car Unloading Building, Area 200	168,350	84
Future Support Building, Area 200	3,400	9
West Boiler Building, Area 600	6,600	3
Storage Tanks and East Boiler Building, Area 300	3,000	2
Marine Terminal, Area 400	None	0
Total	N/A	115

* Parking for areas 600 and 300 is provided for maintenance vehicles only. Those areas will not be continuously occupied.

**ADA parking will comply with IBC section 1106 and WAC 51-50-1106.

As shown on the site plan (see Appendix A for plan sheets), the total of 118 parking spaces to be provided, exceeds the minimum number of spaces required by VMC 20.945 and no impacts or unmet parking needs are anticipated to result from the project.

4.2.13 Signs (VMC 20.960)

Response: A sign identifying the facility is anticipated at Area 600 or Area 200, but details on the sign type or size have not been developed. Once details are developed the information will be provided to EFSEC for approval and will comply with the requirements of VMC 20.960 for industrial districts. Within industrial districts free standing signs are limited to one sign per street frontage with an allowed size of one square foot for each lineal foot of frontage up to 250 square feet. The maximum height is 15 feet and no portion of the sign may extend into the right-of-way. Signs on buildings are limited to 12 percent of the building elevation up to 250 square feet in size.

4.2.14 Solid Waste Disposal and Recycling (VMC 20.970)

Response: No exterior solid waste disposal or recycling is anticipated with the proposal. All operational waste and recycling will be collected inside the office or other buildings and disposed of at an approved landfill.

4.3 Shoreline Master Program

4.3.1 Applicability

Consistent with Section 2.1.1(a) on p. 2-1 of the SMP, the SMP applies to all shorelands and waters within the City limits that fall under the jurisdiction of Revised Code of Washington (RCW) 90.58, including the following geographic area that includes the project site.

On the Columbia River from the eastern boundary of Wintler Park downstream to the eastern boundary of Parcel #153105000 (also referred to as "Port Parcel 3") shorelands shall include those lands extending two hundred (200) feet in all directions as measured on a horizontal plane from the ordinary high water mark (OHWM); floodways and contiguous floodplain areas landward two hundred (200) feet from such floodways; and all wetlands and river deltas associated with the streams, lakes and tidal waters that are subject to the provisions of this Program, as may be amended; the same to be designated as to location by Ecology, as defined by RCW 90.58.

The SMP divides the shoreline jurisdiction on the site into two major environments: Aquatic and Upland. The Upland environment in the project area is designated as high-intensity, and generally extends 200 feet landward of the Ecology OHWM.

The proposed project involves work below the Ecology OHWM of the Columbia River in the aquatic shoreline environment and within 200 feet of the OHWM in the Urban High Intensity (UHI) shoreline environment. The following discussion

addresses project consistency with the City’s SMP and its policies and regulations as they relate to both of these shoreline environments.

Table 8 identifies the specific Facility elements proposed within shoreline jurisdiction.

According to Table 6-1 Shoreline Use, Modification and Development Standards of the SMP, water-dependent uses are permitted in the Aquatic and High-Intensity shoreline environments. The proposed project is a facility that will receive crude oil by rail, store it on site, and ship it via the Columbia River. Its activities require direct access to the shoreline for operation and, as such, meet the definition of a water-dependent use contained in Chapter 8 of the SMP:

198. *Water-Dependent Use or Activity – A use or a portion of a use which requires direct contact with the water and cannot exist at a non-water location due to the intrinsic nature of its operations.*

Table 8. Facility Elements in Shoreline Jurisdiction

Shoreline Jurisdiction	Elements Falling within Shoreline Jurisdiction
Upland	<ul style="list-style-type: none"> • Portions of two designated rail tracks at Terminal 5. • Two transfer pipelines, each approximately 24 to 36 inches in diameter that will connect the storage tanks to the vessel loading system at Area 400. • A 6-inch return line that will return crude oil from the vessel loading system back to the storage tanks. • A 16- to 22-inch diameter line that will deliver hydrocarbon vapor generated during the loading of vessels to the marine vapor combustion unit (MVCU). • A vapor blower staging unit that will be constructed on an approximately 425-square foot concrete pad approximately 30 feet west of the Berth 13 access trestle. • Structures including: <ul style="list-style-type: none"> - An approximately 1,250-square foot single-story E-house located west of the Berth 13 access trestle. - An approximately 300-square foot single story motor control center (MCC) building located approximately 250 feet west of the Berth 13 access trestle. • 10 parking stalls that will be created in an existing gravel mobilization area approximately 110 feet east of the Berth 14 access trestle. • An Emergency fire water pump and foam building • MVCUs • An approximately 24-foot-wide access driveway

Shoreline Jurisdiction	Elements Falling within Shoreline Jurisdiction
Aquatic	<ul style="list-style-type: none"> • Two transfer pipelines, each approximately 24 to 36 inches in diameter, that will be installed on the existing Berth 13 trestle and T dock to connect the storage tanks to the vessel loading system at Area 400. • A 6-inch return line that will be installed on the existing Berth 13 trestle and T dock to return crude oil from the vessel loading system back to the storage tanks. • Vessel loading equipment that will be installed on the dock and include crane(s), piping manifold, high pressure hoses, hose support equipment, crane control room, dock safety unit, and safety equipment including skiff, boom reels, and response equipment.
Aquatic	<ul style="list-style-type: none"> • Modifications to the existing berths 13 and 14 dock including: <ul style="list-style-type: none"> - Removal of two mooring dolphins and two breasting dolphins including 48, 18-inch steel pipe piles and 8, 12 ¾-inch steel fender piles and approximately 1,330 square feet of existing concrete pile cap. - Installation of 4, new 27- foot diameter (approximately 2,150 square feet combined new, solid overwater coverage) mooring dolphins including 40, 36-inch steel pipe piles. - Removal of approximately 3,250 square feet of grated walkway associated with the existing breasting dolphins that will be removed. One existing 18-inch steel pipe pile supporting the walkways also will be removed. - Addition of 4 to 8, 24-inch steel pipe piles to Berth 13 dock platform. - Addition of 16, 24-inch steel pipe piles (all below the OHWM) to the existing bents at Berth 13 access trestle. - Addition of 6 to 12, 36-inch steel pipe piles at the existing trestle abutment at Berth 13, all above OHWM. - Installation of structural connection framing between the Berth 13 platform and the adjacent upstream and downstream breasting dolphins. Installation of grated walkways on top of the framing. Addition of 2, 24-inch steel pipe piles to support structural framing. - Addition of approximately 2,850 square feet of new grated walkways between mooring and breasting dolphins with 4, 24-inch steel piles to support the walkways. Grated walkways will mostly be reused portions of existing walkway that was removed. • Removal of existing structures and piles at Terminal 2.

4.3.2 Criteria for SDP

Per RCW Section 90.58.340, the local jurisdiction, in this case the City of Vancouver, is responsible for developing policies related to the use of its shorelines. These policies and the local shoreline management master program are required to implement the program contents identified in RCW 90.58.100. As such, the applicable policies and procedures per WAC 173-27-150 are those of the City's SMP.

Similarly, the provisions of WAC 173-27 generally reflect administrative provisions for the local municipality to adopt with its SMP. Thus, the regulations that apply are found in the City's SMP and addressed below. Sections 173-27-150 of the WAC identify the review criteria for shoreline substantial development permits (SDPs). They are as follows:

WAC 173-27-150 Review criteria for substantial development permits.

- (1) A substantial development permit shall be granted only when the development proposed is consistent with:
 - (a) The policies and procedures of the act;*
 - (b) The provisions of this regulation; and*
 - (c) The applicable master program adopted or approved for the area. Provided, that where no master program has been approved for an area, the development shall be reviewed for consistency with the provisions of chapter 173-26 WAC, and to the extent feasible, any draft or approved master program which can be reasonably ascertained as representing the policy of the local government.**
- (2) Local government may attach conditions to the approval of permits as necessary to assure consistency of the project with the act and the local master program.*

4.3.3 SMP General Shoreline Use and Development Regulations

4.3.3.1 Shorelines of Statewide Significance (SMP Section 3.2)

The Columbia River is identified as a shoreline of statewide significance and the City has designated the shoreline environment within the project site as areas 200 feet landward of the OHWM and Aquatic for areas below the OHWM. The following language illustrates how the project complies with the state legislative intent for shorelines per RCW 90.58.020 and the City's shoreline management policies listed in Section 3.2 of the SMP:

- 1. Preference shall be given to the uses that are consistent with the statewide interest in such shorelines. These are uses that: a. Recognize and protect the statewide interest over local interest; b. Preserve the natural character of the shoreline; c. Result in long term over short term benefit; d. Protect the resources and ecological function of the shoreline; e. Increase public access to publicly-owned areas of the shorelines; f. Increase recreational opportunities for the public in the shoreline; and g. Provide for any other element as defined in RCW 90.58.100 deemed appropriate or necessary.*

Response: The proposed project is consistent with these regulations because:

- The site of the proposed project does not include a natural shoreline, and thus no “natural character of the shoreline” will be affected by this request.
- The current riparian conditions of the project site reflect a developed and maintained industrial port. Most of the site is heavily disturbed by current industrial and port uses and, in addition, the surface of the project area is predominantly impervious because of paving, filling, and compacting of materials.
- The shoreline at the project site is currently developed as a marine terminal and berth, is owned by the Port of Vancouver, and is not accessible to the public.
- The proposed project establishes a water-dependent industrial use on an existing industrial site and repurposes and enhances existing Port assets for economic development. As such, the proposed project is not intended to increase recreational opportunities.

2. *Uses that are not consistent with these policies should not be permitted on SSWS.*

Response: The proposed project is consistent with the applicable SMP policies and regulations as demonstrated by the responses in this narrative.

3. *Those limited shorelines containing unique, scarce and/or sensitive resources should be protected.*

Response: Because of the history of development on the site, the limited amount of vegetation present, and the surrounding industrial activity, the project area provides low quality habitat with little functional value for native flora and fauna. (Part 3 of the Application for Site Certification discusses habitat on the site.) By designating the site as UHI shoreline environment, the City has recognized the intent for water-dependent and water-related uses at the site.

4. *Implementation of restoration projects on shorelines of statewide significance should take precedence over implementation of restoration projects on other shorelines of the state.*

Response: The project is not a restoration project and therefore this provision is not applicable.

5. *Development should be focused in already developed shoreline areas to reduce adverse environmental impacts and to preserve undeveloped shoreline areas. In general, SSWS should be preserved for future generations by 1) restricting or prohibiting development that would irretrievably damage shoreline resources, and 2) evaluating the short-term economic gain or convenience of developments relative to the long-term and potentially costly impairments to the natural shoreline.*

Response: Like other upland industrial shoreline areas at the Port, the upland area of the site is designated UHI and the area waterward of the OHWM is designated Aquatic. Per Section 4.3.5.2 of the SMP, the UHI designation is intended for dense and developed urban areas with low to moderate ecological function and low to moderate opportunity for ecological restoration or preservation.

The project site is within the former location of aluminum processing facilities owned and operated by Alcoa. The site has been the location of intensive historic industrial use, dating back to 1940 when Alcoa first developed the site for aluminum smelting operations. Given the developed condition of the project site and its continued industrial waterfront use, the City has designated the property appropriately.

The project design and extensive operational protocols have been developed to avoid, minimize, and contain the inadvertent release of crude oil during operations. The project will implement several impact minimization measures and BMPs to minimize the potential for any construction-related temporary water quality impacts associated with leaks or spills or from temporarily increased turbidity. These measures include preparing and abiding by a spill prevention, control, and countermeasures (SPCC) plan, the operations manual, and the spill contingency plan; inspecting construction equipment daily to ensure that there are no leaks of hydraulic fluids, fuel, lubricants or other petroleum products; and locating temporary material and equipment staging areas above the OHWM of the action area waterbody and outside environmentally sensitive areas. With these measures, the project will be operated and managed in a manner that will ensure shoreline resources are not irretrievably damaged.

Lastly, given that the proposed project will use an existing developed marine terminal along a shoreline with low ecological function and the project involves a substantial long-term investment in the regional and local economies, the proposed development represents an appropriate use of the shoreline as described in SMP Section 3.2.

4.3.3.2 General Shoreline Use and Development Regulations (SMP Section 5.1)

As acknowledged in the City of Vancouver staff report for the pre-application conference, dated June 27, 2013, the following policy sections are regulations are applicable to the proposed project:

Table 9. SMMP Policies and Regulations

Section	Associated Regulation(s)
5.1	1-2, 4-6, 11, 15
5.2	All
5.3	All
5.4	2
5.6.1	All
5.6.2	1-5
5.6.3	All
5.7	All
5.8.1	All
5.9	1-7
5A	All
Table 6-1	All
6.3.3.5	1, 4-5
6.3.6	1, 5-6
6.3.13	1-5

The responses below illustrate how the project complies with the applicable general shoreline use and development regulations described in Section 5.1 of the SMP.

1. *Shoreline Uses and developments that are water-dependent shall be given priority.*

Response: As indicated, the project is a water-dependent use. Consequently, the project is sited appropriately and is a prioritized use within the UHI shoreline designation.

2. *The applicant shall demonstrate all reasonable efforts have been taken to avoid and where unavoidable, minimize and mitigate impacts such that no net loss of critical area and shoreline ecological function is achieved. Mitigation shall occur in the following order of priority:*
 - a. *Avoiding the impact altogether by not taking a certain action or parts of an action. This may necessitate a redesign of the proposal.*
 - b. *Minimizing unavoidable impacts by limiting the degree or magnitude of the action and its implementation by using appropriate technology or by taking affirmative steps to avoid or reduce impacts. The applicant shall seek to minimize fragmentation of the resource to the greatest extent possible.*
 - c. *Rectifying the impact by repairing, rehabilitating, or restoring the affected environment;*
 - d. *Reducing or eliminating the impact over time by preservation and maintenance operations;*

- e. *Compensating for the impact by replacing, enhancing, or providing substitute resources or environments. The compensatory mitigation shall be designed to achieve the functions as soon as practicable.*
- f. *Monitoring the impact and the compensation projects and taking appropriate corrective measures.*

Response: By locating the proposed project at an existing terminal, effects to the shoreline environment have been avoided and minimized. As shown in Section 4.3.4.1 the regulatory RMA and RB will not be affected by the project elements. Construction BMPs will be employed as outlined in section 4.1.3.2, to avoid and minimize effects during construction. Where unavoidable impacts result from the project, the development of the project incorporates mitigation.

The following potential impacts to critical area and shoreline ecological functions have been identified, and mitigation has been provided to ensure no net loss of ecological function.

Direct Habitat Modification – The project will not result in any net increase in permanent impacts below the OHWM of the Columbia River (see attached JARPA). Removal of existing overwater structures and piles will offset the additional overwater coverage and pile placement associated with the project. Approximately 395 square feet of new benthic habitat impacts will be associated with the installation of seventy-six 24- and 36-inch steel piles for the mooring dolphins and walkways, but this impact will be offset by the proposed removal of 56 steel piles restoring 92 square feet of benthic habitat at the project site and the removal of timber piles at (approximately 220) at the Port’s Terminal 2 area restoring approximately 305 square feet of benthic habitat.

In addition to permanent piles, temporary piles are expected to be used during construction to support the guides that will position and align the permanent piles and for the concrete formwork. It is estimated that up to approximately 40 temporary piles may be required. These temporary piles will be 18- to 24-inch-diameter open-ended steel pipe or H-piles and will be installed with a vibratory hammer. The temporary piles will result in approximately 126 square feet of temporary impact to benthic habitat. These piles will only be placed for short period of time (on the order of hours or days) and any temporary loss of productivity will be minor and the area is expected to rapidly recolonize following removal.

Additionally, the project will result in a net reduction of approximately 295 square feet of solid overwater coverage and a net increase of approximately 785 square feet of grated overwater coverage associated with walkways. The removal of solid overwater coverage in excess of the amount placed by 295 square feet and the location of this removal in shallow water compensate for the small increase in grated structures.

The aquatic portion of the project site provides habitat for a number of native fish species, including the 14 special status species identified in section 3.4-2. Nearshore habitats in particular (those less than approximately 20 feet deep) provide suitable migratory and foraging habitat for juvenile salmonids and trout, lamprey, minnows, eulachon, and other native fish species. Deep-water habitats provide these functions to a lesser degree, along with suitable migratory and foraging habitat for sturgeon and adult salmonids.

The project will not result in an increase in impacts to benthic habitat or overwater coverage and therefore impacts to fish habitat at the project site are not expected to result in any significant effect on the quality or function of the habitat. The impacts of both new benthic habitat and new overwater coverage will be offset by the removal of existing piles and overwater structure. Because the project will not result in a net increase in impact to either benthic habitat or overwater coverage, no significant impact is expected to the quality or function of habitat for special status fish species or to any designated or proposed critical habitats for them.

Temporary Water Quality Impacts – As with any construction project, there is a potential for leaks and/or spills from construction equipment. The proposed overwater work creates the potential for construction debris to enter the waterway. Any material that enters the water will be removed. Equipment and storage containers associated with the proposed project also create slight potential for leaks and spills of fuel, hydraulic fluids, lubricants, and other chemicals.

The proposed project also has the potential to disturb sediments and increase turbidity temporarily at the project site during pile installation and removal activities. Increased levels of turbidity could have temporary negative impacts on aquatic habitats and, if any special-status fish species are present during the time of construction, could affect them directly.

These potential temporary water quality impacts have the potential to affect fish habitat function and special status fish species both at the project site and within the project vicinity, by reducing water quality, reducing visibility and increasing potential exposure to predators, and reducing habitat suitability for prey species. These effects would be temporary, and conditions would return to baseline conditions following completion of construction. At the scale of the project shipping prism, fish and fish habitat would not be affected by any temporary water quality impacts associated with construction, as these effects would be localized to the project vicinity.

During the in-water work period (anticipated to be October 1 to February 28), outmigrating juveniles and migrating adult salmon, steelhead, and bull trout could be present within the action area, as could migrating adult Pacific eulachon. Larval and juvenile eulachon are not expected to be present during the in-water work period. Similarly, green sturgeon will not be exposed to any direct effects of temporarily decreased water quality, as they are not expected to be present within the project vicinity during the in-water work period.

Special status salmon, steelhead, bull trout, and Pacific eulachon, if present, likely will be migrating through the project site and vicinity, and are not expected to be present for any significant period. Habitat suitability for adult and juvenile salmonids, steelhead, bull trout, and adult Pacific eulachon is limited at the site, and provides little function aside from a suitable migratory corridor. Fish are expected to move rapidly through the site and vicinity. Exposure to temporarily decreased water quality conditions, including temporarily elevated turbidity levels and/or potential debris contamination, is expected to be limited, and effects to fish habitat and special status fish species will be minor.

Designated and proposed critical habitats within the action area also may experience temporarily increased levels of turbidity during the proposed action. The geographic extent and duration of any potential short-term increases in sedimentation or turbidity are expected to be limited, and are not expected to exceed baseline sedimentation conditions measurably. Any temporarily elevated sedimentation levels will not result in any significant effect to any primary constituent elements (PCE) of designated or proposed critical habitat for any species.

Temporary Construction Noise – The proposed project has the potential to result in temporarily elevated terrestrial and underwater noise levels at the project site and within the project vicinity during pile driving activities.

The project will require the installation of approximately seventy-six 24- and 36-inch-diameter steel pipe piles below the OHWM of the Columbia River. Pile driving will be completed using a vibratory hammer to drive all of the permanent structural piles to the extent practicable, as well as all of the approximately 40 temporary piles. Following vibratory driving to refusal (the point at which the pile will no longer advance with the vibratory hammer), the project will use an impact hammer to drive piles to their final tip elevations. As well, an impact hammer will be needed to proof the structural piles. Proofing is the process of striking piles with an impact hammer to verify their load-bearing capacity. As part of impact minimization, a vibratory hammer will be used to remove approximately 56 piles from below the OHWM of the river at the marine terminal area and an additional 220 timber piles from the Port's Terminal 2. Pile removal is not expected to generate levels of underwater noise that will result in significant effects to fish habitat or species.

The zone of influence for underwater noise has been determined using the practical spreading loss model, currently recognized by both USFWS and National Marine Fisheries Service (NMFS) as the best method to determine underwater noise attenuation rates, assumes a 4.5-decibel (dB) reduction per doubling of distance. The baseline underwater noise level in the portion of the Columbia River that is within the action area is conservatively assumed to be approximately 120 dB_{RMS}¹, although actual background underwater noise levels may be higher, given the amount of industrial shipping traffic. The impact pile installation of 24- and 36-inch diameter piles (with a bubble curtain providing 5 dB of noise attenuation) has the potential to

¹ RMS=root mean square

generate temporary underwater noise levels of approximately 202 dB_{PEAK}, 189 dB_{RMS}, and 173 dB_{SEL}. To obtain pile capacity, it is anticipated that each pile will require approximately 1,000 blows with an impact hammer. An installation rate of 4 to 6 piles per day is estimated. At a maximum, the total number of blows per day will be approximately 6,000 requiring a total of up to 160 minutes of impact driving, spread out over each day. At a maximum installation rate of 6 piles per day, it is anticipated that 13 working days would be required to install 76 piles below the OHWM of the Columbia River. If pile installation is slower, fewer strikes per day can be struck, and additional days of pile driving may be required. A worst-case estimate is that installing all of the in-water piles to tip elevation could require up to 25 to 30 days of in-water work during the in-water work window.

NMFS has established 206 dB_{PEAK} as an underwater noise injury threshold for fish of all sizes. The noise attenuation analysis indicates that peak underwater noise levels could exceed this injury threshold within approximately 30 feet of each pile being driven. Any fish present within approximately 30 feet of the pile being driven could be injured; therefore, the suitability of fish habitat within the immediate vicinity of the pile driving activities will be significantly degraded while pile driving is being conducted. Fish in the vicinity will be expected to avoid the area temporarily during pile driving activity.

Additionally, the noise attenuation analysis indicates that the worst-case estimate of up to 6,000 strikes per day that may be necessary to drive piles to final elevation will result in exceedances of the cumulative underwater noise injury thresholds for fish greater than 2 grams (187 dB_{RMS}) and for fish less than 2 grams (183 dB_{RMS}) within approximately 1,119 feet of pile driving activity, respectively. Given the nature and quality of the habitat, however, most fish are expected to be moving through the action area; their exposure to the sound from all 6,000 strikes per day is not expected.

During the in-water work period, it is possible that native fish, including adults and/or juveniles of several Evolutionary Significant Units/Distinct Population Segment (ESU/DPS) of salmon, steelhead, bull trout, and Pacific eulachon, could be present within the portion of the project site and vicinity where underwater noise could be temporarily elevated. Although run timing within the river is different for each ESU/DPS, it is possible that some individuals could be present in the vicinity and could be exposed to temporarily elevated underwater noise levels resulting from pile installation.

Special status fish present within the portion of the project site where injury thresholds could be exceeded could be adversely affected, but this is unlikely. Special status fish species that could be present during the in-water work period will be expected to avoid the area within approximately 30 feet of the pile, and therefore will not be exposed to levels of peak underwater noise that would result in injury. Similarly, special status fish species are expected to be moving through the project site and vicinity, and therefore will not be exposed to the maximum 6,000 strikes per day. For this reason, special status fish species will not be exposed to cumulative underwater noise levels that could result in adverse effects.

While the underwater noise is temporarily elevated, fish may avoid the area temporarily, but this is unlikely to affect feeding and/or migratory activities significantly. Any elevated underwater noise levels associated with the proposed project will be temporary and will have no effect on any PCE of designated or proposed critical habitat.

Operational Water Quality Impacts – Operational water quality impacts that could be associated with the proposed project include an increased potential for impacts associated with stormwater management at the site and spills or leaks associated with on-site equipment and machinery, and a potential for catastrophic accidents such as an inadvertent crude oil release to surface water.

The project has the potential to increase stormwater runoff at the site, which could affect water quality and quantity as described in section 2.11 of this application. The entire Facility is located on 41.5 acres, and the proposed construction will result in approximately 38.2 acres of impervious surface. Treatment for stormwater will include enhanced treatment at Area 300 (Storage) and basic treatment at other areas of the Facility, with discharge to existing stormwater systems at Terminal 4 and Terminal 5. The proposed facilities will provide water quality treatment and conveyance and will be designed to handle the 6-month, 24-hour event as estimated using Ecology's Western Washington Continuous Simulation Hydrology Model (Ecology's hydrology model).

The operation of the Facility also has the potential to increase the risk of catastrophic accidents, such as an inadvertent release of crude oil to the environment. While the likelihood of such an event is exceedingly low, the possibility must be addressed. According to projected volumes, the proposed project will result in approximately one ship calling at the facility every three days initially increasing to one ship call per day at full capacity. Spills could occur at the project site while docking or filling, or in transit downstream on the Columbia River or in marine waters.

The project site and vicinity provide documented habitat for the adult and juvenile forms of several special status populations of salmon, steelhead, and bull trout as well as for Pacific eulachon, green sturgeon, Pacific and river lamprey, and leopard dace. While run timing differs by species and population, these populations may be present within the project site and/or vicinity at various times during the year. Because operational impacts will not be restricted to an in-water work window, each species and its habitat have the potential to be affected by water quality impacts associated with the operation of the Facility.

Habitat suitability for native fish (including special status species) is limited at the site. The project site and vicinity primarily provide habitat as a migratory corridor. For this reason, fish are expected to move rapidly through the vicinity.

Accidental leaks or spills of fuel or other chemicals into surface water or groundwater at the project site have the potential to reduce fish habitat suitability,

which also could affect special status fish species. However, the project has implemented several impact minimization measures and BMPs to reduce the potential for any spills or release of materials to occur, and to minimize the extent of any impacts resulting from any accidental spill or release.

Proposed stormwater treatment for new impervious surface at the site will minimize the potential for any adverse effects associated with stormwater. The proposed stormwater treatment will result in an improved water quality condition within the project site in the long term, and will not result in any adverse effects to fish habitat or to special status fish species.

A release to surface water has the potential to result in significant adverse effects to fish habitat and for special status fish species and their designated or proposed critical habitats. However, the likelihood of a spill is extremely low, and the proposed BMPs and safety and security measures will manage the risk of impacts to fish species and habitats effectively. The nature of the proposed Facility (offloading from rail, storage, and loading to marine vessels) and the nature of the product handled (crude oil) engender a comprehensive and rigorous regulatory environment for facility design, construction, operation, and spill response contingency planning. Local state and federal programs all regulate spill prevention of the proposed facility and offer significant redundancy in safety protocols for the proposed facility.

The Applicant will comply with the comprehensive regulatory context regarding Facility design, construction, operation, and contingency planning requirements and its actions will be fully coordinated to meet all applicable local, state, and federal requirements. The Applicant will also implement inspection and training processes to ensure long-term compliance with these requirements. Inspections and training relating to spill prevention and controls will be integrated into the overall day-to-day management of the Facility.

Impacts to fish habitat and to special status fish species and their designated or proposed critical habitats from water quality impacts associated with operation of the Facility are expected to be minor.

Operations Spill Prevention Control and Countermeasures Plan

Operations at the site will be governed by an SPCC plan, which will define specific BMPs to minimize the potential for leaks and spills and the extent of damage from any unavoidable leaks or spills. The impact minimization measures and BMPs mitigate for the potential direct and indirect effects of the Facility to the shoreline environment.

3. *In addition to compensatory mitigation, unavoidable adverse impacts may be addressed through voluntary restoration efforts.*

Response: No restoration activities are planned.

4. *Shoreline uses and developments shall not cause impacts that require remedial action or loss of shoreline ecological functions on other properties.*

Response: The project design avoids direct impacts to adjacent properties by avoiding actions that could lead to changes in river dynamics that could affect adjacent properties. During construction, noise has the potential to affect properties beyond the project footprint. These impacts would be short term and, considering the developed nature of adjacent properties and the location of the project within an industrial zone with existing sources of noise, the impacts would not require remedial action or result in loss of ecological functions.

5. *Shoreline uses and developments shall be located and designed in a manner such that shoreline stabilization is not necessary at the time of development and will not be necessary in the future for the subject property or other nearby shoreline properties unless it can be demonstrated that stabilization is the only alternative that allows a reasonable and appropriate water-dependent use to become established or expand or protects public safety and existing primary structures.*

Response: The activities proposed within the shoreline environment will not result in the need for shoreline stabilization. The shoreline along this reach of the Columbia River is armored with riprap and no activities are proposed at the shoreline that will destabilize the shoreline embankment.

6. *Land shall not be cleared, graded, filled, excavated or otherwise altered prior to issuance of the necessary permits and approvals including a statement of exemption for a proposed shoreline use or development to determine if environmental impacts have been avoided, minimized and mitigated to result in no net loss of ecological functions.*

Response: No clearing, grading, or excavation activities will occur until all necessary permits and authorizations for such activities have been obtained.

9. *On navigable waters or their beds, all uses and developments should be located and designed to:*
 - a. *Minimize interference with surface navigation;*
 - b. *Consider impacts to public views; and*
 - c. *Allow for the safe, unobstructed passage of fish and wildlife, particularly species dependent on migration.*

Response: The facility improvements that are proposed will be outside the Columbia River navigational channel and will not affect surface navigation on the river. Because the proposed project has been sited to use an existing dock structure and berth, the condition of the shoreline will remain industrial and in marine terminal use. A visual assessment analyzing the impact of the proposed project on views from the Columbia River looking north toward the shoreline concluded that the project will have a low level of impact on views from the Columbia River. This low level of

impact is because of the distance of upland facilities from the viewpoints and because the project is consistent with the existing industrial context of the viewshed.

Lastly, the number of piles that will be installed to support the proposed modifications at the loading terminal is the minimum necessary to meet safety and structural requirements. Their installation will occur in the same general location as the existing in-water dock and is not expected to obstruct the passage of fish and/or wildlife. In addition, to compensate for benthic impacts, significantly more piles will be removed than installed.

11. In-water work shall be scheduled to protect biological productivity (including but not limited to fish runs, spawning, and benthic productivity). In-water work shall not occur in areas used for commercial fishing during a fishing season unless specifically addressed and mitigated for in the permit.

Response: In-water work will occur during the approved in-water work window as established by USACE and WDFW. In addition, to reduce the amount of in-water work required, construction above the level of the water surface but below the OHWM may occur outside the work window when water levels are low.

Commercial fishing on the Columbia River near the project site is limited and the timing varies by year according to anticipated run sizes. According to information from the Oregon Department of Fish and Wildlife, the only commercial fishery that could coincide with the work window is the Columbia River mainstem late fall fishery, which typically occurs in September and October, although the exact period varies by year. Construction activities will be limited to an area immediately surrounding the existing loading berth and will not obstruct fishing traffic.

12. The effect of proposed in-stream structures on bank margin habitat, channel migration, and floodplain processes should be evaluated during permit review.

Response: The riparian area within the proposed project site is mostly devoid of vegetation, with the exception of scattered trees and vegetation below the top of the bank. Vegetation within the riparian habitat at the site consists primarily of small-diameter black cottonwood (*Populus trichocarpa*) and willows (*Salix* spp.), and non-native false indigo bush (*Amorpha fruticosa*) and Himalayan blackberry (*Rubus armeniacus*). The bank is armored with riprap, and above the riprap there is a narrow band of ruderal grass/forb habitat. No riparian trees or vegetation will be removed, and no impacts to bank margin habitat are anticipated.

The floodplain is located at approximately the top of bank. No fill is proposed within the 100-year floodplain. Therefore, the proposed project will not affect the 100-year base flood elevation of the Columbia River.

Historically, the Columbia River experienced channel migration but shoreline development and maintenance of the navigation channel in the project vicinity mostly confine the river to areas within the 100-year floodplain. The 100-year base

flood elevation is generally located at the top of the bank at terminals 4 and 5 and it is not anticipated that project activities will result in changes to channel migration or the channel migration process.

15. *Developments permitted in the Aquatic Shoreline Designation along the Columbia River shall be sited waterward of -15 feet CRD unless shallow water habitat will be created as mitigation.*

Response: Pile installation is proposed in the Aquatic Shoreline Designation of the Columbia River and will occur in shallow water areas above -15 feet Columbia River Datum. The project does not propose to eliminate shallow water habitat in place of deep water habitat. Using piles and overwater structures has an effect on the value of shallow water habitat, but the design minimizes these effects by placing structures in as deep of water as possible, by using the minimum possible number of piles, and by using grated structures to the extent practicable. The project will create shallow water habitat by removing existing over-water structures equal to those being placed.

4.3.3.3 Archaeological, Cultural, and Historic Resources (SMP Section 5.2)

1. *All shoreline uses and development shall comply with the applicable requirements of VMC 20.710, Archaeological Resource Protection.*

Response: The proposed project will be conducted in accordance with RCW 27.53.060 (Archaeological Sites and Resources), RCW 27.44.020 (Indian Graves and Records), DAHP regulations, and all applicable requirements of VMC 20.710 Archaeological Resource Protection. The cultural resources report prepared by AINW and dated July 5, 2013 concludes that there is a low likelihood of encountering cultural material during construction because much of the project area is located on areas of fill material from past dredging activities. However, the report indicates the desirability of conducting archaeological monitoring of excavation activities if project construction activities are proposed to a depth below that of past dredge deposits, and such materials are brought to the surface. In addition, if any unknown archaeological or historic materials are encountered during project activities, work in the immediate area of the discovery will be halted, a professional archaeologist will assess the significance of the find, and DAHP and concerned tribes will be notified so that a course of action can be decided on and implemented

2. *When a shoreline use or development is in an area known or likely to contain archaeological artifacts and data, the applicant shall provide for a site inspection and evaluation by a professional archaeologist prior to issuance of any shoreline permit or approval including a statement of exemption. Work may not begin until the inspection and evaluation have been completed and the City has issued its permit or approval.*

Response: The AINW report summarizes the findings of past archaeological explorations within the project area; these investigations did not reveal the presence of any known archaeological artifacts on the site.

3. *If any item of possible archaeological interest (including human skeletal remains) is discovered on site, all work shall immediately stop, and the City, State Department of Archaeology and Historic Preservation (DAHP), and affected Native American Tribes shall be notified of the discovery. A stop-work order will be issued. The shoreline permit will be temporarily suspended. All applicable state and federal permits shall be secured prior to commencement of the activities they regulate and as a condition for resumption of development activities. Development activities may resume only upon receipt of City approval.*

Response: The applicant will implement an unanticipated discovery plan, including work stoppage in the location of an unanticipated archaeological or historical resource discovery and notification to EFSEC and other appropriate jurisdictional agencies.

4. *If the discovery includes human skeletal remains, the find must be secured and protected from further disturbance; the Clark County Medical Examiner and local law enforcement shall be notified in the most expeditious manner possible. The County Medical Examiner will assume jurisdiction over the site and the human skeletal remains, and will make a determination of whether they are crime-related. If they are not, DAHP will take jurisdiction over the remains and report them to the appropriate parties. The State Physical Anthropologist will make a determination of whether the remains are Native American and report that finding to the affected parties. DAHP will handle all consultation with the affected parties as to the preservation, excavation, and disposition of the remains.*

Response: If evidence of burials is encountered, all ground-disturbing activity in the vicinity will be halted immediately, and DAHP, the Clark County Sheriff's Office, and the appropriate tribes will be notified.

4.3.3.4 Critical Areas Protection (SMP Section 5.3)

The following sections address the regulations in Section 5.3, Critical Areas Protection, of the SMP:

1. *In addition to the provisions of this section, critical areas (fish and wildlife habitat conservation areas, frequently flooded areas, geologic hazard areas, and wetlands) located within shoreline jurisdiction and their buffers are regulated and protected by Chapter 5A, VMC 20.740, Critical Areas Protection as modified for consistency with the Act and this Program. All shoreline development shall comply with VMC 14.26, Water Resources Protection.*

Response: The critical areas located within the shoreline jurisdiction of the site include fish and wildlife habitat conservation areas, frequently flooded areas, and geologic hazard areas. Additional information was included under section 4.2.4 Critical Areas Protection above. Section 4.1.3.4 of the narrative addresses how the project complies with VMC 14.26.

2. *Unless otherwise stated, no development shall be constructed, located, extended, modified, converted, or altered or land divided without full compliance with this Program whether or not a shoreline permit or written statement of exemption is required.*

Response: Section 4.3 of this narrative is devoted to the City's SMP and includes details about how the proposed project is consistent with the policies and regulations of the SMP.

3. *Any allowed use, development, or activity affecting a critical area proposed on a parcel located in the shoreline jurisdiction, whether or not exempt from obtaining a shoreline substantial development permit, shoreline conditional use, or shoreline variance, shall be regulated under the provisions of this Program.*

Response: As stated above, section 4.3.4 of this narrative addresses regulations related to critical areas within the shoreline jurisdiction and the project's consistency with these provisions.

4. *Shoreline uses and developments and their associated structures and equipment shall be located, designed and operated using best management practices to protect critical areas.*

Response: The proposed project will be completed using BMPs to protect critical areas as described in sections 4.1.3 and 4.3.4 and 4.3.3.4.

5. *The applicant shall demonstrate all reasonable efforts have been taken to avoid and where unavoidable, minimize and mitigate impacts such that no net loss of critical area and shoreline ecological function is achieved. Mitigation shall occur in the following order of priority:*
 - a. *Avoiding the impact altogether by not taking a certain action or parts of an action. This may necessitate a redesign of the proposal.*
 - b. *Minimizing unavoidable impacts by limiting the degree or magnitude of the action and its implementation by using appropriate technology or by taking affirmative steps to avoid or reduce impacts. The applicant shall seek to minimize fragmentation of the resource to the greatest extent possible.*
 - c. *Rectifying the impact by repairing, rehabilitating, or restoring the affected environment;*
 - d. *Reducing or eliminating the impact over time by preservation and maintenance operations;*
 - e. *Compensating for the impact by replacing, enhancing, or providing substitute resources or environments. The compensatory mitigation shall be designed to achieve the functions as soon as practicable.*
 - f. *Monitoring the impact and the compensation projects and taking appropriate corrective measures.*

Response: Impacts to critical areas have been avoided, to a large degree, by locating the proposed facility at an existing marine terminal, thus forestalling many of the direct environmental effects that could be expected from a new in-water facility. Modifications to the structures on berths 13 and 14 are necessary and are described above including necessary mitigation to minimize and offset impacts to aquatic resources.

During construction, the primary source of potential effects will be the generation of in-water noise during pile installation. To reduce the potential effects, the following BMPs will be employed:

- Using a vibratory pile driver to the maximum extent feasible.
- Employing a bubble curtain or other similar noise attenuation method (such as sound attenuation pile caps, increased hammer size, etc.) during impact pile driving.
- Implementing a marine mammal monitoring plan during pile driving activities to reduce the risk of potential impacts to ESA-listed marine mammals.
- Driving piles only during daylight hours.
- Using watertight forms during overwater concrete work to reduce the potential for spills to the environment.

Benthic habitat impacts will be associated with the installation of steel piles and the overwater structure for the mooring dolphins and walkways; these potential impacts will be offset by the proposed removal of existing steel and wood piles and the overwater structures at berths 13 and 14 and Terminal 2.

6. *In addition to compensatory mitigation, unavoidable adverse impacts may be addressed through restoration efforts.*

Response: No restoration efforts are planned.

4.3.3.5 Public Access (SMP Section 5.4)

1. *Provisions for adequate public access shall be incorporated into all shoreline development proposals that involve public funding unless the applicant demonstrates public access is not feasible due to one or more of the provisions of Section 5.4.2 (a-e). Where feasible, such projects shall incorporate ecological restoration.*
2. *Consistent with constitutional limitations, provisions for adequate public access shall be incorporated into all land divisions and other shoreline development proposals (except residential development of less than five (5) parcels), unless this requirement is clearly inappropriate to the total proposal. Public access will not be required where the applicant demonstrates one or more of the following:*
 - a. *Unavoidable health or safety hazards to the public exist that cannot be prevented by any practical means;*

- b. *Inherent security requirements of the use cannot be satisfied through the application of alternative design features or other solutions;*
- c. *The cost of providing the access, easement, alternative amenity, or mitigating the impacts of public access are unreasonably disproportionate to the total proposed development;*
- d. *Significant environmental impacts that cannot be mitigated will result from the public access; or*
- e. *Significant undue and unavoidable conflict between public access requirements and the proposed use and/or adjacent uses would occur, provided that the applicant has first demonstrated and the City determines that all reasonable alternatives have been evaluated and found infeasible, including but not limited to:*
 - i. *Regulating access by such means as maintaining a gate and/or limiting hours of use;*
 - ii. *Designing separation of uses and activities (including but not limited to, fences, terracing, use of one-way glazings, hedges, landscaping); and*
 - iii. *Provisions for access at a site geographically separated from the proposal such as a street end, vista or trail system.*

Response: The project does not involve the use of public funds. Vessel loading and unloading areas at the Port are off-limits to the public in accordance with the requirements of the Maritime Security system and the National Terrorism Advisory System. In addition, the shoreline in the vicinity of the project site is devoted to heavy industrial activities and facilities, including shiploading and unloading, heavy vehicle use, and sand and gravel operations. Thus, public access to the shoreline at the project site is not allowed or appropriate and public access will not be incorporated into the project design.

4.3.3.6 Site Planning and Development – General (SMP Section 5.6.1)

1. *Land disturbing activities such as grading and cut/fill shall be conducted in such a way as to minimize impacts to soils and native vegetation and shall comply with VMC 14.24, Erosion Prevention & Sediment Control and VMC 14.25, Stormwater Control.*

Response: Ground-disturbing activities such as excavation for building foundations and site grading will be limited to the minimum areas necessary to construct the project. Land-disturbing activity in the shoreline area will be limited to excavating for building and pipeline foundations, modifying the trestle abutment, and constructing the driveway and potential ground improvements to address liquefaction and lateral movement during earthquake events. Site-specific BMPs for temporary erosion and sediment control are identified in the stormwater pollution prevention plan (SWPPP) and erosion and sediment control plans. BMPs will be used in accordance with the erosion control plan to ensure consistency with City and state regulations.

2. *Development shall be designed and land disturbing activities conducted to avoid impacts to healthy trees such that they are likely to become hazard trees.*

Response: Proposed project construction activities will occur primarily on areas of existing impervious surface and in areas disturbed by past development activities and will not affect healthy trees in the shoreline areas. No tree removal is anticipated within the shoreline jurisdiction.

3. *Impervious surfaces shall be minimized to the extent feasible so as not to jeopardize public safety. Impervious surfacing for parking lot/space areas, trails, and pathways shall be minimized through the use of alternative surfaces where feasible.*

Response: Project elements within shoreline jurisdiction will be constructed primarily in areas of existing impervious surface. The construction of the MVCUs and the proposed access driveway will create some additional impervious surface within the shoreline. These surfaces are the minimum necessary for installing the equipment and driveway and will be located beyond the limits of the regulatory buffers for the riparian management areas (RMA) and riparian buffers (RB).

4. *When feasible, existing transportation corridors shall be utilized. Ingress/egress points shall be designed to minimize potential conflicts with and impacts upon vehicular and pedestrian traffic. Pedestrians shall be provided with safe and convenient circulation facilities.*

Response: The project will use existing transportation corridors to the extent feasible for site access for rail and auto traffic. There is no pedestrian access to the project area. At Terminal 5, two additional rail loops will be located in an existing rail corridor landward of existing and permitted tracks. At Terminal 4, access will be provided by the construction of a driveway from the existing Harborside Drive connecting with the existing access road along the shoreline. This driveway will not conflict with existing roadways and will eliminate conflicts with the access to Berth 10, which is used for auto imports. During vessel unloading, access from the east would be restricted because of vehicles exiting the vessels.

5. *Vehicle and pedestrian circulation systems shall be designed to minimize clearing, grading, alteration of topography and natural features, and designed to accommodate wildlife movement.*

Response: The proposed new driveway will be located perpendicular to the shoreline, reducing the length that will be in the shoreline. Minor grading will be necessary where the proposed driveway crosses existing stormwater facilities.

6. *Parking, storage, and non-water dependent accessory and appurtenant structures and areas shall be located landward from the OHWM and landward of the water-oriented portions of the principal use.*

Response: A 10-stall parking area will be restriped in an area of existing parking landward of the OHWM along berths 13 and 14 to accommodate workers at the loading berth.

7. *Trails and uses near the shoreline shall be landscaped or screened to provide visual and noise buffering between adjacent dissimilar uses or scenic areas, without blocking visual access to the water.*

Response: Adjacent uses along the shoreline are industrial and are similar to the proposed project. There are no trails or public access areas immediately adjacent to project elements in shoreline jurisdiction that will require visual or noise buffering.

8. *Elevated walkways shall be utilized, as appropriate, to cross sensitive areas such as wetlands.*

Response: The proposed project will not require access across sensitive areas or wetlands. Therefore, no elevated walkways are proposed.

9. *Fencing, walls, hedges, and similar features shall be designed in a manner that does not significantly interfere with wildlife movement.*

Response: The shoreline area of berths 13 and 14 is completely surrounded by security fencing as mandated by federal regulations. Fencing may be modified or added based on the needs of the project. Fencing will not be located in the water or along the existing vegetated areas of the bank. Because there are no other adjacent habitat areas or significant areas of wildlife use except for the river, the new fencing will not interfere with wildlife movement.

10. *Exterior lighting shall be designed, shielded and operated to:*
 - a. *Avoid illuminating nearby properties or public areas;*
 - b. *Prevent glare on adjacent properties, public areas or roadways;*
 - c. *Prevent land and water traffic hazards; and*
 - d. *Reduce night sky effects to avoid impacts to fish and wildlife.*

Response: Exterior lighting within the shoreline will be installed on the dock to illuminate the shiploading area for safety as ship loading will include nighttime operations. Lighting will be shielded and directed toward work areas to prevent glare and avoid illuminating areas (such as the water surface) where there is no need for lighting. Adjacent areas are devoted to industrial uses and light and glare will not result in adverse effects to these areas.

4.3.3.7 Clearing, Grading, Fill and Excavation (SMP Section 5.6.2)

1. *Land disturbing activities such as clearing grading, fill and excavation shall be conducted in such a way as to minimize impacts to soils and native vegetation and shall comply with VMC 14.24, Erosion Prevention & Sediment Control;*

14.25, Stormwater Control; and VMC Chapter 17.12, International Building Code.

Response: Section 4.1.3.3 addresses consistency with the City's stormwater and erosion control provisions. Within the shoreline, most of the proposed project will be constructed on existing impervious surfaces and prior disturbed areas along an existing industrial waterfront. By locating on an existing and prior developed site, the project's grading plans are designed to minimize and control erosion and sedimentation. Using BMPs in accordance with the erosion control plan will ensure compliance with City and state regulations. Further, the site contains no native vegetation that would be removed with the construction of the proposed project in the shoreline area.

2. *Clearing, grading, fill, and excavation activities shall be scheduled to minimize adverse impacts, including but not limited to, damage to water quality and aquatic life.*

Response: Clearing and grading will be minimized within shoreline jurisdiction. Clearing, grading, and fill activities will only be conducted upland and will be of limited extent; therefore, specific schedules will not be necessary.

4. *Developments shall comply with the VMC 14.24, Erosion Prevention & Sediment Control during construction and shall ensure preservation of native vegetation for bank stability. Disturbed areas shall be stabilized immediately and revegetated with native vegetation.*

Response: Excavation for the pipelines and structures and for the placement of the two additional rail lines within the Terminal 5 loop will occur within the shoreline area. Project construction will use appropriate BMPs to manage potential erosion or turbidity concerns. No impacts to native vegetation within the shoreline area are anticipated and, as a consequence, the project will not require the re-establishment of native vegetation

6. *Fills shall be permitted only in conjunction with a permitted use, and shall be of the minimum size necessary to support that use. Speculative fills are prohibited.*

Response: No fill, as defined in the SMP, is planned within the 100-year floodplain. Minor fill will be necessary to place the planned access driveway across the existing stormwater facilities located north of the berth area.

7. *Any fill activity shall comply with the fill provisions of VMC Chapter 17.12. Fill shall consist only of clean materials.*

Response: Fill materials will comply with VMC Chapter 17.12 and will consist only of clean materials.

8. *Soil, gravel or other substrate transported to the site for fill shall be screened and documented that it is uncontaminated. Use of any contaminated materials as fill is prohibited.*

Response: All soil, gravel, or other minerals brought on site for project construction will consist of clean materials from an approved off-site source consistent with VMC 17.12 and Port protocols.

9. *Fills shall be designed and placed to allow surface water penetration into groundwater supplies where such conditions existed prior to filling.*

Response: Fill will be placed only to accommodate the proposed driveway. Because the fill will be capped by impervious surfaces, it will not allow surface water penetration to groundwater. Runoff from the driveway will be directed to a stormwater system for discharge to the Columbia River. The subject site is not within an aquifer recharge zone.

10. *Fills must protect shoreline ecological functions, including channel migration processes.*

Response: Fill is proposed for an area that does not currently provide shoreline ecological functions because it is isolated from the river by existing development and is above the OHWM.

11. *Fill waterward of OHWM shall only be allowed as a conditional use, and then only when it is necessary: a. To support a water-dependent or public access use.*

Response: No fill is proposed below the OHWM.

12. *In the Columbia River, fills shall be prohibited between the OHWM and minus fifteen (-15) feet CRD, unless shallow water habitat will be created as mitigation.*

Response: Consistent with this provision, no fill is proposed below the OHWM of the Columbia River.

14. *Upon completion of construction, remaining cleared areas shall be replanted with native species on the City's Native Plant List available from the Shoreline Administrator. Replanted areas shall be maintained such that within three (3) years' time the vegetation is fully re-established.*

Response: The proposed project will not remove any riparian vegetation on the site. However, any exposed soils that may result from proposed construction within the shoreline jurisdiction will be stabilized by reestablishing the area to pre-existing developed conditions.

4.3.3.8 Building Design (SMP Section 5.6.3)

1. *Non-single-family structures shall incorporate architectural features that provide compatibility with adjacent properties, enhance views of the landscape from the water, and reduce scale to the extent possible.*

Response: Two new buildings are proposed in shoreline jurisdiction, proximate to berths 13 and 14. They consist of an approximately 300-square-foot and 15-foot-tall control room/E-house and an approximately 300-square-foot and 15-foot-tall MCC building. Both will be single-story and metal-clad, consistent with the industrial character of other structures at the Port. They are small structures, ancillary to the loading operations, and are significantly smaller than other existing and planned structures in the vicinity, such as the Farwest Steel facility approximately 1,900 feet north of the shoreline and the planned bulk potash handling facility approximately 2,000 feet to the west at Terminal 5. Therefore, compared to existing surrounding industrial structures, these structures in shoreline jurisdiction will be inconspicuous and will not dominate views of the shoreline at Terminal 4.

2. *Building surfaces on or adjacent to the water shall employ materials that minimize reflected light.*

Response: The only buildings proposed within shoreline jurisdiction are the control room/E-house and MCC buildings which will be located near berths 13 and 14 and will support the unloading operations at the marine terminal. These structures will include metal clad siding and will be painted in gray or earth tones to minimize reflected light towards off-site locations.

3. *Façade treatments, mechanical equipment and windows in structures taller than two (2) stories, shall be designed and arranged to prevent bird collisions using the best available technology. Single-family residential structures are exempt from this provision.*

Response: Only single-story structures are proposed within shoreline jurisdiction. Mechanical equipment, including the stack associated with the MVCU, the crane(s) on the dock, and the lighting towers, may be 45 feet in height or taller. Because the project will not employ reflective surfaces, large moving surfaces, solid red lights, guy wires, lattice towers, or other elements that present a hazard of bird strikes, no specific design measures are necessary to prevent bird strikes.

4. *Interior and exterior structure lighting shall be designed, shielded, and operated to: a. Avoid illuminating nearby properties or public areas; b. Prevent glare on adjacent properties, public areas or roadways; c. Prevent land and water traffic hazards; and d. Reduce night sky effects to avoid impacts to fish and wildlife.*

Response: Lighting within shoreline jurisdiction will be necessary for safe operation at night. In Area 400 within shoreline jurisdiction, four light poles are proposed to be located on the dock, with an additional four light poles along the causeway and two

light poles located along the roadway in front of the dock area on either side of the causeway. In addition, two lighting fixtures will be located at the maintenance parking stalls near the MCC and the Control Room. The lighting fixtures will be shielded and directed toward work areas and no off-site glare impacts are expected to result from their use. Lighting on the proposed site will be designed to ensure compliance with VMC 20.935.030.D, which prohibits off-site glare impacts from direct or reflected light sources.

5. *Accessory uses, including parking, shall be located as far landward as possible while still serving their intended purposes.*

Response: The project will restripe an existing parking area at berths 13 and 14 within the shoreline area. This parking area is landward of the OHWM and, because of the limited depth of the area around berths 13 and 14 and the existing access road and stormwater facilities, the parking area cannot be located further from the shoreline.

4.3.3.9 Vegetation Conservation (SMP Section 5.7)

1. *Existing native vegetation within shoreline jurisdiction shall be retained and allowed to grow naturally in the riparian area.*

Response: Previous development and remediation activities filled, paved, and/or capped most of the project site. As a result, vegetation on the site is primarily limited to grasses, non-native weedy herbaceous vegetation, and shrubs located between the top of the bank of the Columbia River and the riprap at the water's edge. No removal of native vegetation is proposed.

2. *Removal of native vegetation outside the riparian area shall be avoided. Where removal of native vegetation cannot be avoided, it shall be minimized and mitigated to result in no net loss of shoreline ecological functions. Lost functions may be replaced by enhancing other functions provided that no net loss in overall functions is demonstrated and habitat connectivity is maintained. Mitigation shall be provided consistent with an approved mitigation plan. See Chapter 5A, 20.740.030(B)(1)(f) on maintaining fire-defensible space.*

Response: No native vegetation will be removed with the Shoreline jurisdiction.

3. *If non-native vegetation is removed, it shall be replaced with native vegetation within the shoreline jurisdiction.*

Response: Approximately 7,500 square feet of vegetation will be removed from areas near the stormwater facilities north of berths 13 and 14 to accommodate the pipelines, MVCU, and driveway. These areas will be covered by development and replanting is not feasible. If areas are cleared outside the limits of the new impervious surfaces, they will be planted with an appropriate groundcover native seed mix.

4. *Development shall be located to avoid clearing and grading impacts to more mature or multi-storied plant communities and to retain habitat connectivity.*

Response: There are no mature or multi-storied plant communities within the shoreline jurisdiction that will be disturbed by the project.

5. *Vegetation (such as a mature stand of trees) that cannot be replaced or restored within twenty (20) years shall be preserved.*

Response: No mature vegetation within the shoreline jurisdiction will be cleared with the proposed project.

6. *Maintaining vegetated riparian areas to protect shoreline stability and shoreline ecological functions takes precedence over vegetation clearing to preserve or create views.*

Response: No vegetation will be cleared within the shoreline area to preserve or create views.

4.3.3.10 Visual Access (SMP Section 5.8.1)

1. *Visual access shall be maintained, enhanced, and preserved as appropriate on shoreline street-ends, public utility rights-of-way above and below the ordinary high water mark, and other view corridors.*

Response: None of the proposed shoreline elements will occur at a shoreline street end or along a public right-of-way that provides a view corridor through the site.

The SMP defines view corridors as follows.

...portion of a viewshed, often between structures or along thoroughfares. View corridors may or may not be specifically identified and reserved through development regulations for the purpose of retaining the ability of the public to see a particular object (such as a mountain or body of water) or a landscape within a context that fosters appreciation of its aesthetic value.

The shoreline areas of the project site do not adjoin existing residential uses or neighborhoods and are not part of their viewshed. Residential areas, including street ends and public parks, that are located approximately 1.75 miles or more northeast of the project site have general territorial views of the Port. The distance and intervening trees and buildings prohibit direct views of berths 13 and 14. While the crane on the existing dock may be visible from certain areas, it will occupy a very small portion of the viewshed and will be smaller in scale than existing cranes and shiploading features currently developed along the shoreline.

2. *Development on or over the water shall be constructed to avoid interference with views from surrounding properties to the adjoining shoreline and adjoining waters to the extent practical.*

Response: The surrounding properties are in current industrial use and the overwater structures are not located within a scenic vista from adjacent properties.

3. *Maintaining vegetated riparian areas to protect shoreline stability and shoreline ecological functions takes precedence over vegetation clearing to preserve or create views.*

Response: No vegetation will be cleared to preserve or create views.

4.3.3.11 Water Quality and Quantity (SMP Section 5.9)

1. *The location, design, construction, and management of all shoreline uses and activities shall protect the quality and quantity of surface and ground water adjacent to the site.*

Response: Runoff from any new and/or reconstructed areas of impervious surface within the shoreline jurisdiction will be collected via catch basins, routed through a stormwater quality facility designed to comply with VMC 14.25, and ultimately conveyed to the Columbia River via existing Port outfalls. As described above in section 4.1.3.3, stormwater management facilities will be designed to meet all necessary regulatory requirements to protect the quantity and quality of surface- and groundwater on and adjacent to the site.

2. *All shoreline development shall comply with the applicable requirements of the VMC Chapter 14.24, Erosion Prevention & Sedimentation Control; 14.25, Stormwater Control; and 14.26, Water Resources Protection.*
3. *Best management practices [BMPs] for control of erosion and sedimentation shall be implemented for all shoreline development.*
4. *Potentially harmful materials, including but not limited to oil, chemicals, tires, or hazardous materials, shall not be allowed to enter any body of water or wetland, or to be discharged onto the land except in accordance with VMC 14.26. Potentially harmful materials shall be maintained in safe and leak-proof containers.*

Response: The project will be constructed using appropriate BMPs, as described in section 4.1.3.2 and 4.1.3.3, to manage potential erosion or turbidity concerns consistent with permits issued for the project and the requirements of VMC Chapter 14. Design and operation measures to minimize and respond to inadvertent releases of harmful materials as described in section 4.1.3.4.

5. *Herbicides, fungicides, fertilizers, and pesticides shall not be applied within twenty-five (25) feet of a waterbody, except by a qualified professional in accordance with state and federal laws. Further, pesticides subject to the final ruling in Washington Toxics Coalition, et al., v. EPA shall not be applied within sixty (60) feet for ground applications or within three hundred (300) feet for*

aerial applications of the subject water bodies and shall be applied by a qualified professional in accordance with state and federal law.

Response: The construction of the proposed project does not involve the application of fungicides, fertilizers, and/or pesticides. If, in the operation of the facility, the management of invasive vegetation is required, it will be conducted in conformance with these provisions.

6. *Any structure or feature in the Aquatic shoreline designation shall be constructed and/or maintained with materials that will not adversely affect water quality or aquatic plants or animals. Materials used for decking or other structural components shall be approved by applicable state agencies for contact with water to avoid discharge of pollutants.*

Response: Additional steel piles and concrete decking will be necessary for structural improvements at the dock. WAC 220-11-060 contains technical provisions for dock construction established by WDFW. These provisions address the use of treated wood decking and structural elements. No wood elements are proposed consistent with these provisions.

7. *Conveyance of any substance not composed entirely of surface and stormwater directly to water resources shall be in accordance with VMC 14.26.*

Response: The project does not propose to convey anything other than stormwater to the Columbia River. Process water from the operation of the facility will be conveyed to the City sanitary sewer system for treatment and discharge.

4.3.4 SMP Chapter 5A Critical Areas Regulations

For this project, fish and wildlife habitat conservation areas, frequently flooded areas, and geologic hazard areas fall within the shoreline jurisdiction and are subject to compliance with the critical area standards contained in Chapter 5A of the SMP.

VMC 20.740.060 Approval Criteria

Any activity or development subject to this chapter, unless otherwise provided for in this chapter, shall be reviewed and approved, approved with conditions, or denied based on the proposal's ability to comply with all of the following criteria. The City may condition the proposed activity as necessary to mitigate impacts to critical areas and their buffers and to conform to the standards required by this chapter. Activities shall protect the functions of the critical areas and buffers on the site. Mitigation shall occur in the following order of priority:

- A. *Avoid Impacts. The Applicant shall first avoid all impacts that degrade the functions and values of (a) critical area(s) by not taking a certain action or parts of an action. This may necessitate a redesign of the proposal.*

- B. *Minimize Impacts. The applicant shall minimize the impacts of the activity by limiting the degree or magnitude of the action and its implementation by using appropriate technology or by taking affirmative steps to avoid or reduce the impacts. The applicant shall seek to minimize the fragmentation of the resource to the greatest extent possible.*
- C. *Rectify Impacts. The applicant shall rectify the impacts by repairing, rehabilitating, or restoring the affected environment.*
- D. *Reduce Impacts. The applicant shall reduce or eliminate the impacts over time by preservation and maintenance operations.*
- E. *Compensatory Mitigation. The applicant shall compensate for the impacts by replacing, enhancing, or providing substitute resources or environments. The compensatory mitigation shall be designed to achieve the functions as soon as practicable.*
- F. *Monitor Impacts and Mitigation. The applicant shall monitor the impacts and the compensation projects and take appropriate corrective measures.*

Response:

Fish and Wildlife Habitat Conservation Area – Impacts to fish and wildlife habitat conservation areas have been avoided, to a great extent, by locating the proposed facility at an existing marine terminal, thus forestalling many of the direct environmental effects that could be expected from a new in-water facility. As shown in Section 4.3.4.1, the only project elements located in regulatory conservation areas are the proposed dock improvements located waterward of the top of the bank. These modifications are the minimum necessary to obtain an optimal mooring configuration and to meet current seismic standards. To offset the additional piles and overwater structure, the project will remove existing piles and overwater structures at the project site, Terminal 5, and Terminal 2. See section 4.3.3.2 for additional discussion of impacts and mitigation to the aquatic habitat.

Frequently Flooded Areas – No fill is planned for the project within the 100-year floodplain. As a consequence, the proposal will not result in a net rise in the 100-year base flood elevation. Furthermore, no structures, other than improvements to the existing dock, will be located in the 100-year floodplain.

Geologic Hazard Areas – Clark County GIS data indicate that soils within the area of the project site have moderate-to-high potential for liquefaction or dynamic settlement during seismic events. This condition occurs over the entire site and across much of the land at the Port. Therefore, avoiding geologic hazard areas is not possible. Generally, critical area requirements for geologic hazard areas consist of compliance with the building code.

G. *Type and Location of Mitigation. Compensatory mitigation shall be in-kind and on-site, when feasible, and sufficient to maintain the functions of the critical area, and to prevent risk from a hazard posed by a critical area to a development or by a development to a critical area.*

Response: Mitigation for effects to conservation areas is described above and will occur primarily onsite through the design of the project and on other areas of the Port. Geologic hazard areas do not possess an ecological function that requires maintenance through mitigation or compensation. Rather, the geologic hazard is simply an indicator that the project must comply with building code standards regarding seismic hazards.

H. *In addition to mitigation, unavoidable adverse impacts may be addressed through restoration efforts.*

Response: No restoration is planned.

I. *No Net Loss. The proposal protects the critical area functions and values and results in no net loss of critical area functions and values.*

Response: As shown in section 4.3.3.2, the proposed project will not result in a net loss of critical area functions and values.

J. *Consistency with General Purposes. The proposal is consistent with the general purposes of this chapter and does not pose a significant threat to the public health, safety, or welfare on or off the development proposal site;*

Response: Per VMC Section 20.740.010 as referenced in Section 5A of the SMP, the general purposes of the critical area provisions are: (A) to designate and protect ecologically sensitive and hazardous areas (critical areas) and their functions and values, while also allowing the reasonable use of property; (B) protect critical areas (wetlands, fish and wildlife habitat conservation areas, geologically hazardous areas and frequently flooded areas); and (C) implement the goals and policies of the Vancouver Comprehensive Plan.

Consistent with these general purposes, the proposed project will use an existing port terminal and adjacent shoreline areas with limited ecological function to develop a new export facility that will expand economic opportunities in the City and the region. The shoreline development that is proposed will occur within existing developed areas and will not disturb or degrade environmentally sensitive areas. As described in section 4.3.3.2, the development of the Facility will include extensive systems to avoid, contain, respond to, and mitigate for any potential spill that could occur in the transfer of crude oil. As such, the proposal does not pose a significant threat to the public health, safety, or welfare on or off the development proposal site.

K. *Performance Standards. The proposal meets the specific performance standards of Fish and Wildlife Habitat Conservation Areas VMC 20.740.110, Frequently Flooded Areas VMC 20.740.120, Geologic Hazard Areas VMC 20.740.130, and Wetlands VMC 20.740.140, as applicable.*

Response: Per the performance standard provisions for fish and wildlife habitat conservation areas, frequently flooded areas, and geologic hazard areas, the proposed project has been designed to ensure

- No net loss of critical area functions,
- No increase in the base flood elevation, and
- Compliance with the seismic code provisions adopted by VMC Title 17, Building and Construction.

4.3.4.1 VMC 20.740.110 Fish and Wildlife Habitat Conservation Areas

This code section identifies the following fish and wildlife habitat conservation areas:

- Habitat used by any life stage of state or federally designated endangered, threatened, and sensitive fish and wildlife species
- Priority habitats and associated priority species (PHS)
- Water bodies
- Habitats of local importance
- Riparian management areas and riparian buffers

The Columbia River, a Type 1 water/Type S shoreline of the state, supports resident and anadromous fish species. The river is designated as priority habitat by WDFW and is designated critical habitat for several salmonids and bull trout listed under the Endangered Species Act (ESA). The river also provides migration and foraging habitat for outmigrant juvenile salmonids. Marine mammals that occur in the river include California sea lions (*Zalophus californianus*), Steller sea lions (*Eumatopius jubatus*), and harbor seals (*Phoca vitulina*).

The City has established riparian management areas (RMA) and riparian buffers (RB) for the Columbia River. The RMA is defined as land 100 feet from the OHWM; the RB extends an additional 75 feet landward from the RMA along the Columbia River. However, Section 2.740.110(A)(1)(e)(A) specifies that where impervious surfaces from previous development functionally isolate the RMA and RB from the waterbody, the regulated area extends to the impervious surfaces. The Terminal 4 area was developed in 1993 and 1994 and included the installation of guardrails at the top of the bank and parking and other impervious surfaces landward of the guardrail. Therefore, the regulatory RMA/RB is limited to the riprap bank below the guardrail. At Terminal 4, vegetation within the functional portion of the riparian habitat at the site consists primarily of three small-diameter black cottonwood,

willows, non-native false indigo bush, and Himalayan blackberry below the top of the bank. The bank is armored with riprap and above the riprap, there is a narrow band of ruderal grass/forb habitat. No vegetation clearance or disturbance is proposed within these limited functional areas of riparian habitat; therefore, the proposed project will not reduce the function of the fish and wildlife habitat conservation areas on the site.

4.3.4.2 VMC 20.740.120 Frequently Flooded Areas

As stated above, no net fill will occur within the 100-year floodplain of the site. Therefore, the project will not affect the 100-year base flood elevation and the proposed project is consistent with VMC 20.740.120.

4.3.4.3 VMC 20.740.130 Geologic Hazards

As previously stated, Clark County GIS data indicated moderate-to-high potential for liquefaction or dynamic settlement within the project site area. The project will incorporate necessary structural and foundation design to comply with the seismic requirements of the building code.

4.3.5 Specific Shoreline Use Regulations (SMP Chapter 6)

These responses illustrate how the project complies with the applicable specific shoreline use regulations described in Chapter 6 of the SMP.

4.3.5.1 Shoreline Use, Modification and Development Standards (SMP Table 6-1)

Table 6-1 in the SMP identifies development standards for uses in the shoreline. Shoreline uses included in the proposed project are identified in Table 10.

Table 10. Shoreline Uses

Shoreline Use	Proposed Uses	Aquatic	Urban: High Intensity
<p>Industrial Use (Water-Dependent)</p> <p>Industrial Use (Water Dependent)</p>	<ul style="list-style-type: none"> • A 24- to 36-inch-diameter pipe that will connect the storage tanks to loading berths 13 and 14. • A 6-inch return line that will allow oil to return to the storage tanks in case of a shutdown of the ship loading system. • A 16- to 22-inch-diameter line that will deliver hydrocarbon vapor generated during the loading of vessels to a new MVCU. • A vapor blower staging unit that will be constructed on a concrete pad approximately 30 feet west of the Berth 13 access trestle. • An Emergency Fire Water Pump and Foam Building • Marine vapor recovery units for handling emissions for the ship holds during loading. The units will be installed on concrete slab and will include approximately 8, 25-foot-tall stacks. • An approximately 300-square-foot single-story control room/E-house that will be located immediately east of the Berth 13 access trestle. • An approximately 300-square-foot single-story MCC building that will be located approximately 250 feet west of the Berth 13 access trestle. • Improvements to the existing dock structure, including <ul style="list-style-type: none"> – Removal of two existing mooring dolphins – Placement of four new mooring dolphins including catwalks connecting to the existing trestle and dock. – Removal of an existing breasting dolphin and catwalks. – Replacement of the existing pile fender system with a cone fender system. – Adding more structural piles to the access trestle and dock. • Placement of a crane(s), dock safety unit, crane control building, and other equipment on the dock for ship loading. 	Permitted	Permitted

Shoreline Use	Proposed Uses	Aquatic	Urban: High Intensity
Setback= 0' Minimum in UHI/N/A in Aquatic	<ul style="list-style-type: none"> Facilities proposed below OHWM and are in compliance as no minimum setback is required for a water-dependent facility. 		
Height = Unlimited in both UHI and Aquatic	<ul style="list-style-type: none"> The tallest structure within shoreline jurisdiction is 45 feet upland and approximately 60 feet above the OHWM in the aquatic zone 		
Parking (Accessory Use)	<ul style="list-style-type: none"> Proposed use of 11 existing parking stalls adjacent to Berth 13 in the HI designation. 	N/A	Permitted
Setback= 50' in UHI and N/A in Aquatic	<ul style="list-style-type: none"> The parking area is approximately 60 feet north of the OHWM of the Columbia River. 		
Transportation Uses (Railroads)	<ul style="list-style-type: none"> The addition of 5,600 linear feet of rail associated with the construction of two additional rail loops no closer than 100 feet from the OHWM at Terminal 5. 	N/A	Permitted

4.3.5.2 Moorage Facilities: Docks, Piers, and Mooring Buoys (SMP Section 6.3.3.5)

1. *Mooring buoys shall be used instead of docks and piers whenever feasible.*

Response: The proposed project will utilize the existing marine terminal at berths 13 and 14 in Area 400. Loading the vessel requires a direct ship-to-shore connection. Mooring buoys are not feasible for the type of loading and vessels needed for the proposed use as a direct connection with the shoreline is necessary for the loading process.

4. *Docks and piers for water-dependent commercial and industrial uses shall be allowed to the outer harbor line or combined U.S. Pierhead/Bulkhead line but no more than that required for the draft of the largest vessel expected to moor at the facility. These provisions are also applicable to multiple-use facilities where the majority use is water-dependent and public access can safely be provided.*

Response: The proposed project will maintain the waterward line of the existing dock at berths 13 and 14 in Area 400 and will not extend the dock southward toward the Columbia River navigational channel.

5. *Bulk storage (non-portable storage in fixed tanks) for gasoline, oil and other petroleum products for any use or purpose is prohibited on docks and piers.*

Response: The proposed facility will transfer crude oil from upland storage at the storage tank area at Area 300 via above-ground and below-ground steel transfer pipelines to the vessel loading system in Area 400. Consistent with this provision, gasoline, oil, and other petroleum products will not be stored on the dock.

4.3.5.3 Industrial Uses (SMP Section 6.3.6)

1. *Water-oriented industrial uses and development are preferred over nonwater oriented industrial uses and development.*

Response: Consistent with this provision, the proposed facility is a water-dependent facility and therefore is sited appropriately in shoreline jurisdiction.

5. *Proposed developments shall maximize the use of legally-established existing industrial facilities and avoid duplication of dock or pier facilities before expanding into undeveloped areas or building new facilities. Proposals for new industrial and port developments shall demonstrate the need for expansion into an undeveloped area.*

Response: Consistent with this provision, the proposed facility will use an existing industrial site and will not expand into an undeveloped area. The marine terminal will use an existing legally established dock thereby avoiding the duplication of dock and pier facilities.

6. *Proposed large-scale industrial developments or major expansions shall be consistent with an officially-adopted comprehensive scheme of harbor improvement and/or long-range port development plan.*

Response: The proposed facility is consistent with the Port's mission to provide economic benefit to the community through leadership, stewardship, and partnership in marine and industrial development. The project is also consistent with the Port's strategic plan goals which include the development of new rail-served marine terminals to grow economic benefits for the community. The Port has indicated that the project does not require an amendment to its adopted Comprehensive Scheme of Harbor Improvements.

4.3.5.4 Transportation Uses (SMP Section 6.3.13)

1. *All transportation facilities in shoreline areas shall be constructed and maintained to cause the least possible adverse impacts on the land and water environments, shall respect the natural character of the shoreline, and make every effort to preserve wildlife, aquatic life and their habitats.*

Response: The proposed project will require the placement of two rail loops on Terminal 5, portions of which are within shoreline jurisdiction. These rail tracks will be installed landward of existing rail loops in areas that are currently impervious gravel surfaces. The site of the relocated tracks is devoid of vegetation and provides no riparian habitat function. Therefore, the proposed rail lines will not involve adverse effects to the land and water environment at Terminal 5.

2. *New or expanded surface transportation facilities not related to and necessary for the support of shoreline activities shall be located outside the shoreline*

jurisdiction wherever possible, or set back from the ordinary high water mark far enough to make shoreline stabilization, such as riprap, bulkheads or jetties, unnecessary.

Response: The proposed rail lines will serve the facility, which is a water-dependent use; the lines are located landward of the existing rail lines. Thus, there is a direct connection between the proposed rail relocation and the shoreline activities of the proposal. Additionally, the relocated rail lines will not require modifications to the armored embankment at Terminal 5.

3. *Transportation facilities shall not adversely impact existing or planned water-dependent uses by impairing access to the shoreline. All roads shall be set back from water bodies and shall provide buffer areas of compatible, self-sustaining native vegetation. Shoreline scenic drives and viewpoints may provide breaks in the vegetative buffer to allow open views of the water.*

Response: The proposed rail lines will not obstruct access to the shoreline at Terminal 5, as an existing access roads and rail lines are located between the proposed tracks and the shoreline. The proposed driveway addition to allow access to Area 400 will be perpendicular to the shoreline and will provide access to a water-dependent use.

5.0 CONCLUSION

As demonstrated in this narrative and the materials that together comprise the submittal packet, the proposed project has been designed to comply with the applicable provisions of the VMC and the SMP. Compliance with the City's land use regulations and development standards is provided to support the application to EFSEC for site certification.

**Project Narrative
Tesoro Savage Vancouver Energy Distribution Terminal
Vancouver, Washington**

**Appendix A
Plan Sheets***

***Included on CD**

Project Narrative
Tesoro Savage Vancouver Energy Distribution Terminal
Project Narrative

Appendix B
Cultural Resource Report*

***Included on CD**

**Project Narrative
Tesoro Savage Vancouver Energy Distribution Terminal
Vancouver, Washington**

**Appendix C
Application for Site Certification Geotechnical Sections***

***Included on CD**

**Project Narrative
Tesoro Savage Vancouver Energy Distribution Terminal
Vancouver, Washington**

**Appendix D
Transportation Impact Analysis Technical Report***

***Included on CD**

**Project Narrative
Tesoro Savage Vancouver Energy Distribution Terminal
Vancouver, Washington**

**Appendix E
Preliminary Stormwater Pollution Prevention Plan (SWPPP)*
Spill Prevention, Control and Countermeasures Plan Outline
(SPCC)***

***Included on CD**

**Project Narrative
Tesoro Savage Vancouver Energy Distribution Terminal
Vancouver, Washington**

**Appendix F
Preliminary Stormwater Report***

***Included on CD**

**Project Narrative
Tesoro Savage Vancouver Energy Distribution Terminal
Vancouver, Washington**

**Appendix G
Level V Tree Plan*
Clark Public Utilities Electrical Substation
Port of Vancouver, USA**

***Included on CD**