



King County

## ENVIRONMENTAL CHECKLIST

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### Dockton Shoreline Restoration Project

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#### *Purpose of the Checklist:*

The State Environmental Policy Act (SEPA), Chapter 43.21 RCW, requires all governmental agencies to consider the environmental impacts of a proposal before making decisions. An environmental impact statement (EIS) must be prepared for all proposals with probable significant adverse impacts on the quality of the environment. The purpose of this checklist is to provide information to help you and the agency identify impacts from your proposal (and to reduce or avoid impacts from the proposal, if it can be done) and to help the agency decide whether an EIS is required.

#### *Instructions for Applicants:*

This environmental checklist asks you to describe some basic information about your proposal. Governmental agencies use this checklist to determine whether the environmental impacts of your proposal are significant, requiring preparation of an EIS. Answer the questions briefly, with the most precise information known, or give the best description you can.

You must answer each question accurately and carefully, to the best of your knowledge. In most cases, you should be able to answer questions from your own observations or project plans without the need to hire experts. If you really do not know the answer, or if a question does not apply to your proposal, write “**do not know**” or “**does not apply.**” Complete answers to the questions now may avoid unnecessary delays later.

Some questions ask about governmental regulations, such as zoning, shoreline, and landmark designations. Answer these questions if you can. If you have problems, the governmental agencies can assist you.

The checklist questions apply to all parts of your proposal, even if you plan to do them over a period of time or on different parcels of land. Attach any additional information that will help describe your proposal or its environmental effects. The agency to which you submit this checklist may ask you to explain your answers or provide additional information reasonably related to determining if there may be a significant adverse impact.

#### *Use of Checklist for Nonproject Proposals:*

Complete this checklist for nonproject proposals, even though questions may be answered “**does not apply.**” In addition, complete the SUPPLEMENTAL SHEET FOR NONPROJECT ACTIONS (PART D).

For nonproject actions, the references in the checklist to the words “**project,**” “**applicant,**” and “**property or site**” should be read as “**proposal,**” “**proposer,**” and “**affected geographic area,**” respectively.

**A. BACKGROUND**

1. *Name of the proposed project, if applicable:*

Dockton Shoreline Restoration Project

2. *Name of Applicant:*

King County Department of Natural Resources and Parks  
Water and Land Resources Division

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

Laird O’Rollins, Project Manager  
King County Water and Land Resources Division  
201 South Jackson Street, Suite 600  
Seattle, WA 98104-3855  
Phone: 206-296-8014  
Fax: 206-296-0192  
Laird.orollins@kingcounty.gov

4. *Date checklist prepared:*

June, 2012

5. *Agency requesting checklist:*

King County Department of Natural Resources and Parks  
Water and Land Resources Division

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

Project construction will occur in two phases. Phase 1 will be constructed during the fall of 2012 and Phase 2 will be constructed during the fall of 2013.

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

No

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

Cultural Resources Investigations for the Dockton Heights Restoration Project, prepared by ICF International, February 2012;

The Vashon Island Archaeology Project, prepared by Amanda Taylor for King County Road Services Division, NADB 135119, 2007.

Dockton Beach Park, Vashon Island, Washington – Hazmat Assessment, prepared by Herrera Environmental Consultants, October 2011;

Dockton Beach Park Shoreline Geomorphic Processes Assessment, prepared by Herrera Environmental Consultants, November 2011.

Washington Department of Natural Resources Puget Sound Initiative – Derelict Creosote Piling Removal Best Management Practices For Pile Removal & Disposal, Washington Department of Natural Resources; 2006.

Dockton Shoreline Restoration Project Wetland Delineation and Functional Assessment Report, King County Water and Land Resources Division; (in progress, likely to be completed in June, 2012).

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.*
- No.
10. *List any government approvals or permits that will be needed for your proposal, if known.*
- King County Clearing and Grading Permit (King County DDES);
  - King County Parks Special Use Permit (King County Parks);
  - Hydraulic Project Approval (Washington Dept. of Fish and Wildlife);
  - Washington State Shorelines Substantial Development Exemption (King Count DDES);
  - Section 401 (Clean Water Act) Water Quality Certification (Washington Dept. of Ecology) (Phase 2 only);
  - Coastal Zone Management Act Concurrence (Washington Dept. of Ecology);
  - Nationwide 27 Permit (Aquatic Habitat Restoration), Section 10 (Rivers and Harbors Act), (U.S. Army Corps of Engineers) (Phase 2 only);
  - Section 7 (Endangered Species Act) compliance;
  - Section 106 (Historic Preservation Act) compliance.
11. *Give a 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 the project description.)*

The Dockton Shoreline Restoration Project will remove up to 80 creosote-coated pilings and other debris from a site in the intertidal area of Quartermaster Harbor (Phase 1), and restore beach-forming processes and salt marsh characteristics to a one-acre site on the shoreline of Quartermaster Harbor, Maury Island (Phase 2). The pilings will be removed using a crane mounted on a barge and will follow the Washington State Department of

Natural Resources Best Management Practices (BMPs) for Pile Removal and Disposal. Beach-forming processes and salt marsh characteristics will be restored to the site by removing approximately 375 linear feet of shoreline protection (loose rock bulkhead) and about 1,700 cubic yards of fill that have been placed landward of the bulkhead. The filled area will be graded to create a variety of salt water inundation frequencies and optimize potential salt marsh habitat. In addition, the upper beach area will be nourished with up to 100 cubic yards of appropriately sized gravel to mitigate for the interruption of sediment supply to the beach, promote beach-forming processes and improve beach-spawning fish habitat.

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, and 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 plan, 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 proposed project is located on the shoreline of Quartermaster Harbor on Maury Island, just southeast of the town of Dockton and immediately west of Dockton Beach Park (see Figure 1 appended to this checklist). The 1-acre property is owned by King County and is managed as “Ecological Land.” The project site is in the NW quarter of Section 29, Township 22N, Range 02E; Thomas Bros. page 713 at F-3.

## **B. ENVIRONMENTAL ELEMENTS**

### **1. Earth**

- a. *General description of the site (underline one): flat, rolling, hilly, steep slopes, mountainous, other.*

The site is a flat terrace, backed by a steep road shoulder and also bordered by a gently sloping beach.

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

Portions of the road embankment bordering the site are at slopes of around 1.5 to 1 (about 70%).

- 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 soils on the site have been disturbed. Fill dirt—a mix of sand and gravel—covers most of the site and was placed over native peat soils and gravel beach. In places, the native peat soils are still at the surface. The beach itself is formed of small gravels and sand.

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

The site is a Puget Sound shoreline, which would naturally be subject to erosion from wave action, etc. However, the existing rock bulkhead protects the site from such forces. There are no current indications of soil instability on or near the site.

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

In Phase 2 of the project, approximately 1,900 cubic yards of dirt and rock used to construct the bulkhead will be removed from the site to create topography suitable for supporting salt marsh vegetation. Most of the dirt to be removed is fill that was placed over native peat soils. Some or all of the rock armoring may be placed along the toe of the adjacent road embankment to protect against potential future erosion.

In addition, up to 100 cubic yards of small, clean gravel will be placed along the upper beach to improve spawning conditions for beach-spawning fish and to promote natural beach morphology. Development along the shoreline of Quartermaster Harbor has interrupted the natural supply of sediment to the beach on this site, and placement of these gravels is meant to mitigate for that disruption of natural processes. Gravel of appropriate specifications will be obtained from a local commercial source.

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

Removal of the existing rock bulkhead that separates the site from the adjacent beach will expose the site to wave action and other natural erosional forces. While this area of Quartermaster Harbor is protected and fairly quiescent, some erosion (and deposition) will still likely occur over time. This level of erosion is consistent with natural processes that form appropriate and productive shoreline habitat.

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

None of the site will be covered with impervious surface after project construction.

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

Temporary Erosion and Sediment Control (TESC) BMPs will be utilized as necessary during construction. An engineered construction entrance, and TESC supervision by a certified erosion and sediment control lead (CESCL) will minimize the potential for erosion during construction.

## 2. Air

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

The project has the potential to generate construction related dust. Dust control will be performed on an as-needed basis by stabilizing construction access surfaces and watering. All loads of soil or other debris leaving the site will be covered.

The completed project will not emit gasses with the potential to negatively affect climate change.

Construction equipment, including a barge/tug boat, crane, track hoes, dump trucks and pick-up trucks, will be used during construction. This equipment will emit gasses including carbon dioxide (CO<sub>2</sub>), methane and nitrous oxide, as well as others in much smaller amounts. The global warming potential (GWP) of these compounds is measured in “carbon dioxide equivalents,” or CO<sub>2</sub>e, which converts the GWP of various gasses into their equivalent in CO<sub>2</sub>. The amount of CO<sub>2</sub>e that may be emitted as a result of constructing the proposed project has been estimated by computing the amount of fuel to be consumed by equipment used to construct the project or by estimating their hourly output of various greenhouse gases. Fuel consumed or hourly output is then converted into CO<sub>2</sub>e emitted using formulae developed by the Energy Information Administration (EIA) of the U.S. Department of Energy.

Construction of the proposed project will likely result in the discharge of approximately 15 tons of CO<sub>2</sub>e to the atmosphere.

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

No.

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

Engines will not idle unnecessarily and will be kept in proper working order with all filters and other emission control devices functional.

## 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 the type and provide names. If appropriate, state what stream or river it flows into.*

Yes. The site is on the shoreline of Quartermaster Harbor and Puget Sound. There is also a small, perennial and uninventoried stream that enters the site via a

culvert beneath SW Dock Street and flows across the site into Puget Sound. This stream flows through and feeds a small (13,500 ft<sup>2</sup>), uninventoried Category III wetland that is also on the site. Another drainage of similar size empties into Quartermaster Harbor via a culvert beneath SW Dock Street on the parcel immediately northwest of the site.

- 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.*

Yes. Most of the project site and work proposed is within the tidal influence of Puget Sound and all of the work is within 200 feet of Puget Sound. The project will remove up to 80 creosote-coated wood pilings from the intertidal area of Puget Sound (Phase 1, Figure 2) and will reconfigure the shoreline of Puget Sound within the project area as shown in Figure 3.

No grading or filling will occur within the Category III wetland on the site. However, fill will be removed to the wetland's edges in Phase 2 of the project. Much of the area that will be graded is expected to become wetland as it is exposed to more frequent tidal and groundwater inundation and as fill that presently constrains and contains the existing wetland is removed. Approximately 9,400 square feet of wetland—mostly salt marsh—is expected to be created by this project.

- 3) *Estimate the amount of fill and dredge material that could 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.*

No dredging will occur within surface waters (below Mean High Water) or wetlands. Mean High Water at the location of this project is at 7.9 feet NAVD 88 (NOAA Technical Memorandum OAR PMEL-122, Tidal Datum Distributions in Puget Sound, Washington, Based on a Tidal Model, November 2002). In Phase 2 of this project, up to 100 cubic yards of clean gravel will be placed along the upper beach between 6' and 8' elevations (NAVD 88) to improve conditions for beach-spawning fish and beach berm-forming processes. The beach at this site has been starved of sediment due to shoreline development, and placement of this material is meant to compensate for those effects.

Up to 80 creosote-coated wood pilings will be removed from the intertidal area of Puget Sound adjacent to the site during Phase 1 of this project (see Figure 2).

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

No. However, the finished project may change flow patterns of water flowing through the freshwater wetland on site due to the removal of fill that presently constrains the wetland.

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

Yes, the entire project is within the 100-year floodplain of Puget Sound. See Figure 2.

- 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 project should not involve any discharges of waste materials to surface waters. However, it is possible that, during removal of up to 80 creosote-coated pilings from the intertidal area of Quartermaster Harbor, contaminated soils surrounding the pilings or parts of the pilings themselves could be disturbed and/or mobilized in the water column. The contractor performing the piling extraction will be required to use a floating surface boom to capture debris that falls from the piling during extraction. The floating boom shall be equipped with absorbent pads to contain any oil sheens. The contractor will be required to follow all of the Washington State Department of Natural Resources' Best Management Practices for Pile Removal and Disposal (2011 update) (appended to this checklist as Exhibit A).

*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.*

No.

- 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.*

None.

*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.*

The project will generate no stormwater runoff in excess of present conditions.

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

See Question 3. a. 6) above. No waste materials will enter groundwater. All equipment will be kept outside of stream channels and wetlands. Crews will be equipped with spill response kits and will follow Best Management Practices.

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

All Best Management Practices will be followed during project construction and piling removal to minimize impacts to surface and groundwater, including the Washington State Department of Natural Resources' Best Management Practices for Pile Removal and Disposal (2011 update). The finished project will enhance and expand wetlands on the site and should improve filtration of runoff entering the site before it enters Puget Sound.

#### 4. Plants

- a. *Check or underline types of vegetation found on the site:*

- Deciduous trees: alder, maple, aspen, other
- Evergreen trees: fir, cedar, pine, other
- Shrubs
- Grass
- Pasture
- Crop or grain
- Wet soil plants: cattail, buttercup, bulrush, skunk cabbage, other
- Water plants: water lily, eelgrass, milfoil, other
- Other types of vegetation

Much of the site is covered in grasses growing in compacted soil imported to the site as fill. However, a wetland occupying about ¼ acre in the southwest corner of the site is vegetated with native willow, crabapple, slough sedge and skunk cabbage, as well as non-native yellow iris. Red alder, black cottonwood, shore pine, western red cedar, Douglas fir and non-native deodar (or Himalayan) cedar (*Cedrus deodara*) are also found on the site.

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

About one half of an acre will be cleared of vegetation in order to grade the site and promote salt marsh characteristics. This clearing will entail cutting of about 28 trees. The majority of those trees are either red alder (*Alnus rubra*) or black cottonwood (*Populus trichocarpa*), which are fast-growing deciduous trees. However, three conifer trees—one Western red cedar (*Thuja plicata*), one shore pine (*Pinus contorta*) and one non-native deodar or Himalayan cedar (*Cedrus deodara*)—will also be cut. The conifers will be reused on site as either snags or as habitat logs within the project site to improve habitat.

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

None.

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

The entire cleared area will be revegetated using appropriate native species adapted for the environment into which they will be planted. These will include salt-tolerant species adapted to regular inundation by salt water.

## 5. Animals

- a. *Check or underline any birds or 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

Other species of note that may utilize the site include purple martins (which nest in boxes attached to pilings in the intertidal areas), sand lance and other beach-spawning forage fish.

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

ESA-listed Chinook salmon and Steelhead trout, as well as coho salmon, likely use the nearshore areas during certain stages in their life cycles. Stellar sea lions and killer whales are not known to regularly use Quartermaster Harbor, but it is accessible to them and their use of waters adjacent to the project site is possible.

Pacific herring, a state candidate species of concern, are documented to spawn in the nearshore areas adjacent to the project site.

Purple martins, a candidate for state threatened or endangered status, nest in four artificial nesting boxes attached to pilings slated to be removed as part of Phase 1 of this project. New nesting boxes will be attached to nearby pilings that will not be removed prior to removal of the pilings and boxes. The piling removal will be scheduled for autumn, after purple martin nesting/fledging has been completed for the year.

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

Many anadromous salmonids, including Chinook and coho salmon, cruise the shorelines of Puget Sound after migrating out of their natal rivers and streams and before migrating to the open ocean. These species and others are expected to migrate past the project site and may utilize the salt marsh and other enhanced features proposed for this site. Pacific herring and sand lance may also use the nearshore areas adjacent to the project site.

The project site is also on the Pacific Flyway and may serve as a resting area for migrating birds.

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

The purpose of this project is to enhance habitat quality of the site. Creating salt marsh characteristics will increase the site's value to both marine and terrestrial wildlife.

Nourishing the beach with additional sediment will also improve spawning habitat for beach-spawning fish such as herring and sand lance, which are prey fish for salmon.

## 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.*

The finished project will require no energy.

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

No.

- 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:*

Not applicable.

## 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.*

No toxic chemicals or hazardous waste will be used or generated by this project. Elevated levels of arsenic and lead have been detected in the soils on site, but these are consistent with background levels found throughout Maury Island and are assumed to originate from the Asarco copper smelter in Tacoma (Dockton Beach Park, Vashon Island, Washington – Hazmat Assessment, prepared by Herrera Environmental Consultants, October 2011). One sampling location showed levels of arsenic and lead that are higher than background and may be the result of historical boat building or other historical activities on the site. That same sampling location and one other also showed levels of carcinogenic polycyclic aromatic hydrocarbons (cPAHs) that exceed Model Toxics Control Act (MTCA) thresholds for unrestricted use, but do not exceed thresholds for mandatory cleanup. This contamination is likely associated with historical activities on the site. Testing completed to date indicates that these contaminants are located near the surface and can be completely removed during construction. King County is developing a remediation plan for the removal and proper disposal of these materials.

Creosote-coated pilings in the intertidal area of the site will be removed and it is possible that creosote could be released into the environment as a result. Best Management Practices developed by the Washington Dept. of Natural Resources for

piling removal will be followed and include measures designed to prevent such releases. Pilings will be disposed of in a landfill permitted to accept creosote-coated materials.

Also, construction equipment could leak diesel gas, oil, or hydraulic fluid onto the site. Best Management Practices as described below will be followed to prevent such leaks or releases of hazardous materials.

1) *Describe special emergency services that might be required.*

None.

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

King County is developing a remediation plan that will prevent release of hazardous materials or chemicals already present on the site into the environment.

All machinery will be inspected for leaks prior to entering the site. An emergency spill kit will be kept on the site at all times to respond to the potential loss of diesel gas, oil, or hydraulic fluid from construction machinery.

Crews that remove pilings from the intertidal area will follow all of Washington DNR's Best Management Practices for Pile Removal and Disposal, including those intended to prevent and minimize release of toxic wastes into the environment. Removal of these pilings will stop the continued leaching of creosote from the pilings into Quartermaster Harbor

All construction equipment will be refueled at a designated fueling area on the access road. All equipment will be inspected on a daily basis to determine if there are leaking seals or gaskets that require replacement. Best Management Practices (BMPs) such as fuel containment and a spill response plan will be used during construction to reduce and control environmental health hazards. When feasible, biodegradable hydraulic fluid will be used.

b. Noise:

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

None.

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

Removal of the pilings from the intertidal area (Phase 1) will likely be accomplished using a vibratory hammer and may create noise. This work is expected to last one to two weeks and will be limited to hours between 7:00am and 7:00pm, Monday through Saturday.

Construction of the Phase 2 project will generate some noise due to the use of excavators and trucks. Construction of the project will likely take two to three weeks and construction activities will be limited to hours between 7:00am and 7:00pm, Monday through Saturday.

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

Use of heavy equipment to construct the project will be limited to the hours between 7:00am to 7:00pm, Monday through Saturday.

## 8. Land and Shoreline Use

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

The site is currently owned by King County and is managed as “Ecological Land” for its ecological functions. It is immediately adjacent to a developed King County Park (Dockton Beach Park). Residential areas are across SW Dock Street from the site.

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

No.

c. *Describe any structures on the site.*

There is one wooden shed on site, in addition to the rock bulkhead.

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

The wooden shed and the rock bulkhead will be removed as part of this project.

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

The site is zoned RA-5.

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

RA (Rural Area)

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

Rural.

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

Yes. The site is a shoreline of Puget Sound and also contains a Category III freshwater wetland.

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

None.

- j. Approximately how many people would the completed project displace?*  
None.
- k. Proposed measures to avoid or reduce displacement impacts, if any:*  
Not applicable.
- l. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any:*  
The property is owned by King County and managed for its ecological values. This proposal would enhance those ecological values.

## 9. Housing

- a. Approximately how many units would be provided, if any? Indicate whether high-, middle-, or low-income housing.*  
None.
- b. Approximately how many units, if any, would be eliminated? Indicate whether high-, middle-, or low-income housing.*  
None.
- c. Proposed measures to reduce or control housing impacts, if any:*  
Not applicable.

## 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 project may include the installation of “snags”—dead trees used by birds for perching—that may be up to 30 feet in height.
- b. What views in the immediate vicinity would be altered or obstructed?*  
None.
- c. Proposed measures to reduce or control aesthetic impacts, if any:*  
The project will enhance the aesthetics of the site by planting native species appropriate for the specific environment.

## 11. Light and Glare

- a. What type of light or glare will the proposal produce? During what time of day would it mainly occur?*  
None.

- b. *Could light or glare from the finished project be a safety hazard or interfere with views?*  
No.
- c. *What existing off-site sources of light or glare may affect your proposal?*  
None.
- d. *Describe proposed measures to reduce or control light and glare impacts, if any.*  
None.

## 12. Recreation

- a. *What designated and informal recreational opportunities are in the immediate vicinity?*  
The site is immediately adjacent to a developed King County Park, which contains a playground, restrooms, a dock and a boat launching ramp. The site itself is used for informal recreational opportunities, such as bird watching and picnicking.
- b. *Would the proposed project displace any existing recreational uses? If so, describe.*  
Access to the site from the neighboring park may be somewhat more difficult since the trail connecting the two sites is on fill that will be removed. Pedestrian access will be maintained from SW Dock Street, where a driveway currently accesses the site, and from the beach itself. More of the site will be wetter and muddier than at present, but areas for viewing the site and surrounding areas will be maintained.
- c. *Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:*  
A pedestrian trail will maintain access to the site from SW Dock Street, and a viewing area will be created suitable for passive uses of the site. Access to the site from the adjacent Dockton Beach Park will be available via either the beach or SW Dock Street.

### 13. Historical 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.*

The Washington Department of Archaeology and Historical Preservation's (DAHP) WISAARD database and King County's cultural resources database show no places or objects listed on, or proposed for, national, state, or local preservation registers known to be on or next to the project site.

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

Prehistoric archaeological site 45KI783 was recorded in 2007 as a 10-m-wide "secondary deposit of shell midden...on the beach seaward of the seawall and on the ground surface on the raised surface landward of the seawall" (Amanda Taylor, 2007, The Vashon Island Archaeology Project, King County Road Services Division, NADB 1351193).

The exact location of the site and its boundaries are not clear. Taylor mapped the boundaries of 45KI783 as a rectangle that extends northwest-southeast along the beach for about 65 m and encompasses about 10 m on the landward side of the seawall and about 20 m on the beach side. According to WISAARD, the site is about 80 m long and extends 40 m from the inland side of SW Dock Street out to the beach beyond the seawall. Taylor excavated two auger probes in the secondary deposit on the landward side of the seawall, but did not encounter intact archaeological deposits. Subsequent subsurface archaeological investigations for the Dockton Heights Restoration Project have been conducted within a 125-m-long area between SW Dock Street and the seawall that includes the site boundaries as mapped by both Taylor and DAHP. These investigations, which consisted of twenty shovel probes and monitoring of 6 geological borings, did not identify any intact archaeological materials (Christopher Hetzel, Shane Sparks, and Charles Hodges, 2011, Dockton Heights Restoration Project – Cultural Resources Risk Assessment, ICF International; J. Tait Elder and Meredith Mullaley, 2012, Cultural Resources Investigations for Dockton Heights Restoration Project, ICF International).

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

In case there are deposits associated with 45KI783 within the project area, an archaeological monitor on site will observe all ground disturbing 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.*

Access to the site is from SW Dock Street. The finished project will have no vehicle access, though parking is available at the adjacent Dockton Beach Park.

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

The site itself is not served by public transit. The nearest public bus stop is about 3,000 feet away on SW 264<sup>th</sup> Street at 99<sup>th</sup> Avenue SW.

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

Parking is available at the adjacent King County Park. This project will neither add nor reduce available parking.

- 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).*

No.

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

The project is located immediately adjacent to a King County Park with a boat ramp and dock and marina. Numerous pleasure craft anchor in the harbor adjacent to the project site. The completed project will not use or affect boat traffic. However, a barge will likely be anchored at the site of the pile removals during construction of Phase 1 for up to two weeks. This may cause minor disruption of boat traffic in the immediate vicinity, but should not restrict moorages, launching or docking of boats.

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

None.

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

None.

## 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.

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

None.

**16. Utilities**

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

None.

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.*

None.

**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:



Title:

Project Manager / Sr. Ecologist

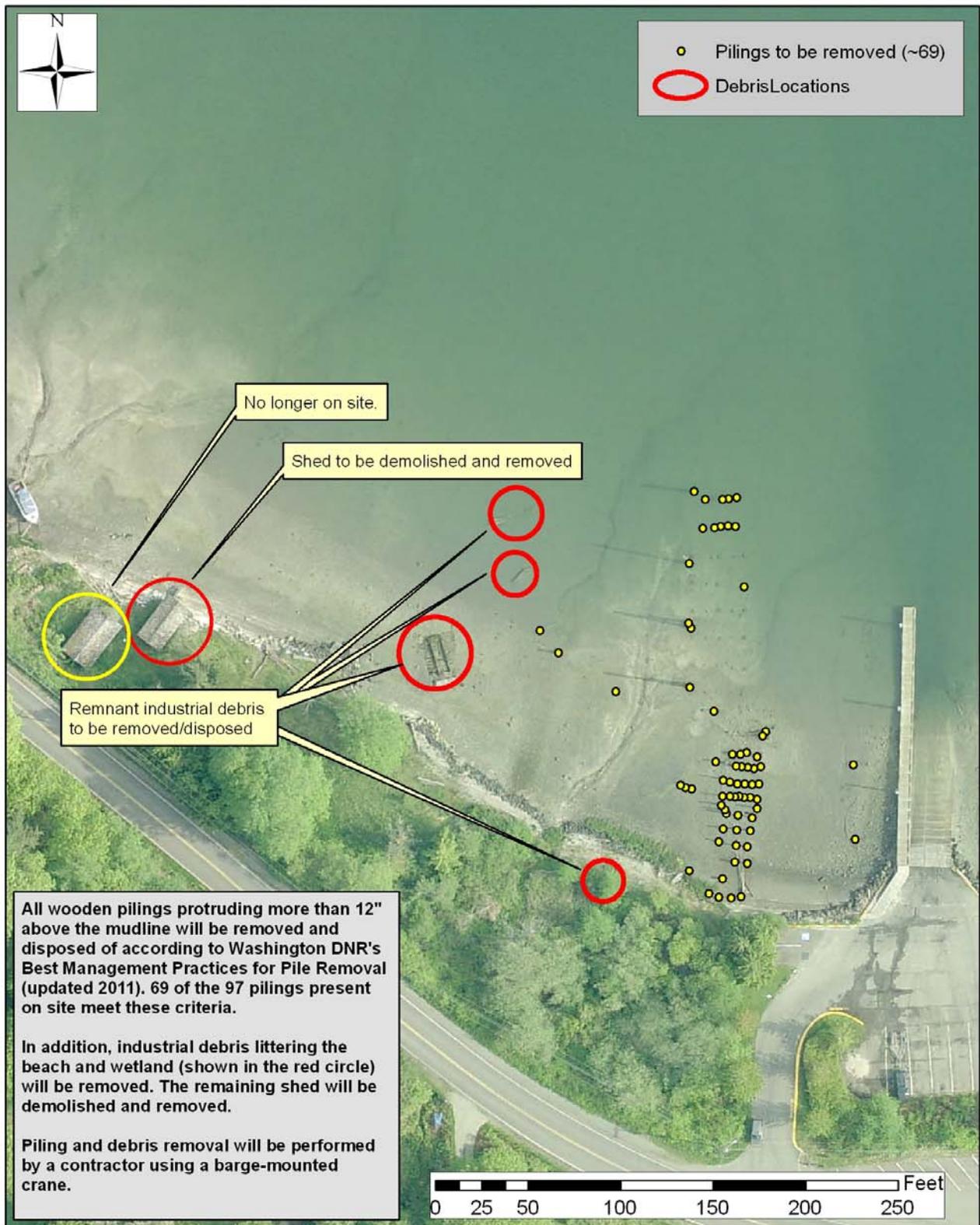
Date Submitted:

June 5, 2012



Figure 1: Vicinity Map  
Dockton Shoreline Restoration Project





**Figure 2: Phase 1--Piling/Debris Removal**  
Dockton Shoreline Restoration Project





**Figure 3: Phase 2 Salt Marsh Restoration/Creation**  
Dockton Shoreline Restoration Project

Greenhouse Gas (GHG) Emissions Worksheet

**Dockton Shoreline Restoration Project, Phases 1 and 2**

Note: The finished project will emit no GHGs aside from those occurring in the environment by natural processes. All emissions are therefore related to construction of the proposed project.

Distance of project site from Vashon Shops, where most daily construction-related vehicle trips will start and end: 7.5 miles

Estimated days of construction activity:

<u>Vehicle</u>	<u>Miles/hours</u>	<u>Rate</u>	<u>fuel used</u>	<u>Em. Coef.</u>	<u>Emissions</u>	<u>Tons CO<sub>2</sub>e</u>
Pickup	225	20.7	10.87	19.564	212.65	0.11
Pickup	225	20.7	10.87	19.564	212.65	0.11
Pickup	225	20.7	10.87	19.564	212.65	0.11
dumptruck	612	6.15	99.51	22.384	2227.48	1.11
dumptruck	450	6.15	73.17	22.384	1637.85	0.82
PC 120 Trackhoe	90	6.3	567.00	22.384	12691.73	6.35
Heavy Equip Transport	30	1.9	15.79	22.384	353.43	0.18
Tug boat	4	85	340.00	22.384	7610.56	3.81
Crane	35	6.3	220.50	22.384	4935.67	2.47
<b>TOTAL:</b>					<b>30094.68</b>	<b>15.05</b>

**Washington Department of Natural Resources  
Puget Sound Initiative – Derelict Creosote Piling Removal  
Best Management Practices  
For Pile Removal & Disposal**

The following Best Management Practices (BMPs) are adapted from EPA guidance (2005), Washington State Department of Transportation (WSDOT) methods and conservation activities as included in Joint Aquatic Resources Protection Application (JARPA) 2005, and Washington State Department of Resources (WADNR) “Standard Practice for the Use and Removal of Treated Wood and Pilings on and from State-Owned Aquatic Lands” 2005, as well as WADNR’s practical experience through managing piling removal projects since 2006.

The purpose of these BMPs is to control turbidity and sediments re-entering the water column during pile removal, and prescribe debris capture and disposal of removed piles and debris.

**BMP 1. PILE REMOVAL**

Crane operator shall be experienced in pile removal. Piles will be removed slowly. This will minimize turbidity in the water column as well as sediment disturbance. Pulled pile shall be placed in a containment basin to capture any adhering sediment. This should be done immediately after the pile is initially removed from the water.

**A. Vibratory extraction**

1) This is the preferred method of pile removal. Vibratory extraction shall always be employed first unless the pile is too decayed or short for the vibratory hammer to grip. After consultation with WADNR, the alternative options listed below may be used.

2) The vibratory hammer is a large mechanical device (5-16 tons) that is suspended from a crane by a cable. The hammer is activated to loosen the piling by vibrating as the piling is pulled up. The hammer is shut off when the end of the piling reaches the mudline. Vibratory extraction takes approximately 15 to 30 minutes per piling depending on piling length and sediment condition.

3) Operator will “Wake up” pile to break up bond with sediment.

- Vibrating breaks the skin friction bond between pile and soil.
- Bond breaking avoids pulling out a large block of soil – possibly breaking off the pile in the process.
- Usually there is little or no sediment attached to the skin of the pile during withdrawal. In some cases material may be attached to the pile tip, in line with the pile.

**B. Direct Pull**

1) This method is optional if the contractor determines it to be appropriate for the substrate type, pile length, and structural integrity of the piling. Vibratory extractor must be attempted first unless there is risk of greater disturbance of sediments.

2) Pilings are wrapped with a choker cable or chain that is attached at the top to a crane. The crane pulls the piling directly upward, removing the piling from the sediment.

#### C. Clamshell Removal

1) Broken and damaged pilings that cannot be removed by either the vibratory hammer or direct pull may be removed with either a clamshell bucket or environmental clamshell.

2) A clamshell is a hinged steel apparatus that operates like a set of steel jaws. The bucket is lowered from a crane and the jaws grasp the piling stub as the crane pulls up.

3) The size of the clamshell bucket shall be minimized to reduce turbidity during piling removal.

4) The clamshell bucket shall be emptied of material onto a contained area on the barge before it is lowered into the water.

#### D. Cutting

1) Is required if the pile breaks at or near the existing substrate and cannot be removed by other methods.

2) If a pile is broken or breaks above the mudline during extraction, all of the methods listed below should be used to cut the pile.

a. The pile should be cut 1 foot below the mudline.

b. Piles shall be cut off at lowest practical tide condition and at slack water. This is intended to reduce turbidity due to reduced flow and short water column through which pile must be withdrawn.

c. In subtidal areas, if the piling is broken off at or below the mudline, the piling may remain. In intertidal areas, seasonal raising and lowering of the beach could expose the pilings above the mudline and leach out PAH's or other contaminants. In this case, the piling should be cut off at least one foot below the mudline.

d. No hydraulic jetting devices shall be used to move sediment away from piles.

e. The contractor shall provide the location of all the broken and cut piles using a GPS.

### **BMP 2. BARGE OPERATIONS, WORK SURFACE, CONTAINMENT**

A. Barge grounding will not be permitted.

B. Work surface on barge deck or pier, or upland staging area shall include a containment basin for all treated materials and any sediment removed during pulling. Creosote shall be

prevented from re-entering the water. Uncontaminated water run-off can return to the waterway.

- 1) Containment basin shall be constructed of durable plastic sheeting with continuous sidewalls supported by hay bales, ecology blocks, other non-contaminated materials, or support structure to contain all sediment and creosote. Containment basin shall be lined with oil absorbent boom.
- 2) Work surface on barge deck and adjacent pier shall be cleaned by disposing of sediment or other residues along with cut off piling as described in BMP #4.C.
- 3) Containment basin shall be removed and disposed in accordance with BMP #4.C or in another manner complying with applicable federal and state regulations.
- 4) Upon removal from substrate the pile shall be moved expeditiously from the water into the containment basin. The pile shall not be shaken, hosed-off, left hanging to drip or any other action intended to clean or remove adhering material from the pile.

### **BMP 3. DEBRIS CAPTURE IN WATER**

- A. A floating surface boom shall be installed to capture floating surface debris. The floating boom shall be equipped with absorbent pads to contain any oil sheens. Debris will be collected and disposed of along with cut off piling as described in BMP #4.
- B. The boom may be anchored with four or fewer ½ ecology blocks or a similar anchoring device. These anchors must be removed once the project is complete. The anchor system shall be located to avoid damage from vessel props to eelgrass, kelp, and other significant macroalgae species. The line length between the anchor and surface float shall not exceed the water depth as measured at extreme high tide plus a maximum of 20 percent additional line for scope. The buoy system shall include a subsurface float designed to keep the line between the anchor and surface float from contacting the bottom during low tide cycles. The subsurface float shall be located off the bottom a distance equal to 1/3 the line length
- C. The boom shall be located at a sufficient distance from all sides of the structure or piles that are being removed to ensure that contaminated materials are captured. The boom shall stay in its original location until any sheen present from removed pilings has been absorbed by the boom. BMP #3B may be used to keep the boom in its original location.
- D. Debris contained within boom shall be removed at the end of each work day or immediately if waters are rough and there is a chance that debris may escape the boom.
- E. To the extent possible all sawdust shall be prevented from contacting beach, bed, or waters of the state. For example, sawdust on top of decking should be removed immediately after sawing operations.
- F. Any sawdust that enters the water shall be collected immediately and placed in the containment basin.

- G. Piles removed from the water shall be transferred to the containment basin without leaving the boomed area to prevent creosote from dripping outside of the boom.

#### **BMP 4. DISPOSAL OF PILING, SEDIMENT AND CONSTRUCTION RESIDUE**

- A. Piles shall be cut into lengths as required by the disposal company.
- B. Cut up piling, sediments, absorbent pads/boom, construction residue and plastic sheeting from containment basin shall be packed into container. For disposal, ship to an approved Subtitle D Landfill.
- C. Creosote-treated materials shall not be re-used.

#### **BMP 5. RESUSPENSION/TURBIDITY**

- A. Crane operator shall be trained to remove pile from sediment slowly.
- B. Work shall be done in low water and low current, to the extent possible.
- C. Removed piles shall be placed in a containment facility.
- D. Sediments spilled on work surfaces shall be contained and disposed of with the pile debris at permitted upland disposal site.
- E. Holes remaining after piling removal shall not be filled.

#### **BMP 6. PROJECT OVERSIGHT**

- A. WADNR will have a project manager or other assigned personnel on site. Oversight responsibilities may include, but are not limited to the following:
  - 1) Water quality monitoring to ensure turbidity levels remain within required parameters
  - 2) Ensure contractor follows BMPs
  - 3) Ensure contractor is in compliance with contract and permit requirements
  - 4) Ensure correct structures are removed
  - 5) Maintain contact with regulatory agencies should issues or emergencies arise

#### **BMP 7. CULTURAL RESOURCES**

- A. In the event that artifacts (other than the pilings or materials attached to them) that appear to be 50 years old or older are found during the project, the WADNR Aquatics archaeologist must be notified in order to evaluate the find and arrange for any necessary consultation and mitigation required by law.
  
- B. If human remains or suspected human remains are found during the project, work in the vicinity will be halted immediately, and the County Coroner must be notified immediately. If the remains are determined to be non-forensic, then the WADNR Aquatics archaeologist will be notified to begin tribal and Washington State Department of Archaeology and Historic Preservation consultations required by law.
  
- C. If sediment exceeding 1 cubic meter is removed, the WADNR Aquatics archaeologist will be notified and given the opportunity to examine the sediment for cultural materials before it is removed from the containment area.