



King County

ENVIRONMENTAL CHECKLIST

CHINOOK WIND MITIGATION PROJECT

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:*

Chinook Wind Mitigation Project

2. *Name of Applicant:*

King County Department of Natural Resources and Parks
Water and Land Resources Division (WLRD)

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
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Laird.orollins@kingcounty.gov

4. *Date checklist prepared:*

October, 2019

5. *Agency requesting checklist:*

King County Department of Natural Resources and Parks
Water and Land Resources Division (WLRD)

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

Project construction will begin in the spring of 2020 and will be completed by the spring of 2021

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

Further activity at the site will be limited to monitoring, maintenance and adaptive management activities to ensure and document project success.

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

1. Environmental Conditions Report, Chinook Wind Property (October 5, 2017). Aspect Consulting, prepared for King County Water and Land Resources Division.
2. Geotechnical Subsurface Conditions Summary and Stable Slope Assessment, Chinook Wind Property, (September 28, 2017). Aspect Consulting, prepared for King County Water and Land Resources Division.
3. Cultural Resources Assessment for the Chinook Wind Rehabilitation Project Land Purchase, Tukwila, King County, Washington (February 18, 2015). Hart Crowser, prepared for King County Water and Land Resources Division.

4. Chinook Winds Post Fieldwork Memorandum (March 1, 2019). Willamette Cultural Resources Associates, Ltd., prepared for King County Water and Land Resources Division.
 5. Construction Excavation and Monitoring Plan for Cultural Resources During the Chinook Wind Wetland Restoration Project, Tukwila, Washington (March 19, 2019). Willamette Cultural Resources Associates, Ltd., prepared for King County Water and Land Resources Division.
 6. Settlement, Lateral Spread, and Seismic Stability Evaluation Chinook Wind Property, 11244 and 11250 Tukwila International Boulevard Tukwila, Washington (May 31, 2019). Aspect Consulting, prepared for King County Water and Land Resources Division.
 7. Draft Chinook Wind Geomorphological Assessment (September 6, 2019). Coastal Geologic Services, prepared for King County Water and Land Resources Division.
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 permits or other authorizations for other proposals are currently pending.
10. *List any government approvals or permits that will be needed for your proposal, if known.*
- Clean Water Act Section 404 Permit (U.S. Army Corps of Engineers)
 - Endangered Species Act (ESA) Section 7 Consultation (National Oceanic and Atmospheric Administration Fisheries and United States Fish and Wildlife Service)
 - National Historic Preservation Act Section 106 Review
 - National Pollutant Discharge Elimination System (NPDES) Permit for Construction (Washington State Department of Ecology)
 - Coastal Zone Management Consistency
 - Section 401 Water Quality Certification (Washington State Department of Ecology)
 - Washington Department of Fish and Wildlife Hydraulic Project Approval
 - Aquatic Lease Approval (Washington Department of Natural Resources)
 - City of Tukwila Public Works Permit
 - Shoreline Management Substantial Development Permit Exemption (Washington State Department of Ecology/City of Tukwila)
11. *Give a brief, complete description of your proposal, including the proposed uses and the size of the project and site.*

The Chinook Wind Mitigation Project will create approximately 5.5 acres of aquatic, wetland and riparian habitat adjacent to the Duwamish River. This will be accomplished by removing about 80,000 cubic yards of soil from the site to create a hook-shaped backwater channel surrounded by gently sloping features that will be regularly inundated by tidal fluctuations in water levels. Areas of the finished site above Elevation 5' (NAVD 1988) will be densely planted with native wetland and riparian species (Figure 1). This will provide valuable habitat for juvenile Chinook salmon and other fish species that rear for part of their life histories in the Duwamish River. A pedestrian footpath will be constructed by the City of Tukwila around the north and east edges of the site.

This project will provide compensatory mitigation for impacts to wetlands and aquatic resources caused by developers who have purchased mitigation credits through King County's In-Lieu Fee Mitigation Program.

The project is sponsored by King County's State and Federally certified In-Lieu Fee Mitigation Program that provides compensatory mitigation for unavoidable impacts to wetlands and aquatic resources. The Chinook Wind Mitigation Project will include riparian, high marsh, low marsh, mudflat and aquatic components to mitigate for impacts to wetlands and aquatic habitat elsewhere in the Green River/Duwamish and Central Puget Sound Service Areas in Water Resource Inventory Area 9. Permitted impacts that are planned to be compensated for at Chinook Wind Mitigation Project include:

- Sound Transit's Seattle-to-Tacoma Commuter Rail Easement 4 (Corps permit # NWS-2013-922),
- Integrity Homes' Terrace at Maple Woods (Corps permit # 2013-1199),
- Sound Transit's South Sounder, Easement 3 (Corps Permit # NWS-2013-0921),
- Des Moines Creek Business Park's Phase I (Corps Permit # NWS-2014-154),
- Gregory Real Estate Three's Pacific Heights (Ecology Administrative Order 11654),
- Lennar Northwest's Addison Park (Corps Permit # NWS-2016-309),
- North Auburn Logistics' commercial development (Corps Permit # NWS-2014-0928),
- King County Wastewater Treatment Division's Kent Auburn Conveyance System Improvements, Phase B (Corps Permit # NWS-2015-256),
- MPR Holdings Eagle Creek Land (Kent Permit # RECR-2171878),
- PPF Industrial's Kent 234 PPF (Corps Permit # NWS-2016-574),
- Auburn School District's Evergreen Heights Elementary School Site Improvements (Auburn Permit # GRA14-0034/FAC18-0001),
- O'Keefe Development's DC 192 Warehouse (Kent Permit # RECR-2170804),
- Harbour Homes' Breimer Bluff (Kent Permit # RECC-2175086, NWS-2017-275),
- Des Moines Creek Business Park's Phase II (Corps Permit # NWS-2014-154),
- BP West Coast Product's BP Seattle Distribution Terminal North Bulkhead Replacement (Corps Permit # NWS-2011-761),
- The Boeing Company's South Oxbow Bridge Repair (Tukwila SEPA Exemption # A17-0019),
- Seattle Public Utilities' Puget Way Southwest Culvert Replacement (Corps Permit # NWS-2013-602-WRD), and
- Fort Dent Real Estate, LLC's King Lasik (NWS-2017-421, Tukwila L18-0013).

Additional projects may be assigned to the Chinook Wind Mitigation Project.

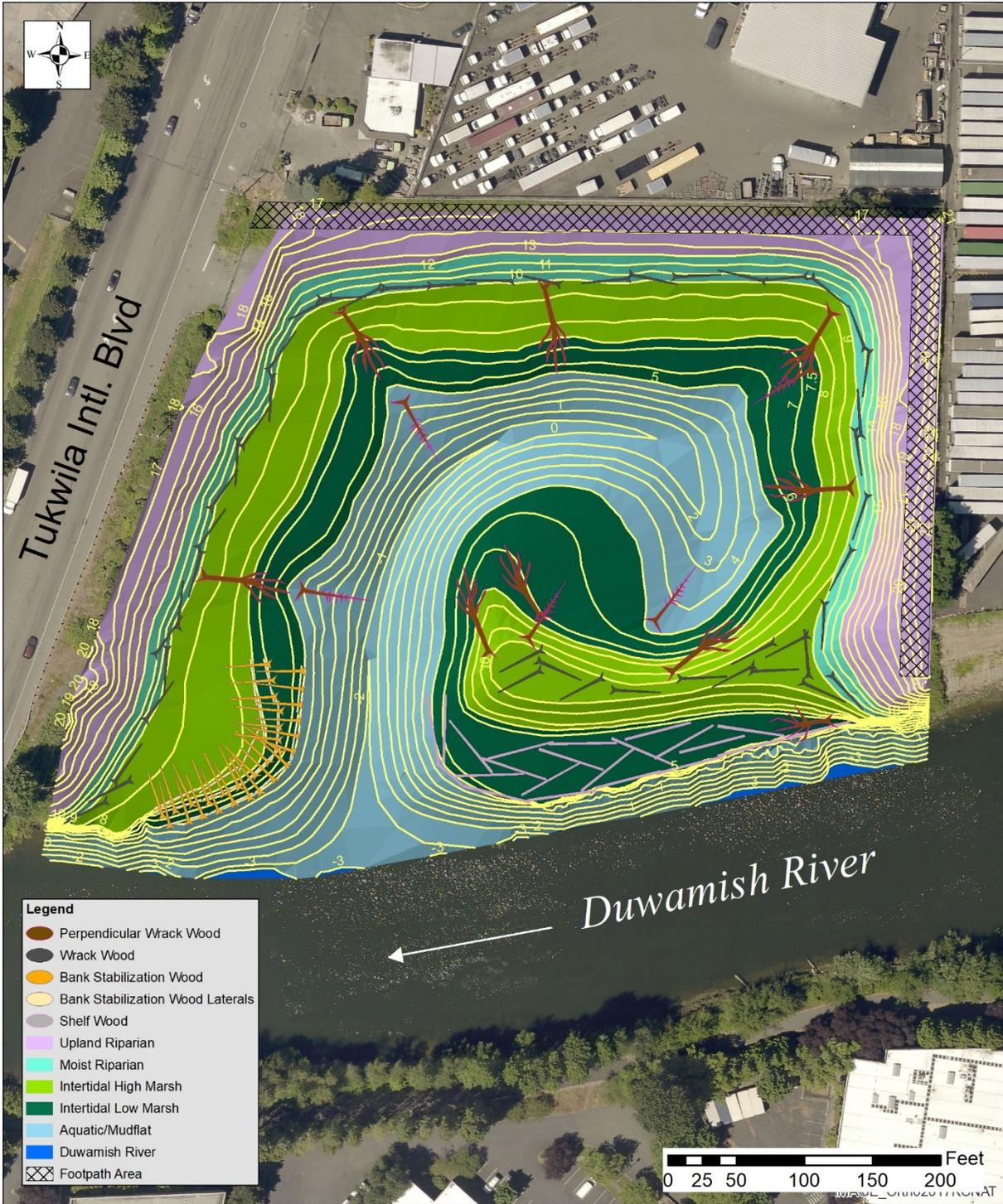


Figure 1. Chinook Wind Mitigation Project Conceptual Design

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 Chinook Wind Mitigation Project is located at 11244 Tukwila International Blvd. in the City of Tukwila on the right (north) bank of the Duwamish River, at River Mile (RM) 6.7. The site is in the NE quarter of Section 9, Township 23 North, Range 4 East. See Figure 2 Below.

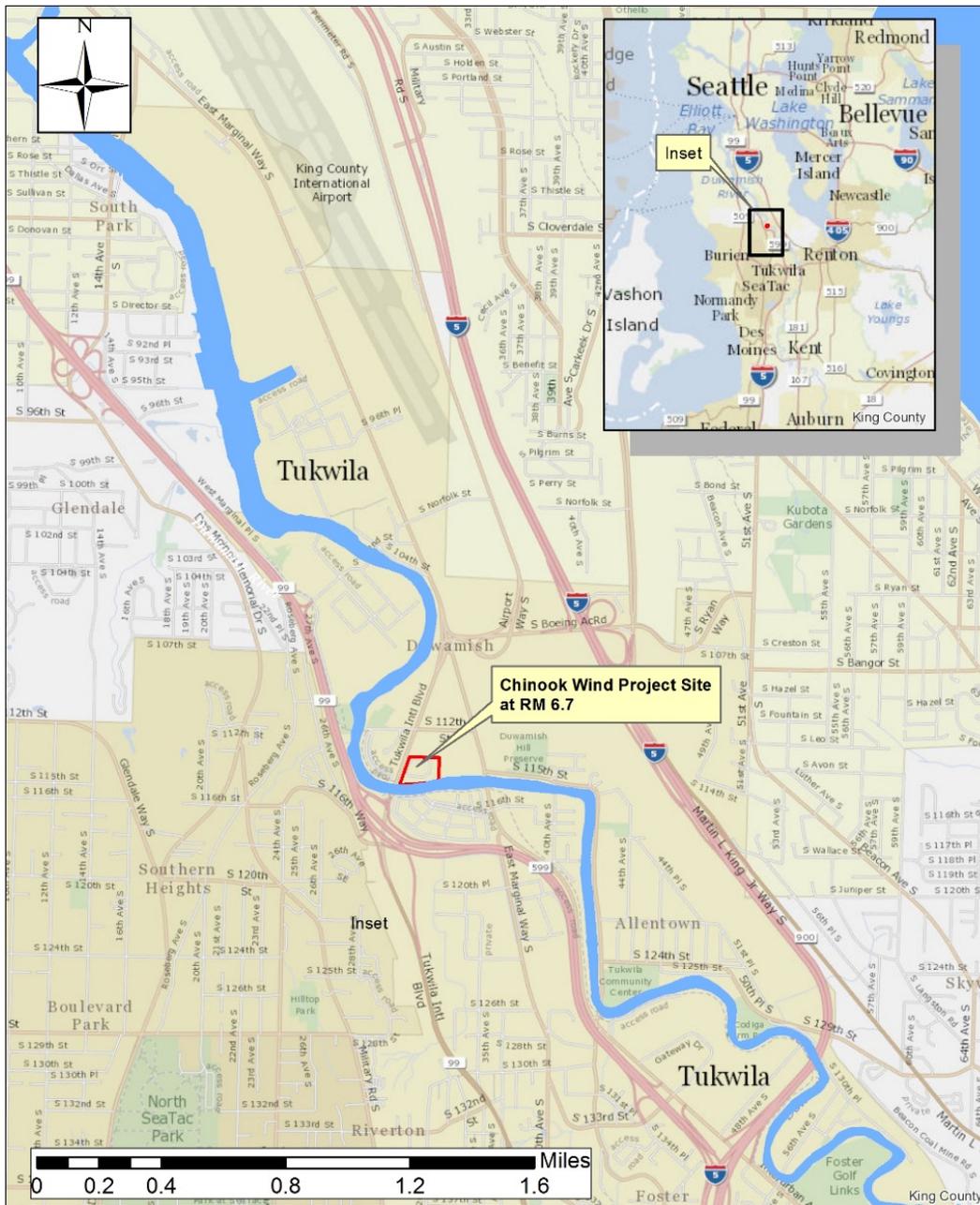


Figure 2: Project Vicinity Map.

B. ENVIRONMENTAL ELEMENTS

1. Earth

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

The site is flat, with the exception of the immediate banks of the Duwamish River, which are steep and nearly vertical in places. No above-ground structures remain on the site.

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

The steepest slopes on the site are at the immediate banks of the Duwamish River, which approach 100% (1:1) in places. The remainder of the site is flat.

- 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.*

Geotechnical analysis shows soils to be sand, silty sand, sandy silt and silt. A fill layer varying from 2- to 7-feet thick appears to have been placed over the native soils at some point in the past, but these soils are very similar to subsurface soils. The USGS Soil Survey does not categorize soils at this site. However, the University of Washington Soil Survey has categorized local soils as Bellingham series, which consist of very deep, poorly drained soils formed in loess, alluvium, and lacustrine sediments at slopes of 0 to 3 percent. Bellingham soils are used for cropland and pasture. This area was used for agriculture prior to construction of a motel on the site in 1963.

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

No surface indications of unstable soils have been observed. The area is not mapped as a seismic hazard zone. However, consultant studies commissioned by the project design team have shown a potential for instability and lateral spreading during a large earthquake that could extend into immediately adjacent properties. Some risk to neighboring properties exists independent of implementation of this project but may increase somewhat due to the presence of the deep excavations proposed as part of this project. The project design team will work with the City of Tukwila to define acceptable levels of risk and will incorporate appropriate mitigating measures into the project design.

Any measures to mitigate seismic hazards will be below the final graded surface and will not affect surface soils, plants or the characteristics that will make the site suitable for fish and wetland plant communities.

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

The objective of this project is to create tidally-inundated aquatic and wetland habitat. The site is presently at an elevation well above the 100-year flood elevation. Excavation of approximately 80,000 cubic yards of soil from the site will lower site elevations so that as much of the site as possible will be inundated by the adjacent Duwamish River as its water levels rise and fall with the tides. The deepest area of excavation will form a hook-shaped backwater channel, the bottom of which, at Elevation -2' (NAVD 88) will be inundated at almost all flows and tides. This will allow juvenile salmon that will rear in this channel to remain in the channel through low tide cycles without being forced back into the mainstem river channel.

Final elevations elsewhere on the site are designed to support native tidal marsh and riparian plant communities.

Areas of the site where final elevations will be above 5' (NAVD 88) will be over-excavated by about 4-inches and backfilled with a mix of topsoils and gravel to support establishment of native vegetation communities. A crushed-gravel footpath will be constructed by the City of Tukwila around the north and east edges of the site. No other fill will be placed at the site.

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

Yes, erosion could occur due to site modification. Minor erosion of banks within the newly created backwater channel and wetlands is expected during the first year as the site stabilizes. Water quality will be protected by using Best Management Practices (BMPs) and an erosion control plan during and after construction. As vegetation becomes established within the first year minimal erosion at the site is expected. Small and temporary discharges of sediment from the site to the Duwamish River are possible as the site equilibrates to environmental conditions until vegetation communities are established.

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

The City of Tukwila plans to construct a 6-foot wide crushed gravel footpath along the east and north edges of the site. This footpath will be approximately 800 feet long and will occupy about 4,800 square feet. A total of about 2.6% of the finished site will be occupied by the crushed gravel trail.

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

Although minor erosion during and after construction is expected, the following practices will be used to assure that water quality is maintained during construction:

- All necessary and appropriate erosion control BMPs will be used during construction to limit sediment runoff from access roads, work areas, and stockpiles during rain events.
- Turbidity in the Duwamish River will be monitored during in-water construction work to ensure levels are within permitted limits.
- Work areas will be temporarily isolated from the Duwamish River by means such as a coffer dam, temporary sheet piles, and/or a turbidity curtain to minimize mobilization of sediment from the site during construction.
- The topography of the finished site has been designed with shallow slopes (6:1 or less) in areas to be regularly inundated by water. These slopes should remain stable even when regularly inundated by tides, though some minor erosion is expected as the site equilibrates to environmental conditions.
- Establishment of native plant communities will also help to minimize erosion.

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.*

Air quality will be impacted by greenhouse gas (GHG) emissions produced by vehicles and equipment during project construction. Internal combustion engines primarily emit carbon dioxide (CO₂), methane, and nitrous oxide. The global warming potential (GWP) of these compounds is measured in “carbon dioxide equivalents,” or CO₂e, which converts the GWP of various gasses into their equivalent in CO₂. Carbon dioxide emissions can be approximated from projected fuel consumption, transportation distances, and duration of use, using formulae developed by the Energy Information Administration (EIA) of the U.S. Department of Energy.

The project is expected to discharge 195 tons of CO₂e over 90 days during construction of the project. Emissions will be offset by planting native trees and shrubs that sequester CO₂. The finished project will emit no GHGs aside from those naturally occurring in the environment; all emissions are related to construction of the proposed project. The Greenhouse Gas (GHG) Emissions Worksheet is attached to the end of this checklist.

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

The project is located in an area of relatively high air pollution, which may negatively affect survival of plantings of some species which are sensitive to air quality.

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

Construction will comply with Puget Sound Clean Air Agency regulations. Graded and disturbed areas will be replanted with native vegetation according to plan. Approximately 325 trees will be planted in the first fall/winter after construction.

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 project site is adjacent to the Duwamish River, which flows into Puget Sound 6.7 miles downstream of the project site. Tidal elevations and fluctuations in Puget Sound affect water levels in the river adjacent to the site. There are no wetlands on 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. The project will entail grading and excavation along about 550 lineal feet of the right/north bank of the Duwamish River to create wetland and aquatic fish habitat. A hook-shaped

backwater channel will be excavated out of the parcel adjacent to the river which will join the river itself. The mouth of this backwater channel will occupy about 250 lineal feet of the river bank and will be excavated to a depth of -2' (NAVD 88). Upstream of this channel mouth, a "shelf" about 50' by 300' will be excavated from the bank at about Elevation 6' (NAVD 88). This shelf will be planted with emergent wetland vegetation to provide fish habitat along the channel margin. The remaining areas of the adjacent parcel not occupied by the backwater channel and shelf will be graded to elevations that will support wetland and riparian vegetation and planted with native plants appropriate to the hydrology of the site. A temporary floating log boom or similar may be installed along the bank to prevent floating debris from entering the site. Temporary fencing or similar may also be installed around new plantings to prevent geese or other wildlife from browsing plantings until those plantings are fully established.

See Figure 1 above.

- 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.*

Approximately 80,000 cubic yards of material will be removed from the site adjacent to the Duwamish River to create a backwater channel and surrounding wetlands. These features will be connected to the Duwamish River and regularly inundated by tidally-influenced water flows from in the Duwamish. The entire 6.16-acre site will be affected by this excavation. After initial excavation, about 3200 cubic yards of topsoil will be placed in areas above Elevation 5' (NAVD 88), which total approximately 4 acres.

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

The contractor, which will be selected in a competitive bid process, will have discretion regarding means and methods for accomplishing the required excavation and may elect to pump groundwater from the site to dry out soils prior to and/or during excavation. Any water withdrawn will be treated to meet state water quality standards prior to discharge into the Duwamish River. The contractor may also elect to place a barrier of some sort, such as sheet piling, inflatable coffer dams or similar, to keep groundwater and/or river water out of the excavation area. Any such measures will be eventually removed to connect the finished site to the Duwamish River.

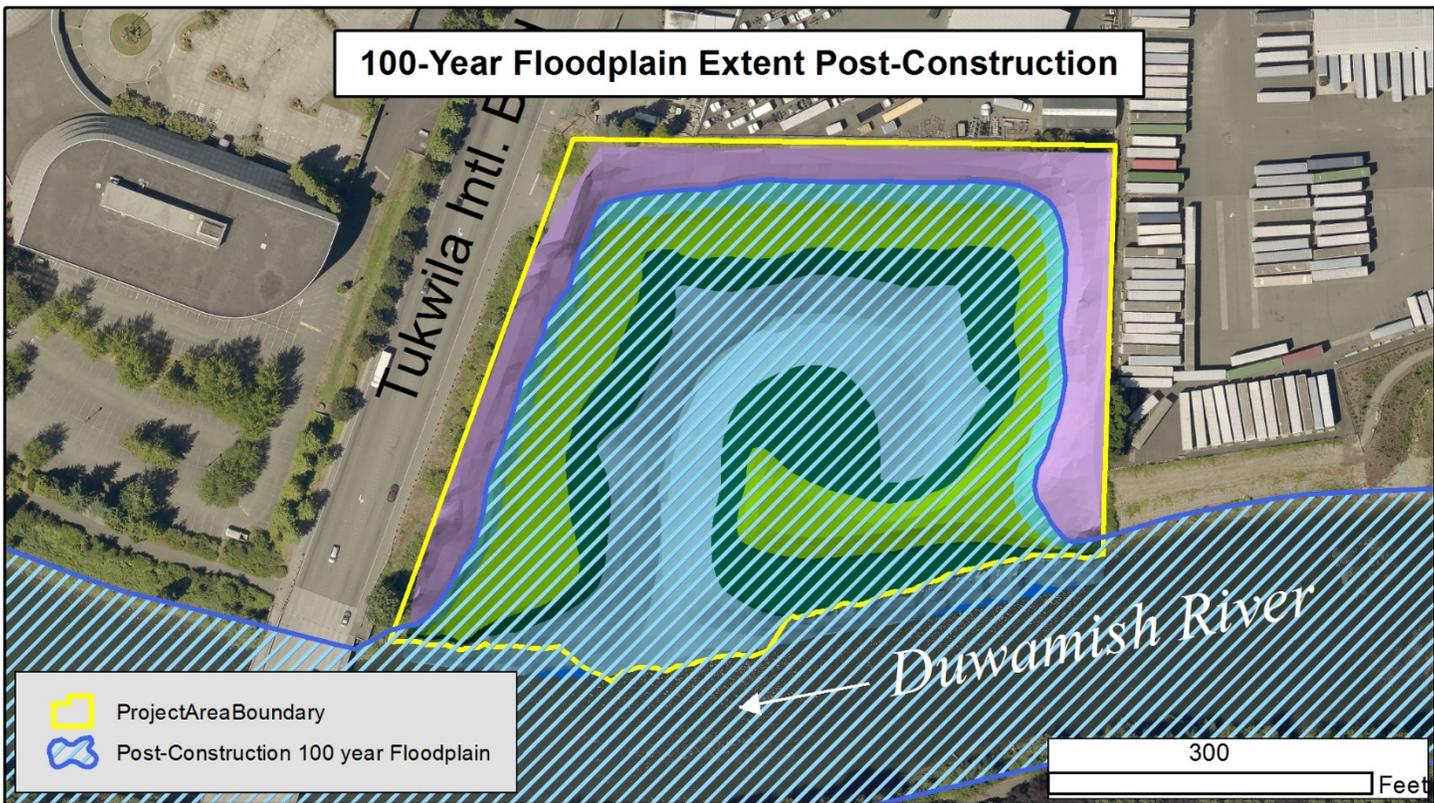
The final project will result in a new backwater channel with a connection to the Duwamish River channel. This backwater channel and adjacent wetlands will be regularly inundated by Duwamish River flows as tides rise and fall.

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

The present 100-year floodplain remains within the defined channel of the Duwamish River in the location of the project site and is present on the site which includes the existing river bank. The finished project will extend that floodplain to cover most of the site. See Figure 3 below.

- 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.*

No waste material will be discharged to surface or groundwater.



Changes to 100-Year Floodplain (El. 12.8' NAVD 88)

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.*

Shallow groundwater, the levels of which are directly related to those in the adjacent Duwamish River, may be pumped out of the active construction area to facilitate excavation and to protect water quality. This will be limited to the immediate project area and for short durations that are not expected to affect deeper groundwater conditions or drinking water wells. Any groundwater withdrawn will be treated prior to discharge to the adjacent Duwamish River to maintain State water quality standards. There will be no discharges to groundwater.

- 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.*

No waste material will be discharged to groundwater.

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.*

Precipitation that falls within the project area is expected to infiltrate on the site due to the porous nature of the onsite soils. During periods of heavy rain, however, rainwater that does not infiltrate is expected to enter the wetland areas created onsite and then flow into the Duwamish River.

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

No.

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

To the extent possible, the work area will remain isolated from the adjacent channel of the Duwamish River to prevent mobilization of sediments as the site is excavated. However, some excavation will be necessary on the banks of the river channel. A floating/weighted turbidity curtain or similar will be used to contain turbid runoff from these activities. (The contractor will be obligated to maintain State water quality standards but will have discretion regarding means and methods of doing so.) Work will be performed during low tides when the work areas are not covered by water. However, the deepest excavations will require excavation below the lowest tide elevations and will entail excavation in the water. Again, these activities will be isolated from flows in the river using turbidity curtains or similar measures to maintain water quality in the river.

Groundwater and/or surface water may need to be pumped from the site to facilitate excavation. Turbid water from the dewatering of deep excavation areas will be pumped to an above-ground, contained settling basin or mobile settling tanks where sediment can settle or be filtered prior to discharge to the river.

Discharges of turbid water will be managed using the methods above and other Best Management Practices to comply with State Water Quality Standards.

4. Plants

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

- Deciduous trees: Red alder, black cottonwood, black locust, American chestnut, birch, willow, cherry, madrona
- Evergreen trees: Western red cedar, pine, spruce
- Shrubs: Laurel, native willows
- Grass:
- Pasture: Pasture grasses
- Crop or grain
- Wet soil plants:
- Water plants:
- Other types of vegetation: blackberry, Scotts Broom

The site was occupied by a motel until it was demolished in 2016. Most of the site remains bare of vegetation, though most trees on site were preserved. The immediate bank of the Duwamish River is vegetated with mostly shrubs (blackberry and laurel), several immature cedar trees, red alder and a chestnut tree. A stand of black cottonwood trees is located in the northeast corner of the site. Poison hemlock (*Conium maculatum*) has been found on the site and treated with herbicide.

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

Almost all vegetation remaining on the site will be removed in order to accomplish the necessary excavation. A total of 65 trees will be removed for the excavation, but all will be retained on site and used to construct habitat elements of the project.

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

There are no threatened or endangered plant species known to exist on the site. The Washington Department of Natural Resources' (DNR) Natural Heritage Information System indicated no listed species are found on the subject properties or nearby.

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

Almost the entire site will be excavated to form topography that will be regularly inundated by the tidally-influenced river adjacent to the site. The site will be cleared of vegetation in order to construct the project. All of the cleared trees will be felled whole with rootballs intact and will be placed at the project site for habitat improvement.

All areas of the finished site above Elevation 5' (NAVD 88) will be densely planted with native herbaceous plants, shrubs, and trees appropriate to the soils and hydrology on the site. (Areas below Elevation 5' are too frequently inundated by tides and river flows to support vegetation and will form mudflat habitat.) Wetland/riparian shrubs and tree species will be planted extensively throughout the newly created wetland and riparian habitats.

Geese and other waterfowl feed on newly planted shoots and stems and will be excluded from planted areas of the site. A variety of means may be used to accomplish this, including fencing around and over planted areas, floating booms or fences that rise and fall with tides, and/or mechanical devices such as strobe lights that discourage waterfowl from nesting. These measures will be necessary until vegetation is sufficiently established to survive and resist predation by waterfowl, likely around two years. They will be removed when the threat from waterfowl has receded.

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: Osprey, heron, geese, songbirds, other
- Mammals: river otter, beaver, coyotes and other urban wildlife, marine mammals that use the Duwamish River
- Fish: salmon, trout, other

Although fish and wildlife habitat on the site is degraded, the adjacent Duwamish River provides habitat to a variety of fish and wildlife species native to Puget Sound. All salmonids that use the Green/Duwamish River for spawning and rearing, including ESA-listed Chinook salmon, bull trout and steelhead trout, will migrate past the project site on their way to spawning grounds upstream and as fry or parr as they migrate back out to Puget Sound and the Pacific Ocean. This project is designed to provide critically depleted rearing habitat for juvenile Chinook salmon and other salmon species that use the system. Other fish species that use the Duwamish as a migration path or for juvenile rearing include coho, pink, chum and sockeye salmon and resident cutthroat trout.

An osprey nesting pole is presently located on the site and is actively used by osprey. This pole will be relocated prior to the birds' return in the spring before the start of construction. Some marine mammals, such as seals and sea lions, occasionally swim up the Duwamish River and have been observed in the reach adjacent to the project site.

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

Puget Sound Chinook salmon (*Oncorhynchus tshawytscha*), Coastal/Puget Sound steelhead trout (*Oncorhynchus mykiss*), and Coastal/Puget Sound bull trout (*Salvelinus confluentus*) are known to use the Green/Duwamish River for migration, spawning and rearing. The Duwamish River is designated as Critical Habitat for both Puget Sound Chinook salmon and Coastal/Puget Sound bull trout.

Chinook salmon spend a portion of their life histories rearing in the Duwamish River as they transition from fresh to salt water. The project is located in the "transition zone" of the Duwamish River, where fresh and salt water mix and water levels are tidally influenced. This is an especially critical area for juvenile Chinook salmon and other fish species that make this transition from fresh to salt water.

Winter run steelhead trout also use the Duwamish River as a migration corridor, typically migrating upstream to spawning grounds in the winter and spring. Steelhead trout typically spend two to three years rearing upstream in reaches of the Green River before migrating back through the Duwamish River to Puget Sound and the Pacific Ocean.

The Green/Duwamish River is used by bull trout for foraging, but no spawning populations have been documented. Bull trout have been observed on the mainstem up to Newaukum Creek and it is presumed that bull trout utilize the Green River up to the Tacoma Headworks at river mile 61 (Green/Duwamish and

Central Puget Sound Watershed Salmon Habitat Plan—August 2005). Bull trout likely migrate past the project site but prefer colder water than is typically found in the lower Duwamish River.

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

Yes. Numerous salmonid species, including Chinook, coho, pink, chum and sockeye salmon, bull trout and steelhead trout use the Duwamish River to migrate upstream to spawning grounds and downstream as juveniles to Puget Sound and the Pacific Ocean.

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

The Chinook Wind Mitigation Project is designed to provide critically needed rearing habitat for juvenile Chinook salmon and other fish species that use the Duwamish River for rearing and transition to salt water. The project will create a tidally-inundated backwater channel and surrounding wetland and riparian habitats that will provide habitat for many species of fish and wildlife in an area where such habitats have been critically depleted. The project site will contain diverse native vegetation communities as well as features such as large wood to enhance wildlife habitat (Figure 1 above).

An osprey nesting pole/platform presently on site will be moved a short distance during the autumn preceding project construction but will be preserved on site.

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.*

None. The completed 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.*

Construction equipment could leak diesel gas, oil, or hydraulic fluid onto the site.

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

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.

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

All construction equipment will be refueled at a designated fueling area outside of critical areas. All equipment will be inspected on a daily basis to determine if there are leaking seals or gaskets that require replacement. BMPs such as fuel containment and a spill response plan will be used during construction of this project to reduce and control environmental health hazards.

b. Noise:

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

The project site is located across the Duwamish River from State Route 599, a major highway, and adjacent to Tukwila International Blvd, a 5-lane roadway. Both of these generate traffic noise that is noticeable at the project site that also generates noise. These should have no effect either on construction or the completed project. The project site is in an area zoned MIC/H (Manufacturing Industrial Center/Heavy Industrial).

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.*

Heavy equipment operation associated with construction of the project will cause temporary noise increases between 7 a.m. and 7 p.m. on weekdays and between 9 a.m. and 5 p.m. on Saturdays. Construction is anticipated to last about 90 days. Due to the need to work at low elevations during low tides, work and accompanying noise may also occasionally occur during night time hours. Project-generated noise will comply with the City of Tukwila's noise codes (Chapter 8.22).

The completed project will not change existing noise levels.

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

Noise is unavoidable during large construction projects that will utilize numerous pieces of heavy equipment. All noise impacts will be temporary. The completed project will not generate any noise.

8. Land and Shoreline Use

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

The project site is presently vacant. It was occupied by a residential motel until it was demolished in 2016. The surrounding properties are occupied by light industrial and office buildings (north and east), an arterial roadway (Tukwila International Boulevard to the west) and the Duwamish river (south).

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

The site was used for agriculture until a motel was constructed on the site in 1963.

c. *Describe any structures on the site.*

There are presently no structures on the site. There are remnants of the structure that previously occupied the site, a residential motel, buried below the ground surface. These include utility vaults and buried concrete and wood pilings.

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

The buried remnants of the structure that previously occupied the site will be removed during excavation of the proposed project. The pilings that remain on the site are of unknown depth. They will be either completely removed or removed to a depth at least three feet below the proposed finished grade.

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

The site is zoned by the City of Tukwila as “MIC/H Manufacturing Industrial Center/Heavy Industrial”.

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

The site lies within the City of Tukwila’s Manufacturing/Industrial Center boundaries.

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

Urban Shoreline.

The Tukwila Shoreline Management Act (SMA) designates the Green/Duwamish River as a shoreline of Statewide significance. *“Because these shorelines are major resources from which all people in the State derive benefit, the [development] guidelines and master programs must give preference to uses which favor public and long-range goals.” [WAC 173-16-040(5)]* The SMA states that master programs for shorelines of Statewide significance shall give preference to uses that (in order of preference): 1. *Recognize and protect the Statewide interest over local interest.* 2. *Preserve the natural character of the shoreline.* 3. *Result in long-term over short-term benefit.* 4. *Protect the resources and ecology of the shoreline.* 5. *Increase public access to publicly-owned areas of the shoreline.* 6. *Increase recreational opportunities for the public in the shoreline.* 7. *Provide for any other element, as defined in RCW 90.58.100, deemed appropriate or necessary (that is, which further the State’s shoreline policies).*

The future plans to restore habitat onsite will preserve the natural character of the shoreline.

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

Yes. The proposed project is adjacent to the Duwamish River which is regulated by the State of Washington and subject to the Hydraulic Code of Washington. The City of Tukwila regulates the channel of the Duwamish River and a portion of the project site as “Floodway”. The City of Tukwila also maps portions of the site as “Class 2- Moderate” and “Class 3- high” landslide hazard areas. However, the site is flat and highly unlikely to be the site of a landslide.

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. Prior to acquisition of the property, the motel served as month-to-month residence and transitional housing facility. The previous owner, in partnership with Downtown Emergency Services and Catholic Community Services assisted with the relocation of all of the temporary residents before King County's purchase of the property.

There will be no further displacements due to this project.

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 City of Tukwila's Shorelines Master Program states the following goals for shorelines in the Urban Conservancy Environment:

- Development that promotes vegetation conservation and enhancement, sensitive areas protection, and preservation of water quality to assure no net loss of shoreline ecological functions;
- Uses that preserve or restore shoreline ecological functions provided by vegetation, open space, flood plain or sensitive area lands;
- Uses that minimize interference with navigation and flood control, consider impacts to public views, and allow for the safe, unobstructed passage of fish and wildlife, particularly those species dependent on migration;
- Development that is compatible with the natural and biological limitations of the land and water that do not require extensive alteration of the shoreline or new shoreline stabilization, except for restoration projects; and,
- Enhancement and restoration of ecological functions.

The proposed project is consistent will all of the above goals of Tukwila's Shoreline Master Program.

The underlying zoning for the property identifies future use of the site as the planned heavy industrial use. However, Goal 5.9 in the Shorelines Element Section of the Tukwila Comprehensive Plan refers to, "Restored, enhanced and protected natural environmental resources along the river, including trees, wildlife habitat, and features with value for long-term public, scientific and educational uses." Policies 5.9.1, 5.9.2, 5.9.3, and 5.9.5 all support the removal of the motel with the long-term goal of creating a habitat restoration site along the shoreline.

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:*
Does not apply.

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?*
No above-ground structures are proposed for this site and none presently occupy the site. However, an osprey nest platform is located in the southeast corner of the site. The pole is about 45 feet high and will be moved a short distance from its present location prior to project construction. An interpretive kiosk will also be placed on site after construction of the rest of the project.
- b. *What views in the immediate vicinity would be altered or obstructed?*
Tree plantings may eventually obscure some views of the river from areas landward of the site. Most views will be improved by native plantings and open space.
- c. *Proposed measures to reduce or control aesthetic impacts, if any:*
The project may be considered an aesthetic improvement. The project will provide open space natural area in an area where such spaces have been depleted.

11. Light and Glare

- a. *What type of light or glare will the proposal produce? During what time of day would it mainly occur?*
The finished project will produce no light or glare. However, it is possible that waterfowl exclusion devices that use strobe lights to discourage nesting may be used for two years after project completion
- 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?*

There is a gravel footpath that runs around the perimeter of the Duwamish Gardens site just east of the proposed project site and which dead-ends at the edge of that site. The Duwamish Gardens site also has a canoe/kayak launching site, a campfire pit, interpretive signage and public artwork.

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

No recreational opportunities will be adversely impacted.

- c. *Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:*

A footpath will be constructed by the City of Tukwila around the north and east sides of the Chinook Wind site which will eventually connect with the Duwamish Gardens path and will provide recreational access to the site. Recreational access will be restricted to the area occupied by the footpath and separated from the rest of the site by a split-rail fence or similar. Interpretive signage is also planned for the publicly-accessible areas of the site.

The proposed project will improve fish and wildlife habitat and thereby may have a positive effect on recreational opportunities.

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 historical Ray-Carrossino farmstead was located just east of the project site. This pre-contact site with a historical component was recommended as eligible for listing in the National Register of Historic Places. The historical component, a barn, was dismantled prior to construction of the Duwamish Gardens site and its components used for barn restorations elsewhere in the state.

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

In addition to the site described above, several other known archaeological sites in similar settings and within a mile of the site show that the project vicinity was important for Native Americans. The area, along with the North Wind's Weir (a rock formation in the Duwamish River about 1,100 feet northwest of the site), is described as part of the Duwamish Tribe's Epic of the Winds legend and is culturally important to Native Americans.

The Columbia and Puget Sound Railroad once ran about 0.6 miles east of the site.

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

Two subsurface surveys of cultural resources have been conducted on the site to minimize the potential of impacting cultural resources during project construction. In addition, a plan for monitoring for the presence of cultural resources during project construction, which includes an

Unanticipated Discovery Plan, has been developed. Construction crews will be briefed on the possibility of discovery of cultural resources during construction and on the procedures to follow should such an event occur.

In the event that cultural or archaeological resources are uncovered or encountered during demolition, work will cease immediately and appropriate steps will be taken to protect those resources prior to resumption of any ground disturbing work in the area. If resources are discovered, the Washington State Department of Archaeology and Historic Preservation, the King County Historic Preservation Program, and any affected tribal groups will be notified immediately, and an on-site inspection will be conducted by a professional archaeologist or other qualified resource professional. A mitigation plan will be prepared, if necessary, prior to resuming excavation at the site.

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.*

The project is immediately adjacent to Tukwila International Boulevard. See Figures 1 and 2 above.

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

There is a King County Metro Transit bus stop on Tukwila International Blvd. about 380 feet north of the project site entrance.

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

No parking places will be constructed on the site, itself. The City of Tukwila may opt to construct parking areas in the adjacent right-of-way of Tukwila International Boulevard.

- 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.*

No. The Duwamish River is not accessible to commercial water traffic at this location (RM 6.7).

- 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:*

Transportation impacts will be reduced with signage, flaggers, and similar methods to be developed in a traffic control plan.

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:*

Does not apply.

16. Utilities

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

Water, sewer, electricity and natural gas are available at the site, but all were disconnected from the site when the motel that previously occupied the site was demolished.

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:

W. H. ZORR

Title:

Project Manager / Sr. Ecologist

Date Submitted:

Oct. 29, 2019

Greenhouse Gas (GHG) Emissions Worksheet

Project Name: Chinook Wind Mitigation Project

Project Manager: O'Rollins

Assessment Completed by: O'Rollins

Date of completion: 4/1/2019

Project Description: Excavation of ~80'000CY to create off-channel habitat and wetlands

Construction-related Greenhouse Gas Emissions

	Pounds	Metric tons
Emissions from fuel-burning activities (in CO2e):	430656.2912	195.397591
Emissions from embedded materials (in CO2e):	0	0
Emissions resulting from site impacts (in CO2e):	0	0
Total Emissions (in CO2e):	430656.2912	195.3976

Project-Related Carbon Sequestration

	Pounds	Metric tons
Total Carbon Sequestration 35 years after planting:	0.028140421	62.0214882