

**SECTION 404(b)(1) EVALUATION  
SPRINGWATER CORRIDOR WETLANDS  
SECTION 206 AQUATIC ECOSYSTEM RESTORATION PROJECT  
CITY OF PORTLAND, MULTNOMAH COUNTY, OREGON**

**1. Introduction**

Section 404 of the Clean Water Act of 1977 requires that all civil works projects involving the discharge of dredged or fill material into waters of the United States be evaluated for water quality effects prior to making the discharge. This evaluation assesses the effects of the removal of fill and native soil and the redistribution of soil to create islands, greater than incidental fallback during ecosystem restoration, on the existing wetland, riparian, and adjacent habitats. The total proposed project encompasses up to 40 acres of wetland and riparian restoration and would improve habitat for a wide variety of wildlife species including Neotropical migratory birds, waterfowl, shorebirds, amphibians, reptiles, and mammals.

The City of Portland, Bureau of Environmental Services (BES), and the U.S. Army Corps of Engineers, Portland District, have initiated a wetland restoration project along the Springwater Corridor in southeast Portland. The proposed Springwater Corridor Wetlands Section 206 Restoration project is located in southeast Portland, Oregon, in the Johnson Creek watershed. Specifically, the area of interest is generally located north of SE Foster Road and between SE Harold Street, SE 111th Avenue, and SE 122nd Avenue. The project area includes four contiguous parcels within the Johnson Creek 100-year floodplain, identified from upstream to downstream as the Zenger Wetland, Central Wetland, North Parcel and Beggar's Tick Marsh Wildlife Refuge (west of SE 111<sup>th</sup> Avenue) (see Figure 1).

The project parcels are not directly connected to Johnson Creek except during extreme flood events when localized stormwater runoff and backwater from Johnson Creek enter the site. The Zenger wetland has a continuous spring discharge creating surface flow that travels through the parcels in a generally northwesterly direction, and connects with Beggars Tick Marsh to the west. Surface water from Beggars Tick Marsh occasionally flows into Johnson Creek via a drainage ditch along the Springwater Trail and culvert under SE Foster Road. The project parcels also receive stormwater runoff from adjacent areas, and the poorly drained soils cause seasonal ponding of water and have resulted in a total of about 35 acres of wetlands that currently exist on the sites. The Springwater Trail, the former right-of-way of an abandoned electric trolley line, traverses through the project area in a southwest-northeast direction.

The purpose of the proposed action is to protect, restore, create, and enhance wetlands in the Johnson Creek watershed to improve habitat for a wide variety of wildlife species including Neotropical migratory birds, waterfowl, shorebirds, amphibians, reptiles, and mammals. The scope of this ecosystem restoration project consists of up to 40 acres of wetland and riparian restoration.



Figure 1. Project Site.

## II. Description of the Proposed Activity

The proposed project includes the following elements (see Figure 2, plan overview sheet):

- Removal of the existing 24 inch culvert under the Springwater Trail and replacement with a 36 inch culvert and stop logs to allow the water level to be managed to maximize habitat diversity.
- Excavation of open water channels and placement of material and LWD for islands and diverse topography and cover on the Zenger site.
- Excavation of 1 acre of upland and a flow-through channel to increase wetland area and placement of islands and LWD for diverse topography and cover on the Central site.
- Placement of a water control structure at the outlet of the Central site to allow the water level to be managed.
- Removal of over 6 acres of fill on the North site and creation of wetland channels and fingers.
- Addition of a culvert under SE 111<sup>th</sup> Avenue to allow wildlife passage during high water.
- Removal of 1 acre of fill on the Beggar's Tick site to increase wetland area.

- Removal of non-native species within the approximately 40 acres of the project footprint and replanting with native trees, shrubs, and emergents.

Approximately 35,000 cubic yards (CY) of material will be excavated. Approximately 10,800 CY will be excavated in wetlands and 4,200 CY will be placed as islands within wetlands. This fill will create cover and wintering habitat for native amphibians. The replacement of the existing culvert under the Springwater Trail with a new larger culvert will result in a net decrease of fill in the wetlands and floodplain and allow better flow during high water events. Approximately 65 CY of material will be excavated from the roadway fill for SE 111<sup>th</sup> Avenue for the placement of a second culvert.

<b>Table 1.</b> Summary of project excavation and fill quantities within waters of the U.S. and State of Oregon.		
<b>Item</b>	<b>Description</b>	<b>Quantity (CY)</b>
Road Fill Removal	Excavate roadway and trail for culvert placement	70
Upland Fill Removal	Excavate fill material or uplands to restore wetlands	23,600
Wetland Excavation	Excavate channels and pools in existing emergent wetlands	10,800
Wetland Island Fill	Replace excavated material as islands or other diverse microtopography	4,200
Culverts and Wingwalls	Remove old culvert	5
	Place new culverts	10

### III. Description of the Removal and Fill Sites

#### *Zenger Wetland*

The Zenger Wetland site covers approximately 14 acres and is located at the base of the Zenger Farm hillslope and an area across the Springwater Trail to the north (see Figure 1). Approximately 12 acres of the site are wetlands. The majority of the flat area at the base of the slope is wetland. The portion of the site to the north of the trail is partially wetland and partially upland with Douglas spirea (*Spirea douglasii*), reed canary grass, and Himalayan blackberry dominant in various portions of the site. The majority of the south site is an emergent wetland dominated by reed canary grass, with smaller pockets dominated by soft rush (*Juncus effusus*) and small-fruited bulrush (*Scirpus microcarpus*). A small stand of willow is also present. The wetland receives water from a large spring at the base of the slope, as well as rainfall runoff. The spring provides the majority of water and is located adjacent to a large Western red cedar (*Thuja plicata*) tree at the south end of the wetland. Standing water is present on much of the southern portion of the site year-round. Compared to the conditions observed during 2000 (Adolfson 2000), the site has significantly more standing water and is almost completely dominated by reed canary grass. Historic photos show the site as previously farm or pasture with much less water. The current situation may be a result of the blockage of culverts under the Springwater Trail, or from increased runoff to the site from surrounding land uses.

#### *Central Wetland*

The Central Wetlands parcel is approximately 12 acres total with approximately 5.0 acres of wetlands. The remainder of the site is uplands primarily dominated by English hawthorn and Himalayan blackberry.

There are two distinct wetland areas, on the western half and the eastern half. The western portion of the wetland is primarily an emergent marsh area with pockets of perennial standing water. The eastern portion of the wetland is primarily a willow/hawthorn thicket with a seasonally inundated ditch adjacent to the Springwater Trail. The emergent wetland is dominated by cattails (*Typha angustifolia*), reed canary grass, soft rush, small-fruited bulrush, and creeping buttercup (*Ranunculus repens*). The willow/hawthorn thicket is dominated by Pacific willow (*Salix lasiandra*), Sitka willow (*S. sitchensis*), and both the native and English hawthornes (*C. douglasii* and *C. monogyna*). Small stands of willow and hawthorne are present in the emergent wetland. The southwest corner of the site is not wetland and is dominated by grass species such as tall fescue (*Festuca arundinacea*), velvet grass (*Holcus lanatus*), and bluegrass (*Poa* sp.). There are currently no native trees on the site, but several ornamental willow trees, such as weeping willow and curly willow.

#### North Parcel

The North Parcel is approximately 12 acres in size and is located east of SE 111<sup>th</sup> Avenue and south of SE Harold Street. The site has approximately 3.6 acres of wetlands and the remainder of the site is comprised of 3-4 feet of gravel, rock and concrete fill uplands with sparse non-native grass cover and extensive areas of Himalayan blackberry (*Rubus discolor*) and Scotch broom (*Cytisus scoparius*). The wetland area has four distinct plant communities, including willow shrubland (*Salix lasiandra* and *S. sitchensis*), a Douglas spirea thicket (*Spirea douglasii*), a reed canary grass wetland, and a black cottonwood/hawthorn forest (*Populus balsamifera*, *Crataegus douglasii* and *C. monogyna*). A small stand of big leaf maple (*Acer macrophyllum*) is present on the southeast corner of the site. Standing water is present seasonally along the southern border of the site in a vegetated swale and throughout the willow and spirea shrublands. It appears that the soils are quite compacted in the cottonwood/hawthorn forested area and water seasonally ponds from precipitation in this area. The cottonwood/hawthorn and big leaf maple forested areas are approximately 2 feet higher in elevation than the other plant communities. Extensive hummocks are present throughout the site from downed wood. As the cottonwoods reach about 8-12 inches in diameter they easily fall, likely due to the highly compacted soils and inability to grow an extensive root system. Non-native species are present throughout the site and include Himalayan blackberry, Scotch broom, English hawthorn, reed canary grass, and hybrid poplars (possible cross between *P. balsamifera* and *P. alba*). Most of the trees on the site are fairly young, approximately less than 30 years old, and large woody debris is limited in abundance and diversity in the parcel.

#### Beggar's Tick Wildlife Refuge

The Beggar's Tick Marsh Wildlife Refuge, owned by Metro, is approximately 22 acres in size and is located west of SE 111<sup>th</sup> Avenue and north of the Springwater Trail. Approximately 19 acres of the site is wetland and the remainder of the site is comprised of filled areas, including a short loop trail in the SE corner and fill adjacent to the culvert under SE 111<sup>th</sup> Avenue. Three plant communities are present in the wetland area, including an emergent marsh dominated by beggar's tick (*Bidens cernua*, *B. frondosa*, and *B. tripartita*) and smartweed (*Polygonum* sp.), a willow scrub/shrub wetland dominated by a variety of willows (*S. geyeriana*, *S. lasiandra*, *S. hookeriana*), and Douglas spirea (*Spirea douglasii*), and an ash/cottonwood seasonal wetland in the southern portion of the site. The uplands are dominated variously by black cottonwood, black locust (*Robinia pseudo-acacia*), and Himalayan blackberry. Some Douglas firs (*Pseudotsuga menziesii*) are also present.

The areas that will be excavated and filled are the roadbed, Springwater Trail, culverts, filled uplands and wetlands. Fill will come from on-site excavation. Sediment is currently being tested to determine if any pollutants are present. Only clean material will be reused as fill. Any contaminated materials excavated will be hauled to an approved landfill. The roadbed and trail backfill will be composed to the maximum extent possible of the existing roadbed materials. Where unsuitable materials are encountered (logs, etc.),

that material will be hauled off-site to an appropriate landfill or upland disposal area. Any additional roadbed material necessary will be imported from an approved quarry.

#### **IV. Factual Determinations**

##### *a. Physical Substrate Determinations*

The project will remove approximately 23,600 CY of fill material on the Central, North, and Beggar's Tick sites. This will return 8.2 acres of existing upland to wetland. Excavation will remove non-native soils from the properties and return the topography to a state more similar to natural conditions.

Approximately 10,800 CY will be excavated in existing wetlands to create a more defined flow-through channel as well as ponds and depressions. Approximately 4,200 CY will be reused on the site and placed as islands and other topographic variations to provide upland refuge and cover for amphibians and other wildlife species. Approximately 20 pieces of LWD will be placed to provide additional cover and habitat.

Overall, there are not expected to be any significant adverse effects on geology, soils or sediments, and the site will be returned to a more natural floodplain wetland condition.

##### *b. Water Circulation and Fluctuation Determinations*

The replacement of the culvert under the Springwater Trail and the excavation of channels connecting the sites will improve water circulation and allow more frequent natural fluctuations. The restoration of 8.2 acres of wetlands will increase the wetted floodplain area. The placement of stop logs or other water control structures will allow the water levels to be managed to ensure that the existing open water and emergent wetlands on the Zenger and Central sites are not drained, but water levels can be managed to maximize diversity of wetland types. The proposed project will provide an incidental amount of additional flood storage (less than 20 acre-feet) but will not significantly change the 100-year water surface elevations (extremely small localized drop in water surface elevations).

Overall, there are not expected to be any significant adverse effects on water circulation and fluctuations and more natural floodplain conditions will be restored.

##### *c. Suspended Particulate/Turbidity Determination*

During construction, suspended particulate and turbidity levels may increase as a result of construction activity and restoration. However, construction will occur during the low water season (summer and fall) and turbidity will be contained on site and not enter any streams. The use of best management practices and erosion control measures are expected to avoid and minimize any such temporary impact. Restoration of native vegetation will stabilize disturbed areas. There will be no long-term effects on suspended particulates or turbidity.

##### *d. Contaminant Determinations*

A Level 1 Environmental Assessment was conducted to determine the potential for any contamination on the site. There are a few records of primarily oil spills in the project area, of which most have been cleaned up to the satisfaction of the Oregon Department of Environmental Quality (ODEQ); four sites are still in the cleanup phase.

It is likely that pesticide residues will be found on the site due to the past use as agricultural lands. Water and sediment quality sampling and analysis are currently on-going. If any contaminants are present above legal limits in proposed excavation areas, then additional sampling will occur to determine how sediments may need to be disposed of. Any contaminated sediments would be disposed of in an appropriate landfill.

Currently, there are two surface water drains that flow into Beggar's Tick Wildlife Refuge from SE 111<sup>th</sup> Avenue and adjacent businesses. These outfalls are being sampled to determine if there is a need for the City of Portland to take any measures to pre-treat flow into the site. If there are contaminants of concern from these outfalls, then the City of Portland will work separately to develop bioswales or other measures to reduce the input of contaminants.

If any suspicious containers or materials are encountered during construction, then the ODEQ will be immediately notified to determine what actions to take.

Overall, there are not expected to be any significant effects on the project from contaminants.

#### *e. Aquatic Ecosystem and Organism Determinations*

Excavation and fill may cause some temporary turbidity and disturbance or loss of invertebrate species. However, restoration and enhancement of nearly 40 acres of wetland and riparian habitat will significantly improve conditions for native wildlife species. The placement of islands and other topography diversity and LWD will increase cover and wintering habitat for amphibians. The removal of invasive species and revegetation with a diversity of native species will increase habitat diversity and restore a forested wetland community that is currently rare in the City of Portland. These modifications will help restore a more natural floodplain and riparian corridor in this highly urbanized area. The culvert for wildlife passage will improve ease of movements of wildlife species between the Beggar's Tick site and the other sites.

Impacts of removal and fill on the structure and function of the aquatic ecosystem and organisms would be beneficial. Small areas of young forest would be removed during construction to allow equipment access and for creation of wetland channels and fingers. However, all disturbed areas would be replanted once construction activities are completed. Also, approximately 40 acres will have a greater percentage of native species, since non-native species will be removed both incidentally for construction activities and as part of the restoration measures.

Overall, the project is expected to benefit wildlife species and the floodplain wetland ecosystem.

#### *f. Proposed Disposal Site Determinations*

The fill material would not violate Environmental Protection Agency or State water quality standards or violate the primary drinking water standards of the Safe Drinking Water Act (42 USC 300 et seq.).

Project design, best management and erosion control practices would preclude the introduction of substances into surrounding waters. Materials removed for disposal off-site will be disposed of in an appropriate landfill or other upland area.

#### *g. Determination of Cumulative Effects on the Aquatic Ecosystem*

The removal and fill action is not expected to have significant adverse cumulative effects on the aquatic ecosystem. Removal of fill, restoration and enhancement of wetlands and native plant communities will



have a beneficial effect on the aquatic ecosystem, listed species utilizing the area, and their habitats. The project is expected to incrementally reverse adverse cumulative effects that have previously occurred in the project area.

*h. Determination of Secondary Effects on the Aquatic Ecosystem*

The proposed work would increase the abundance and diversity of wildlife species utilizing the sites. Wildlife migrations may also be benefited as a result of the additional culvert at SE 111<sup>th</sup> Avenue and better connections between the sites. Invasive plant species will be reduced and native plant communities will be restored.

**V. Findings of Compliance or Non-Compliance with the Restrictions on Discharge**

- a. No significant modifications of the guidelines were made relative to this evaluation.
- b. The "no action" alternative was considered and rejected because it would not restore floodplain wetland habitats and invasive species would continue to dominate the project site. No practicable alternative to the proposed action exists that provides the short- and long-term environmental, water quality, habitat and listed species benefits provided by the proposed alternative.
- c. The proposed action is in compliance with applicable State water quality standards; however, concurrence must still be received from the Oregon Department of Environmental Quality.
- d. The proposed action would not violate the toxic effluent standards of Section 307 of the Clean Water Act. State water quality certification has been requested.
- f. The proposed fill would not result in significant adverse effects on human health and welfare, including municipal and private water supplies, recreational and commercial fishing, plankton, fish, shellfish, and wildlife. No significant adverse effects on aquatic ecosystem diversity, productivity, stability, recreational, aesthetic, and economic values would occur. The proposed action does not cause or contribute to significant degradation of waters of the United States.
- g. Appropriate and practicable steps will be taken to minimize potential adverse impacts of the discharge on the aquatic ecosystem. Appropriate steps to minimize potential adverse impacts would be specified in the construction contracts.

With the inclusion of appropriate and practical conditions to minimize pollution and adverse effects to the aquatic ecosystem during construction, the proposed action is specified as complying with the requirements of the Section 404(b)(1) guidelines.

Date: \_\_\_\_\_

THOMAS E. O'DONOVAN  
Colonel, EN  
Commanding