

ENVIRONMENTAL CHECKLIST

Terminal 18—Maintenance Dredging

A. BACKGROUND

1. Name of proposed project, if applicable: Terminal 18—Maintenance Dredging

2. Name of applicant: Port of Seattle

3. Address and phone number of applicant and contact person:

Geo. Blomberg

Seaport Environmental Programs

Port of Seattle

P.O. Box 1209

Seattle, Washington 98111

Telephone: 206-728-3194

E-Mail: blomberg.g@portseattle.org

4. Date checklist prepared: March 25, 2008

5. Agency requesting checklist: Port of Seattle (SEPA File Number: 08-04)

6. Proposed timing or schedule (including phasing, if applicable):

The proposed start date is December 2008 and the project is expected to be substantially complete by February 2009.

7. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain

There are no current plans for additions, expansion or further changes in structures or uses at Terminal 18. No other construction activities or improvements are related to this proposal.

8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal.

The Port is preparing an evaluation of the potential aquatic area effects of the proposed project, analyzing the effect of proposed maintenance dredging activities on endangered and threatened species. A copy of the project biological evaluation may be obtained from the Port for review. Please note that marine cargo facilities at Terminal 18 were substantially improved during the period 1998 through 2001, with redevelopment of the site evaluated in a June 1997 SEPA EIS. In addition, the Port is completing the final year of a four year container cargo pier strengthening and rehabilitation project. Environmental information relating to recent marine terminal infrastructure improvements are available for review, please contact Geo. Blomberg (206-728-3194, blomberg.g@portseattle.org).

9. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain.

There are no other known applications pending for governmental approvals for other development actions or proposals directly affecting the Terminal 18 maintenance dredging site.

10. List any government approvals or permits that will be needed for your proposal, if known.

- City of Seattle – Shoreline Substantial Development Permit Exemption—maintenance dredging
- Washington Department of Fish and Wildlife – Hydraulic Project Approval
- US Army Corps of Engineers – Section 404 Permit
- Washington Department of Ecology – Section 401 Water Quality Certification

11. Give brief, complete description of your proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page. (Lead agencies may modify this form to include additional specific information on project description.)

Project Background

The Port's existing marine cargo transshipment activities at Terminal 18 require maintenance of navigational access for deep draft vessel use at minus 50 feet MLLW. Recent bathymetric survey data indicate limited shoal areas immediately adjacent to container cargo pier structures at Terminal 18, including localized accumulations of sediment two to seven feet higher than the Port's recent survey information. At present, up to 2,000 cubic yards of sediment requires removal from vessel berth areas in order to maintain adequate navigational access to the existing Terminal 18 cargo pier.

Project Context—Site Description

Terminal 18, located on Harbor Island in south Elliott Bay, consists of approximately 196 acres of marine industrial area built and committed for use in transshipment of container cargo, receiving and shipping of other bulk and liquid bulk commodities, and providing other marine, water-dependent marine industrial services. The existing container cargo pier is approximately 6100 feet in length, located on the west margin of the East Waterway. The Terminal 18 container pier provides six berth areas for heavy draft ocean-going vessels, tugs, and barges. Container terminal and marine service operations at the existing water-dependent Terminal 18 facility include the following existing improvements: (1) ten container-handling cranes (six 100 feet gauge cranes and four 50 feet gauge cranes); (2) inter-modal rail facilities for coincident loading/unloading of 116, five-platform, double-stack railcars; (3) refrigerated container cargo container capacity for approximately 1,350 container units; (4) two gate facilities accommodating up to 32 lanes for heavy truck access, including 12 scales; (5) on-site maintenance and repair facilities totaling approximately 24,000 square feet of covered, drainage controlled work area; and, (6) on-site parking sufficient for approximately 300 long-shore and cargo terminal staff.

Container pier operations take place at a concrete piling supported pier approximately 6100 feet in length and 110 feet wide. Nine existing container cranes move laterally along the container pier on steel rails, located on the container pier parallel to the pier face serving five container ship berth areas (numbered berths 1 through 5, north to south). Berths 1 and 2 are fitted to accommodate 50 feet and 100 feet gauge cranes and Berths 2 through 5 are, generally, served by larger 100 feet gauge cranes.

The existing container cargo pier at Terminal 18 consists of concrete structural piling, supporting a horizontal concrete pier deck, approximately 110 feet in width. The concrete structural piling are octagonal, eighteen to 24 inches in diameter, and arranged in ranks or bents (linear rows of concrete piling oriented east/west), installed perpendicular to the shoreline, with approximately twenty feet separating each piling bent. Each bent consists of 11 to 13 concrete structural piling. The concrete piling are placed in a rap-rap embankment, constructed with a slope of approximately 1.75:1, extending from approximately minus 50 feet MLLW at the water-ward margin of the container pier (the berth area of the container pier) to a top-of-slope elevation of approximately plus 7.5 feet MLLW. The west margin (upland edge) of the under-pier area consists of a vertical steel bulkhead, elevation approximately plus 7.5 feet to 13 feet MLLW. The water-ward margin of the container pier consists of treated timber or steel fender piling, serving as a compression buffer between vessels moored at

the site and the concrete pier. Treated timber fender piling are approximately twelve to eighteen inches in diameter and are spaced approximately ten feet apart, while steel fender piling are 30 inches in diameter, spaced approximately 20 feet apart. In all instances, fender piling extend from the upper, water-ward edge of the concrete container pier (approximate elevation of 18 feet above MLLW) to the maintained berth depth at Terminal 18, approximately 50 feet below MLLW.

Proposed Maintenance Dredging Project

The present proposal includes removal of up to 2000 cubic yards of sediment from container vessel berth areas adjacent to the existing cargo pier at Terminal 18. Generalized navigational access information for south Elliott Bay was distributed by federal agencies in November 2007. Berth depth information in several locations adjacent to the existing Terminal 18 cargo pier was noted as inconsistent with the Port's berth depth data. Subsequently, the Port conducted detailed berth depth surveys at Terminal 18, identifying a linear, dispersed shoal area, approximately 4600 feet long and extending up to 50 feet water-ward from the existing fender piling system, with insufficient berth depths. A total of approximately 0.75 acres of sub-tidal aquatic area, minus 44 to minus 50 feet below MLLW, has been identified for maintenance dredging, including approximately 2000 cubic yards, in order to maintain required deep draft vessel access at existing Terminal 18 container cargo berths. Maintenance dredging to ensure average minus 50 feet MLLW berth depths at Terminal 18 includes dredging to a maximum depth of minus 51 feet MLLW; as over-dredge necessary to account for the accuracy of mechanical dredging equipment operating in depths in excess of 50 feet, over a dispersed site up to 4600 feet in length, comprising 0.75 acres. Including the potential for maintenance dredging between minus 50 and 51 feet MLLW, the total dredging volume necessary for navigational access will not exceed 2000 cubic yards

The accumulated sediment volume is comparatively small, however, it is anticipated that removal of the sediments will require seven to ten working days, due to the long, narrow configuration of the maintenance dredging area and the small changes in sub-tidal depths required. In addition, due to (1) the small quantity of sediments proposed for maintenance dredging, (2) the likelihood that dredged sediments would not be acceptable for open water disposal (based on previous sediment quality data from areas in the west portion of the East Waterway), and (3) the need to restore adequate navigational access depths as soon as possible, the port is proposing to remove maintenance dredging sediments to an approved upland disposal site.

Although sediment excavated during maintenance dredging will not be proposed for placement at the Puget Sound Dredged Disposal Analysis (PSDDA) unconfined open-water disposal site, sediments planned for removal will be analyzed as prescribed by Dredged Material Management Program (DMMP) guidelines and protocols.

Dredging would be accomplished using mechanical clamshell equipment. Dredged material will be placed into a haul barge, which will be transported to a contractor provided off-loading site, transferred from the haul barge by mechanical methods (e.g., land based or barge-based excavator or derrick), and transported by truck and/or rail to an approved upland landfill facility.

Following restoration of adequate sub-tidal vessel berth depths at minus 50 feet below MLLW, including maintenance dredging up to minus 51 feet MLLW to ensure restoration of uniform depth throughout the dredging area, the re-exposed berth sediment surface will be evaluated. DMMP sampling and sediment evaluation protocols will be used to determine if the newly exposed surface sediments are consistent with Washington State anti-degradation requirements and EPA administered Superfund criteria. If regulatory agencies determine that post-maintenance dredging surface sediment conditions exceed anti-degradation parameters, the project plans include the potential for additional sediment removal, providing for excavation of one additional foot of sediments from within the berth areas, and placing a minimum six inches of clean sandy cover over the berth area. It is estimated that up to 1210 cubic yards of additional dredging may be required for the purpose of removing contaminated surface sediments determined by post-maintenance dredging evaluations. A similar volume of clean sand sediments would be placed as a protective cap, including a

maximum of approximately 1210 cubic yards, assuming approximately six inches cover plus six inches of allowable over-placement, due to the need to establish uniform cover and limitations in the capability of large scale equipment to produce precise sub-surface sediment layer conditions.

12. Location of the proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist.

The Terminal 18 project site is located on the west margin of the East Waterway, in southeast Elliott Bay. Terminal 18 includes approximately 196 acres. The Port of Seattle is fee owner of existing upland area. The Washington Department of Natural Resources is owner and manager of adjacent aquatic area and tideland. The port and WDNR implement a joint management agreement for aquatic area adjacent to port marine terminal facilities. The East Waterway is an element of the near-shore environment of WRIA 9. Terminal 18 is located in the west half of Sections 7 and 18, Township 25 north, Range 4 East, King County, Washington. The Terminal 18 street address is 2400 Eleventh Avenue Southwest, Seattle, Washington 98134.

TO BE COMPLETED BY APPLICANT

B. ENVIRONMENTAL ELEMENTS

1. Earth

a. General description of the site (circle one): Flat, rolling, hilly, steep slopes, mountainous, other _____.

Terminal 18, located on the west margin of the East Waterway, in southeast Elliott Bay, consists of approximately 196 acres of water-dependent marine industrial area improved for use in transshipment of container cargo, receiving and shipping of other bulk and liquid bulk commodities. Container terminal and marine service operations at the existing water-dependent Terminal 18 facility include the following existing improvements: (1) nine container-handling cranes (six 100 feet gauge cranes and three 50 feet gauge cranes), operating on an existing approximately 6,100 feet long concrete piling supported cargo pier; (2) inter-modal rail facilities for coincident loading/unloading of 116, five-platform, double-stack railcars; (3) refrigerated container cargo container capacity for approximately 1,350 container units; (4) two gate facilities accommodating up to 32 lanes for heavy truck access, including 12 scales; (5) on-site maintenance and repair facilities totaling approximately 24,000 square feet of covered, drainage controlled work area; and (6) on-site parking sufficient for approximately 300 long-shore and cargo terminal staff. The existing marine industrial site was, generally, constructed as a filled location in shallow sub-tidal and inter-tidal area of south Elliott Bay in the early 1900s. Upland area at the present site was completed in 1969, and includes an approximate two percent slope to allow for appropriate storm water drainage.

b. What is the steepest slope on the site (approximate percent slope)?

The steepest slopes at Terminal 18 are located in the shoreline area beneath the existing 6,100 feet long concrete piling supported cargo pier area. The pier structure connects the upland cargo operations area with vessels using berth area adjacent to east margin of Terminal 18, moored in the East Waterway. The existing pier structure provides the greatest elevation difference at the site, bridging the upland grade elevation of the cargo marshalling yard, approximately 17 to 18 feet above MLLW, with existing berth depths maintained at approximately minus 50 feet MLLW. The slope beneath the existing pier structures is, therefore, comparatively steep. The design slope under the concrete pier structure is approximately 1.75:1. The constructed slope beneath the concrete cargo pier is structurally stabilized by concrete support piling and

heavy armor or riprap stone.

c. What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any prime farmland.

The Terminal 18 location is constructed on filled former tideland area of the Duwamish River estuary. Fill at the site consists of sediments dredged from the previous tideland area, excavated in the first two decades of the last century in order to create deep draft navigational access in south Elliott Bay, and more recently placed fill materials from adjacent upland locations. The Terminal 18 site consists entirely of filled upland and has no previous, existing, or potential agricultural use.

d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.

As a filled former aquatic area site, Terminal 18 may be subject to liquefaction and is identified by City of Seattle Critical Area maps as a potential liquefaction zone. Liquefaction potential zones are considered environmentally sensitive but not environmentally critical areas.

e. Describe the purpose, type, and approximate quantities of any filling or grading proposed. Indicate source of fill.

The present maintenance dredging proposal includes the potential for placement of clean sand fill, if stipulated by participating state and federal management agencies as an environmental protection measure in order to isolate contaminated sediments exposed as a result of maintenance dredging.

f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe.

The proposed maintenance dredging activity is limited to existing sub-tidal aquatic area, greater than 46 feet below MLLW. No potential for erosion of upland soils or inter-tidal sediments is anticipated.

g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)?

With the exception of the riprap slope in bank-line areas and landscape entrance locations at Terminal 18, all existing upland area is covered by impervious surface (asphalt-concrete pavement) and will remain so upon completion of the project.

h. Proposed measures to reduce or control erosion, or other impacts to the earth if any:

Best management practices (BMP's) for control of potential sources of erosion will be implemented during all demolition and construction activities as consistent with the City of Seattle Stormwater, Grading, and Drainage Control Ordinance and Department of Planning and Development Director's Rules.

2. Air

a. What types of emissions to the air would result from the proposal (i.e., dust, automobile, odors, industrial wood smoke) during construction and when the project is completed? If any, generally describe and give approximate quantities if known.

The Terminal 18 marine cargo facility has been in continuous use as a Port cargo transshipment facility for more than four decades and the facility-wide cargo shipping capacity, also referred to as through-put capacity, of the site will not be expanded as a result of the proposed maintenance dredging project. Air emissions from facility-wide cargo operations at the site will not change significantly in comparison with past cargo operations at the entire site.

Air emissions expected as a result of maintenance dredging activities will include equipment emissions from barge-mounted cranes and tugs assisting barges at the site.

b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe.

No off-site sources of air emissions are present that have the potential to adversely affect the present proposal.

c. Proposed measures to reduce or control emissions or other impacts to air, if any:

Motor-powered equipment used for the proposed maintenance dredging activities will be operated and maintained consistent with existing air emissions requirements.

3. Water

a. Surface

- 1) Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into.**

The proposed Terminal 18 maintenance dredging project is located at the west margin of the East Waterway, in southeast Elliott Bay. Please note that the East Waterway and south Elliott Bay are tributary to the Green/Duwamish watershed (WRIA 9).

- 2) Will the project require any work over, in, or adjacent to (within 200 feet) the described waters? If yes, please describe and attach available plans.**

The proposed maintenance dredging project at Terminal 18 will take place in existing sub-tidal aquatic area upland. The maintenance dredging footprint includes approximately 0.75 acres, affecting aquatic area between 44 feet and 51 feet below MLLW.

- 3) Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material.**

The purpose of the proposed project is to ensure maintenance of previously authorized berth depths at Terminal 18. Approximately 2,000 cubic yards of sediments are proposed for removal, reducing existing minor berth shoal areas to a required elevation of minus 50 feet MLLW, plus an additional one-foot of allowable overdepth to bring the final dredge elevation to approximately minus 51 feet MLLW. Dredging is proposed by mechanical clamshell equipment. The approximate sub-tidal maintenance dredging area is approximately 0.75 acres.

The quality of post-maintenance dredging surface sediments will be evaluated to determine if the newly exposed sediments exceed Washington State anti-degradation requirements or are consistent with federal Superfund sediment conditions administered by the Environmental Protection Agency. If review agencies determine that newly exposed surface sediments require measures to protect aquatic area conditions, the Port anticipates the need for an additional one foot of dredging, removing sediments to a maximum depth of approximately 52 feet below MLLW. It is expected that the additional dredging area would require a minimum six inches of clean sand cover, placed as a further environmental protection. The approximate volume for additional dredging is 1,210 cubic yards, and the maximum volume of clean cover would be 1,210 cubic yards (assuming six inches cover plus six inches of allowable overplacement). This results in a potential maximum dredge volume 3,210 cubic yards.

The clean backfill material will likely consist of sand sediments obtained from either an upland quarry source or, potentially, clean dredged material from some other dredging project site that is approved to beneficially re-use dredged sediment as clean backfill. The clean backfill material, regardless of source, would be tested against State Sediment Management Standards (SMS) to ensure that the backfill material meets the Sediment Quality Standards (SQS) criteria.

- 4) Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known.**

No surface water withdrawals or diversions are proposed as part of the proposed project.

- 5) Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.**

The proposed project at Terminal 18 will take place in existing aquatic areas used for more than four decades as a marine industrial, water-dependent site. Existing upland cargo marshalling and transfer areas

adjacent to the maintenance dredging site working surfaces at the site are approximately 17 to 18 feet above MLLW. The aquatic area water-ward of the existing cargo pier, beneath existing pier structures, at the east margin of the site is subject to fluctuations in the 100-year floodplain.

6) Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.

The proposed project does not include discharge of waste materials to aquatic area in the adjacent East Waterway.

Two aspects of the proposed project are important to note regarding potential releases of contaminants to aquatic area in the East Waterway. First, all operating equipment at the site will be subject to best management practices (BMPs) and Spill Prevention, Containment and Countermeasures (SPCC) plans implemented to avoid and minimize potential releases of fuel and petroleum products used by maintenance dredging equipment to the marine environment. Second, proposed maintenance dredging activities will be controlled by best management practices intended to avoid and minimize potential releases of fugitive materials to the aquatic environment.

Please refer to Section B.3.d. below for additional information concerning avoiding and minimizing potential adverse effects to aquatic area in the East Waterway, aquatic area important to fish and wildlife habitat.

b. Ground:

1) Will ground water be withdrawn, or will water be discharged to ground water? Give general description, purpose, and approximate quantities if known.

Proposed maintenance dredging at Terminal 18 does not include withdrawal of groundwater or discharge of materials to groundwater at the project site.

2) Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example, Domestic sewage; industrial, containing the following chemicals . . . ; agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.

The proposed project does not include any discharge of waste material to ground water at the site.

c. Water Runoff (including storm water):

1) Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.

No changes in existing storm drainage systems are proposed and no change in existing upland impervious surface at the site will take place.

2) Could waste materials enter ground or surface waters? If so, generally describe.

It is anticipated that the potential for only minimal volumes of waste materials will be generated during maintenance dredging activities. These materials will be confined and collected as they appear, with the objective of avoiding and minimizing releases to surface water.

Please note that motorized equipment used for maintenance dredging at Terminal 18 will be subject to stringent controls prohibiting discharge of deleterious materials to the aquatic environment.

d. Proposed measures to reduce or control surface, ground, and runoff water impacts, if any:

All maintenance dredging activities will be controlled to avoid and minimize potential releases of debris to the aquatic environment. Motorized equipment used to perform demolition and replacement activities will be subject to best management practices and stringent discharge controls.

Potential adverse effects on water quality and wildlife are expected to be limited to temporary, localized turbidity increases. Potential adverse effects will be minimized during dredging by the following in-water construction controls and best management practices:

- All maintenance dredging activities will be limited to periods determined by participating state and federal agencies to avoid potential adverse effects on migratory fish.
- Best management practices, spill response procedures, and erosion and sediment control measures will be implemented during all maintenance dredging activities, including use of dredged material receiving barges, to avoid discharges and prevent entry of debris to surface waters.

Maintenance dredging activities, including use of floating equipment at the East Waterway Terminal 18 site, will be coordinated with Treaty tribe fishing access in order to avoid and minimize potential effects on usual and accustomed fishing activities in the East Waterway.

During sediment off-loading operations, the contractor will be required to use a spill plate between the haul barge and upland stockpile to prevent spillage of sediment during offloading.

4. Plants

a. Check or circle types of vegetation found on the site:

- deciduous tree: alder, maple, aspen, other
- evergreen tree: fir, cedar, pine, other
- shrubs
- grass
- pasture
- crop or grain
- wet soil plants: cattail, buttercup, bullrush, skunk cabbage, other
- water plants: water lily, eelgrass, milfoil, other
- other types of vegetation

b. What kind and amount of vegetation will be removed or altered?

No existing landscape vegetation, native upland or shoreline vegetation, or aquatic area vegetation or algae will be affected by the proposed project.

c. List threatened or endangered species known to be on or near the site.

No threatened or endangered plant species are known to be in the project area.

d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any:

No existing plant or algal vegetation will be affected by the proposed project.

5. Animals

a. Circle any birds and animals that have been observed on or near the site or are known to be on or near the site:

birds: hawk, heron, eagle, songbirds, other:
mammals: deer, bear, elk, beaver, other:
fish: bass, salmon, trout, herring, shellfish, other:

The built and committed marine cargo use area in existing upland, shore land, and aquatic area at Terminal 18 includes active cargo, warehouse, and industrial operations and does not include significant upland habitat for birds or mammals. Aquatic area in the adjacent East Waterway provides habitat important to numerous species of

resident and migratory fish and wildlife. In recent years, development and construction activities in marine and estuarine locations in Puget Sound have been the subject of increased scrutiny as a result of Endangered Species Act listings, with particular concern for the life cycle and aquatic habitat requirements of Chinook salmon.

Consistent with in-water construction review and permit requirements implemented by the US Army Corps of Engineers, Seattle District, the port is preparing detailed information describing existing aquatic habitat conditions in the East Waterway, pertaining to Endangered Species Act decision-making requirements. This information will be presented in the form of a biological evaluation, analyzing the potential for adverse aquatic area effects due to the proposed maintenance dredging project. Corps of Engineers permit documents and the accompanying biological evaluation will be available for review, contact Geo. Blomberg, Seaport Environmental Programs, P.O. Box 1209 Seattle, Washington 98111 (telephone 206-728-3194, e-mail: blomberg.g@portseattle.org).

The following summarizes information concerning potential adverse effects on fish and wildlife anticipated as a result of the proposed project:

Species listed under the Endangered Species Act (ESA) that may be present in the vicinity of the proposed Terminal 18 maintenance dredging project include: (1) Puget Sound Chinook salmon – threatened; (2) Puget Sound steelhead – threatened; (3) Coastal-Puget Sound bull trout- threatened; (4) Stellar sea lion – threatened; (5) leatherback sea turtle – endangered; (6) humpback whale – endangered; and (7) Orca whale – endangered.

South Elliott Bay, the East Waterway and West Waterway, and the Duwamish Waterway are part of a migration corridor important to anadromous salmon species, serving as a connection between Elliott Bay and the Green/Duwamish watershed. In particular, Puget Sound Chinook, Puget Sound steelhead and coastal-Puget Sound bull trout are known to use the project area. However, bull trout use the Green/Duwamish River system to a lesser degree than chinook salmon or steelhead trout. Adult bull trout have been identified in the Green/Duwamish river basin and may use this area for foraging, migration, and overwintering; however, there is no indication that the system supports a spawning bull trout population.

Stellar sea lions are not common in the project area and typically would not be expected to enter the area when maintenance dredging activities occur. Leatherback sea turtles typically occur in offshore locations and there are no documented sightings within Puget Sound; therefore, it is unlikely that this species uses Elliott Bay or the Duwamish Waterway. Humpback whales are unlikely to be present in the project area at any time. There are no direct, indirect, or cumulative effects due to the proposed project that are expected to adversely affect Steller sea lions or humpback whales.

Puget Sound Orca whales (*Orcinus orca*) were listed under the federal Endangered Species Act as an endangered species on November 12, 2005. Known specifically as the Southern Resident killer whales, they are usually found in northern Puget Sound around the San Juan Islands, but individual whales have been known to be occasionally present in the southern portions of Puget Sound.

b. List any threatened or endangered species known to be on or near the site.

Species listed under the Endangered Species Act (ESA) that may be present in the vicinity of the proposed Terminal 18 maintenance dredging project include: (1) Puget Sound Chinook salmon – threatened; (2) bull trout- threatened; (3) Stellar sea lion – threatened; (4) humpback whale – endangered; and (5) Orca whale – threatened.

c. Is the site part of a migration route? If so, explain.

South Elliott Bay, the East and West Waterways, and the Duwamish Waterway, comprise a portion of the migration corridor important to anadromous salmon species, linking Elliott Bay and the Green/Duwamish watershed. In particular, Puget Sound Chinook, steelhead, and bull trout are known to use the project area.

d. Proposed measures to preserve or enhance wildlife, if any:

Measures to avoid and minimize potential adverse effects on ESA species of concern and, as a result, function as conservation measures, may include a combination of the following:

- Timing restrictions specifying allowable in-water work periods. Maintenance dredging activities would take place only between August 15 and February 15, or other period determined to be protective by state and federal agencies.
- Water quality standards and procedures that limit the effect of turbidity to a defined mixing zone, stipulate limits for chemical constituents, dissolved oxygen, and other parameters, implemented by the Washington Department of Ecology.
- Water quality monitoring during maintenance dredging operations to ensure that applicable water quality standards are met.
- Best management practices (BMPs) required to reduce the potential for dredging-related affects on aquatic species and their habitats, including: (1) prevention of releases of petroleum products, chemical, or other toxic or deleterious materials to the water; (2) immediate stop of work to report and contain any spills or releases, and, (3) preparation and application of a Spill Prevention, Control, and Countermeasure (SPCC) plan for use during maintenance dredging activities.

Please also see Section B.3.d. (Water) above for measures to preserve or enhance wildlife.

6. Energy and Natural Resources

a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc.

No significant change in use of energy for cargo operations at the Terminal 18 project site will take place due to the proposed project. Please note that efficient use of vessel berths at Terminal 18 avoids and minimizes potential vessel delays and demurrage, with associated reduction in energy use.

b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.

The proposed project at Terminal 18 will have no adverse effect on potential use of solar energy at adjacent sites.

c. What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any:

Fuel-efficient electrical and motorized equipment will be used to the extent possible throughout the proposed maintenance dredging project.

7. Environmental Health

a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste, that could occur as a result of this proposal? If so, describe.

The proposed project does not include any new activities at Terminal 18 and, therefore, no operational changes will result that have the potential to introduce environmental health hazards to the project area. Please note that motorized equipment used for construction activities may include potentially hazardous materials in the form of fuel, lubricants, and associated materials. These materials will be subject to local, state, and federal controls and regulations pertaining to use, handling, and storage. No increase in exposure is anticipated.

Dredged material will be evaluated as required by the Dredged Material Management Program (DMMP) to determine the character of the dredged sediments and ensure that post-maintenance dredging surface sediments do not result in adverse exposure to the aquatic environment.

1) Describe special emergency services that might be required.

No special emergency services are anticipated or necessary due to the proposed project.

2) Proposed measures to reduce or control environmental health hazards, if any:

Potentially hazardous fuels, lubricants, and associated materials used for operation of motorized equipment as part of the proposed maintenance dredging activities will be subject to existing local, state, and federal controls for use, handling, and storage, with the objective of avoiding potential environmental health exposure

and hazards.

It is anticipated that dredged sediments excavated from the west margin of the East Waterway will be transported for placement at an approved upland landfill facility. Dredged sediments will be evaluated for consistency with operational and performance requirements at the selected landfill facility.

b. Noise

1) What types of noise exist in the area which may affect your project (for example: traffic equipment, operation, other)?

Terminal 18 is located on the east shoreline of the East Waterway, on Harbor Island, in south Elliott Bay. The Terminal 18 site is north of the Spokane Street transportation corridor, west of Highway 99, and north and west of existing rail line connections in south Elliott Bay. Existing sources of noise at the site include motor-driven vehicles, particularly heavy forklifts and container cargo hauling equipment. Adjacent sources of noise include vehicle traffic throughout the adjacent south Elliott Bay and Duwamish industrial area, rail traffic, and adjacent industrial facilities.

2) What types and levels of noise would be created by or associated with the project on a short-term or a long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from the site.

Short-term noise levels will be affected at Terminal 18 during maintenance dredging activities.

No significant increase in the volume of cargo operations at Terminal 18 is anticipated in comparison with the cargo capacity represented by the existing marine terminal facility. Therefore, no significant increase in noise resulting from continuing marine cargo operations at the site is expected to result from the proposed project.

3) Proposed measures to reduce or control noise impacts, if any:

All motorized demolition equipment will be maintained and operated consistent with prudent measures to control potential noise emissions.

8. Land and Shoreline Use

a. What is the current use of the site and adjacent properties?

The Terminal 18 site is built and committed to marine industrial cargo use. Additional water-dependent marine industrial uses are present on Harbor Island and in up-stream locations in the Duwamish Waterway. Existing marine service uses and activities are consistent with the industrial shore-land and upland character of the project location.

b. Has the site been used for agriculture? If so, describe.

The Terminal 18 site has no historic agricultural use.

c. Describe any structures on the site.

The existing Terminal 18 site comprises approximately 196 acres of upland and shore land marine cargo marshaling area, warehouse structures, and industrial transportation equipment maintenance and repair facilities.

d. Will any structures be demolished? If so, what?

The proposed maintenance dredging project includes no changes to existing structures, including no demolition of structures of any kind.

e. What is the current zoning classification of the site?

The existing zoning classification is Heavy Industrial (IG1/U 85).

f. What is the current comprehensive plan designation of the site?

Existing comprehensive land use designations for the site include Heavy Industrial, General Industrial, and Manufacturing.

g. If applicable, what is the current shoreline master program designation of the site?

The present City of Seattle Shoreline Master Program designation for Terminal 18 is Urban Industrial (UI).

h. Has any part of the site been classified as an "environmentally sensitive" area? If so, specify.

City of Seattle Critical Area Maps indicate the Terminal 18 site is within a potential liquefaction zone, since the area was created on fill in a portion of former south Elliott Bay tidelands. Potential liquefaction zones are considered environmentally sensitive but not environmentally critical areas.

i. Approximately how many people would reside or work in the completed project?

No residential uses are present at the project site and no residential occupancy is proposed. Changes in the number of workers at the site are neither proposed nor anticipated.

j. Approximately how many people would the completed project displace?

The maintenance dredging project is not expected to result in displacement of workers.

k. Proposed measures to avoid or reduce displacement impacts, if any:

No displacement of residents will result from the proposed project at Terminal 18; therefore, no measures for avoiding or reducing displacement impacts are included in the present proposal.

l. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any:

The objective of the proposed maintenance project is to ensure adequate continuing deep draft navigational access to existing marine cargo facilities at Terminal 18. Maintaining deep draft vessel access at Terminal 18 is consistent with the port's long-range marine cargo facility needs, including the most recent revisions to the Port's Harbor Development Strategy (2002).

The proposed project is consistent with the permitted uses and activities identified in the Seattle Shoreline Master Program.

9. Housing

a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing.

No housing units are included in the proposed project at Terminal 18.

b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.

No housing units would be eliminated due to the proposed project.

c. Proposed measures to reduce or control housing impacts, if any:

Since no housing resources will be affected, no measures to reduce or control adverse effects on housing are included in the present proposal.

10. Aesthetics

a. What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed?

The proposed project includes removal of accumulated sediments in existing sub-tidal aquatic area. The maintenance dredging activity will take place approximately 68 feet below the existing grade surface of the existing Terminal 18 container cargo facility. No new in-water or upland structures of any kind are proposed. No change in grade elevation of above-water structures is proposed.

b. What views in the immediate vicinity would be altered or obstructed?

No adverse effects on views of adjacent water and shoreline areas are expected to result from the proposed project.

Existing views at the Terminal 18 include the above grade portions of the maintenance and repair structures, long-shore labor and pier administration buildings, and mobile container crane equipment in use at the existing pier area, at the east (water-ward) margin of the site. Please note that cargo transshipped at the site may appear in rows of stacked twenty and forty feet long cargo containers up to 40 feet high or as areas of open storage of cargo. Empty containers may be present at the site, marshaled in stacks up to 60 feet high.

c. Proposed measures to reduce or control aesthetic impacts, if any:

No significant changes in view conditions at the existing marine cargo terminal are anticipated and no offsetting aesthetic measures are included in the present proposal.

11. Light and Glare

a. What type of light or glare will the proposal produce? What time of day would it mainly occur?

The proposal is not expected to alter existing light or glare conditions at the project site.

b. Could light or glare from the finished project be a safety hazard or interfere with views?

No change in light or glare conditions is anticipated and no safety hazards or interference with views will result from the proposed maintenance dredging project.

c. What existing off-site sources of light or glare may affect your proposal?

No off-site sources of light and glare in the area of the Terminal 18 are expected to adversely affect the present proposal.

d. Proposed measures to reduce or control light and glare impacts, if any:

No adverse effects are expected. Therefore, no mitigation measures are proposed.

12. Recreation

a. What designated and informal recreational opportunities are in the immediate vicinity?

The Port of Seattle has constructed and maintains three public shoreline access sites near the proposed Terminal 18 maintenance dredging project site:

1. Jack Perry Memorial Public Shoreline Access Site, 1700 Alaskan Way South, at the intersection of Alaskan Way South and East Marginal Way South—public use improvements include: Approximately 1.4 acres and approximately 160 linear feet of shoreline access; pedestrian/bicycle pathways, connecting to adjacent pedestrian/bicycle routes; native plant landscaping; parking for 13 vehicles; interpretive panels; shoreline and aquatic area view points; hand-carried boat launch; seating; and, ADA access.
2. Terminal 12 Public Access Park, southwest Harbor Island, north of Klickitat Avenue Southwest/Southwest Spokane Street intersection: Public use improvements include 1.1 acres landscaped upland area and 640 linear feet of shoreline access; three covered tables/seating areas; shoreline plaza and view area; native plant landscaping; lighting; paved pathways; hand-carried boat launch; on-site parking for seven vehicles; and, ADA access.
3. Duwamish Public Access at Terminal 105, 4260 West Marginal Way Southwest: Including 210 feet of shoreline, 1.3 acres upland use area; fishing pier; tables/seating in covered/shelter area; hand-carried boat launch; fish and wildlife habitat; and, native riparian vegetation landscaping.

The City of Seattle operates and maintains two public shoreline access areas south of the Terminal 18 maintenance dredging site: (1) Spokane Street fishing pier: The north margin of the grade-level Southwest Spokane Street bridge crossing of the East Waterway includes approximately 380 linear feet improved as a public use/fishing pier, with four landscape timber planters, two seating shelters, benches, and pedestrian/bicycle pathway connections. (2) Spokane Street--hand-carried boat access: Located south of Southwest Spokane Street, beneath the high-level West Seattle Bridge (Spokane Street viaduct), including approximately 120 linear feet of shoreline, a 15 feet wide sloping path launch site, landscaping, and parking for ten vehicles.

b. Would the proposed project displace any existing recreational uses? If so, describe.

The proposed project will not alter or disrupt public shoreline or recreational uses in the project area.

c. Proposed measures to reduce or control impacts, if any:

No disruption or displacement of existing public shoreline access or recreational uses in the area of the Terminal 18 maintenance dredging project is anticipated.

13. Historic and Cultural Preservation

a. Are there any places or objects listed on, or proposed for, national, state, or local preservation registers known to be on or next to the site? If so, generally describe.

No listed historic or cultural resource sites are known to be present at or adjacent to the proposed Terminal 18 maintenance dredging project site. The possibility that historic or cultural resources are present at the site is low since the present marine cargo facility consists entirely of fill, with the majority of fill placed in former aquatic area in south Elliott Bay at the discharge of the Duwamish estuary. The historic shoreline in this area was located near the present alignment of West Marginal Way and Harbor Avenue Southwest (near Pigeon Point in southwest Elliott Bay) and near the present Airport Way South right-of-way (at the east margin of the Duwamish industrial area).

Aquatic area in Elliott Bay and the Duwamish Waterway consists of Treaty-protected "usual and accustomed" fishing area. Fishing activity in this area is managed by the Muckleshoot Indian Tribe, together with the Washington Department of Fish and Wildlife. Fishing by Tribal members in this area is consistent with past federal government treaties and subsequent court decisions. Treaty fishing is an ongoing activity, and thus, a baseline condition within this area.

Members of the Muckleshoot Indian Tribe and Suquamish Indian Tribe harvest Chinook, coho, chum, and steelhead salmon in south Elliott Bay, the East and West Waterways, and the Duwamish Waterway during summer, fall, and winter of each year, generally from August through February. Aquatic area adjacent to Terminal 18 is an active set net fishing area.

Since the Terminal 18 project site is an existing marine terminal facility and no expansion of the physical dock or pier structures at the site is proposed, the effect of the project on Treaty-fishing access is expected to be limited to floating dredging equipment and the dredging activity, during daylight work periods. Please note that the proposed project is not expected to add to the cargo shipping capacity of the present marine terminal facility, and a significant increase in use of the site by deep draft vessels, compared with present vessel use frequency, is not expected. The throughput capacity of the marine cargo terminal is not expected to increase significantly, compared with the present number of vessel calls and the cargo volume represented by vessel service.

b. Generally describe any landmarks or evidence of historic, archaeological, scientific, or cultural importance known to be on or next to the site.

No landmarks or evidence of historic, archaeological, scientific, or cultural features of importance are known to be at the project site or potentially affected by project actions.

c. Proposed measures to reduce or control impacts, if any:

No potential adverse effects on historic or cultural resources are anticipated and no measures are proposed to reduce or control such effects.

Please note that, at present, the port works in partnership with the Muckleshoot Indian Tribe and the Suquamish Indian Tribe to inform treaty fishermen of vessel activity in the vicinity of Terminal 18, including berth location and arrival/departure date and time, during fishing periods. Information detailing vessel activity is provided as a means of avoiding potential fishing use and vessel operation conflicts and to ensure continuing mutual access to this area of the East Waterway.

It is important that maintenance dredging activities necessary for the proposed project avoid and minimize

potential disruption of Treaty fishing activities. Maintenance dredging activities will also be coordinated with fishing periods in order to minimize potential disruption of fishing locations due to the presence of floating dredging equipment and shifts in cargo vessel mooring areas due to maintenance dredging activities.

14. Transportation

a. Identify public streets and highways serving the site, and describe proposed access to the existing street system. Show on site plans, if any.

Terminal 18 is located west of Interstate Highway 5 and west of Highway 99. The site is north of the Southwest Spokane Street transportation corridor crossing the south end of Harbor Island. The Terminal 18 site includes arterial street connections to the Spokane Street industrial traffic corridor. Terminal 18 vehicle traffic connects, via Southwest Spokane Street to Highway 99 and Highway 5.

b. Is site currently served by public transit? If not, what is the approximate distance to the nearest transit stop?

Limited public transit is present on Harbor Island, generally serving shipyard workers at northwest Harbor Island.

c. How many parking spaces would the completed project have? How many would the project eliminate?

The existing Terminal 18 container cargo facility includes approximately 300 on-site (off-street) parking spaces. The proposed project will not alter the number of on-site parking areas identified at Terminal 18.

d. Will the proposal require any new roads or streets, or improvements to existing roads or streets, not including driveways? If so, generally describe (indicate whether public or private).

The proposed project does not require changes or improvements to existing roads or streets in the project area. The project will allow for full utilization of existing marine terminal facilities at the site. No increase in marine terminal shipping capacity will result from the proposed project, however, and no changes in road and street connections are necessary or required.

e. Will the project use (or occur in immediate vicinity of) water, rail, or air transportation? If so, generally describe.

No changes in rail or air transportation will result from the proposed project. Rail access is present at the site and no changes are proposed to rail lines or rail service characteristics.

f. How many vehicular trips per day would be generated by the completed project? If known, indicate when peak volumes would occur.

No significant change in the volume of trucks transporting marine cargo to and from the Terminal 18 facility is expected, nor is a significant increase in the number of vehicles used by workers at the site anticipated.

The proposed project will ensure continuing cargo transshipment at Terminal 18, but is not expected to increase facility-wide cargo capacity. Therefore, no significant change in the volume of cargo shipped at the Terminal 18 site, compared with present conditions at the site, is anticipated.

The proposed maintenance dredging activity will be accomplished using barge-based equipment. Transfer of dredged materials to an upland receiving site for transport to an approved disposal site is not expected to generate significant truck or rail traffic, due to the comparatively small volume of dredged material proposed for transport.

g. Proposed measures to reduce or control transportation impacts, if any:

No long-term negative effects on transportation in the area of Terminal 18 are anticipated as a result of the proposed project. No additional measures for reduction/minimization of potential adverse transportation effects are included in the project.

15. Public Services

- a. Would the project result in an increased need for public services (for example: fire protection, police protection, health care, schools, other)? If so, generally describe.**

No increase in public services is anticipated as a result of the proposed project.

- b. Proposed measures to reduce or control direct impacts on public services, if any.**

No measures for offsetting, reducing or controlling negative effects on public services are required.

16. Utilities

- a. Circle utilities currently available at the site: electricity, natural gas, water, refuse service, telephone, sanitary sewer, septic system, other.**

Terminal 18 receives electric, natural gas, water, solid waste, sanitary sewer, and telephone service.

- b. Describe the utilities that are proposed for the project, the utility providing the service and the general construction activities on the site or in the immediate vicinity that might be needed.**

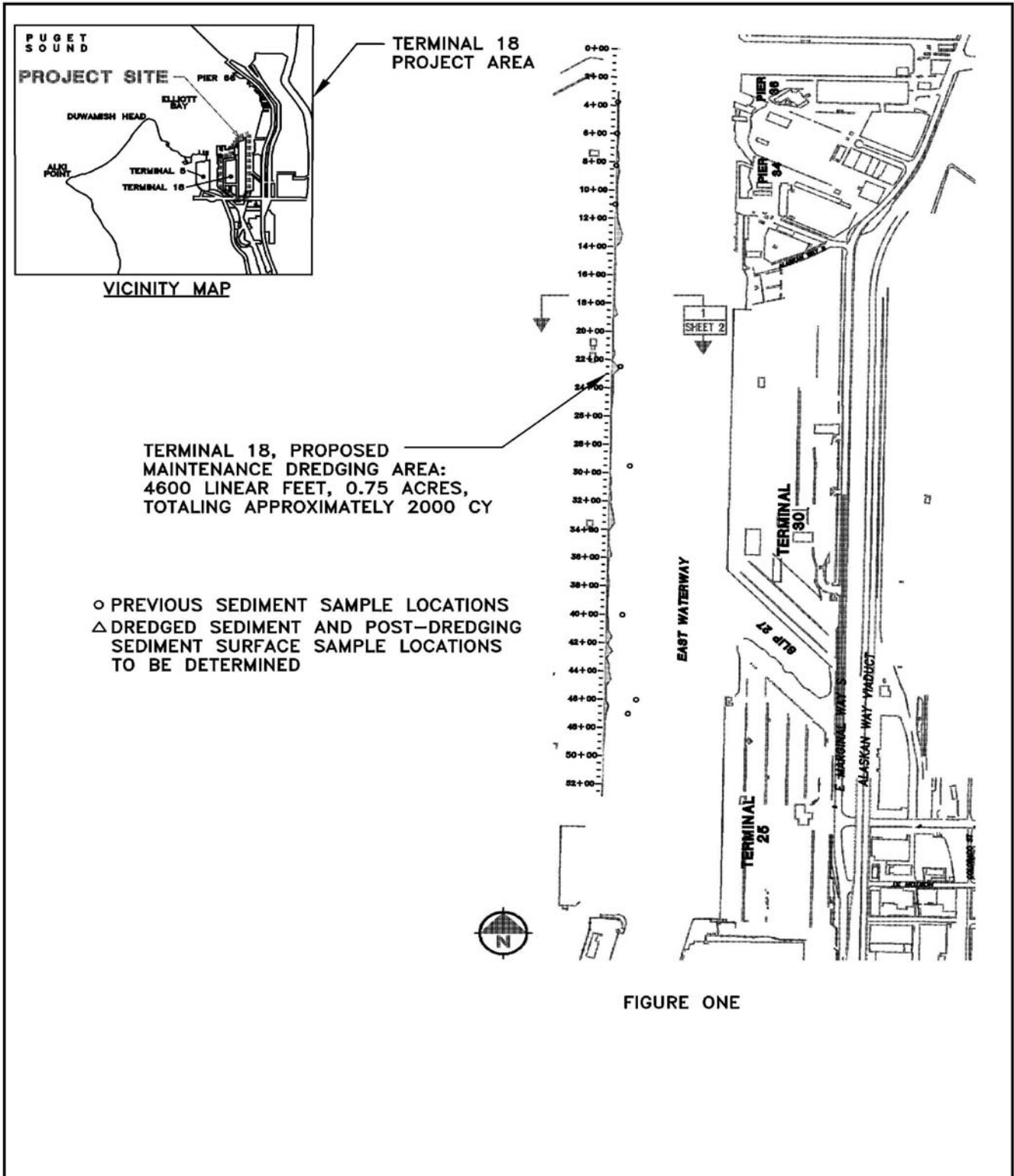
No change in utilities serving the site is proposed in the present project.

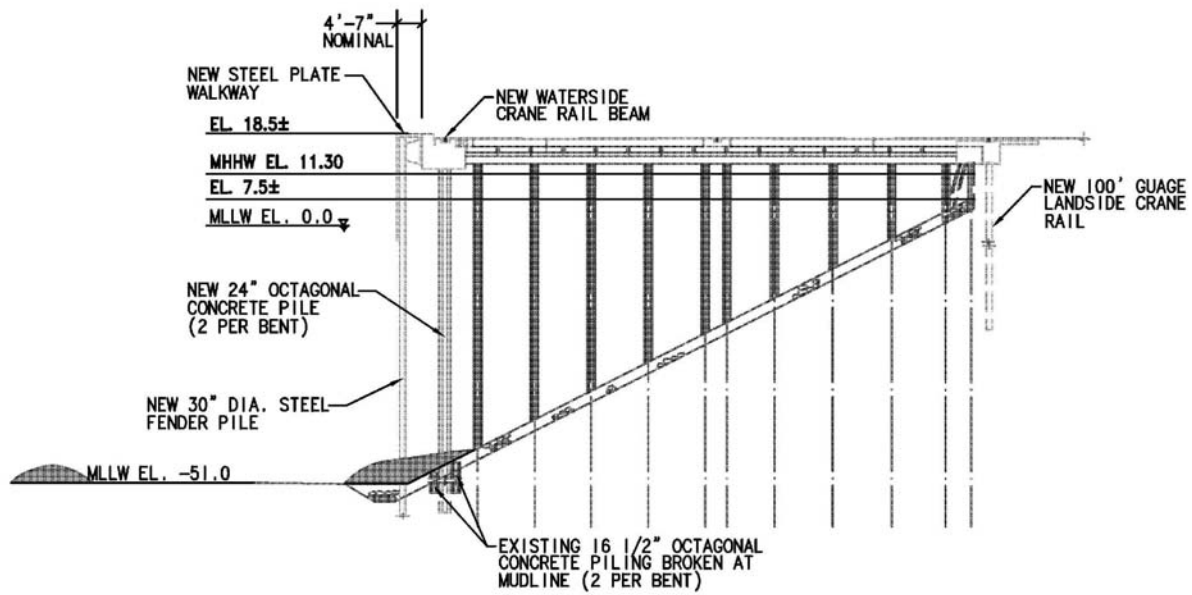
C. SIGNATURE

The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

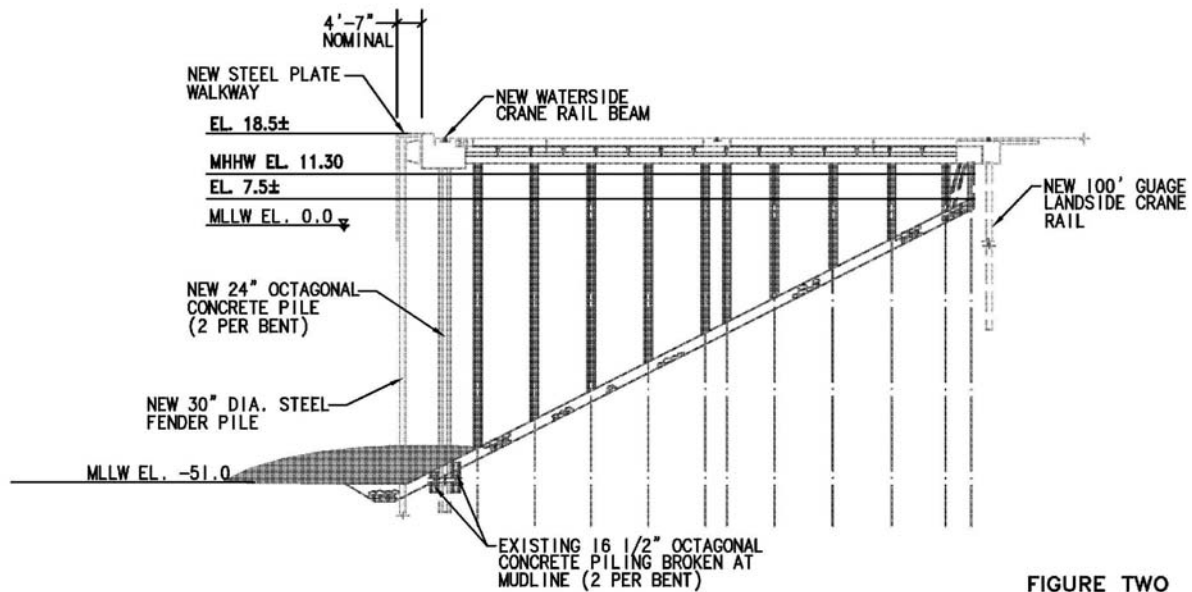
Signature: _____ **Signature on File** _____

Date Submitted: _____ April 4, 2008 _____





SECTION
 TYPICAL APRON SECTION PIER STATION 1300 FEET
 PROPOSED MAINTENANCE DREDGING



SECTION
 TYPICAL APRON SECTION PIER STATION 3300 FEET
 PROPOSED MAINTENANCE DREDGING

FIGURE TWO