



WASHINGTON STATE

Joint Aquatic Resources Permit Application (JARPA) Form^{1,2}

USE BLACK OR BLUE INK TO ENTER ANSWERS IN THE WHITE SPACES BELOW.



US Army Corps
of Engineers®
Seattle District

AGENCY USE ONLY

Date received: _____

Agency reference #: _____

Tax Parcel #(s): _____

Part 1–Project Identification

1. Project Name (A name for your project that you create. Examples: Smith's Dock or Seabrook Lane Development) [help]
Tesoro Savage Vancouver Energy Distribution Terminal

Part 2–Applicant

The person and/or organization responsible for the project. [\[help\]](#)

2a. Name (Last, First, Middle)			
Flint, Kelly			
2b. Organization (If applicable)			
Tesoro Savage Petroleum Terminal LLC			
2c. Mailing Address (Street or PO Box)			
6340 South 3000 East, Suite 600			
2d. City, State, Zip			
Salt Lake City UT 84121			
2e. Phone (1)	2f. Phone (2)	2g. Fax	2h. E-mail
(801) 944-6600	()	(801) 944-6554	generalcounsel@savageservices.com

¹Additional forms may be required for the following permits:

- If your project may qualify for Department of the Army authorization through a Regional General Permit (RGP), contact the U.S. Army Corps of Engineers for application information (206) 764-3495.
- If your project might affect species listed under the Endangered Species Act, you will need to fill out a Specific Project Information Form (SPIF) or prepare a Biological Evaluation. Forms can be found at <http://www.nws.usace.army.mil/Missions/CivilWorks/Regulatory/PermitGuidebook/EndangeredSpecies.aspx>.
- Not all cities and counties accept the JARPA for their local Shoreline permits. If you need a Shoreline permit, contact the appropriate city or county government to make sure they accept the JARPA.

²To access an online JARPA form with [help] screens, go to http://www.epermitting.wa.gov/site/alias_resourcecenter/jarpa_jarpa_form/9984/jarpa_form.aspx.

For other help, contact the Governor's Office of Regulatory Assistance at 1-800-917-0043 or help@ora.wa.gov.

Part 3—Authorized Agent or Contact

Person authorized to represent the applicant about the project. (Note: Authorized agent(s) must sign 11b of this application.) [\[help\]](#)

3a. Name (Last, First, Middle)			
3b. Organization (If applicable)			
3c. Mailing Address (Street or PO Box)			
3d. City, State, Zip			
3e. Phone (1)	3f. Phone (2)	3g. Fax	3h. E-mail
()	()	()	

Part 4—Property Owner(s)

Contact information for people or organizations owning the property(ies) where the project will occur. Consider both **upland and aquatic** ownership because the upland owners may not own the adjacent aquatic land. [\[help\]](#)

- Same as applicant. (Skip to Part 5.)
- Repair or maintenance activities on existing rights-of-way or easements. (Skip to Part 5.)
- There are multiple upland property owners. Complete the section below and fill out [JARPA Attachment A](#) for each additional property owner.
- Your project is on Department of Natural Resources (DNR)-managed aquatic lands. If you don't know, contact the DNR at (360) 902-1100 to determine aquatic land ownership. If yes, complete [JARPA Attachment E](#) to apply for the Aquatic Use Authorization.

4a. Name (Last, First, Middle)			
Boyden, Patty			
4b. Organization (If applicable)			
Port of Vancouver, USA			
4c. Mailing Address (Street or PO Box)			
3103 NW Lower River Road			
4d. City, State, Zip			
Vancouver, WA 98660			
4e. Phone (1)	4f. Phone (2)	4g. Fax	4h. E-mail
(360) 693-3611	()	(360) 735-1565	pboyden@portvanusa.com

Part 5–Project Location(s)

Identifying information about the property or properties where the project will occur. [\[help\]](#)

- There are multiple project locations (e.g. linear projects). Complete the section below and use [JARPA Attachment B](#) for each additional project location.

5a. Indicate the type of ownership of the property. (Check all that apply.) [help]			
<input type="checkbox"/> Private <input type="checkbox"/> Federal <input checked="" type="checkbox"/> Publicly owned (state, county, city, special districts like schools, ports, etc.) <input type="checkbox"/> Tribal <input checked="" type="checkbox"/> Department of Natural Resources (DNR) – managed aquatic lands (Complete JARPA Attachment E)			
5b. Street Address (Cannot be a PO Box. If there is no address, provide other location information in 5p.) [help]			
5501 NW Lower River Road			
5c. City, State, Zip (If the project is not in a city or town, provide the name of the nearest city or town.) [help]			
Vancouver, WA 98660			
5d. County [help]			
Clark			
5e. Provide the section, township, and range for the project location. [help]			
¼ Section	Section	Township	Range
S ½	18	2N	1E WM
N 1/2 , SW ¼	19	2N	1E WM
N 1/2	20	2N	1E WM
5f. Provide the latitude and longitude of the project location. [help]			
<ul style="list-style-type: none"> Example: 47.03922 N lat. / -122.89142 W long. (Use decimal degrees - NAD 83) 			
45.651778 N. lat / 122.731161 W. long			
5g. List the tax parcel number(s) for the project location. [help]			
<ul style="list-style-type: none"> The local county assessor's office can provide this information. 			
152799-000, 152903-000, 152173-000, 152168-000, 152166-000, 503030-000, 503030-003, 503030-004, 152184-000, 152177-000, 152179-000, 986027-146, 986027-027, 50303-001, 152905-000, 152798-000			
5h. Contact information for all adjoining property owners. (If you need more space, use JARPA Attachment C.) [help]			
Name	Mailing Address	Tax Parcel # (if known)	
Port of Vancouver USA	3103 NW Lower River Road Vancouver WA 98660	153109-000, 152174-000, 152185-000, 152172-000	
Farwest Steel Properties	2000 Henderson Ave	152167-000	
	Eugene OR 97440		
Clark Public Utilities	1200 Fort Vancouver	152169-000, 152906-000	
	Vancouver, WA 98666		

Clark County	PO Box 5000	152169-000
	Vancouver WA 98666	
Hickey Family Company	16420 SE McGillivray Suite 103, PMB #193	152804-000
	Vancouver WA 98683	
Washington State Department of Natural Resources	PO Box 47027 Olympia WA 98504-7027	No number

5i. List all wetlands on or adjacent to the project location. [\[help\]](#)

There are no wetlands on the project site. There are wetland mitigation sites located on the parcel north of Area 200 (Parcel 153109-000) and east of Area 300 (Parcel 152185-000). The Columbia River Wetland Mitigation Bank is located north of Area 300.

5j. List all waterbodies (other than wetlands) on or adjacent to the project location. [\[help\]](#)

Columbia River

5k. Is any part of the project area within a 100-year floodplain? [\[help\]](#)

Yes No Don't know

5l. Briefly describe the vegetation and habitat conditions on the property. [\[help\]](#)

The majority of the areas proposed for the project are devoid of vegetation. Vegetation is limited to grassy areas on portions of the pipeline route near berths 13 and 14, near the Clark County Jail Work Center, and areas of the riprap bank of the Columbia River. These areas are primarily grass and weedy herbaceous vegetation, with approximately 25 cottonwood (*Populus trichocarpa*) and Lodgepole pine (*Pinus contorta*) trees at the Jail Work Center.

The riparian area within the proposed Facility 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.), 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. A guardrail is located at the top of the bank and areas landward of the top of the bank are devoted to paving, parking and storage. No riparian trees or vegetation will be removed, and no impacts to bank margin habitat are anticipated.

Habitat improvements were conducted in 2009 along the East Landfill shoreline, downstream of berths 13 and 14. This restoration activity included the construction of a riparian planting area, placement of large woody debris, and riparian plantings along the length of the East Landfill revetment. The Port will install large woody debris on the Terminal 4 shoreline east of the project site as part of mitigation efforts for the West Vancouver Freight Access (WVFA) project.

The Columbia River, a Type 1 water/Type S shoreline of the state, supports resident and anadromous fish species. Within the project vicinity, the Washington State Department of Fish & Wildlife (WDFW) has designated riparian priority habitat under its PHS program. The designated area includes the Columbia River and the land adjacent to it. As noted above, the shoreline is primarily riprap, leading to a gently sloping sand and silt substrate, before dropping off to the berth and channel. Aquatic habitat conditions within the area of the Facility are consistent with those associated with an urbanized and industrial reach of the Columbia River. The navigation channel of the river in this area is maintained artificially at a depth of approximately 43 feet. As a result, the natural fluvial processes of the river have been altered dramatically. 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 site. Sediments in the area of the project are predominantly silts, sands, and clays, with very little gravel or cobble present. There is limited in-stream large woody debris nor any backwater or side channel habitat at the site.

5m. Describe how the property is currently used. [\[help\]](#)

All Facility areas are located within the Port of Vancouver (Port) and are in various states of industrial development. The current uses of each of the Facility areas are described below:

Area 200 is in the northern portion of the area of the Port that is 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, through the early 2000s, when aluminum processing activities on the property ended. The Port completed the purchase of the Evergreen and Alcoa properties in 2009 and, with the exception of the onsite 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 WVFA project, a rail improvement project that is under construction at the Port. Remediation was conducted at the site in accordance with Washington State Department of Ecology (Ecology) approvals. There are several locations within the boundary of the proposed Facility, that are deed restricted areas, including the Vanexco cap, North/North 2 landfills, the SPL cap, and the Ingot Plant Cap.

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. This site was developed by the Port for laydown and industrial development and is currently partially occupied by a temporary steel scrap storage yard.

Area 400 is located at existing Port berths 13 and 14 on the Columbia River south of the current Subaru facility. Berths 13 and 14 were developed by the Port in the early 1990s and most recently have been used as vessel layberths.

Area 500 is located within Terminal 5, Parcel 1A, berths 13 and 14, and corridors adjacent to existing private port roads.

Area 600 is located at the northwest corner of Terminal 5. Area 600 was part of the Alcoa/Evergreen site and is currently vacant.

5n. Describe how the adjacent properties are currently used. [\[help\]](#)

The project site and its surroundings are heavily modified from their original natural state and are typified by industrial facilities including large industrial buildings, large expanses of impervious surfacing, utility and railroad corridors, fencing, and open storage. The stormwater and mitigation sites operated by the Port adjacent to the project site offer some vegetation; however, these limited sites are generally visually and physically disconnected from the surrounding landscape.

Area 200 – Uses immediately surrounding Area 200 are as follows:

- North: Old Alcoa Facility Access 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), 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 BHP Billiton 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 combined-cycle combustion natural gas turbine located on approximately 16 acres that can generate 248 megawatts of electricity.

The bulk potash handling facility will include rail unloading, a storage building, dock and shiploader and accessory structures and facilities. Initial site grading and ground improvement work has been completed for this project.

Tidewater Terminal Company occupies approximately 23 acres, including an office building for the corporate headquarter for and Tidewater Barge Lines operates a marine terminal. The terminal handles containers and serves as a tug and barge maintenance and operations facility including marine and upland facilities.

Area 300 – 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 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 to mitigate for wetland impacts on other properties. The Subaru facility is a port of entry for 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.

Area 400 – 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.

Area 500 – Properties adjacent to the pipeline routes are all industrial, with the exception of the Jail Work Center, previously described above, which is located immediately south and west of the pipeline routes.

Area 600 – 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.

Rail infrastructure – The rail 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.

5o. Describe the structures (above and below ground) on the property, including their purpose(s) and current condition. [\[help\]](#)

The only structures within the limits of the project are the Gateway Avenue Overpass, fencing and the dock constituting berths 13 and 14.

The Gateway Avenue Overpass is currently under construction and will provide a grade separated crossing for Gateway Avenue over the main port rail lines replacing the existing at grade crossing.

Berths 13 and 14 were constructed in 1993 and 1994 in a T-dock configuration consisting of two trestles with platforms and mooring structures. The 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 waterward of the T docks. The structures were developed for short and long term moorage of ocean going vessels.

5p. Provide driving directions from the closest highway to the project location, and attach a map. [\[help\]](#)

From Interstate 5 north or southbound take the Fourth Plain Exit (Exit 1D). Follow Fourth Plain Boulevard west approximately 1.5 miles to where it merges into NW Lower River Road. Continue west approximately 2 miles to Old Lower River Road. Travel south on Old Lower River Road to a four-way intersection. Turn left and continue east on an unnamed private Port road approximately 1,000 feet to the proposed Facility location.

Part 6–Project Description

6a. Briefly summarize the overall project. You can provide more detail in 6b. [\[help\]](#)

Tesoro Savage Petroleum Terminal LLC (the Applicant) is proposing to construct a facility to receive crude oil by rail, store it on site, and load it on vessels for shipment to refineries located primarily on the West Coast. Unit trains will arrive at the Facility and will be stationed on the Facility rail loops. The trains will be “indexed” through the unloading area (Area 200), where the crude oil will be gravity-drained into the transfer pipeline system (Area 500). The crude oil will be pumped through the transfer pipelines to the crude oil storage tanks (Area 300) where it will be held until the marine vessel loading operation. The unloading and conveyance system is also designed to allow blending the various types of crude oil at the Facility to meet customer demands for specific qualities. Marine vessels will arrive and moor at the dock (Area 400) where they will be preboomed. Crude oil will be pumped from the storage tanks to the loading area, and loaded to the marine vessels.

In addition to the primary components described above, the Facility will include ancillary elements that will support the unloading, storage, and loading operations. The following Table summarizes the primary and ancillary project elements by Facility area.

Facility Area	Primary and Ancillary Project Elements
Rail Infrastructure	<ul style="list-style-type: none"> • Rail facility loops
200 – Unloading and Office	<ul style="list-style-type: none"> • Rail unloading area • Control rooms\E-houses • Administrative and Support Buildings • Fire Pump and Foam Building
300 – Storage	<ul style="list-style-type: none"> • Crude oil Storage Tanks • Secondary Containment Berm

	<ul style="list-style-type: none"> • Boiler Building • Pump Basin • Control Room/E-House • Fire Pump and Foam Building
400 – Marine Terminal	<ul style="list-style-type: none"> • Marine Vessel Loading Hoses and Equipment • Control Room/E-House • Crane Control Room • Dock Safety Unit • Marine Vapor Combustion Unit • Vapor Blower Skid • Dock Improvements • Spill Prevention, Response and Containment Equipment • Fire Pump and Foam Building
500 – Transfer Pipelines	<ul style="list-style-type: none"> • Transfer Piping from Area 200 to Area 300 • Transfer Piping to/from Area 300 to Area 400 • Piping from vessel loading to Vapor Control Unit
600 – West Boiler	<ul style="list-style-type: none"> • West Boiler Building

6b. Describe the purpose of the project and why you want or need to perform it. [\[help\]](#)

The Facility's principal purpose is to provide North American crude oil to U.S. refineries to offset or replace declining Alaska North Slope crude reserves, California crude production, and more expensive foreign crude-oil imports. The crude oil handled by and shipped through the Facility will largely offset other sources of crude oil used by U.S. refineries that choose to source a portion of their crude through the Facility. In accordance with current federal law, crude oil extracted in the United States generally cannot be exported to foreign countries.

The Port represents the closest deep water port to the primary sources of the increased domestic production. The Port is already served by Class 1 railroads that provide service from the source regions, thereby providing the necessary transportation infrastructure to allow transportation of crude oil to U.S. West Coast refineries.

6c. Indicate the project category. (Check all that apply) [\[help\]](#)

- Commercial
 Residential
 Institutional
 Transportation
 Recreational
 Maintenance
 Environmental Enhancement

6d. Indicate the major elements of your project. (Check all that apply) [\[help\]](#)

<input type="checkbox"/> Aquaculture <input type="checkbox"/> Bank Stabilization <input type="checkbox"/> Boat House <input type="checkbox"/> Boat Launch <input type="checkbox"/> Boat Lift <input type="checkbox"/> Bridge <input type="checkbox"/> Bulkhead <input type="checkbox"/> Buoy <input type="checkbox"/> Channel Modification	<input type="checkbox"/> Culvert <input type="checkbox"/> Dam / Weir <input type="checkbox"/> Dike/Levee/Jetty <input type="checkbox"/> Ditch <input checked="" type="checkbox"/> Dock/Pier <input type="checkbox"/> Dredging <input type="checkbox"/> Fence <input type="checkbox"/> Ferry Terminal <input type="checkbox"/> Fishway	<input type="checkbox"/> Float <input type="checkbox"/> Floating Home <input type="checkbox"/> Geotechnical Survey <input type="checkbox"/> Land Clearing <input type="checkbox"/> Marina / Moorage <input type="checkbox"/> Mining <input type="checkbox"/> Outfall Structure <input checked="" type="checkbox"/> Piling/Dolphin <input type="checkbox"/> Raft	<input type="checkbox"/> Retaining Wall (upland) <input type="checkbox"/> Road <input type="checkbox"/> Scientific Measurement Device <input type="checkbox"/> Stairs <input type="checkbox"/> Stormwater facility <input type="checkbox"/> Swimming Pool <input type="checkbox"/> Utility Line
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Other:

6e. Describe how you plan to construct each project element checked in 6d. Include specific construction methods and equipment to be used. [\[help\]](#)

- Identify where each element will occur in relation to the nearest waterbody.
- Indicate which activities are within the 100-year floodplain.

The proposed Facility consists of both upland and marine components. While the focus of the JARPA is the construction of the Facility elements located below the ordinary high water mark (OHWM), as this is the component of the Facility that has the potential to impact aquatic resources, the upland portions of the Facility are also described briefly. This response also describes the construction methods that will be employed by the Facility.

Facility Overview

The proposed Facility will consist of the following elements:

Rail Infrastructure: Construction of two additional loop tracks on Terminal 5

Area 200 – Unloading and Office

- Rail Unloading Area
- Administrative and Support Buildings
- Fire Pump and Foam Building

Area 300 – Storage

- Crude Oil Storage Tanks
- Secondary Containment Berm
- Boiler Building
- Pump Basin
- Control Room/E-House
- Fire Pump and Foam Building

Area 400 – Marine Terminal

- Marine Vessel Loading Hoses and Equipment
- Control Room/E-House
- Crane Control Room
- Dock Safety Unit
- Marine Vapor Combustion Unit (MVCU)
- Vapor Blower Skid
- Dock Improvements
- Spill Prevention and Response Equipment. Fire Pump and Foam Building

Area 500 – Transfer Pipelines

- Transfer Piping from Area 200 to Area 300
- Transfer Piping to/from Area 300 to Area 400
- Piping from vessel Loading to MVCU

Area 600 – West Boiler

- West Boiler Building

Rail Infrastructure: Up to four unit trains per day on average will be delivered onto the Port's rail network via Class I railroad lines for staging on the rail infrastructure serving the Facility. Trains will arrive at Terminal 5 from the east where they will exit the Class 1 mainlines and enter the Port's industrial rail network and travel to the rail offloading building located on the north side of the Terminal 5 rail loop. The design of the rail infrastructure will accommodate complete unit trains, eliminating the need to break trains into smaller segments requiring multiple switching movements during the unloading process.

To support the staging of unit trains, two new rail lines (track numbers 4106 and 4107), each approximately 7,700 feet in length, will be added to the Terminal 5 rail infrastructure. As shown in Figure 2.3-3, the additional lines will form two complete loops inside the existing rail loops and will begin and end near the Gateway Avenue grade separation. The rail loops will be designed to comply with railroad and federal requirements.

In order to accommodate the two additional rail loops, the configuration of permitted (existing and to be built) WVFA rail facilities and the adjacent loop road will be shifted: the shifting of existing facilities will be performed by others, has been previously permitted. The rail loops will be designed to comply with railroad and federal requirements. Standard rail construction techniques will be used to modify existing rail lines and install the new rail loops. The southern portion of the rail loops will be approximately 150 feet from the OHWM of the Columbia River.

Areas 200: Unloading and Office

The rail unloading elements (Area 200) will be located south of the Administrative and Support Buildings. The rail unloading building will span tracks 4105, 4106, and 4107. Existing rail lines will separate the unloading elements from the Administrative/Support Buildings. These existing rail lines are not part of the Facility. A pedestrian bridge will provide access from the Administrative/Support Buildings to the rail unloading building.

Two of the unloading tracks will accommodate trains carrying crude oil that can be drained and conveyed without being heated; the third unloading track will accommodate trains carrying crude oil that can be drained and conveyed without being heated as well as crude oil that may need to be heated prior to draining and conveyance to storage. Each unit train will include approximately 100 to 120 tank cars. Typical unit train length will be approximately 7,800 feet. Tank cars typically hold between 650 and 750 barrels of crude oil.³ A typical unit train will deliver between 65,000 and 90,000 barrels of crude oil.

The rail car unloading facility is composed of a covered structure through which the trains will be pulled and safely secured where the unloading will occur. The building that houses the rail car unloading functions will be approximately 1,850 feet long by 91 feet wide, with a maximum height of approximately 50 feet. The structure will consist of a steel frame with sheet metal walls. The exterior walls of the offloading facility will be painted a neutral color. The structure will be open on both ends and have sides that stop short of the roofline to allow continuous venting. The structure will have translucent panels for natural lighting as well as interior lighting.

Unloading Piping

The unloading area is designed to accommodate three parallel tracks. Each track will include 30 unloading stations for a total of 90 stations, 30 stations per track. Track 4105 will be able to heat the rail cars by steam, as described in more detail below.

The 30 unloading stations for each track are subdivided into five groups of six unloading stations. Each unloading station will accommodate one rail car. Each unloading station will include:

- Hoses equipped with dry fit connectors used to gravity drain the crude oil from the tank car to a collection header pipe

³ A barrel of crude oil contains 42 gallons.

- Walkway (gangway) grating to serve as the unloading work platform
- Mezzanine catwalks to access the top of the tank cars
- Collection pans between rails that are piped to a separate line that conveys inadvertent releases to the rail unloading facility containment tanks;
- Paved or asphalted ground surfaces between the unloading rail tracks
- A vent line that allows the tank car to maintain atmospheric pressure as its contents drain

The 30 unloading stations dedicated to heated non-pipeline quality crude unit trains also will be equipped with steam connections to heat the crude oil to decrease its viscosity and allow it to flow more easily. Steam will be produced in the Area 600 Boiler Building and piped to the unloading facility. Tank cars that receive steam will be fitted with permanent internal steam manifolds at the bottom of the car. Inlet steam hoses will be connected to each car to allow steam to circulate in the manifold, thereby warming the contents of the tank car. Steam condensate exiting the manifolds will be collected via condensate hoses, and piped back to the steam boilers in a closed loop system.

The unloading process will be conducted with the following elements:

- Unloading will be accomplished with a closed-loop system, i.e., the crude oil will be contained in an enclosed system at all times from when it leaves the rail car to when it enters the storage tanks. During the entire unloading process, neither the crude oil nor crude oil vapors will be exposed to the atmosphere.
- Flexible vent hoses will be manually connected to a valve at the top of the car accessed by a movable gangway. The vent hoses will connect to the collection header. Vapors leaving the collection header as oil flows into the header will travel through the vent hose to the car as the crude oil drains from the car. This prevents vapors from being vented to the atmosphere.
- Unloading hoses will be manually connected to the valves on the cars using dry fit connectors, one hose per tank car. Dry fit connectors are designed so that the crude oil in the hose cannot come into contact with the atmosphere. The connector is designed such that crude oil will not flow without a secure connection. Each hose will be equipped with an automatic shutoff valve. Once the dry fit connector has been secured, the crude oil will gravity-drain from the cars to a collection header. The hoses will also have an emergency shut down (ESD) valve before the collection header. The valve will automatically close during a fire or if an ESD button is depressed in the building. Buttons are located at the bottom of all the stair landings and in between stations on the upper mezzanine.
- The collection header collects the flow from a grouping of six cars. The collection headers will be housed in below-grade trenches running parallel to the rail tracks. A single 9-foot-wide by 5-foot-deep trench will serve tracks 4106 and 4107; a 9-foot-wide by 5-foot-deep trench will serve track 4105. Although the primary purpose of the trench is to house the product collection header, spill collection line and electrical and data lines, the trench will also act as secondary containment.

Each collection header is directly connected to a dedicated pumping station which transfers the crude oil into a 24-inch-diameter transfer pipeline (one per track) which will collect the flow from all five pump basins on that track. As the crude oil flows from the collection header to the pumping stations, it will pass through a basket strainer to remove solids that may be present. The pumping stations monitor volumetric flow rate, crude oil density, and contaminants (sediment and water), and collect regular samples of the crude oil for analysis. The pumps are housed in pump basins beneath the rail unloading building. Each of the five pump basins serving Tracks 4106 and 4107 will measure approximately 15 feet wide by 34 feet long and 15 feet deep. The five pump basins serving track 4105 will measure 10 feet wide by 34 feet long and 15 feet deep. Two pumps will serve each offloading header, with one acting as a primary and the second as an on-line spare on standby. During pumping, the crude oil will not come into contact with the vaults; however, the pump basins will serve as secondary containment. The trenches and pump basins will be constructed of concrete, coated with sealant and include

chemical resistant joint sealant.

The discharge of all five unloading pumping stations will be combined into one 24-inch-diameter transfer pipeline per track, which will convey the crude oil to the storage tanks in Area 400. This transfer pipeline is part of Area 500 and is described in detail below. There will be a total of two non-heated 24-inch transfer pipelines, one per track, from the non-heated unloading stations to the storage area inlet manifold. The discharge from the pumping stations with the potential for heating will be combined into a separate heat-traced and insulated, 24-inch transfer pipe to the storage area heated inlet manifold.

Unloading Facility Pedestrian Access

One pedestrian bridge will provide access for workers from the Administrative/Support Buildings, over the existing Terminal 5 rail loops, and to the interior of the rail loop. An additional four pedestrian bridges will allow workers to pass over the unit trains once they are inside the rail car unloading facility. The pedestrian bridges will be grated and a minimum of 3 feet wide to facilitate emergency access.

Rail Car Unloading Facility Holding Tanks

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 the entire 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. The tank contents will be disposed of or recycled at an offsite facility with the ability to handle the waste.

E-Houses, Transformer, Air Compressor, and Fire Pump and Foam Building

The unloading process will be controlled from six control rooms/E-houses, one associated with two pumping basins (non-heated and heated). Each of these E-houses will be approximately 825 square feet with a maximum height of 15 feet. Two transformers will regulate electrical output to the unloading facility. Both will be pad-mounted on 225-square foot pads. A fire pump and foam building will house a diesel fire pump and fire protection systems associated with the unloading facility. The single story building will have an approximate footprint of 750 square feet.

Administrative and Support Buildings

The proposed Facility will require three approximately 3,400-square foot office buildings for administrative functions, lockers, restrooms, and other employee support facilities. These elements will be located on the north side of the Terminal 5 loop south of the existing private road. Parking and landscaping will be provided per City standards.

Area 300 – Storage

The crude oil will be stored in up to six double-bottom, internal floating-roof ASTs, aboveground storage tanks (ASTs) located in Area 300, approximately 1,700 feet north of the Columbia River and approximately 1 mile southeast of Vancouver Lake. These tanks will be approximately 48 feet in height and 240 feet in diameter, with a shell capacity of approximately 380,000 barrels each. The maximum amount of crude oil stored in each tank will be approximately 360,000 barrels, to take into account the presence of the internal floating roof and the additional head space required to allow product movement in the event of seismic conditions.

The ASTs will be erected in the field and constructed per American Petroleum Institute (API) Standard 650. AST features include a uniformly supported flat bottom, welded carbon steel construction, and control of crude oil temperature and internal tank pressure to API specifications, and will use appropriate live load characteristics for roof design. Two of the tanks may be equipped with steam manifolds constructed into the bottom of the tanks so that the contents of the tanks can be heated to maintain temperature to control viscosity during loading and unloading viscosity of oils that may require

heating. All of the tanks will be equipped with mixers to prevent crude oil from stratifying during storage.

Each tank will have a fixed roof to keep precipitation from reaching the inside of the tank and an internal floating roof with dual seals to control vapor emissions from the tank to the atmosphere. The floating roof will be designed to avoid tipping during operations.

The double-bottomed tanks will include a leak detection system between the tank floors, and will be cathodically protected to prevent corrosion.

Containment Berm

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 40 CFR 112.7. Intermediate berms will be installed within the larger containment area to separate each tank area from the larger containment area.

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 collected in the bottom of the berm will gravity-drain to the berm area sump. The sump will house three 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.

Tank to Dock Crude Oil Conveyance Pumps

Crude oil stored in the tanks will be pumped to the dock for transfer to a ship or barge. Four variable speed pumps will pump the crude, with three pumps in operation and one on standby. The pumps will be housed in the tank storage pump basin located on the west side of the storage tank area; the basin will measure approximately 58 by 58 feet square and 12 feet deep. It will be equipped with two sump pumps to evacuate any stormwater that collects in it. Stormwater evacuated from the pit will be routed through the treatment and discharge system associated with the containment berm sump described above.

E-Houses, Transformer, Air Compressor, Fire Pump and Foam, and Boiler Buildings

The storage and pumping of crude oil to vessel loading in Area 400 operations will be controlled from a control room/E-house. This E-house will have a footprint of approximately 1,250 square feet and will be single story.

Two transformers will regulate electrical output to the storage area. Both will be pad-mounted on approximately 210-square-foot concrete pads.

A fire foam skid and fire water pump house will contain the diesel fire pump and fire protection systems associated with the storage operations. The fire foam skid will have a footprint of approximately 180 square feet; the fire water pump house will have a footprint of approximately 325 square feet and will be single-story.

A building will house a primary and a standby natural gas fired boilers, each with a capacity of 10,040 MMBTU/hr to provide up to 10,350 lbs steam/ hour (one boiler operating) for the heating of two storage tanks. Boilers will be field-erected with a watertube design, where water circulates through the inside of heat transfer tubes while the outside of the tubes is heated by direct contact with the hot combustion gases and radiant heat transfer. Natural gas will be supplied to the boiler buildings from the existing

pipeline serving the area. Steam from the boilers will be delivered to the point of use via insulated pipelines. The gas-fired boiler may also provide steam to pipes and ancillary equipment and potential space heating.

Area 400 – Marine Terminal

Crude oil will be transferred to vessels at berths 13 and 14. The berths are existing steel pile-supported docks consisting of two concrete decked access trestles and T-docks, four breasting dolphins connected to the trestles by catwalks, and three mooring dolphins. To obtain an optimal mooring configuration and to meet current seismic standards, a number of modifications will be required at the existing dock to accommodate the Facility.

These modifications include in and overwater construction as follows:

- Remove two mooring dolphins, and two breasting dolphins including forty-seven 18-inch steel pipe piles, eight 12-3/4-inch steel fender piles and approximately 1,330 square feet of existing concrete pile cap.
- Remove approximately 3,250 square feet of grated walkway associated with existing breasting dolphins to be removed. One existing 18-inch steel pipe pile supporting the walkways will also be removed.
- Install four new 27-foot-diameter mooring dolphins (approximately 2,140 square feet combined new, solid overwater coverage), including 40, 36-inch steel pipe piles.
- Add four to eight 24-inch steel pipe piles to Berth 13 dock platform.
- Add sixteen 24-inch steel pipe piles (all below OHWM) to existing bents at Berth 13 access trestle.
- Add six to twelve 36-inch steel pipe piles at the existing trestle abutment at Berth 13, all above OHWM, including pile cap modifications resulting in an additional 192 square feet of overwater coverage.
- Install structural connection framing consisting of two 24 to 36-inch-diameter steel pipes between the Berth 13 platform and the adjacent upstream and downstream breasting dolphins totaling 920 square feet. Install grated walkways on top of one of the steel pipes adding approximately 690 square feet of new grated walkways (beyond the pile footprint). Install two 24-inch steel pipe piles to support the structural framing system.
- Add approximately 4,035 square feet new grated walkways between mooring and breasting dolphins with four 24-inch steel piles to support the walkways. Grated walkways will mostly be reused portions of the existing walkways that were removed.

Mooring and Breasting Dolphins and Walkways

The project will remove two existing mooring dolphins and install four new mooring dolphins. The existing mooring dolphins are supported by a combined total of 23, 18-inch-diameter steel pipe piles. One of the existing mooring dolphins that will be removed is located in relatively shallow water, at an elevation of approximately +3 feet CRD. The new mooring dolphins will be located in water depths ranging from approximately -4 feet to -17 feet CRD. Each new mooring dolphin will consist of up to ten 36-inch-diameter steel piles supporting a 27-foot-diameter, cast-in-place concrete pile cap and mooring equipment. The mooring system will incorporate a load monitoring system for the physical tensioning of the mooring lines so that they operate within optimum design considerations and do not stress or break while a vessel is berthed. The new mooring dolphins will be connected to the main structure of the dock by approximately 5-foot-wide grated walkways to allow safe access during vessel mooring; each walkway will be supported by a single 24-inch-diameter steel pipe pile.

Two existing breasting dolphins at Berth 14 will be removed, along with approximately 650 linear feet of existing 5-foot-wide steel grated walkways. The grated walkways that are removed will mostly be reused and reinstalled if they are determined to be structurally appropriate. The existing breasting dolphins are supported by a combined total of twenty-four 18-inch-diameter steel pipe piles. One

section of the walkway is also supported by a single 18-inch-diameter steel pipe pile, which will also be removed.

The existing grated walkways that connect the breasting dolphins east and west of the Berth 13 dock will be replaced with structural framing to physically connect the structures. This framing will be an open design element (not solid) consisting of two interconnected 24-inch pipes. This framing will result in an additional 920 square feet of overwater shading. A length of 5-foot-wide grated walkway will be aligned over one of the pipes. The east span framing will be supported on two 24-inch-diameter steel pipe piles.

Berth 13 Access Trestle

The bents supporting the Berth 13 access trestle will be supplemented with piles for structural support to meet seismic provisions of current building code. The abutment (above the OHWM of the Columbia River) will be supplemented with six to twelve 36-inch-diameter steel pipe piles, while the waterward bents will be supplemented with two or four 24-inch-diameter steel pipe piles at each bent, depending on location. A total of 22 to 28 new piles will be installed to reinforce the trestle, with 16 of these new piles located below the OHWM. To incorporate the new pipe piles at each bent, an additional 192 square feet of shading will result from new concrete pile cap. Additionally, the central platform at the end of the Berth 13 trestle will be supplemented with four to eight 24-inch-diameter steel pipe piles.

In order to drive piles within the footprint of the existing platform, the concrete topping and precast concrete deck panels will be removed to provide sufficient clearance to drive the piles, then reconstructed with cast-in-place concrete.

Construction Sequencing

Mobilization

During this task, the contractor will mobilize labor and equipment to the site. Laydown areas for materials and equipment will be located landward of the OHWM. During installation activities, the contractor will most likely use barges for cranes, pile driving equipment, and construction materials for in-water work, but may also use land-based equipment located on the existing structures.

Demolition

Following mobilization, demolition activities would commence. In-water and overwater demolition will consist of removal of the two existing mooring dolphins, two existing breasting dolphins, and associated walkways. Demolition will generally proceed by removing existing concrete caps, and then removing the associated piles for each structure. Pile removal at the Terminal 5 dock and at Port Terminal 2 for habitat mitigation will also likely proceed at this time. Approximately 250 piles will be removed from below the OHWM of the Columbia River. Piles will be removed by vibratory extraction or by pulling them directly with a crane mounted on a barge. If a pile breaks above or below the mudline, it will be cut off consistent with agency-approved BMPs. Any voids left in the river bottom following pile removal are expected to collapse and fill in rapidly due to the sandy/silty nature of the substrates at the site and natural sediment transport activities in the river. The removed piles will be stored temporarily on a barge before being sent to an approved recycling center or disposal in a landfill. All activities conducted below the OHWM will be conducted within the in-water work window.

Pile Installation

The project requires the installation of approximately 76, 24- to 36-inch steel piles (66 planned and 10 contingency) below the OHWM of the Columbia River. The diameter of the piles is based on structural and geotechnical design considerations. Pile installation activities will occur via a combination of impact and vibratory methods.

The in-water piles will most likely be installed by a crane located on a derrick barge with piles and materials stored on a supply barge; a tugboat will also likely be required. Shoreline piles at the Berth

13 abutment are expected to be installed from shore by land-based equipment.

To the greatest extent possible, piles will be driven using a vibratory hammer; however, piles will be driven to final tip elevations with an impact hammer. Temporary piles are expected to be used 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.

Vibratory Driving

The vibratory hammer method is a common technique used to drive piles where the type of sediment allows it. This process begins by placing a choker around the pile and lifting it into vertical position with the crane. The pile is then lowered into position and set in place at the mudline. The pile is held steady while the vibratory hammer drives it to the required tip elevation. For this project, it is expected that the vibratory hammer will be used to drive all of the permanent structural piles to the extent practicable as well as all of the approximately 40 temporary piles.

Impact Driving

Following vibratory driving to refusal (the point at which the pile will no longer advance with the vibratory hammer), an impact hammer will be used to drive piles to their final tip elevations. An impact hammer will also be needed to proof the structural piles. Proofing is the process of striking piles with an impact hammer to verify their load-bearing capacity.

An impact hammer is a large steel device that works with a hydraulic or diesel piston. Impact hammers have guides (called a lead) that hold the hammer in alignment with the pile while the heavy piston moves up and down, striking the top of the pile and driving it into the substrate from the downward force of the hammer on the top of the pile. Where the impact hammer is used, a bubble curtain or other similar noise attenuation method (such as sound attenuation pile caps, increased hammer size, etc.) will be employed.

Temporary piles may be necessary to support concrete forms or for pile driving templates during pile driving. These will be installed with a vibratory hammer to the greatest extent possible.

Overwater Construction

The overwater construction portions of the project will generally proceed immediately after pile installation operations. Concrete pile caps will be formed and constructed, and walkways and access trestle decking will be installed. Other overwater portions of the project will include installation of associated on deck infrastructure such as the hanging fendering system, bollards, handrails, etc.

Overwater activities would be conducted according to the BMPs established for the project, which will minimize any potential for impacts to water quality such as inadvertent releases or release of construction debris into the waters at the site. Overwater construction would not be limited to the in-water work window.

Upland Access Trestle Improvements

The project may require some ground improvement or other structural activities at the upland end of the access trestle. This component of the design has not yet been finalized, but if these activities are necessary, they would be conducted entirely above the OHWM and will not impact aquatic resources.

Dock-Side Loading Equipment

Piping, jib cranes, a moveable gangway, an observation and control platform, dock safety unit, pipe trays, and lighting will be installed on the existing Berth 13 trestle and dock. The two 24- to 36-inch pipelines from the tank storage will be located on the trestle where they will connect with a manifold on the dock. High velocity hoses will be connected to the manifold and used to transfer the crude oil from the piping system to the marine vessel being loaded. The high velocity hoses will be supported by a pulley or crane system and connected to the grounding grid to protect from the buildup of static

electricity. The loading system will incorporate automatic shutoff valves with a maximum 30-second shutoff time.

Marine Vapor Combustion Unit (MVCU)

Marine vessels will generally arrive at the berth empty with inert (nonexplosive) gases occupying the tank. When the vessel tanks are filled with crude oil, the vapors from previous cargo, vapors from the crude being added to the tank, and the inert gases will be forced from the tank. These vapors will be sent to the MVCU, which will combust the hydrocarbons in the vapors. Piping from the dock will convey the vapors to the MVCUs located north of the access trestle and roadway. Up to eight units will be installed on a 100- by 50-foot concrete slab housing equipment including eight, 8-foot-diameter steel stacks approximately 25 feet in height.

Area 500: Transfer Pipelines

A combination of above- and belowground steel transfer pipelines will convey crude oil from the rail unloading building in Area 200 to the storage tanks in Area 300 and from the storage tanks to the marine vessel loading system in Area 400. At full build-out, the system will include the following:

- Up to three 24-inch-diameter, approximately 1,800-foot-long pipelines will collect the crude oil unloaded at the rail unloading stations; one of these pipelines will be electrically heat-traced to ensure that the viscosity of the crude oil requiring heating will be maintained as it is conveyed out of the unloading building.
- Three 24-inch-diameter, approximately 5,500-foot-long pipelines will connect the rail car unloading facility to the storage tanks in Area 300; one of these pipes will be electrically heat-traced to ensure that the viscosity of the crude oil requiring heating will be maintained from the unloading facility to the storage area.
- Two 24- to 30 inch-diameter, approximately 5,300-foot-long pipelines will connect the storage tanks with the vessel loading system in Area 400.
- One 6-inch-diameter, approximately 5,300-foot-long pipe will return crude oil from the marine vessel loading system back to the storage tanks. This pipe is provided to handle loading process shutdowns and provide pressure relief and prevent pipe hammer in the pipe conveyance system.
- One 16- to 22-inch-diameter, approximately 600-foot-long pipe will deliver hydrocarbon vapor generated during loading of vessels to the MVCU.

Piping will be constructed of ASTM A36 steel pipe. Aboveground runs of piping will be supported so that the bottom of the piping is approximately 2 feet off the ground on vertical supports located every 20 to 25 feet. The vertical supports will be fixed on small concrete foundations. Where multiple pipes are placed within the routing pipelines may be either laid side-to-side, or stacked. Expansion loops will be constructed throughout the transfer pipeline runs to accommodate for thermal expansion of the pipelines during operation. Where road or rail crossings occur and in other limited areas, the piping will be housed in underground steel casings or raised above ground for standard American Railway Engineering and Maintenance-of-Way Association (AREMA) clearances. If installed underground, the piping will be placed in casings with incorporated leak detection. Runs of aboveground pipeline will be standard walled, to ensure ease of inspection and maintenance, and in accordance with the applicable requirements of WAC 173-180-340, and 49 CFR 195.246 through 49 CFR 195.254. Cathodic protection will be provided for piping to prevent corrosion and piping will be wrapped and coated.

The piping system and associated supports and foundations will be designed to applicable seismic protection standards, and will be electrically grounded to protect against the buildup of static electricity during crude oil conveyance. Manual isolation valves will be located on the piping system at the exit of the rail car unloading facility and at the entrance to the storage tank area. The pipeline system will be inspected on a routine basis.

Area 600 – West Boiler

The Area 600 West Boiler Building will be located west of the Administration and Support Buildings. This building will have a footprint of approximately 6,000 square feet, and will be approximately 45 feet high. The building will house two primary and one standby natural gas fired boilers, each with a capacity of 50,208 MMBTU/hr, to provide up to 103,500 lbs steam/per hour (two boilers operating) for the heating of tank cars during unloading. Boilers will be field-erected with a watertube design, where water circulates through the inside of heat transfer tubes while the outside of the tubes is heated by direct contact with the hot combustion gases and radiant heat transfer. Natural gas will be supplied to the building from the existing pipeline serving the area. Steam from the boilers will be delivered to the point of use via insulated pipelines. The gas-fired boiler may also provide steam to pipes and ancillary equipment and potential space heating.

6f. What are the anticipated start and end dates for project construction? (Month/Year) [\[help\]](#)

- If the project will be constructed in phases or stages, use [JARPA Attachment D](#) to list the start and end dates of each phase or stage.

Start date: October 2014

End date: October 2015

See JARPA Attachment D

6g. Fair market value of the project, including materials, labor, machine rentals, etc. [\[help\]](#)

\$100 Million

6h. Will any portion of the project receive federal funding? [\[help\]](#)

- If **yes**, list each agency providing funds.

Yes No Don't know

Part 7–Wetlands: Impacts and Mitigation

Check here if there are wetlands or wetland buffers on or adjacent to the project area.
(If there are none, skip to Part 8.) [\[help\]](#)

7a. Describe how the project has been designed to avoid and minimize adverse impacts to wetlands. [\[help\]](#)

Not applicable

As noted in Section 5i, the project site contains no wetlands.

7b. Will the project impact wetlands? [\[help\]](#)

Yes No Don't know

7c. Will the project impact wetland buffers? [\[help\]](#)

Yes No Don't know

7d. Has a wetland delineation report been prepared? [\[help\]](#)

- If **Yes**, submit the report, including data sheets, with the JARPA package.

Yes No

7e. Have the wetlands been rated using the Western Washington or Eastern Washington Wetland Rating System? [\[help\]](#)

- If **Yes**, submit the wetland rating forms and figures with the JARPA package.

Yes No Don't know

7f. Have you prepared a mitigation plan to compensate for any adverse impacts to wetlands? [\[help\]](#)

- **If Yes**, submit the plan with the JARPA package and answer 7g.
- **If No, or Not applicable**, explain below why a mitigation plan should not be required.

Yes No Not applicable

7g. Summarize what the mitigation plan is meant to accomplish, and describe how a watershed approach was used to design the plan. [\[help\]](#)

7h. Use the table below to list the type and rating of each wetland impacted, the extent and duration of the impact, and the type and amount of mitigation proposed. Or if you are submitting a mitigation plan with a similar table, you can state (below) where we can find this information in the plan. [\[help\]](#)

Activity (fill, drain, excavate, flood, etc.)	Wetland Name ¹	Wetland type and rating category ²	Impact area (sq. ft. or Acres)	Duration of impact ³	Proposed mitigation type ⁴	Wetland mitigation area (sq. ft. or acres)

¹ If no official name for the wetland exists, create a unique name (such as "Wetland 1"). The name should be consistent with other project documents, such as a wetland delineation report.

² Ecology wetland category based on current Western Washington or Eastern Washington Wetland Rating System. Provide the wetland rating forms with the JARPA package.

³ Indicate the days, months or years the wetland will be measurably impacted by the activity. Enter "permanent" if applicable.

⁴ Creation (C), Re-establishment/Rehabilitation (R), Enhancement (E), Preservation (P), Mitigation Bank/In-lieu fee (B)

Page number(s) for similar information in the mitigation plan, if available: _____

7i. For all filling activities identified in 7h, describe the source and nature of the fill material, the amount in cubic yards that will be used, and how and where it will be placed into the wetland. [\[help\]](#)

7j. For all excavating activities identified in 7h, describe the excavation method, type and amount of material in cubic yards you will remove, and where the material will be disposed. [\[help\]](#)

Part 8—Waterbodies (other than wetlands): Impacts and Mitigation

In Part 8, “waterbodies” refers to non-wetland waterbodies. (See Part 7 for information related to wetlands.) [\[help\]](#)

Check here if there are waterbodies on or adjacent to the project area. (If there are none, skip to Part 9.)

8a. Describe how the project is designed to avoid and minimize adverse impacts to the aquatic environment.

[\[help\]](#)

Not applicable

As noted in Section 5j, the project includes work within and above the Columbia River. Potential adverse impacts of the Facility would be limited to temporarily elevated underwater noise levels during pile installation and removal, temporary water quality impairment during in-water and overwater construction, and permanent direct habitat impacts associated with the pile installation, and overwater shading in functional nearshore habitat.

Facility elements located within the aquatic environment are necessary to transfer crude oil to vessels and have been designed to reduce disturbance and impacts. The project includes minimization measures and best management practices (BMPs) to minimize the extent of potential effects to the aquatic environment and to mitigate for any unavoidable impacts. The minimization measures and BMPs listed below will be implemented throughout the project.

Minimization Measures

- The existing structures at berths 13 and 14 will be used for loading and vessel mooring. The face of the berth is located beyond the shallow water zone (i.e., between the OHWM and 20 feet below the OHWM) to minimize impacts to shallow-water habitat.
- New mooring dolphins will primarily be located in deeper water further from shore than the existing dolphins.
- Portions of the trestle serving Berth 14 will be removed in the shallow water zone.
- Grating has been used on all walkway surfaces to allow light penetration.
- The structures will have sufficient clearance between the surface and the water surface at the OHWM elevation to allow for light penetration under the berth surfaces.
- Crude oil will be transferred in a manner that has no direct exposure to the environment. Automatic shut off valves and other safety measures are incorporated into the loading process to minimize the risk of inadvertent releases.
- Timing restrictions are used to avoid in-water work when listed species are most likely to be present. The current WDFW and U.S. Army Corps of Engineers (USACE) recommended work window for this area is October 1 through February 28 annually.
- Project construction will be completed in compliance with Washington State Water Quality Standards (Washington Administrative Code [WAC] 173-201A) including:
 - No petroleum products, fresh cement, lime, concrete, chemicals, or other toxic or deleterious materials will be allowed to enter surface waters.
 - There will be no discharge of oil, fuels, or chemicals to surface waters, or onto land where there is a potential for reentry into surface waters.
 - Fuel hoses, oil drums, oil or fuel transfer valves, fittings, etc. will be checked regularly for leaks, and materials will be maintained and stored properly to prevent inadvertent releases.
 - A construction spill prevention, control, and countermeasures (SPCC) plan will be prepared for use during construction and operation of the project. A copy of the plan with any updates will be maintained at the work site.
- The construction SPCC plan will outline BMPs, responsive actions in the event of a release, and notification and reporting procedures. The SPCC plan also will outline management elements

such as personnel responsibilities, project site security, site inspections, and training.

- The construction SPCC plan will outline measures to be taken to prevent the release or spread of hazardous materials, either found on site and encountered during construction but not identified in contract documents, or any hazardous material that is stored, used, or generated on the construction site during construction activities. These items include, but are not limited to, gasoline, oils, and chemicals.
- Applicable spill response equipment and material designated in the construction SPCC plan will be maintained at the job site.

General BMPs

Typical construction BMPs for working in, over, and near water will be applied, including:

- Checking equipment for leaks and/or other problems that could result in discharge of petroleum-based products or other material into the Columbia River.
- Corrective actions, including those listed below, will be taken in the event of any release of oil, fuel, or chemicals into the water.
- In the event of inadvertent release, containment and cleanup efforts will begin immediately and be completed in an expeditious manner, in accordance with all local, state, and federal regulations, and taking precedence over normal work. Cleanup will include proper disposal of any inadvertently released material and used cleanup material.
- The cause of the inadvertent release will be assessed and appropriate action will be taken to prevent further incidents or environmental damage.
- Inadvertent releases will be reported to Ecology's Southwest Regional Spill Response Office at 360-407-6300.
- Work barges will not be allowed to ground out on the river bottom.
- Excess or waste materials will not be disposed of or abandoned waterward of the OHWM or allowed to enter waters of the state. Waste materials will be disposed of in an appropriate landfill.
- Demolition and construction materials will not be stored where wave action or upland runoff can cause materials to enter surface waters.
- Oil-absorbent materials will be present on site to be used in the event of an inadvertent release or if any oil product is observed in the water.

Pile Removal BMPs

- While creosote-treated piles are being removed, a containment boom will surround the work area to contain and collect any floating debris and sheen. Also, any debris will be retrieved and disposed of properly.
- The piles will be dislodged with a vibratory hammer, when possible, and will not be intentionally broken by twisting or bending.
- The piles will be removed in a single, slow, and continuous motion to minimize sediment disturbance and turbidity in the water column.
- If a pile breaks above or below the mudline or is unable to be removed with the vibratory hammer, it will be cut or pushed in the sediment consistent with agency approved BMPs.
- Removed piles, stubs, and associated sediments (if any) will be contained on a barge. If piles are placed directly on the barge and not in a container, the storage area will consist of a row of hay or straw bales, filter fabric, or similar material placed around the perimeter of the storage area.
- All creosote-treated material, pile stubs, and associated sediments (if any) will be disposed of in a landfill or other method approved to accept those types of materials.

Pile Installation BMPs

- The vibratory hammer method will be used to drive steel piles, to the extent possible, to minimize noise levels.
- A bubble curtain or other similar noise attenuation method (such as sound attenuation pile caps, increased hammer size, etc.) will be employed during impact pile driving.
- If necessary, a marine mammal monitoring plan will be implemented during pile driving activities to reduce the risk of potential marine mammal impacts.

Overwater Concrete BMPs

- Wet concrete will not come into contact with surface waters.
- Forms for any concrete structure will be constructed to prevent leaching of wet concrete.
- Concrete process water shall not enter waters of the US. Any process water/contact water will be routed to a contained area for treatment and disposed of at an upland location.

Operational BMPs

The following describes elements and practices during operations. Upload measures are included as they will minimize the risk of an unintended release reaching the water.

Rail Unloading Facilities

Crude oil unloading will be accomplished within an entirely enclosed system so that under normal operations, the crude oil never comes into contact with the open atmosphere or unprotected ground surfaces.

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.

Storage Tanks

Following unloading, crude oil will be conveyed in transfer pipeline to the storage area (Area 300). Design elements aimed at preventing discharges of oil during unloading will include:

- The storage tanks will be designed in conformance with applicable industry standards.
- The storage tanks 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 overflow.
- 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.

Design elements related to containing unanticipated discharges will include:

- The tanks will be constructed with a double tank bottom, with interstitial monitoring to detect leaks should they occur
- Constructing the tanks 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.

Transfer Pipelines and Pumping Systems

Crude oil will be conveyed between the unloading area, the storage area, and the vessel marine loading area using a system of transfer pipelines and pumps. Design elements aimed at preventing discharges of oil during conveyance will include:

- The transfer pipelines will be designed in conformance with applicable industry standards.
- All conveyance of crude oil will occur in a fully enclosed system.
- Transfer pipelines and the associated pumping systems will be equipped with flow and pressure sensors to identify out of the ordinary operating conditions that could be the result of a pipeline or pump failure and potential risk of crude oil discharge.
- Transfer pipelines will be equipped with valves at the exit of and entry to the unloading area, the storage area, and the marine vessel loading area. These valves will include 30 second shut-offs to stop the flow of product should anomalous flow and pressure conditions related to a product spill occur, or in response to operations personnel triggering the shutoff.
- Transfer piping will be for the most part installed aboveground to facilitate inspections and maintenance. Where road or rail crossings occur, the piping will be housed in underground steel casings or raised aboveground using standard American Railway Engineering and Maintenance-of-Way Association (AREMA) clearances. Pipelines at each railroad, highway, or road crossing will be designed and installed to adequately withstand the dynamic forces exerted by anticipated traffic or rail loads.
- Transfer pipelines will be coated and cathodically protected to prevent corrosion.
- Sections of transfer pipelines constructed underground will be installed so that they are not in electrical contact with any metallic structures. This requirement will not preclude the use of electrical bonding to facilitate the application of cathodic protection. Tests will be carried out to determine the presence of stray currents and protective measures provided when stray currents are present.
- Transfer pipelines will be equipped with leak detection systems meeting regulatory standards.

Design elements related to containing unanticipated discharges will include:

- Piping systems associated with the unloading of crude oil in Area 200 will be placed in concrete trenches; these trenches can serve as secondary containment in the event of a product discharge. Should a discharge occur in the trench, the materials would be removed by vacuum truck and recycled or disposed off site at an approved location.
- Pumps will be located in concrete basins; the concrete basins can serve as secondary containment in the event of a product discharge. Should a discharge occur in the pump basins, the materials would be removed by vacuum truck and recycled or disposed off site at an approved location.

Marine Terminal

The trestle at Berth 13 will be equipped with piping and hoses to transfer the crude oil from the transfer pipeline system to the receiving marine vessel. In accordance with 33 C.F.R. § 154.530 a facility transferring oil or hazardous materials to or from a vessel with a capacity equal to or greater than 250 barrels, must have fixed catchments, curbing, or other fixed means for small discharge containment of materials at the hose handling and loading arm area, each hose connection manifold area, and under each hose connection that will be coupled or uncoupled as part of the transfer operation. For this facility, it is anticipated that the hose diameter will be between 6 and 12 inches, requiring that discharge containment capacity must be at least three barrels.

At Berth 13, a catchment and sump will be constructed at or below the deck level of sufficient capacity to hold the small discharge containment in addition to stormwater that may fall in the catchment area. The containment will be discharged within one hour of completion of any transfer by pumping into the return line.

In addition the design elements aimed at preventing discharges of oil during conveyance will include:

- Hoses and their supporting equipment will be designed to meet the applicable hose protection requirements of WAC 173-180 Part B and 40 CFR 156.
- Vessel mooring systems will meet the applicable requirements of 40 CFR 156.

Spill Prevention and Contingency Plans

The Applicant will prepare and implement the following plans to comply with state and federal requirements:

- An operations SPCC plan, prepared under 40 CFR 112 and WAC 173-180, Part F
- A safe and effective threshold determination report, prepared under WAC 173-180-224
- A pre-loading transfer plan according to WAC 173-180-230
- A facility operations manual in compliance with WAC 173-180 400 to -435
- An oil transfer training program in compliance with WAC 173-180, Part E
- A certification program in compliance with WAC 173-180, Part E
- A spill contingency plan in compliance with WAC 173-182, 40 CFR 112, Subpart D and 33 CFR 154, Subpart F

These plans will comprehensively address spill prevention, control and response for activities conducted both upland and over-water.

8b. Will your project impact a waterbody or the area around a waterbody? [\[help\]](#)

Yes No

8c. Have you prepared a mitigation plan to compensate for the project's adverse impacts to non-wetland waterbodies? [\[help\]](#)

- If **Yes**, submit the plan with the JARPA package and answer 8d.
- If **No, or Not applicable**, explain below why a mitigation plan should not be required.

Yes No Not applicable

The project design minimizes impacts to the aquatic environment and proposes to remove existing structural elements and piles to offset new pile area and overwater coverage. These actions do not require monitoring to determine the long term performance of the mitigation and a mitigation plan is not provided.

As described in Section 8a above, a number of impact minimizing measures and BMPs will be implemented to reduce the extent and amount of impacts to the aquatic environment during construction and operation of the Facility. For unavoidable impacts (mentioned in Section 8a above), a variety of measures will be implemented to offset the effects to aquatic resources.

The modifications to the existing structures will require the placement of up to 76, 24 to 36-inch steel pipe piles below the OHWM of the Columbia River (15.2 CRD [16.74 NGVD-29]) and an additional 3,252 square feet of solid overwater structure. To accommodate the project modifications to Berths 13 and 14, existing overwater structure and existing steel pipe piles will be removed partially offsetting the proposed new piles and overwater structure. These actions will remove two mooring dolphins and two breasting dolphins, totaling 1,330 square feet and 56 steel piles restoring 92 square feet of benthic habitat. It will also remove 3,250 sq. ft. of grated walkways To offset the remaining 1,925 square feet of solid overwater coverage, portions of the Berth 14 trestle, totaling approximately 2,220 square feet will be removed. The project will also remove approximately 220 timber piles at the Port's Terminal 2 area to restore benthic habitat. The actual number of piles removed will be determined based on the final number and size of piles installed.

Based on the above measures the project will restore an area equivalent to the benthic impacts from pile placement. Solid overwater coverage is reduced by approximately 295 square feet, including removal from shallow water zones. Grated overwater coverage is increased by approximately 785 square feet. This increase is off set by the additional solid overwater coverage being removed. The solid coverage has greater impacts than grated structures and the added grated structures are narrow and located outside the shallow water habitat. The combination of these mitigation and project elements will more than offset the additional overwater coverage and pile placement associated with the project. Removal of the overwater structure and piles will result in immediate improvements to aquatic habitat by restoring habitat previously occupied by structures.

8d. Summarize what the mitigation plan is meant to accomplish. Describe how a watershed approach was used to design the plan.

- If you already completed 7g you do not need to restate your answer here. [\[help\]](#)

Empty response area for question 8d.

8e. Summarize impact(s) to each waterbody in the table below. [\[help\]](#)

Activity (clear, dredge, fill, pile drive, etc.)	Waterbody name ¹	Impact location ²	Duration of impact ³	Amount of material (cubic yards) to be placed in or removed from waterbody	Area (sq ft or lf) of waterbody directly affected
Pile Installation	Columbia River	In-water (deeper than 20 feet below OHWM)	Permanent	30, 36-inch and 23, 24-inch steel pipe piles	283 sq ft benthic area
Pile Installation	Columbia River	In-water (to 20 feet below OHWM)	Permanent	10, 36-inch and 13, 24-inch steel pipe piles	112 sq ft benthic area
Overwater Structure	Columbia River	In-water (deeper than 20 feet below OHWM)	Permanent	N/A	2,573 sq ft (solid) 3,290 sq. ft (grated)
Overwater Structure	Columbia River	In-water (to 20 feet below OHWM)	Permanent	N/A	679 sq ft (solid) 770 sq. ft. (grated)
Temporary Pile Installation	Columbia River	In-Water	Temporary	Forty 18- to 24-in steel pipe or H steel piles	126 sq ft benthic area
Overwater Structure Removal	Columbia River	In-Water	Permanent	56 steel and approximately 220 wood piles	396 sq ft benthic area 3,547 sq. ft (solid) 3,250 sq. ft. (grated)

¹ If no official name for the waterbody exists, create a unique name (such as "Stream 1") The name should be consistent with other documents provided.

² Indicate whether the impact will occur in or adjacent to the waterbody. If adjacent, provide the distance between the impact and the waterbody and indicate whether the impact will occur within the 100-year flood plain.

³ Indicate the days, months or years the waterbody will be measurably impacted by the work. Enter "permanent" if applicable.

8f. For all activities identified in 8e, describe the source and nature of the fill material, amount (in cubic yards) you will use, and how and where it will be placed into the waterbody. [\[help\]](#)

No fill will be placed below OHWM or in the 100-year floodplain

8g. For all excavating or dredging activities identified in 8e, describe the method for excavating or dredging, type and amount of material you will remove, and where the material will be disposed. [\[help\]](#)

No new dredging is planned or proposed with the facility. The Port maintains Berths 13 and 14 under existing maintenance dredging permits.

Part 9—Additional Information

Any additional information you can provide helps the reviewer(s) understand your project. Complete as much of this section as you can. It is ok if you cannot answer a question.

9a. If you have already worked with any government agencies on this project, list them below. [help]			
Agency Name	Contact Name	Phone	Most Recent Date of Contact
USACE	Steve Manlow, Muffy Walker	(206) 316-3047	August 15, 2013
Washington Department of Fish & Wildlife	Anne Friesz	(360) 906-6764	June 27, 2013
National Marine Fisheries Service	Jeff Fisher, Steve Landino	(360) 534-9342	August 15, 2013
Ecology	Hedia Adelsman	(360) 407-6222	August 7, 2013
City of Vancouver	Jon Wagner	(360) 487-7885	June 27, 2013
Energy Facility Site Evaluation Council	Stephen Posner	(360) 664-1903	August 7, 2013
<p>The applicant has coordinated extensively with regulatory agencies. The contacts listed above are intended to reflect those with jurisdictional authority for the in-water elements.</p>			
9b. Are any of the wetlands or waterbodies identified in Part 7 or Part 8 of this JARPA on the Washington Department of Ecology's 303(d) List? [help]			
<ul style="list-style-type: none"> • If Yes, list the parameter(s) below. • If you don't know, use Washington Department of Ecology's Water Quality Assessment tools at: http://www.ecy.wa.gov/programs/wq/303d/. 			
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
<p>Columbia River within WRIA #28 is listed on Ecology's 303(d) list for temperature, sediment bioassay, fecal coliform, dissolved oxygen, and PCBs. There is no listed 303(d) parameter at the project site. Downstream of the project site the Columbia is on the 303(d)-list for polychlorinated biphenyls (PCBs) in nearshore sediments.</p>			
9c. What U.S. Geological Survey Hydrological Unit Code (HUC) is the project in? [help]			
<ul style="list-style-type: none"> • Go to http://cfpub.epa.gov/surf/locate/index.cfm to help identify the HUC. 			
Lower Columbia – Sandy (17080001)			
9d. What Water Resource Inventory Area Number (WRIA #) is the project in? [help]			
<ul style="list-style-type: none"> • Go to http://www.ecy.wa.gov/services/gis/maps/wria/wria.htm to find the WRIA #. 			
WRIA #28, Salmon - Washougal			

<p>9e. Will the in-water construction work comply with the State of Washington water quality standards for turbidity? [help]</p> <ul style="list-style-type: none"> Go to http://www.ecy.wa.gov/programs/wq/swqs/criteria.html for the standards.
<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not applicable</p>
<p>9f. If the project is within the jurisdiction of the Shoreline Management Act, what is the local shoreline environment designation? [help]</p> <ul style="list-style-type: none"> If you don't know, contact the local planning department. For more information, go to: http://www.ecy.wa.gov/programs/sea/sma/laws_rules/173-26/211_designations.html.
<p><input type="checkbox"/> Rural <input checked="" type="checkbox"/> Urban <input type="checkbox"/> Natural <input type="checkbox"/> Aquatic <input type="checkbox"/> Conservancy <input type="checkbox"/> Other _____</p>
<p>9g. What is the Washington Department of Natural Resources Water Type? [help]</p> <ul style="list-style-type: none"> Go to http://www.dnr.wa.gov/BusinessPermits/Topics/ForestPracticesApplications/Pages/fp_watertyping.aspx for the Forest Practices Water Typing System.
<p><input checked="" type="checkbox"/> Shoreline <input type="checkbox"/> Fish <input type="checkbox"/> Non-Fish Perennial <input type="checkbox"/> Non-Fish Seasonal</p>
<p>9h. Will this project be designed to meet the Washington Department of Ecology's most current stormwater manual? [help]</p> <ul style="list-style-type: none"> If No, provide the name of the manual your project is designed to meet.
<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>
<p>Name of manual: 2012 Stormwater Management Manual for Western Washington</p>
<p>9i. Does the project site have known contaminated sediment? [help]</p> <ul style="list-style-type: none"> If Yes, please describe below.
<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>
<p>The Port conducted sediment characterization at berths 13 and 14 in 2013 as part of their ongoing maintenance dredging activities. Chemicals of concern were not detected in samples collected from Berth 13 at concentrations greater than the Sediment Evaluation Framework (SEF) toxicity screening levels (SL). Chromium and nickel were detected in a sample collected from Berth 14 at concentrations greater than SEF SLs; however chromium and nickel concentrations were less than SEF SLs in subsequent reanalyses of the sample. No other chemicals of concern were not detected at concentrations greater than SEF SLs in the sample from Berth 14. Material dredged from Berths 13 and 14 would be considered suitable for upland disposal. (PSET Memorandum, NWP-2007-916, April 19, 2013)</p>
<p>9j. If you know what the property was used for in the past, describe below. [help]</p>
<p>Between the 1940s and the 2000s, the Terminal 5 area was used as an industrial site for aluminum smelting and the fabrication and outdoor storage of aluminum ingots. Remediation was conducted at the site in accordance with Ecology approvals, and the site is currently used for the storage of large wind turbine components.</p> <p>Parcel 1A was used for cargo laydown and prior to that it was vacant land and was likely used for agriculture in the past.</p> <p>The Berth 13 and 14 area was created with dredged material prior to its use for industrial activities.</p>

9k. Has a cultural resource (archaeological) survey been performed on the project area? [\[help\]](#)

- If Yes, attach it to your JARPA package.

Yes No

9l. Name each species listed under the federal Endangered Species Act that occurs in the vicinity of the project area or might be affected by the proposed work. [\[help\]](#)

Species Name			ESA Listing Status	Critical Habitat
Common Name	Scientific Name	ESU or DPS*		
Chinook Salmon	<i>(Oncorhynchus tshawytscha)</i>	Lower Columbia River ESU	Threatened	Designated
		Upper Willamette River ESU	Threatened	Designated
		Upper Columbia River spring-run ESU	Endangered	Designated
		Snake River spring/ summer-run ESU	Threatened	Designated
		Snake River fall-run ESU	Threatened	Designated
Chum Salmon	<i>(Oncorhynchus keta)</i>	Columbia River ESU	Threatened	Designated
Coho Salmon	<i>(Oncorhynchus kisutch)</i>	Lower Columbia River ESU	Threatened	Proposed
Sockeye Salmon	<i>(Oncorhynchus nerka)</i>	Snake River ESU	Endangered	Designated
Steelhead	<i>(Oncorhynchus mykiss)</i>	Lower Columbia River DPS	Threatened	Designated
		Upper Willamette River DPS	Threatened	Designated
		Middle Columbia River DPS	Threatened	Designated
		Upper Columbia River DPS	Endangered	Designated
		Snake River Basin DPS	Threatened	Designated
Bull Trout	<i>(Salvelinus confluentus)</i>	Columbia River DPS	Threatened	Designated
Pacific Eulachon (Smelt)	<i>(Thaleichthys pacificus)</i>	Southern DPS	Threatened	Designated
Steller Sea Lion	<i>(Eumatopius jubatus)</i>	Eastern DPS	Threatened	Designated
North American Green Sturgeon	<i>(Acipenser medirostris)</i>	Southern DPS	Threatened	Designated

*ESU =Evolutionarily Significant Unit and DPS=Distinct Population Segment

9m. Name each species or habitat on the Washington Department of Fish and Wildlife's Priority Habitats and Species List that might be affected by the proposed work. [\[help\]](#)

The Columbia River, a Type 1 water/Type S shoreline of the state, supports resident and anadromous fish species. Within the project vicinity, WDFW has designated riparian priority habitat under its Priority Habitat and Species program. The designated area includes the Columbia River and land adjacent to the river.

WDFW recognizes priority habitats as having unique or significant value to many species requiring protective measures and/or management guidelines to ensure their perpetuation (Knutson and Naef 1997). Federal listed, proposed for listed, and/or WDFW priority fish that occur in the Columbia River include Chinook, chum, coho, sockeye salmon, eulachon/smelt, bull trout, steelhead trout, resident/sea-run cutthroat trout (*O. clarki clarki*), white (*Acipenser transmontanus*) and green sturgeon, and Pacific

(*Lampetra tridentata*) and river lamprey (*L. ayresi*). Priority mammals that occur in the river include Steller sea lions, California sea lions (*Zalophus californianus*), and harbor seals (*Phoca vitulina*). No priority species are mapped within the area of the project by WDFW, but the river and land directly adjacent to the river are considered riparian priority habitat.

Sandhill cranes (*Grus canadensis*) are listed as endangered in Washington, but are not listed by the federal government. Sandhill cranes are known to occur in the vicinity of the site, in the Vancouver Lake Lowlands. WDFW has mapped migratory occurrence locations of sandhill cranes on the Port's agricultural land west of the site. Cranes also occur in the surrounding area. Fall migration of cranes in the Vancouver Lowlands typically occurs in late September and early- to mid-October. Spring migration through the Lowlands generally occurs from mid-March to mid-April. The Lowlands are used as stopover habitat during migration and for foraging by over-wintering birds.

The site of the proposed Facility does not contain habitat suitable for over-wintering cranes. Cranes are known to rest and feed on Parcel 3, but more commonly use parcels 4 and 5.

Part 10–SEPA Compliance and Permits

Use the resources and checklist below to identify the permits you are applying for.

- Online Project Questionnaire at <http://apps.ecy.wa.gov/opas/>.
- Governor's Office of Regulatory Assistance at (800) 917-0043 or help@ora.wa.gov.
- For a list of addresses to send your JARPA to, click on [agency addresses for completed JARPA](#).

10a. Compliance with the State Environmental Policy Act (SEPA). (Check all that apply.) [\[help\]](#)

- For more information about SEPA, go to www.ecy.wa.gov/programs/sea/sepa/e-review.html.

A copy of the SEPA determination or letter of exemption is included with this application.

A SEPA determination is pending with EFSEC (lead agency). The expected decision date is:

The applicant is requesting that EFSEC prepare an Environmental Impact Statement.

I am applying for a Fish Habitat Enhancement Exemption. (Check the box below in 10b.) [\[help\]](#)

This project is exempt (choose type of exemption below).

Categorical Exemption. Under what section of the SEPA administrative code (WAC) is it exempt?

Other: _____

SEPA is pre-empted by federal law.

10b. Indicate the permits you are applying for. (Check all that apply.) [\[help\]](#)

LOCAL GOVERNMENT

Local Government Shoreline permits:

- Substantial Development Conditional Use Variance
 Shoreline Exemption Type (explain): _____

Other city/county permits:

- Floodplain Development Permit Critical Areas Ordinance

STATE GOVERNMENT

Washington Department of Fish and Wildlife:

- Hydraulic Project Approval (HPA) Fish Habitat Enhancement Exemption – [Attach Exemption Form](#)

Effective July 10, 2012, you must submit a check for \$150 to Washington Department of Fish and Wildlife, unless your project qualifies for an exemption or alternative payment method below. **Do not send cash.**

Check the appropriate boxes:

- \$150 check enclosed. (Check # _____)
Attach check made payable to Washington Department of Fish and Wildlife.
- Charge to billing account under agreement with WDFW. (Agreement # _____)
- My project is exempt from the application fee. (Check appropriate exemption)
- HPA processing is conducted by applicant-funded WDFW staff.
(Agreement # _____)
 - Mineral prospecting and mining.
 - Project occurs on farm and agricultural land.
(Attach a copy of current land use classification recorded with the county auditor, or other proof of current land use.)
 - Project is a modification of an existing HPA originally applied for, prior to July 10, 2012.
(HPA # _____)

Washington Department of Natural Resources:

- Aquatic Use Authorization
Complete [JARPA Attachment E](#) and submit a check for \$25 payable to the Washington Department of Natural Resources.
Do not send cash.

Washington Department of Ecology:

- Section 401 Water Quality Certification

FEDERAL GOVERNMENT

United States Department of the Army permits (U.S. Army Corps of Engineers):

- Section 404 (discharges into waters of the U.S.) Section 10 (work in navigable waters)

United States Coast Guard permits:

- Private Aids to Navigation (for non-bridge projects)

Part 11—Authorizing Signatures

Signatures are required before submitting the JARPA package. The JARPA package includes the JARPA form, project plans, photos, etc. [\[help\]](#)

11a. Applicant Signature (required) [\[help\]](#)

I certify that to the best of my knowledge and belief, the information provided in this application is true, complete, and accurate. I also certify that I have the authority to carry out the proposed activities, and I agree to start work only after I have received all necessary permits.

I hereby authorize the agent named in Part 3 of this application to act on my behalf in matters related to this application. _____ (initial)

By initialing here, I state that I have the authority to grant access to the property. I also give my consent to the permitting agencies entering the property where the project is located to inspect the project site or any work related to the project. _____ (initial)

Applicant Printed Name

Applicant Signature

Date

11b. Authorized Agent Signature [\[help\]](#)

I certify that to the best of my knowledge and belief, the information provided in this application is true, complete, and accurate. I also certify that I have the authority to carry out the proposed activities and I agree to start work only after all necessary permits have been issued.

Authorized Agent Printed Name

Authorized Agent Signature

Date

11c. Property Owner Signature (if not applicant). [\[help\]](#)

Not required if project is on existing rights-of-way or easements.

I consent to the permitting agencies entering the property where the project is located to inspect the project site or any work. These inspections shall occur at reasonable times and, if practical, with prior notice to the landowner.

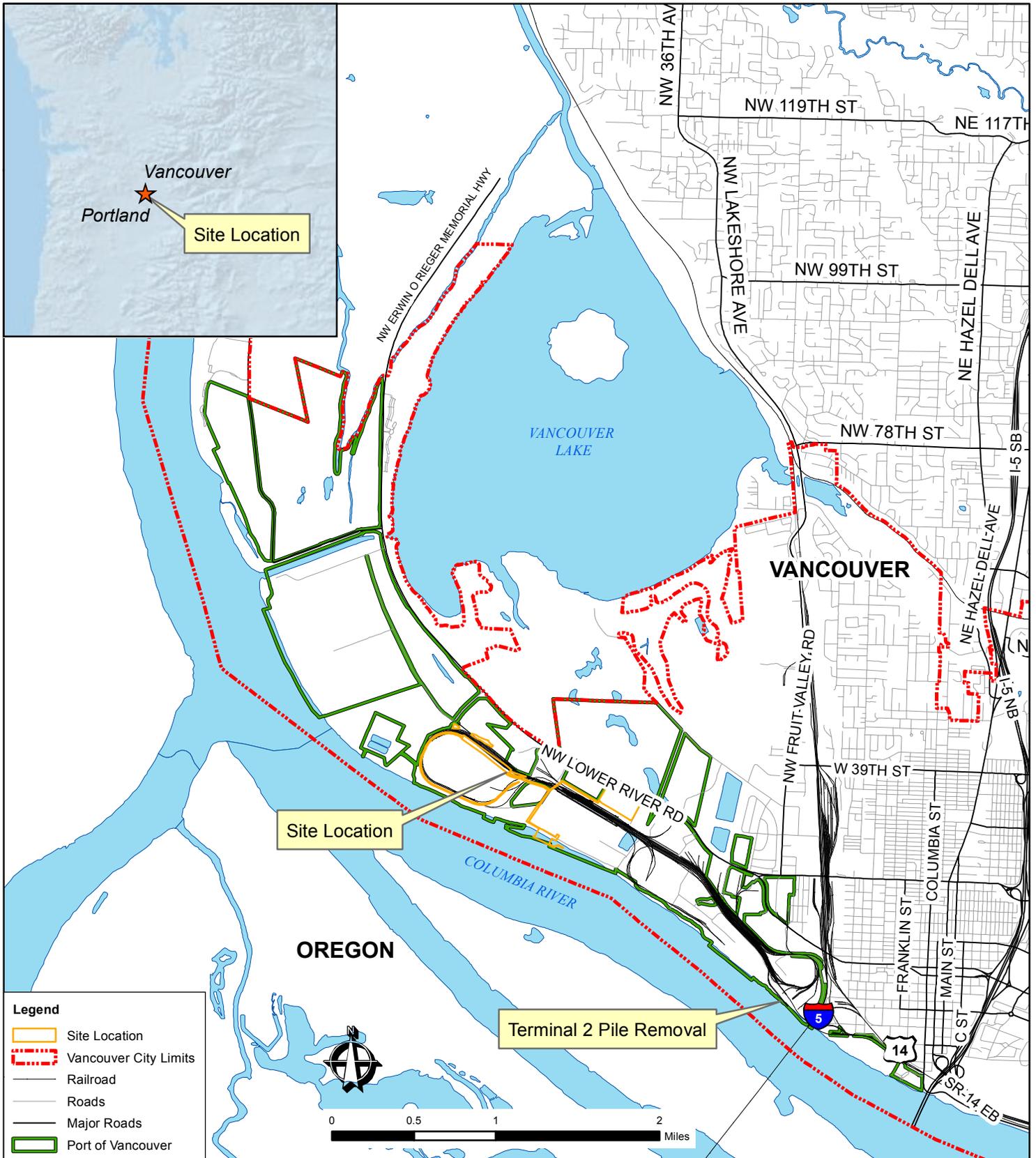
Property Owner Printed Name

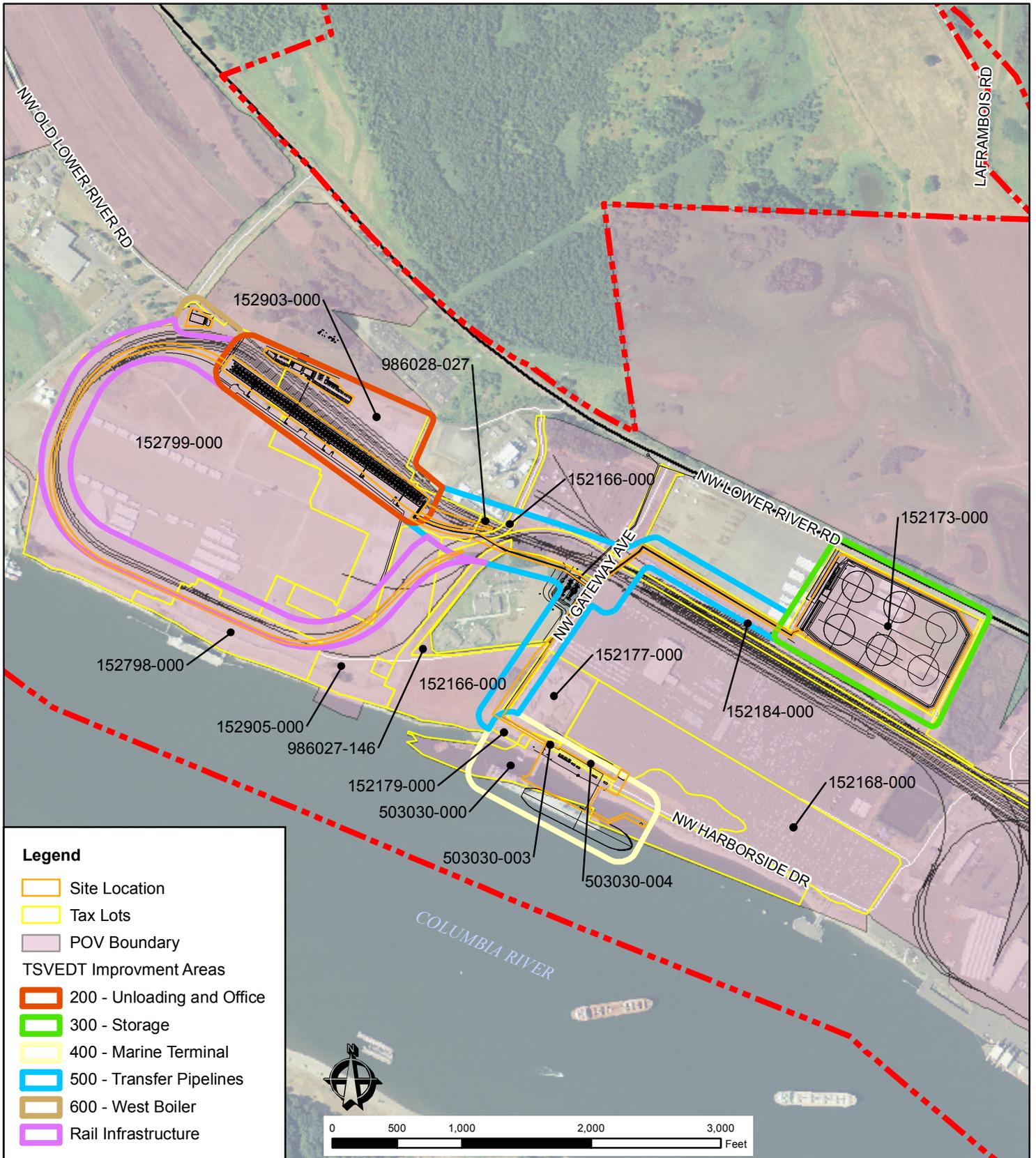
Property Owner Signature

Date

18 U.S.C §1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of the United States knowingly falsifies, conceals, or covers up by any trick, scheme, or device a material fact or makes any false, fictitious, or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false, fictitious, or fraudulent statement or entry, shall be fined not more than \$10,000 or imprisoned not more than 5 years or both.

If you require this document in another format, contact the Governor's Office of Regulatory Assistance (ORA) at (800) 917-0043. People with hearing loss can call 711 for Washington Relay Service. People with a speech disability can call (877) 833-6341. ORA publication number: ENV-019-09 rev. 06-12





Legend

- Site Location
- Tax Lots
- POV Boundary
- TSVEDT Improvement Areas**
- 200 - Unloading and Office
- 300 - Storage
- 400 - Marine Terminal
- 500 - Transfer Pipelines
- 600 - West Boiler
- Rail Infrastructure

PURPOSE: To establish facilities to receive crude oil by rail, store it on site, and load it on vessels for shipment to various consumers and end users located primarily on the West Coast of North America

APPLICANT: Tesoro-Savage

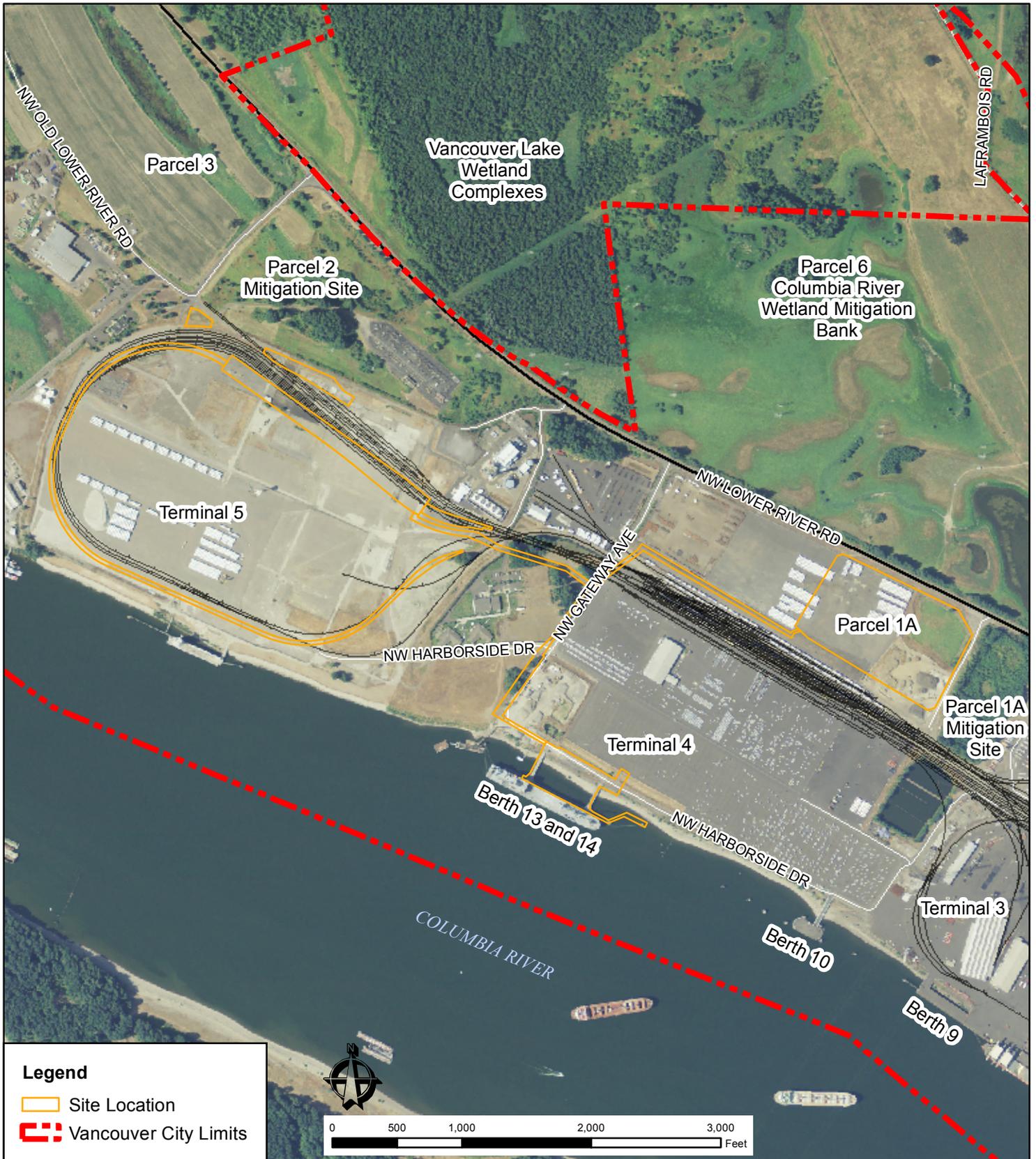
ADJACENT PROPERTY OWNERS (project site):
 Port of Vancouver, Washington Department of Natural Resources (WDNR), Clark County, Clark Public Utilities, Hickey Family Company and Farwest Steel Properties

**FIGURE 2
TAX LOTS**

TESORO SAVAGE VANCOUVER
ENERGY DISTRIBUTION TERMINAL

LAT/LONG: N 45.648/ W 122.725
 NEAR/AT: VANCOUVER
 COUNTY OF: CLARK
 STATE OF: WA
 APPLICATION BY:
 TESORO SAVAGE PETROLEUM TERMINAL LLC

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August 2013



Legend

- Site Location
- Vancouver City Limits

PURPOSE: To establish facilities to receive crude oil by rail, store it on site, and load it on vessels for shipment to various consumers and end users located primarily on the West Coast of North America

APPLICANT: Tesoro-Savage

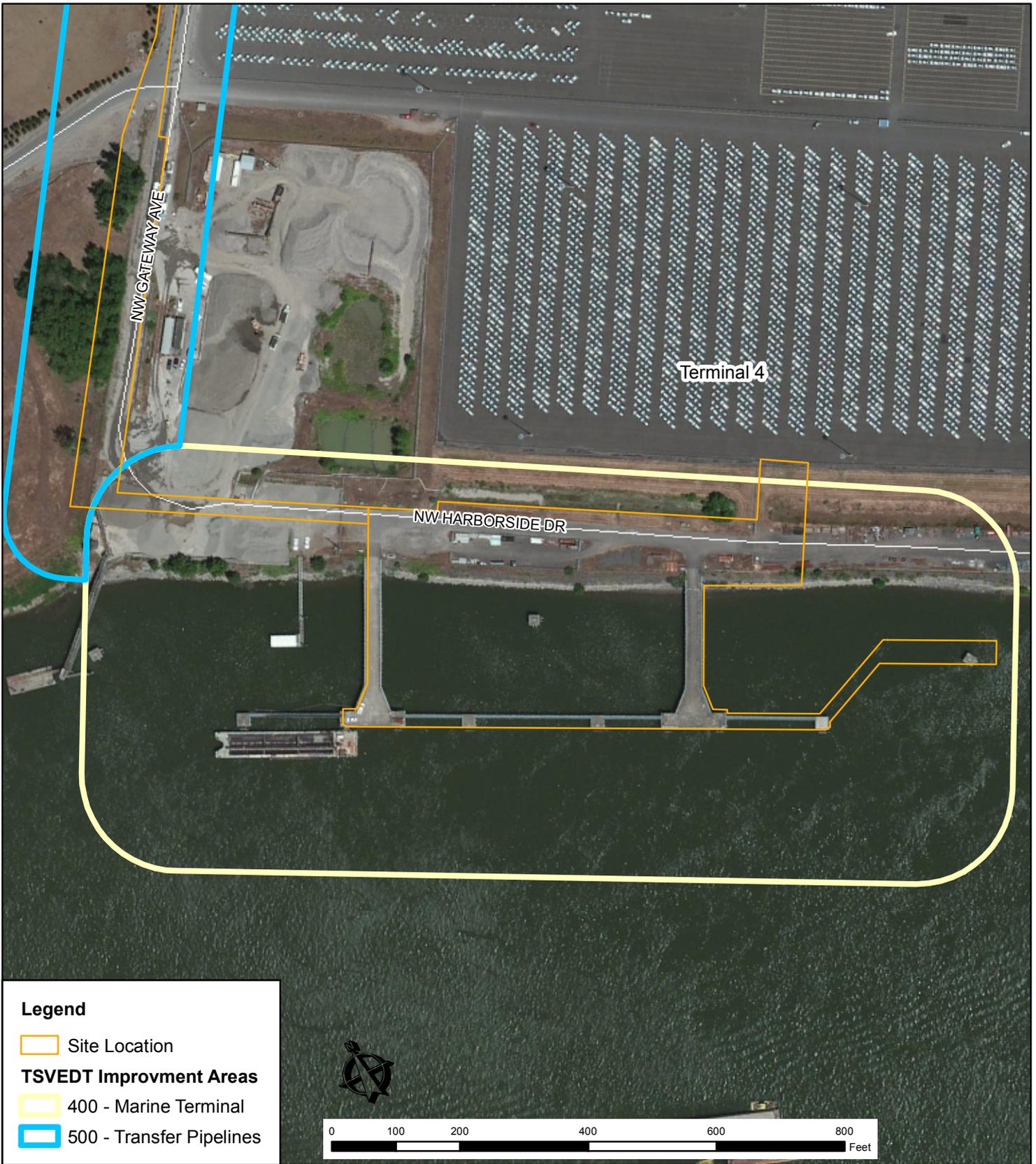
ADJACENT PROPERTY OWNERS (project site):
 Port of Vancouver, Washington Department of Natural Resources (WDNR), Clark County, Clark Public Utilities, Hickey Family Company and Farwest Steel Properties

**FIGURE 3
 EXISTING CONDITIONS**

TESORO SAVAGE VANCOUVER
 ENERGY DISTRIBUTION TERMINAL

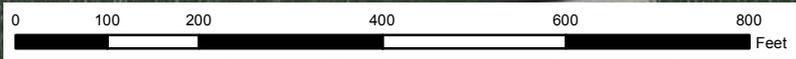
LAT/LONG: N 45.648/ W 122.725
 NEAR/AT: VANCOUVER
 COUNTY OF: CLARK
 STATE OF: WA
 APPLICATION BY:
 TESORO SAVAGE PETROLEUM TERMINAL LLC

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 August 2013



Legend

- Site Location
- TSVEDT Improvement Areas**
- 400 - Marine Terminal
- 500 - Transfer Pipelines



PURPOSE: To establish facilities to receive crude oil by rail, store it on site, and load it on vessels for shipment to various consumers and end users located primarily on the West Coast of North America

APPLICANT: Tesoro-Savage

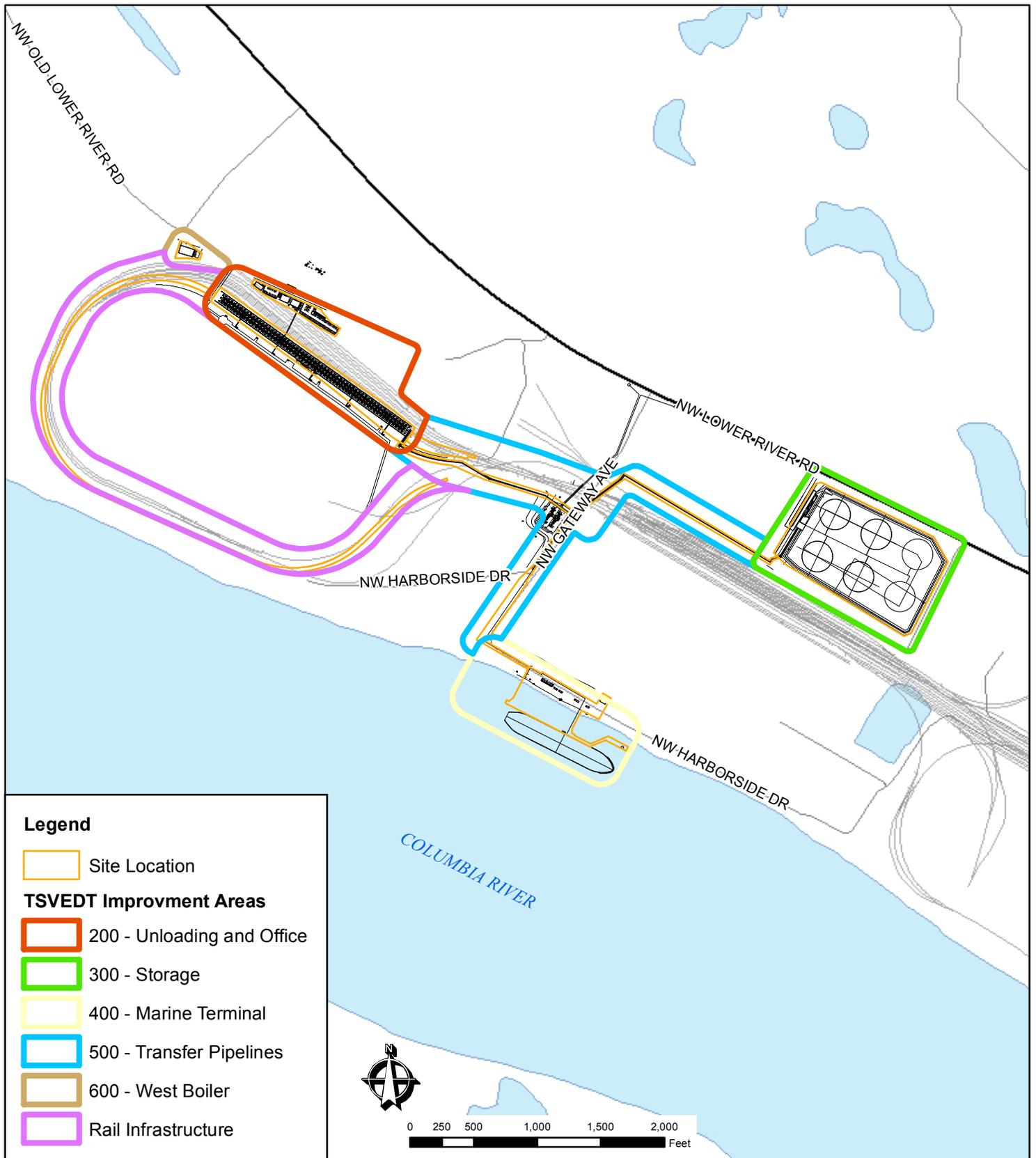
ADJACENT PROPERTY OWNERS (project site): Port of Vancouver, Washington Department of Natural Resources (WDNR), Clark County, Clark Public Utilities, Hickey Family Company and Farwest Steel Properties

FIGURE 4
EXISTING CONDITIONS OF
AREA 400 MARINE TERMINAL

TESORO SAVAGE VANCOUVER
 ENERGY DISTRIBUTION TERMINAL

LAT/LONG: N 45.648/ W 122.725
 NEAR/AT: VANCOUVER
 COUNTY OF: CLARK
 STATE OF: WA
 APPLICATION BY:
 TESORO SAVAGE PETROLEUM TERMINAL LLC

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Legend

- Site Location
- TSVEDT Improvement Areas**
- 200 - Unloading and Office
- 300 - Storage
- 400 - Marine Terminal
- 500 - Transfer Pipelines
- 600 - West Boiler
- Rail Infrastructure

PURPOSE: To establish facilities to receive crude oil by rail, store it on site, and load it on vessels for shipment to various consumers and end users located primarily on the West Coast of North America

APPLICANT: Tesoro-Savage

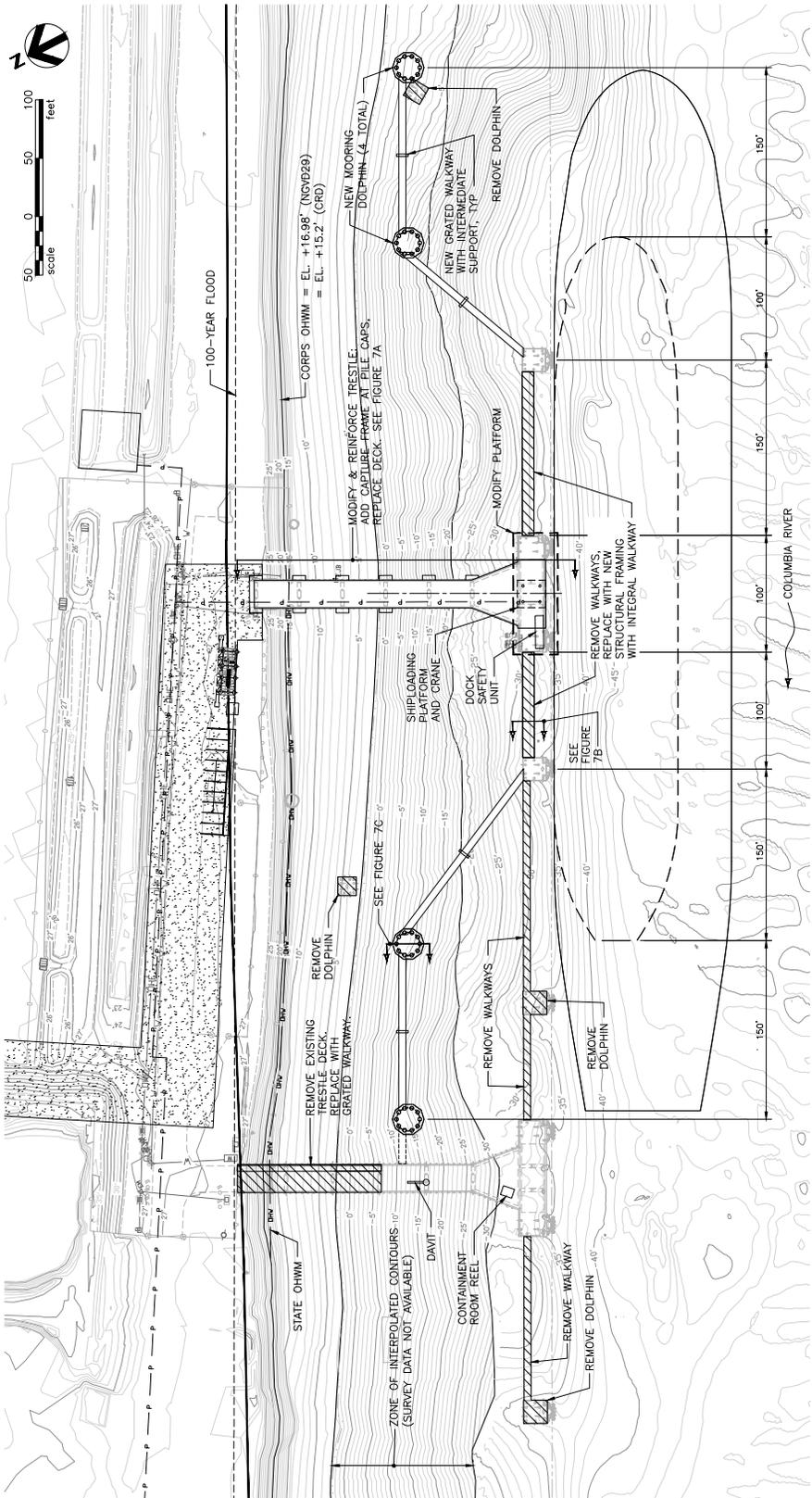
ADJACENT PROPERTY OWNERS (project site):
 Port of Vancouver, Washington Department of Natural Resources (WDNR), Clark County, Clark Public Utilities, Hickey Family Company and Farwest Steel Properties

**FIGURE 5
 OVERALL SITE PLAN**

**TESORO SAVAGE VANCOUVER
 ENERGY DISTRIBUTION TERMINAL**

LAT/LONG: N 45.648/ W 122.725
 NEAR/AT: VANCOUVER
 COUNTY OF: CLARK
 STATE OF: WA
 APPLICATION BY:
 TESORO SAVAGE PETROLEUM TERMINAL LLC

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PURPOSE: To establish facilities to receive crude oil by rail, store it on site, and load it on vessels for shipment to various consumers and end users located primarily on the West Coast of North America

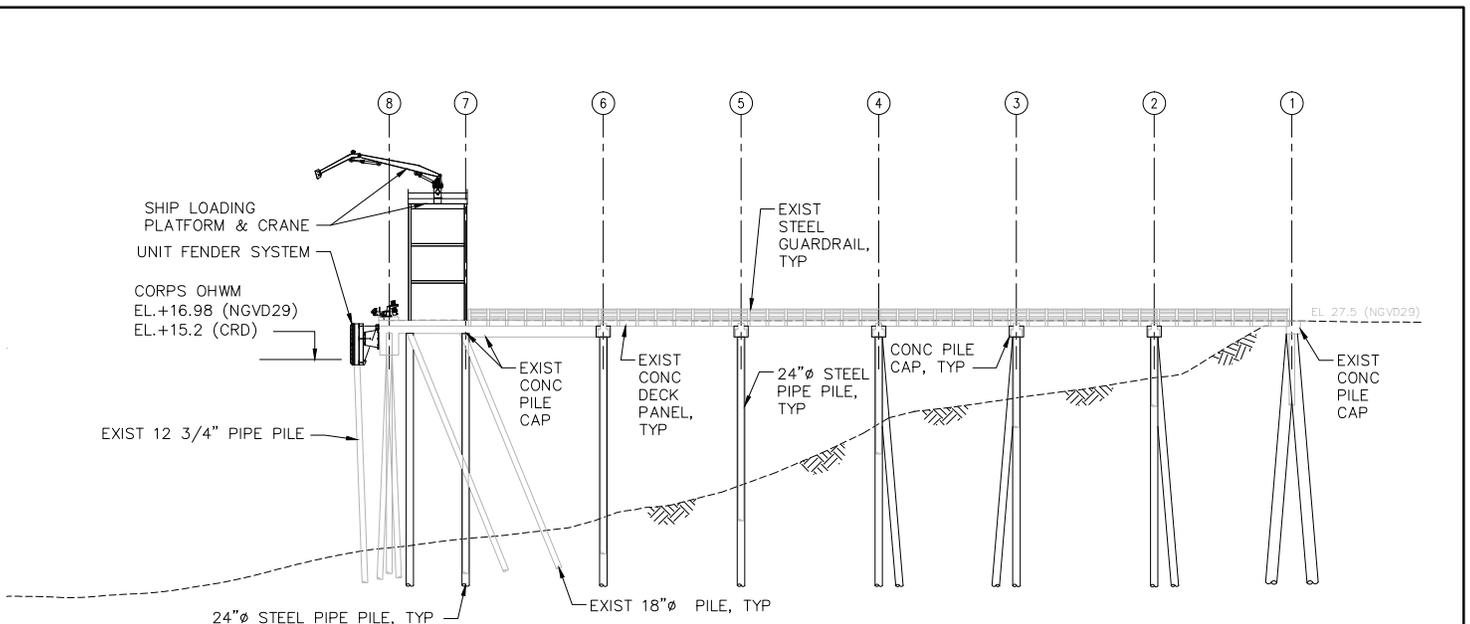
APPLICANT: Tesoro-Savage

ADJACENT PROPERTY OWNERS (project site):
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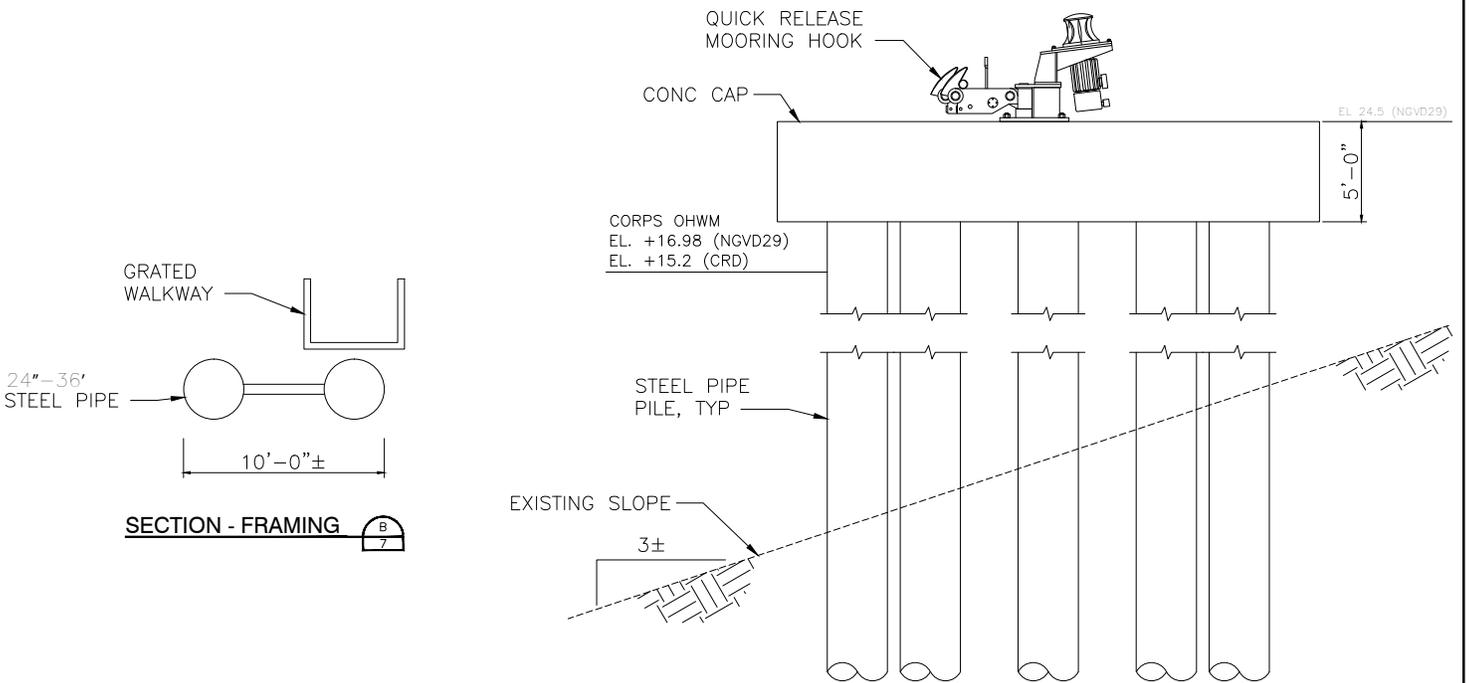
FIGURE 6
SITE PLAN AREA 400
MARINE TERMINAL

TESORO SAVAGE VANCOUVER
ENERGY DISTRIBUTION TERMINAL

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ELEVATION - LOOKING WEST A
7



ELEVATION- PLUMB PILE MOORING DOLPHIN C
7

PURPOSE: To establish facilities to receive crude oil by rail, store it on site, and load it on vessels for shipment to various consumers and end users located primarily on the West Coast of North America

APPLICANT: Tesoro-Savage

ADJACENT PROPERTY OWNERS (project site):
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**FIGURE 7
CROSS SECTION AREA 400
MARINE TERMINAL**

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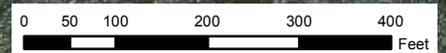
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Terminal 2

Approximately 220 piles to be removed from this area

COLUMBIA RIVER



PURPOSE: To establish facilities to receive crude oil by rail, store it on site, and load it on vessels for shipment to various consumers and end users located primarily on the West Coast of North America

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**FIGURE 9
 TERMINAL 2
 PILE REMOVAL**

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 ENERGY DISTRIBUTION TERMINAL**

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