



US Army Corps  
of Engineers  
Seattle District

# Public Notice

Planning Branch  
P.O. Box 3755  
Seattle, WA 98124-3755  
ATTN: Noel Gilbrough (PM-PL)

Public Notice Date: January 5, 2004  
Expiration Date: February 6, 2004  
Reference: CENWS-PL-04-02  
Name: North Wind's Weir Intertidal Restoration

## 30-DAY PUBLIC NOTICE

Interested parties are hereby notified that the U.S. Army Corps of Engineers, Seattle District (Corps) in partnership with King County Department of Natural Resources and Parks (KCDNRP) propose to restore the approximately 3.27-acre North Winds Weir project area to intertidal and riparian habitats. The site is located in Tukwila, Washington. This work is subject to Section 404 of the Clean Water Act, and is covered by the Nationwide Permit 27 process. The proposed project is described below and shown on the enclosed drawings. The purpose of this Public Notice is to solicit comments from interested persons, groups, and agencies.

### LOCATION

The project area is located along the eastern bank of the lower Duwamish River at approximately River Mile 6.2, in the southeast quarter of Section 4, Township 23 North, Range 4 East, within the City of Tukwila, Washington.

### PROJECT BACKGROUND

The lower Green/Duwamish River estuary was historically an area of very low gradient with a sinuous, meandering main channel. The estuarine mud flats and marshes were nearly completely destroyed by dredging and filling activities that occurred between the late 1800's and the mid-1900's. Ultimately, intertidal habitats in the Duwamish River were reduced from about 2,100-2,500 acres to less than 25 acres.

### PURPOSE AND PROJECT OBJECTIVE

Thus, the purpose of the North Wind's Weir Intertidal Restoration project is to remove the fill from the site, restore the natural shoreline and intertidal habitats, and restore the tidal connection between the site and the Duwamish River. Intertidal functions such as rearing and foraging habitat for juvenile salmonids and detrital export from salt marsh habitats would then be restored to the project area, as would the capacity of the river to sustain intertidal mudflat, marsh, and riparian habitats.

### AUTHORITY

Section 306 of the WRDA of 1990 authorized the Secretary of the Army to include environmental protection as one of the primary missions of the Corps. The Green/Duwamish Ecosystem Restoration Study stems from the Corps' authority under Section 216 of the River and Harbors and Flood Control Act of 1970, which enables the Corps to undertake restoration related to the hydrologic regime of aquatic ecosystems. Congress specifically authorized the Green/Duwamish River Basin Feasibility Study and thus the North Wind's Weir Intertidal Restoration project, in Section 101(b)(26) of WRDA 2000.

## PROPOSED PROJECT

The majority of the site would be lowered to elevations ranging from -1 to +4 feet NGVD 88 (+1.35 to 6.35 MLLW) and would be connected to the Duwamish River via an entrance off the east side of the rock weir and its associated scour pool (see Figures 2 through 5). This would create approximately 1.66 acres of tidal channel and associated intertidal mudflat (below elevation +4 NGVD 88) and approximately 0.76 acres of intertidal and high marsh between elevations +4 and +10 feet NGVD 88 (+6.35 and +12.35 MLLW). A scrub-shrub wetland community between elevations +10 and +12 feet NGVD 88 (+12.35 and +14.35 MLLW) of approximately 0.17 acres would gradually transition to a forested riparian buffer encompassing approximately 0.29 acres to the top of the area of excavation. The upstream side of the entrance channel would be armored and bank stabilized to better maintain the existing hydrodynamics of the shoreline, better preserve the undisturbed portion of the existing saltmarsh, and support a self-maintaining channel opening. The top and backside of the armoring would be capped with soil and planted with vegetation (likely willows) to increase habitat function and improve aesthetics. On in-coming tides, the site would fill with water through the tidal channel, flooding the mudflat and marsh areas. On very high tides, in-coming water would also likely overtop the existing marsh of the site and flood into the site through the restored marsh along the northern edge of the site. On out-going tides, water would flow off of the restored marsh and mudflat and exit the site through the tidal channel. The slopes and elevations are designed for the mudflats and marsh to drain completely at low tides; the tidal channel may retain some ponded water during some of the higher low tides of the year.

Much of the existing riprap and abandoned rubble along the shoreline would be removed and the slope currently colonized by Himalayan blackberries would be excavated and removed. This alternative would require grading of the western side of the existing intertidal marsh to match graded contours with existing contours. The Preferred Alternative would thus result in the loss of the 0.06 acres of the western extent of the existing intertidal marsh (approximately one-third of the marsh) and its replacement with approximately 0.76 acres of restored intertidal marsh habitat that would ultimately be of similar functional value to invertebrates, fish, and birds. Native species planted within the restored marsh area would likely include a variety of species selected for the anticipated tidal regime and salinity conditions of the site, such as Lyngby's sedge (*Carex lyngbyei*), Pacific silverweed (*Potentilla anserine* spp. *pacifica*), hardstem bulrush (*Scirpus acutus*), softstem bulrush (*Scirpus validus*), tufted hairgrass (*Deschampsia cespitosa*), and Douglas aster (*Aster subspicatus*) (Figure 5). Other emergent species may also be considered for the site, such as slough sedge (*Carex obnupta*), small-fruited bulrush (*Scirpus microcarpus*), and spike rush (*Eleocharis* spp.) based on the presence of these species in reference patches of intertidal vegetation along the Duwamish River.

In order to minimize the functional and temporal loss of the existing marsh, the portion of the marsh to be graded would be salvaged just prior to grading and replanted within the restoration site at the same elevation. Salvage would be accomplished by cutting the root-mat of the existing marsh into sections, sliding a steel plate under the root-mat, and then lifting out sections of the marsh and its root-mat. The salvaged pieces of marsh would then be transplanted to the appropriate elevation contour in the restored marsh within the same tidal cycle. If possible, the salvaged marsh would be transplanted contiguous with retained areas of the marsh to maximize the likelihood that it would re-root with minimal dieback. The expectation is that much of the relocated marsh would re-root within the restoration area and would thus retain its temporal and functional value to the suite of benthic invertebrates, fish, and wildlife that currently utilize this marsh.

In order to reduce grazing by geese within the newly planted marsh, a complex of goose excluders will be installed over and around the entire mudflat and marsh areas. Based on designs implemented on other restoration sites along the Duwamish shoreline, the excluders will use open weave steel mesh fencing to prevent 'walk-in' or 'float-in' access and overhead cables to prevent 'fly-in' access to the marsh. The large mesh of the fencing does not restrict access by juvenile salmonids. It is anticipated that these goose excluders will remain in place for a minimum of three years post-planting to allow the restored marsh time to establish and spread sufficiently to withstand herbivory by foraging geese.

During approximately the first three years post-planting, the scrub-shrub and riparian buffer vegetation would be seasonally irrigated by a temporary, above-ground irrigation system. The system would be set on a timer to allow for irrigation between May and October of each year. Once the plants are well established (as indicated by reduced mortality rates, evident growth, and the presence of flowers or fruits), the irrigation system would be removed from the site.

#### MITIGATION

As restoration, this project is considered self-mitigating.

#### ENDANGERED SPECIES

The Endangered Species Act of 1973, as amended, requires assessment of potential impacts to listed and proposed species. Listed and proposed species that may occur in the project vicinity include:

Bald Eagle (*Haliaeetus leucocephalus*)—threatened;  
Coastal/Puget Sound Bull Trout (*Salvelinus confluentus*)—threatened;  
Puget Sound Chinook Salmon (*Oncorhynchus tshawytscha*)—threatened;

In accordance with Section 7(a)(2) of the Endangered Species Act of 1973, as amended, federally funded, constructed, permitted, or licensed projects must take into consideration impacts to federally listed and proposed threatened or endangered species. The Corps prepared two Programmatic Biological Assessments (BA) to assess potential impacts of the proposed work on species protected under the Act, one for species under the jurisdiction of the USFWS and one for species under the jurisdiction of NOAA Fisheries. Both Services concurred with the not likely to adversely affect determinations presented. Copies of the Bas are available from the Corps upon request.

## CULTURAL AND HISTORIC RESOURCES

The District Engineer has reviewed the latest published version of the National Register of Historic Places, lists of properties determined eligible, and other sources of information. The following is current knowledge of the presence or absence of historic properties and the effects of the undertaking upon these properties:

Section 106 compliance studies completed to date include an examination of the electronic database containing the archaeological and historic site records of the Washington State Office of Archaeology and Historic Preservation (OAHP) and other background research. The records search indicated that no properties listed on the National Register of Historic Places (NRHP) and no sites or structures listed on the state inventory are located within the proposed project area. A professional cultural resources reconnaissance survey was conducted for the proposed project. The survey consisted of an examination of the archaeological and historic site records at the Washington State Office of Archaeology and Historic Preservation (OAHP) and a pedestrian survey of the project area. The records search indicated that no properties listed on the National Register of Historic Places (NRHP) are located within the proposed project area. The pedestrian survey did not find any evidence of prehistoric or historic-period cultural material within the proposed project area.

The District Engineer invites responses to this Public Notice from Native American Nations, Federal, State and local agencies, historical and archeological societies, and other parties likely to have knowledge of or concerns with historic properties in the area.

## PUBLIC HEARING

Any person may request, in writing and within the comment period specified in this notice, that a public hearing be held to consider this proposal. Requests for public hearings shall state, with particularity, the reason for holding a public hearing.

## EVALUATION

The decision whether to perform the proposed work will be based on an evaluation of the probable impact, including cumulative impacts, of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefits that reasonably may be expected to accrue from the proposal must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the proposal will be considered, including the cumulative effects thereof; among those are conservation, economics, aesthetics, general environmental concerns, wetlands, historic properties, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, considerations of property ownership, and, in general, the needs and welfare of the people.

The U.S. Army Corps of Engineers, Seattle District is soliciting comments from the public; Native American Nations; Federal, State, and local agencies and officials; and other interested parties in order to consider and evaluate the impacts of this activity. Any comments received will be considered by the Corps of Engineers to determine whether to modify, condition, or not proceed with the proposed work. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects, and the other public interest factors listed above. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the activity.

The evaluation of the activity on the public interest will include application of the guidelines promulgated by the Administrator, Environmental Protection Agency, under authority of Section 404(b) of the Clean Water Act. This evaluation will include an alternatives analysis.

#### ADDITIONAL EVALUATION

The State of Washington will review this work for consistency with the approved Washington Coastal Zone Management Program. A coastal zone consistency statement will be prepared and submitted to the Department of Ecology. A preliminary determination has been made that the proposed restoration project is consistent to the maximum extent practicable with the enforceable policies of the City of Tukwila and King County's Shoreline Management Programs.

A Section 401 water quality certification is requested from the State of Washington.

The North Wind's Weir was previously evaluated in the Final Programmatic Environmental Impact Statement and Restoration Plan (FPEIS) for the Green/Duwamish River Basin Ecosystem Restoration Program, prepared by the Seattle District Corps and King County DNRP in November 2000. In that document, this project was referred to as the 'Site 1' project. The project name was changed to avoid confusion with a documented cultural site upstream of the property.

Pursuant to the National Environmental Policy Act, a draft Environmental Assessment has been prepared to describe the design and impacts in greater detail. The draft Environment Assessment (EA) is posted and available on the Seattle District web site at: <<http://www.nws.usace.army.mil/ers/envirdocs.html>>.

#### COMMENT AND REVIEW PERIOD

Comments on these factors will be accepted, made part of the record, and will be considered in determining whether it would be in the best public interest to proceed with the proposed project. Comments should reach this office, Attn: Planning Branch, not later than the expiration date of this public notice to ensure consideration.

Requests for additional information should be directed to Mr. Noel Gilbrough, Project Manager, at (206) 764-3652 or Ms. Torrey Luiting, Environmental Coordinator, at (206) 764-4476.

Encl  
Drawings (8)