Rivergate Enhancement Sites
Long-Term Management Plan

JANUARY 2022

PREPARED BY

Port of Portland and SWCA Environmental Consultants

RIVERGATE ENHANCEMENT SITES
LONG-TERM MANAGEMENT PLAN

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January 10, 2022

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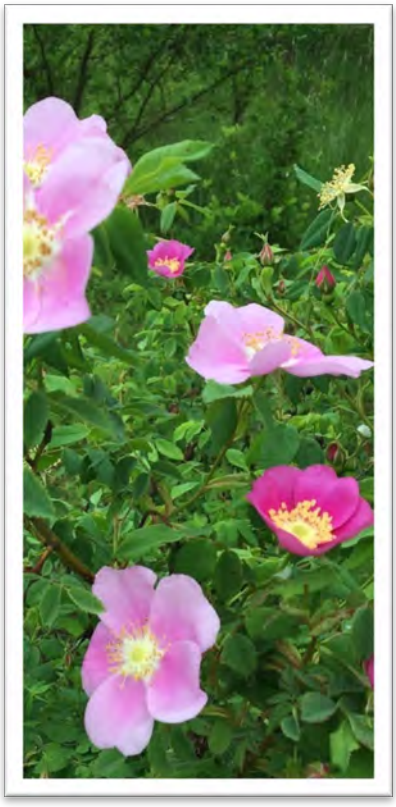
ABBREVIATIONS

BDS	City of Portland Bureau of Development Services
BES	Portland Bureau of Environmental Services
BMPs	best management practices
BNSF	Burlington Northern-Santa Fe
COOP	Rivergate Cooperative Agreement
COP	City of Portland
DEA	David Evans and Associates
DEQ	Oregon Department of Environmental Quality
DSL	Oregon Department of State Lands
ESA	Endangered Species Act
FAC	facultative (plant species equally likely to occur in wetlands and non-wetlands)
IH	Heavy Industrial
LTMP	Long-Term Management Plan
LUR	Land Use Regulations
LWD	large woody debris
NGVD	National Geodetic Vertical Datum
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
PEM	palustrine emergent wetland
PFO	palustrine forested wetland
Port	Port of Portland
PSS	scrub-shrub wetland
RF	riparian forest
Steward	conservation group, land trust, agency or organization that will assume responsibility for the ongoing management of this site
UFO	upland forest
UPG	upland grassland
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service

In recognition of those people whose lives and livelihoods depend on land now occupied by the Port of Portland, we have developed the following Land Acknowledgement:

- We acknowledge that the Port of Portland is located on lands that have been occupied and stewarded since time immemorial by people from the Bands of Cascade, Chinook, Clackamas, Cowlitz, Kalapuya, Kathlamet, Molalla, Multnomah, Tualatin, and Wasco.
- Many other indigenous peoples have their homes in, travel through, harvest and use the plentiful natural resources of the Columbia River, Willamette River, and the other lands and waters within the Port's district.
- The Port of Portland respects the history of the federally recognized sovereign Tribal Nations of the Northwest, whose people were forcibly dispossessed and removed from their homes and lands by the United States government following treaties entered into between 1851 and 1855.
- And we are committed to recognizing the ongoing relationship that exists between indigenous peoples and these places.



1 MITIGATION MANAGEMENT PROGRAM

1.1 Introduction

The Port of Portland (Port) initiated its Mitigation Management Program in 1997 to respond to ongoing and proposed mitigation requirements and mandates from various regulatory agencies to address impacts to wetlands and other natural resources. The Port currently manages over 900 acres of mitigation sites and natural areas. The Rivergate Enhancement Sites consist of five subcomponents that were authorized by the U.S. Army Corps of Engineers (USACE) and Oregon Department of State Lands (DSL) as individual mitigation projects: North and South Slough, Ramsey Enhancement Area and Visual Buffer, Leadbetter, 40-Mile Loop Trail, and Ramsey Lakes (Figure 1). These five subcomponents are located in close proximity to one another and are collectively referred to as the Rivergate Enhancement Sites. This long-term management plan (LTMP) establishes management goals, standards, and guidelines against which all present and future activities within the Rivergate Enhancement Sites will be managed.

Mitigation and other natural resource enhancement projects are designed to provide a number of wildlife, ecological, and community benefits. These benefits include increasing wildlife value by enhancing or creating nesting, foraging, and resting habitat; creating and enhancing riparian zone functions; improving connectivity between wildlife areas; improving or restoring wetland hydrological functions; improving water quality; providing shade to reduce surface water temperature; providing flood attenuation through water storage; reducing and controlling the spread of invasive weeds; and improving habitat for wildlife including avifauna, sensitive turtles, amphibians, and pollinators while providing valuable "green space" in highly urbanized areas. Mitigation planning, designing, monitoring, and reporting follow federal and state regulations, general authorizations, and guidelines.

Permit requirements by the DSL and the USACE for the Rivergate Enhancement Sites have been met and the sites were subsequently released from regulatory obligations in 1999 (for Ramsey Lakes) and in 2010 (for the remaining sites: North and South Slough, Ramsey Enhancement Area and Visual Buffer, Leadbetter, and 40-Mile Loop Trail). One of the goals of the Port's Mitigation Program is to "attain and maintain a high quality of functional performance and increased habitat value on mitigation sites and Port-owned natural area properties," meaning that stewardship over the Rivergate Enhancement Sites will continue while in Port ownership. Long-term management will help to ensure that habitat integrity continues to improve and that the site retains its enhanced condition with minimal intervention.

The long-term management of mitigation sites is vital to ensure that these areas continue to provide ecological benefits to wildlife and the local community. The Port's Natural Resources Policy states that "The Port will manage natural resources in a manner that protects the integrity of the natural environment; promotes natural ecosystems that favor native biodiversity, reduces ecological fragmentation, and improves ecological connectivity, and protects and enhances natural resources of ecological significance." While the Port's Natural Resource staff are dedicated to long-term management of mitigation sites and natural areas, it is not the Port's primary mission. The Port will continue to seek cooperation and partnerships to foster the long-term management of Port mitigation sites and natural areas. The conservation group, land trust or local agency that may in the future assume responsibility for the ongoing management of these sites shall be referred to as the "Steward" for the remainder of this document. This LTMP summarizes the Port's knowledge of the Rivergate Enhancement Sites and will provide a new steward with valuable tools for long-term management to ensure the site's values and functions over time.

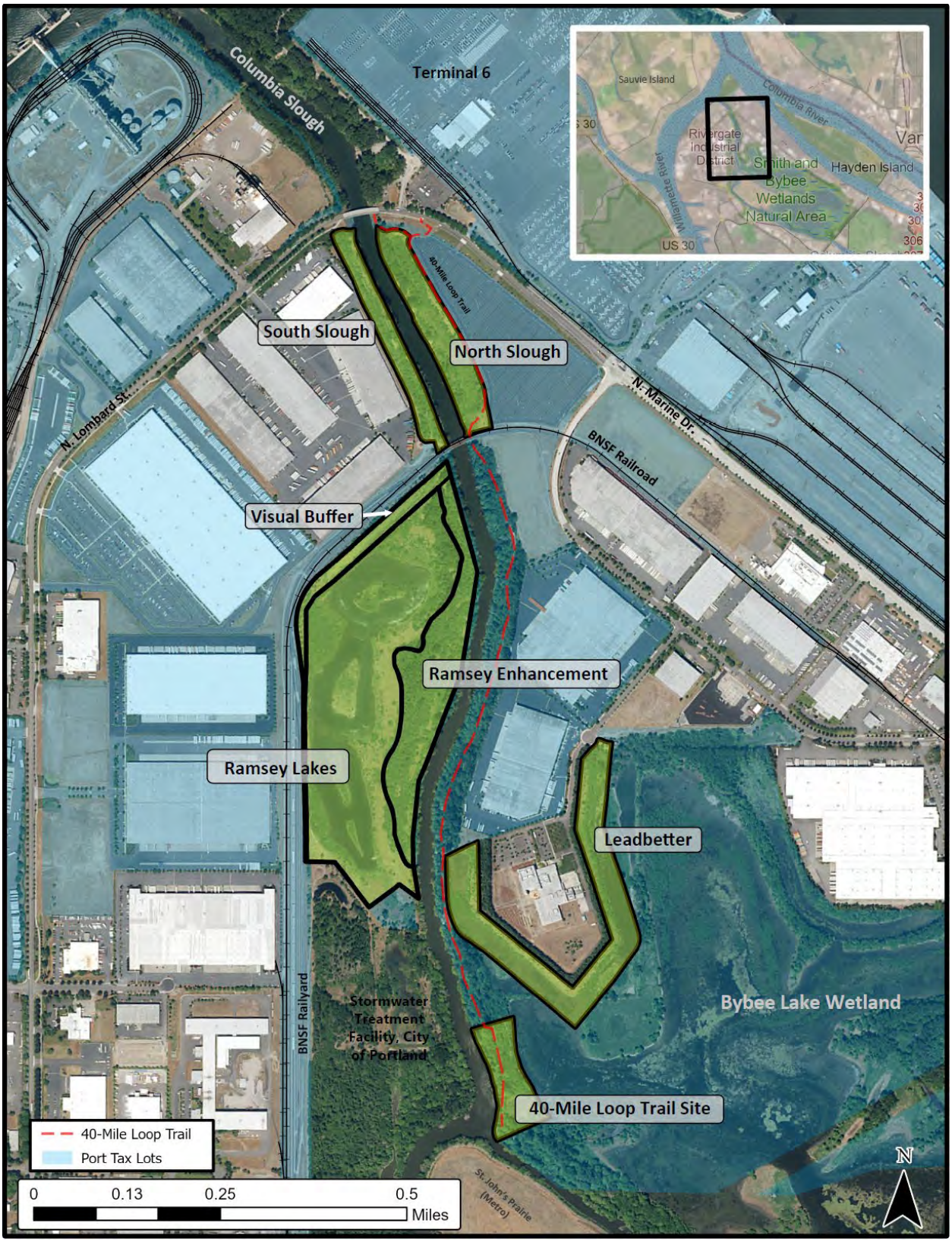


Figure 1. Rivergate Enhancement Sites Overview

1.2 Site Description and History

The Rivergate Enhancement Sites are in Multnomah County, west of Interstate 5, south of N. Marine Drive, and east of N. Lombard Street, adjacent to the Columbia Slough and Bybee Lake. The Rivergate Enhancement Sites are surrounded by developed and undeveloped industrial land (the Rivergate Industrial District), as well as designated open space managed by the City of Portland (COP) and Metro. The surrounding area supports heavy industry, major transportation corridors, and facilities for rail, highway, and marine freight. The Port is the primary landowner in the Rivergate area. The Rivergate Enhancement Sites are approximately 79 acres in size and provide riparian habitat for native plants and wildlife adjacent to the Columbia Slough, which is an important wildlife corridor.

The Rivergate Enhancement Sites (with the exception of Ramsey Lakes) are the result of a federal consent decree (Rivergate Consent Decree; Case No. CV97-1674-ST) settling a citizen lawsuit against the Port (Jones vs. Thorne et al., 2001) and several other agencies. The Rivergate Consent Decree (see Appendix F) was signed on January 31, 2001, and it specifies mitigation actions for wetland fills that occurred during the development of the Rivergate Industrial District over the past 50 years. The goals of mitigation are to increase or restore the following wetland functions: water storage capacity, thermoregulation, anadromous fish habitat, amphibian habitat, waterfowl habitat, and native plant communities. Although Ramsey Lakes was not a component of the Rivergate Consent Decree, it is included here for practical reasons associated with long term site management as it is contiguous with other subcomponents of the Rivergate Enhancement Sites. Ramsey Lakes was established under the Rivergate Cooperative Agreement (1988) between DSL, ODFW, EPA and USACE, which established mitigation obligations for the Port's planned development of the Rivergate Industrial District. The cooperative agreement was superseded by the Rivergate Consent Decree in 2001.

Prior to development, the Rivergate industrial area and vicinity consisted of larger lakes, sloughs, and backwaters, with emergent wetlands, woodlands, and wooded wetlands dominated by willow (*Salix* spp.), Oregon ash (*Fraxinus latifolia*), and black cottonwood (*Populus balsamifera* ssp. *trichocarpa*). Development of the Rivergate Industrial District over the past 50 years resulted in the placement of sandy dredge materials from the Willamette and Columbia rivers, thereby reducing the extent of wetlands, woodlands, and swamps, increasing the presence of weedy herbaceous species, and reducing overall plant diversity.

Mitigation compliance monitoring and reporting was completed in 1999 for Ramsey Lakes and the site was subsequently released from further monitoring and reporting obligations by the regulatory agencies in 1999. Mitigation monitoring activities were completed in 2009 for the remaining Rivergate Enhancement Sites (North and South Slough, Leadbetter, Ramsey Enhancement Area and Visual Buffer, and 40-Mile Loop Trail) representing the fifth year of a minimum of 5 years of monitoring required under the USACE, DSL, and COP Bureau of Development Services (BDS) permits (see Appendix A for aerial figures of each subcomponent; photos provided in Appendix B). These components of the Rivergate Enhancement Sites met success criteria in 2009 and were released from further monitoring and reporting obligations in 2010 by the regulating agencies. Port staff also conducted wildlife and hydrology monitoring at all Rivergate Enhancement Sites which was incorporated into the annual compliance reports. Although the sites have been released from regulatory obligations, the Port continues to inspect and maintain the sites regularly to control invasive vegetation and to identify and implement enhancement projects. Each of the subcomponents are further described below.

1.2.1 *North and South Slough*

The North and South Slough site is located along the north and south banks of the Columbia Slough, respectively, between the Lombard Street bridge and the Columbia Slough rail bridge (see Appendix A-

1). Although the North and South Slough are not contiguous to each other, they are treated as a single site in the Rivergate Consent Decree and associated success criteria and are considered a single subcomponent of the Rivergate Enhancement Sites. Construction of these sites involved removal of sand and other fill materials down to native soils and revegetation of the banks with native plantings. The North Slough covers an area approximately 150 feet wide and approximately 1,400 feet long and the South Slough covers an area approximately 50 feet wide and approximately 1,550 feet long. Mitigation at the North Slough also involved construction of a swale parallel to the Columbia Slough, approximately 800 feet long and 10 feet wide.

The construction and planting of wetland/upland complexes in the North and South Slough was completed in the winter of 2003–2004. Port mitigation management staff conducted monitoring at the North and South Slough for a total of 5 years, in accordance with the Rivergate Consent Decree.

1.2.2 *Ramsey Enhancement Area and Visual Buffer*

The Ramsey Enhancement Area and Visual Buffer are located west of Interstate 5, south of N. Marine Drive, east of N. Lombard Street, and border the southern bank of the Columbia Slough. While the Ramsey Enhancement Area was a requirement of the Rivergate Consent Decree, the Visual Buffer was a requirement imposed by BDS as part of the land use review for construction of the mitigation site. The Ramsey Enhancement Area is bounded by the Columbia Slough to the east and north, and Ramsey Lakes site to the west and south (see Appendix A-2).

Mitigation at the Ramsey Enhancement Area involved removal of sand fill, other fill materials, and native soils; construction of two meandering swales with a combined length of 2,000 feet and individual width of at least 50 feet; and native plantings. Both swales are connected to the Columbia Slough at the upstream and downstream ends during high water.

Construction of the 11.68-acre Ramsey Enhancement Area began in February 2002 and was completed in January 2004. Construction efforts included salvage of native plant material and soil for reuse on the site, excavation of fill and grading to construct the swales, temporary erosion control, seeding of the site with native herbaceous seed mixes, planting of native trees and shrubs, placement of salvaged large woody debris (LWD), and the installation of an irrigation system. These measures resulted in the establishment of 3.64 acres of scrub-shrub wetland and 8.04 acres of upland riparian forest within the enhancement site.

The Visual Buffer is a vegetated buffer located within a corridor bordering the top of the slope west and north of Ramsey Lakes. Mitigation consisted of planting a visual buffer of trees and shrubs within a corridor varying from 10 to 100 feet wide. The height of the visual buffer is limited to accommodate existing utility poles and transmission lines.

Construction of the 2.15-acre Visual Buffer began in July 2003 and was completed in February 2004. Construction efforts included clearing and grubbing activities to remove noxious weeds, seeding the site with two native herbaceous Willamette Valley seed mixes, planting upland native trees and shrubs, and installing an irrigation system. These measures resulted in the establishment of 2.15 acres of upland buffer area located between the north end of the Ramsey Enhancement Area and the Burlington Northern-Santa Fe (BNSF) railroad right-of-way.

The Rivergate Consent Decree also called for the removal of a culvert at the confluence of the Ramsey Ditch and Columbia Slough. Following culvert removal, the ditch was regraded and seeded with native wetland species. Biologists at Jones and Stokes, Inc., performed mitigation monitoring activities at the Ramsey Enhancement Area for a total of 5 years, in accordance with the Rivergate Consent Decree.

1.2.3 *Leadbetter*

The Leadbetter site is a 200-foot corridor that borders the Leadbetter Peninsula (see Appendix A-3) and is approximately 15 acres in size. Construction of the Leadbetter site involved removal of sand and other fill materials down to the native soils for a width of 125 feet around the eastern, southern, and western boundaries of the peninsula and creation of a contoured slope for approximately 75 feet on the upland edge beyond the excavated area. Following removal of fill, the corridor was revegetated with native plantings. Mitigation also included construction of a swale approximately 1,500 feet long and at least 10 feet wide parallel to the toe of the fill slope. The construction and planting of the Leadbetter site were completed in the winter of 2003–2004. Port mitigation management staff conducted monitoring at the Leadbetter site and North and South Slough for a total of 5 years, in accordance with the Rivergate Consent Decree.

1.2.4 *40-Mile Loop Trail Site and Columbia Slough Levee Repair*

The 40-Mile Loop Trail Site is west of Interstate 5, south of N. Marine Drive, and east of N. Lombard Street, between the Columbia Slough and Bybee Lake (see Appendix A-4). It lies adjacent to a portion of the partially constructed 40-Mile Loop Trail and directly borders both the Columbia Slough and Bybee Lake.

This 5-acre mitigation site was intended to compensate for wetland removal and fill (approximately 1.67 acres) associated with construction of a 7,540-foot segment of the COP's 40-Mile Loop Trail. Mitigation consisted of enhancement in existing wetland areas adjacent to the 40-Mile Loop Trail between the BNSF Railroad Bridge and the Port's southern property line.

Enhancement activities at the 40-Mile Loop Trail Site involved removal of nonnative vegetation and planting of native trees and shrubs. The overall goal of mitigation was to establish a forested wetland with native trees and shrubs where a degraded emergent wetland dominated by reed canarygrass once existed. Control of reed canarygrass was accomplished through a combination of mowing, limited chemical applications, and shading. A prescribed burn was conducted as a trial during site prep in October 2001 in collaboration with The Nature Conservancy. Stem (or tiller) count monitoring conducted post-burn confirmed that burning had little impact on reed canarygrass regrowth in the short term but may have contributed to increased diversity due to thatch removal.

In February 2003, during the construction of the 40-Mile Loop Trail and associated mitigation site, a levee breach occurred on the east bank of the Columbia Slough. Repair of the levee, including the placement of fill material in wetlands and below the ordinary high-water elevation of the slough, was required to complete the 40-Mile Loop Trail (see Appendix A-3 for location). This repair work, referred to as the Columbia Slough Levee Repair, was approved by the relevant federal agencies as consistent with the Rivergate Consent Decree and permitted by the DSL under a modification to State Permit 25119-RF. The Columbia Slough Levee Repair Area was completed in September 2003, during the in-water work period for the Columbia Slough (David Evans and Associates [DEA] 2004b). Stockpiled dredged sand overtopped with stockpiled native soil was used to restore the breach to its original footprint and elevation. Geotextile fabric, quarry spalls, and coir fabric were incorporated into the slope design where needed for stabilization and erosion control. Revegetation of the disturbed area was accomplished using a native riparian seed mix and native trees and shrubs in February 2004.

During the spring 2006 and spring 2008, separate flood events swept through the 40-Mile Loop Trail Site and destroyed small sections of the constructed 40-Mile Loop Trail. As per the 2005 Recreational Slough Trail Easement and Maintenance Agreement #282, the COP is responsible for maintenance and repair of the trail and associated culverts. The trail had not been repaired by the date this plan was published, but

there are future plans, as part of the regional trails system, to connect an existing trail from Chimney Park to the St. John's Prairie then over the Slough to the existing 40-Mile Loop Trail, which would be repaired as part of the larger project. Biologists at Jones and Stokes, Inc., performed mitigation monitoring activities at the 40-Mile Loop Trail Site and the Levee Repair Area for a total of 5 years, in accordance with the Rivergate Consent Decree.

In addition, prior to establishment of the 5-acre mitigation site and the levee repair project, the 40-Mile Loop Trail was constructed and areas along the easement were restored with native seeding and planting. Following removal and treatment of invasive species, the mitigation site was seeded with a native hydrophytic seed mix in the fall and winter of 2001-2002. Following seeding, the Portland Bureau of Environmental Services (BES) planted native trees and shrubs on the site in February 2002. During construction of the trail in 2003, five trees were removed. The LWD generated by this effort was salvaged and placed either adjacent to the 40-Mile Loop Trail Site or along the trail to provide additional habitat structure for wildlife. Additionally, natural occurrences such as fallen snags and beaver-downed trees have contributed to LWD habitat throughout the mitigation area. As part of an intergovernmental agreement with the Port, BES maintained the plantings at the 40-Mile Loop Trail Site from 2001 through 2005, after which the Port assumed responsibility for plant maintenance.

1.2.5 *Ramsey Lakes*

The Ramsey Lakes site is north of the Smith and Bybee Wetlands Natural Area, south of North Marine Drive, and west of the Columbia Slough (see Appendix A-2). The Ramsey Lakes site, now managed with the Rivergate Enhancement Sites, was originally established as a result of the Rivergate Cooperative Agreement in 1988. The agreement was between DSL, the Oregon Department of Fish and Wildlife (ODFW), the U.S. Environmental Protection Agency (EPA), the USACE, the U.S. Fish and Wildlife Service (USFWS), and the Port. The Rivergate Cooperative Agreement established mitigation obligations for the Port's planned development of the Rivergate Industrial District and included the establishment of Ramsey Lake wetlands. This agreement was superseded by the Rivergate Consent Decree signed on January 31, 2001. The Rivergate Consent Decree preserved the Ramsey ponds, slopes to the west of the ponds, and a 100-foot buffer to the east of the ponds (approximately 35 acres).

Mitigation at the Ramsey Lakes site involved enhancement of existing emergent and forested wetlands as well as enhancement of adjacent upland areas and riparian habitat along the Columbia Slough. The primary goals of the mitigation plan were to diversify emergent and riparian vegetation and increase wildlife habitat values.

The Ramsey Lakes site consists of three excavated ponds with a total of at least 16 acres of water surface area. Construction was completed in 1990, and material removed from the lakes was used for construction of adjacent fill dikes and islands, and to enhance upland soil before planting. The wetland fringe and islands associated with the ponds were planted with native vegetation and the remaining upland areas between the Ramsey Lakes site and the Columbia Slough were planted with appropriate upland species to provide riparian habitat. Following completion of enhancement activities specified by the Rivergate Consent Decree, the 100-foot buffer (preserved upland grassland) area was set aside as turtle nesting habitat, and management activities for this area focused on restoring open native grassland.

Compliance site monitoring was performed by Port Environmental interns and biologists with Fishman Environmental Services from 1996 through 1999. Mitigation performance was required to be met at Year 3. However, the site did not meet success criteria and required additional monitoring through 1999. The Ramsey Lakes site was released from regulatory obligations in 1999.

2 ECOLOGICAL SETTING

2.1 Habitat Description and Corridor Connectivity

The Rivergate Enhancement Sites consist of a wetland complex terrace that outlets into the Willamette River to the west via the Columbia Slough. Before mitigation activities, the site was subjected to disturbance and fill as part of the development of the Rivergate Industrial District in North Portland. After dredging, grading, and mitigation activities were implemented from 1990 through 2020, the sites are now dominated by wetland habitat, which includes seasonal and perennial ponds, Palustrine Emergent (PEM), Palustrine Scrub-Shrub (PSS), Palustrine Forested (PFO) wetlands, as well as Upland Forested (UFO) and Upland Grassland (UPG) communities (see Appendix C for a comprehensive list of species planted, seeded, or observed). Large woody debris (LWD) was incorporated into mitigation designs and enhancement activities and can be found throughout all project sites in the form of installed snags, anchored root wads, and floating material for turtle basking.

The Willamette and Columbia Rivers occur just west and northeast of the site, respectively. The confluence of both rivers is to the north. Despite the dredge and fill activities, the sites are hydrologically connected through groundwater to the Willamette River. The long-term protection of the sites effectively expands wildlife corridor connectivity for the greater landscape. The created and enhanced wetlands provide habitat for many invertebrates, amphibians, reptiles, mammals, and birds (see Appendix D for a list of wildlife species observed).

2.2 Surrounding Land Use

The Rivergate Enhancement Sites are surrounded by developed and undeveloped industrial land, as well as designated open space (Figure 1). The surrounding area supports heavy industry, major transportation corridors, and facilities for rail, highway, and marine freight. Additionally, there are residential developments, commercial activities, parks, and regional recreational facilities in the Rivergate vicinity. All the surrounding land uses are highly managed and are active vectors that may facilitate the spread of non-native and invasive species into the sites. Several large and high-quality natural resource sites and waterways in Portland are also found in the vicinity and include Kelley Point Park, the Columbia Slough and Smith and Bybee Wetlands. The Port is the major landowner in the Rivergate area.

2.3 Hydrology

Hydrology at the Rivergate Enhancement Sites is primarily influenced by over-bank flooding of the Columbia Slough, overflow from Smith and Bybee Lakes, and a fluctuating water table (Jones and Stokes 2002). The combination of these three sources heavily influences the wetland functions and habitat types present on the site. Surface water levels vary throughout the Rivergate Enhancement Sites based on differences in topography and proximity to the Smith and Bybee Wetlands Natural Area and the Columbia Slough. Generally surface water levels tend to peak in late winter/early spring and are lowest in late summer.

Surface water levels at the North and South Slough range from 0 to 3.3. feet deep; standing water is usually present across the site throughout late winter and spring, with floodwaters receding by early summer. Hydrology at these sites directly correlates with the Columbia Slough.

The Leadbetter site has high water levels into the growing season due to hydrology management at Smith and Bybee Wetlands Natural Area. Surface water levels at the Leadbetter site range from approximately

0.7 feet to 7.5 feet deep, depending on the time of year. Water levels on the south side are highest due to hydrologic connectivity with Bybee Lake. Topography of the site holds water on the north side, resulting in a difference of water levels on each side of the project area.

The swales in the Ramsey Enhancement Area generally contain surface water during the winter and spring and are dry during the summer. Hydrology at this site correlates with the Columbia Slough especially during high water events when hydrologic connectivity occurs. In addition, following culvert removal within the Ramsey ditch, beaver have established multiple damns, further improving water quality before draining to the Slough.

Hydrology within the 40-Mile Loop Trail Site is derived primarily from over-bank flooding of the Columbia Slough, overflow from Smith and Bybee Lakes, and a fluctuating water table. Standing water is typically observed across the site throughout late winter and spring, with floodwaters receding by early summer. Separate springtime flood events in 2006 and 2008, destroyed small sections of the constructed 40-Mile Loop Trail.

Portions of Ramsey Lakes hold water year-round with surface water elevations reflecting annual and seasonal precipitation, water levels in the Columbia/Willamette Rivers, and groundwater elevations. Water surface elevations at Ramsey Lakes have been recorded at 13 to 14 feet deep between July and September based on past measurements.

2.4 Invasive Species

Effective invasive species management is a critical component of the Port's stewardship role. Invasive species can have ecological and economic impacts and are one of the primary maintenance concerns for the Port's wetland mitigation sites. Once established, invasive species can be costly to remove; therefore, preventing the introduction and establishment of invasive species has been shown to be the most cost-efficient strategy for long-term management. The Port documents invasive species management strategies approximately every two years in a Vegetation Management Plan that is publicly available on the Port of Portland website: https://popcdn.azureedge.net/pdfs/VegMgmtPlan.pdf

The Rivergate Enhancement sites are located in an urban-industrial setting in close proximity to key shipping and transportation infrastructure making invasive species an on-going management issue. The Port implements a variety of control methods depending on multiple factors including the species, listed rank of the species, size of weed population, time of year, etc. The Port seeks to minimize the use of chemical herbicides by prioritizing manual and mechanical removal of invasive species when feasible. Early Detection Rapid Response (EDDR) is employed to prevent the spread of identified invasive species. Target invasive species can fluctuate over time depending on site conditions, introductions and control efficacy. At the time this document was published, target species included those listed below in Table 1.

Table 1: Target Invasive Species of the Rivergate Enhancement Sites

Botanical Name	Common Name
Alopecurus pratensis	meadow foxtail
Cirsium arvense	Canada thistle
Cirsium vulgare	bull thistle
Conium maculatum	poison hemlock
Daucus carota	Queen Anne's lace
Dipsacus fullonum	Fuller's teasel
Echinochloa crus-galli	barnyardgrass

Botanical Name	Common Name
Holcus lanatus	velvet grass
Lactuca serriola	prickly lettuce
Lotus corniculatus	bird's-foot trefoil
Ludwigia peploides	ludwigia
Lysimachia nummularia	creeping Jenny
Lythrum salicaria	purple loosestrife
Mentha pulegium	pennyroyal
Myriophyllum aquaticum	parrot feather watermilfoil
Nymphaea odorata	white waterlily
Phalaris arundinacea	reed canarygrass
Rubus armeniacus	Himalayan blackberry
Senecio jacobaea	tansy ragwort
Senecio vulgaris	common groundsel
Solanum dulcamara	climbing nightshade
Solanum nigrum	black nightshade
Sonchus asper	sowthistle
Tanacetum vulgare	common tansy
Verbascum blattaria	moth mullein
Verbascum thapsus	common mullein

2.5 Habitat Communities

Rivergate Enhancement Sites plant communities listed in Table 2 and described below are based on as-built conditions and Year 5 establishment results in addition to recent observation; 2020 aerial imagery was used to estimate the area of habitat communities for the Ramsey Lakes site. The Rivergate Enhancement Sites total approximately 46 acres while the Ramsey Lakes site is about 35 acres. A compiled list of plant species that have been planted and seeded, or observed at the Rivergate Enhancement Sites is included in Appendix C.

Table 2: Habitat Communities and Area (acres) by Site

Community Type	Leadbetter	North Slough	South Slough	Ramsey Enhance.	*Ramsey Lakes	Visual Buffer	40-Mile Loop Site	Totals
Emergent Wetland	8.70	0.31	0.22	0.00	5.50	0.68	0.00	15.41
Wetland Scrub-Shrub	1.46	2.70	0.86	3.64	5.50	2.60	5.00	21.76
Open Water	0.00	0.00	0.00	0.00	16.00	0.00	0.00	16.00
Riparian Forest	4.28	2.65	2.56	8.04	3.00	0.00	0.00	20.53
Upland Buffer	0.00	0.00	0.00	0.00	5.00	2.15	0.00	7.15
Totals:	14.44	5.66	3.64	11.68	35.00	5.43	5.00	80.85

*Habitat community area estimated based on 2020 aerial imagery.

2.5.1 *Community Descriptions*

2.5.1.1 OPEN WATER

Perennial ponding is primarily found at Ramsey Lakes and totals approximately 16 acres depending on conditions. Aquatic species documented in Ramsey Lakes open water area include coon's tail (*Ceratophyllum demersum),* curly pondweed *(Potamogeton crispus),* leafy pondweed (*Potamogeton foliosus)*, and white waterlily (*Nymphaea odorata*). The habitat supports a variety of waterfowl, aquatic

mammals, amphibians and Western painted turtles. Non-native, warm water fish species are present and include carp, gambusia and others.

2.5.1.2 EMERGENT WETLAND

This community can be found throughout the Rivergate Enhancement sites and Ramsey Lakes and covers over 15 acres dominated by spike rush species (*Eleocharis* sp.) and marsh seedbox (*Ludwigia palustris)*. Other native species commonly found in the emergent wetland habitat include broadleaf cattail (*Typha latifolia*), giant burreed (*Sparganium eurycarpum*), rough cocklebur (*Xanthium strumarium*), and hardstem bulrush (*Schoenoplectus acutus*).

2.5.1.3 WETLAND SCRUB-SHRUB

Wetland scrub-shrub habitat covers nearly 22 acres and is dominated by black cottonwood and willow species. All sites include some measure of scrub-shrub habitat, but most can be found at Ramsey Lakes, 40-Mile Loop Site and Ramsey Enhancement. This community supports songbirds, mammals, reptiles, and amphibians.

2.5.1.4 RIPARIAN FOREST

Riparian forest habitat covers 20.5 acres and is dominated by black cottonwood and willow species with Oregon ash, black hawthorn (*Crataegus douglasii*), and red alder (*Alnus rubra*) present to lesser extent. Native woody understory includes snowberry (*Symphoricarpos albus*), willow species, Nootka rose (*Rosa nutkana*), cluster rose (*Rosa pisocarpa*), Pacific ninebark (*Physocarpus capitatus*) and red-osier dogwood (*Cornus sericea*). This habitat supports raptors, neotropical songbirds, mammals, and amphibians.

2.5.1.5 UPLAND BUFFERS

Upland communities include the planted visual buffer and open grassland area between the open water of Ramsey Lakes and the Ramsey Enhancement and covers approximately 7 acres. The visual buffer is a densely vegetated strip along the north and west side of Ramsey Lakes buffering the habitat from an existing active railyard. To accomplish this, black cottonwood, Ponderosa pine (*Pinus ponderosa*), shore pine (*Pinus contorta*), Douglas-fir (*Pseudotsuga menziesii*), Oregon white oak (*Quercus garryana*), big-leaf maple (*Acer macrophyllum*), red alder, Pacific madrone (*Arbutus menziesii*), oceanspray (*Holodiscus discolor*) and other native shrub species were densely planted and some naturally recruited from the surrounding area. The open grassland area was seeded with native upland grasses and forbs. The preserved upland grassland area was specified in the Consent Decree to remain open and unplanted (with trees and shrubs) for turtle nesting habitat. Native forbs including Canada goldenrod (*Solidago canadensis*) have established well.

2.6 Wildlife Species

Wildlife use of the Rivergate Enhancement Sites primarily includes a large variety of bird species, along with some mammal, amphibian, reptile, fish, and macroinvertebrate species. Of the over 100 species of birds that use the habitats provided by the sites, the most commonly sighted bird species include common yellowthroat, great blue heron, bald eagle, mallard, black-capped chickadee, American coot, American goldfinch, common yellowthroat, spotted towhee, American crow, California scrub jay, American robin, song sparrow, northern flicker, cackling goose, and tree swallow. Other notable bird species recorded include American white pelican, chestnut-backed chickadee, peregrine falcon, purple martin, Cooper's hawk, lesser yellowlegs, and yellow warbler. Many of these bird species nest and raise young on the site,

such as Bullock's oriole, wood duck, Canada goose, cinnamon teal, purple martin, tree swallow and American robin.

Mammals that have been observed at the Rivergate Enhancement Sites include beaver (*Castor canadensis*), muskrat (*Ondatra zibethicus*), nutria (*Myocastor coypus*), coyote (*Canis latrans*), raccoon *(Procyon lotor*), vole (*Microtus* sp.), mole (*Scapanus* sp.) brush rabbit (*Sylvilagus bachmani*), and black-tailed deer (*Odocoileus hemionus columbianus*). In addition, herptile species that are frequently observed on the sites include Pacific tree frog (*Pseudacris regilla*), long-toed salamander (*Ambystoma macrodactylum*), American bullfrog (*Lithobates catesbeianus*), common garter snake (*Thamnophis sirtalis*), western painted turtle (*Chrysemys picta bellii*) and red-eared slider (*Trachemys scripta elegans*). Common carp (*Cyprinus carpio*), mosquito fish (*Gambusia affinis*), and three-spine stickleback (*Gasterosteus aculeatus***)** were observed during fish entrapment surveys conducted after flooding events. Most of the species observed are relatively common residents to Columbia River lowland habitats.

The Rivergate Enhancement Sites provide important habitat for the western painted turtle, an Oregon Conservation Strategy species. Western painted turtles are known to use the sites for nesting and basking on large woody debris. The Port has made several enhancements specifically aimed at improving turtle habitat at the Rivergate Enhancement Sites. In 1999, the preserved upland grassland area east of Ramsey Lakes was set aside as turtle nesting habitat and management activities for this area focused on restoring a native grassland community. In spring 2008, Port mitigation staff enhanced a sand fill area adjacent to the Leadbetter site by removing jute and seeding with native grasses to provide additional nesting area for turtles. Recorded evidence of nesting at both Leadbetter and Ramsey Lakes over the years indicates that these areas provide important nesting habitat and should be preserved as such with low growing vegetation for open, sunny exposure[1]. In 2009, the Port added approximately 15 basking logs to the open water area at the west end of the Leadbetter site adjacent to the improved nesting area. Approximately 10 of those basking logs were anchored from the shoreline. Two small turtle nesting patches were created on the upland slopes at the Leadbetter site in 2015. Between 2015 and 2016, root wads were added to the Ramsey Lakes site to provide turtle basking structure and hatchling habitat. The Port also constructed and deployed turtle basking rafts at the Leadbetter site, North and South Slough, and Ramsey Lakes site in February 2018. Turtle nesting surveys and nest predation surveys were performed at the Leadbetter and Ramsey Lakes site between 2017 and 2018. Turtle nest predation surveys have been performed periodically at Leadbetter and Ramsey Lakes since 2006. The purpose of the surveys was to identify turtle nesting hot spots to inform site management decisions.

The Rivergate Enhancement Sites are occasionally visited by several wildlife species that are classified as sensitive or sensitive-critical by the Oregon Department of Fish and Wildlife, as evidenced by incidental observations during site monitoring and inventory surveys. In addition to the western painted turtle, other sensitive species observed once or infrequently at the site include chipping sparrow, western meadowlark, yellow-breasted chat, olive-sided flycatcher, and willow flycatcher. Therefore, it is likely that the site currently supports one or more populations of sensitive species and is acting as a valuable habitat resource while functioning as a stop-over area for other sensitive species. Species observations are listed in Appendix D.

3 REGULATORY FRAMEWORK

Port mitigation projects provide compensation for unavoidable permanent and temporary impacts to wetlands and other natural resources resulting from development and operational activities undertaken by

[1] For more information about creating and maintaining turtle habitat, please see ODFW's Guidance for Conserving Oregon's Native Turtles including Best Management Practices: https://www.dfw.state.or.us/wildlife/living_with/docs/ODFW_Turtle_BMPs_March_2015.pdf

the Port. If new development is proposed where wetlands or other regulated natural resources are impacted, federal, state, and local laws and regulations require that project alternatives be evaluated that 1) avoid the impact, 2) minimize the impact, and 3) mitigate or compensate for the unavoidable impacts to these natural resources. Mitigation usually takes the form of restoration, establishment (creation), enhancement, or preservation of the habitats and functions impacted by development activities.

Permitting and compliance responsibilities for all mitigation sites are primarily enforced by the USACE, the DSL, and the Oregon Department of Environmental Quality (DEQ), with associated federal, state, and local agencies having influence and offering comments on permit compliance. Mitigation for development impacts may also be required through local municipal regulations. The Rivergate Enhancement Sites have been fully released from further obligations associated with mitigation. The Ramsey Lakes site was released in 1999, and all other Rivergate Enhancement Sites were released in 2010. See Appendix F for DSL release letters.

3.1 Federal and State Regulations

3.1.1 *Clean Water Act, Section 404*

Section 404 of the Clean Water Act, initially enacted in 1972, establishes a program to regulate the discharge of dredged or fill material into waters of the United States, including wetlands. Activities in waters of the United States regulated under this program include fill for development, water resource projects (such as dams and levees), infrastructure development (such as highways and airports), and mining projects. Section 404 requires a permit from the USACE before dredged or fill material may be discharged into waters of the United States, unless the activity is exempt from Section 404 regulation (e.g., certain farming and forestry activities). The applicant must first demonstrate that steps have been taken to avoid impacts to wetlands, streams, and other aquatic resources; that potential impacts have been minimized; and that compensation will be provided for all remaining unavoidable impacts.

3.1.2 *Oregon Department of State Lands Removal-Fill Law*

The DSL's Removal-Fill Law (Oregon Revised Statute (ORS) 196.795-990) requires a permit to be obtained from DSL prior to removing or placing material in waters of the state. The purpose of the law, enacted in 1967, is to protect public navigation, fishery, and recreational uses of the waters. "Waters of the state" are defined as "all natural waterways including all tidal and non-tidal bays, intermittent streams, constantly flowing streams, lakes, wetlands….all other navigable and nonnavigable bodies of water in this state…, where removal of fill activities are regulated under a state-assumed permit program…" (ORS 196.800(15)). The law applies to all landowners, whether private individuals or public agencies.

3.1.3 *Endangered Species Act of 1973*

The purpose of the Endangered Species Act (ESA) of 1973 is to protect and recover imperiled species and the ecosystems upon which they depend. It is administered by the USFWS and the NOAA's National Marine Fisheries Service (NMFS). The USFWS has primary responsibility for terrestrial and freshwater organisms, while the responsibilities of NMFS are mainly marine wildlife such as whales and anadromous fish such as salmon. Under the ESA, species may be listed as either endangered or threatened. *Endangered* means a species is in danger of extinction throughout all or a significant portion of its range. *Threatened* means a species is likely to become endangered within the foreseeable future. The ESA makes it unlawful for a person to take a listed animal without a permit. Take is defined as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect or attempt to engage in any such conduct." Section 7 of the ESA requires federal agencies to use their legal authorities to promote the

conservation purposes of the ESA and to consult with the USFWS and NMFS, as appropriate, to ensure that effects of actions they authorize, fund, or carry out are not likely to jeopardize the continued existence of listed species.

3.1.4 *Migratory Bird Treaty Act*

The purpose of the Migratory Bird Treaty Act, initially enacted in 1918, is to protect migratory bird species by making it illegal for anyone to "take, possess, import, export, transport, sell, purchase, barter, or offer of sale, purchase, or barter, any migratory bird, or the parts, nests, or eggs of such a bird except under the terms of a valid permit issued pursuant to federal regulations." It is administered and enforced by the USFWS. The Migratory Bird Treaty Act implements conventions between the United States and four other countries (Canada, Mexico, Japan, and Russia) for protection of migratory birds. A complete list of migratory bird species protected under this act are listed in 50 Code of Federal Regulations 10.13.

3.2 Local Ordinances

3.2.1 *Multnomah County Land Use Regulations*

Actions requiring a development application are reviewed by Multnomah County staff for compliance with standards under the Multnomah County Land Use Regulations (Chapter 39 – Multnomah County Zoning Code). These codes and regulations outline protections for the health, safety, and welfare of the public and environment and ensure compatible land uses are co-located. The standards within the Multnomah County Code are based on a collection of standards established by the Oregon State Statutes, Oregon State Administrative Rules, and ordinances adopted by the Multnomah County Board of Commissioners. Guidance for protection of wetland resources is included therein. These regulations are modified and often defer to the standards and ordinances in the COP Land Use Regulations (LUR) (Title 33 – Zoning Code) for areas within those city limits.

3.2.2 *City of Portland Land Use Regulations*

Development and land management activities within the COP limits are regulated by COP LUR (Title 33). Specifically, the COP Environmental Overlay Zones (e-zones) apply to the Rivergate Enhancement Sites (see Appendix A-1 through A-4). The Environmental Protection overlay zone is applied wherever the COP determines that *highly* significant resources and functional values are present, which is shown on the Official Zoning Maps with a "p" symbol (p-zone). The Environmental Conservation overlay zone is applied wherever the COP determines that significant resources and functional values are present, which is shown on the Official Zoning Maps with a "c" symbol (c-zone). Development and other activities within areas mapped as p- and c-zones that are not exempt must adhere to the regulations included in Chapter 33.430 of the Overlay Zoning Code. Additional environmental regulations may either supplement or supersede the regulations outlined in Chapter 33.430 of the Overlay Zoning Code if the mitigation site is within one of the specific Plan Districts or Natural Resource Management Plans listed in Chapter 33.430.030 of the Overlay Zoning Code.

The Rivergate Enhancement Sites are within the Comprehensive Natural Resource Management Plan (CNRP) for the Smith and Bybee Wetlands Natural Area. While Smith and Bybee Wetlands is primarily managed by the Metropolitan Service District (Metro), other parties including the COP and the Port have landholdings within the management area that they manage as natural areas.

4 RIVERGATE ENHANCEMENT SITES PERMITTING

The following sections summarize permits and approvals, mitigation requirements, and mitigation results for the Rivergate Enhancement Sites. A compiled list of all site documents, including but not limited to as-built reports, mitigation monitoring reports, and other survey reports is included in Appendix E.

4.1 Permit Summary

The Rivergate Enhancement Sites have undergone extensive permitting to stay in compliance with numerous federal, state, and local laws and ordinances. The Rivergate Enhancement Sites were required by a consent decree, signed on January 31, 2001, to mitigate for wetland fills that occurred during the development of the Rivergate Industrial District within the last 50 years. The Ramsey Lakes site, now managed with the Rivergate Enhancement Sites, was originally established as a result of the Rivergate Cooperative Agreement in 1988, which was subsequently superseded by the Rivergate Consent Decree.

The following permits were received from the USACE, DSL, and the COP for the impacts associated with Rivergate Industrial District development and establishment of the Rivergate Enhancement Sites. Table 3 outlines all federal, state, and local permits associated with each of the Rivergate Enhancement Sites. Table 4 summarizes the mitigation timelines for each site and major mitigation requirements for each regulatory agency.

Table 3. Rivergate Wetlands Mitigation Site Permits

Authorizing Agency	Ramsey Lakes	North Slough	South Slough	Ramsey Enhancement Area and Visual Buffer	Leadbetter	40-Mile Loop Trail
USACE Permit No.	NWP32-2001-00247	NWP32-2001-00247	NWP32-2001-00247	NWP32-2001-00247	NWP32-2001-00247	NWP32-2002-00133
DSL Permit No.	23801-RF	23801-RF	23801-RF	23801-RF	23801-RF	25119-RF
COP BDS	n/a	LUR 01-00568EN	LUR 01-00567EN	LUR 01-00567EN (Visual Buffer) COP LUR 02-125102EN (Ramsey Enhancement Area)	LUR 01-00568EN	LUR 02-134231EN

COP BDS= City of Portland Bureau of Development Services, n/a = not applicable

Table 4. Rivergate Mitigation Timeline and Acreage

Project Milestone/Requirement	Ramsey Lakes	North and South Slough	Ramsey Enhancement Area	Ramsey Enhancement Visual Buffer	Leadbetter	40-Mile Loop Trail Site
Start of mitigation construction	1989	2003	2002	2003	2003	2001
Planting complete	1990	2004	2004	2004	2004	2004
Monitoring start date (Year 0)	1990	2004	2004	2004	2004	2004

Project Milestone/Requirement	Ramsey Lakes	North and South Slough	Ramsey Enhancement Area	Ramsey Enhancement Visual Buffer	Leadbetter	40-Mile Loop Trail Site
Monitoring end date	1999	2009	2009	2009	2009	2009
USACE mitigation requirement (acres)*	35†	9.30	11.68	n/a	14.43	5.0
DSL mitigation requirement (acres)*	35†	9.30	11.68	n/a	14.43	5.0
COP BDS mitigation requirement (acres)*	n/a	9.30	11.68	2.15	14.43	5.0
Creation (C)/ Enhancement(E)*	E/C	C	E	E	C	E

* Includes acreage of wetland habitat as well as any non-wetland riparian habitats which were required as part of mitigation for the sites. C and E classifications are based on professional judgment and interpretation of mitigation plans and are not associated with actual permit requirements.

† This approximate acreage includes Ramsey ponds (16 acres), slopes to the west of the ponds, and the 100-foot buffer east of the ponds that were retained by the Rivergate Consent Decree.

Mitigation projects associated with the Consent Decree required creation and enhancement of emergent, scrub-shrub, and forested habitats at the Rivergate Enhancement Sites. While the majority of created or enhanced habitats consist of PEM, PSS, or PFO wetlands, some of the site's mitigation requirements also called for the creation or enhancement of UFO or UPG habitat types as well. The previous Table 2 provides a summary of the created, enhanced, and restored areas by community type and mitigation site.

4.2 Mitigation Plan

The goal of the Rivergate Enhancement Sites project was to restore, create, and enhance wetland and riparian conditions to replace wetland functions and values lost as a result of wetland fills that occurred during the development of the Rivergate Industrial District over the past 50 years. Additional goals specific to the Ramsey Lakes site were to diversify habitat, enhance emergent and riparian vegetation, and improve wildlife habitat values.

The Rivergate Enhancement Sites collectively provide approximately 78.86 acres of created or enhanced habitat, including PSS, PEM, PFO wetland and riparian habitats, as well as some native upland grassland and forested habitats. The objectives of the Rivergate Enhancement Sites are to increase or restore water storage capacity, thermoregulation, anadromous fish habitat, amphibian habitat, waterfowl habitat, and native plant communities. The mitigation plan specified in the Rivergate Consent Decree was divided into eight discrete elements, which are listed below. Public access components (i.e., construction of paths and trail segments) were included in the plan because they were specifically mandated under legal settlements required by the Rivergate Consent Decree; however, these components were not associated with meeting the primary goals and objectives of the Rivergate Enhancement Sites to enhance wetland and habitat functions and values.

1. Construction of an 8-foot-wide asphalt path under the Lombard Street bridge.
2. North bank, Columbia Slough (North Slough): removal of fill to native soils and native plantings over a width of 150 feet and length of approximately 1,400 feet between the Lombard Street bridge and the Columbia Slough rail bridge; slopes no steeper than 3:1; construction of 800 feet of swale at least 10 feet wide and 1 to 2 feet below native soils and parallel to the Columbia Slough.

3. South bank, Columbia Slough (South Slough): removal of fill to native soils and native plantings over a width of 50 feet and length of approximately 1,550 feet between the Lombard Street bridge and Columbia Slough rail bridge; slopes no steeper than 3:1.
4. Leadbetter Peninsula: removal of fill to native soils and native plantings over a width of 125 feet around the eastern, southern, and western boundaries of the peninsula, and a contoured slope to have an average of no greater than 4:1 grade for approximately 75 feet on the upland edge beyond the excavated area; construction of 1,500 feet of swale at least 10 feet wide and 2 to 4 feet below native soils and parallel to the toe of the fill slope.
5. Ramsey Lake Visual Buffer of native shrubs and trees along a corridor with a width of 10 to100 feet at the top of slope west and north of Ramsey Lake mitigation area.
6. Ramsey Lakes enhancement: removal of fill to 14 feet National Geodetic Vertical Datum (NGVD) and construction of two meandering swales with a combined length of 2,000 feet and individual width of at least 50 feet at an approximate elevation of 10 feet NGVD; swales to connect to the Slough at the upstream and downstream ends; and native plantings.
7. Culvert removal and removal of existing fill to the bottom of the elevation of the culvert adjacent to and east of the railroad bridge on the south side of the Columbia Slough.
8. Construction of a segment of the 40-Mile Loop Trail from the rail bridge east to the Port's property line and mitigation for impacting 1.67 acres of wetland for trail construction. On-site wetland mitigation consisted of enhancement of 5.0 acres of reed canarygrass–dominated wetland adjacent to the 40-Mile Loop Trail near its terminus at the Port's property line. Enhancement measures were designed to reestablish forested wetland with native trees and shrubs and initially control reed canarygrass through a combination of burning, mowing, limited chemical applications, and shading.

In addition, the mitigation plan for Ramsey Lakes specified in the Rivergate Cooperative Agreement in 1988 involved enhancement of existing emergent and forested wetlands as well as enhancement of adjacent upland areas and riparian habitat along the Columbia Slough. Components of the mitigation plan consisted of three excavated ponds with a total of at least 16 acres of water surface area; wetland fringe and islands associated with the ponds were planted with native vegetation; and remaining upland areas between Ramsey Lakes and the Columbia Slough were planted with appropriate upland species to provide riparian habitat.

Mitigation construction activities included removal of sand and fill, topographic modifications (e.g., excavations for ponds and swales), clearing and grubbing, removal or treatment of invasive species, seeding with native herbaceous seed mixes, planting with native trees, shrubs, and herbaceous species, installation of irrigation systems, and placement of LWD.

Construction of Ramsey Lakes was completed in 1990 and material removed from the lakes was used for construction of adjacent fill dikes or islands and used to enhance upland soil before planting. The wetland fringe and islands associated with the ponds were planted with native vegetation. Baseline vegetation, wildlife, and hydrology data were collected in 1990; post-project herbaceous vegetation species cover, tree/shrub survival, wildlife, and hydrology data were collected annually from 1990 to 1999.

For the remaining Rivergate Enhancement Sites, mitigation construction and planting/seeding was completed in 2004. Baseline vegetation, wildlife, and hydrology data were collected in 2004; post-project herbaceous vegetation species cover, tree/shrub survival, wildlife, and hydrology data were collected annually from 2004 to 2009. The Smith and Bybee Wetlands Natural Area was used as a reference site to identify appropriate species composition and planting densities.

4.2.1 *Mitigation Success Criteria*

Mitigation for project impacts was contingent on meeting the requirements of the Rivergate Enhancement Sites key success criteria expressed in the DSL, USACE, and COP BDS permits listed in Table 1. Although success criteria for the Ramsey Lakes site originally came from the COOP Agreement, this agreement was superseded by the Rivergate Consent Decree signed on January 31, 2001. Success criteria specified by the Rivergate Consent Decree, Rivergate Cooperative Agreement and the associated regulatory permits for each subcomponent are identified in section 4.3 along with a summary of how each was met.

4.3 Mitigation Results and Current Site Conditions

Each subcomponent of the Rivergate Enhancement Sites was monitored annually, for a minimum of 5 years, to assess vegetation establishment and cover as per the DSL and USACE permits. The final Year-5 monitoring occurred in 2009 for all components of the Rivergate Consent Decree. Ramsey Lakes mitigation monitoring was completed in 1999. All the mitigation criteria were met prior to the sites being released from further monitoring and reporting obligations by the regulatory agencies in 1999 (Ramsey Lakes) and 2010 (all other sites). Final monitoring results for each site are summarized below, based on site characteristics observed at the end of the monitoring periods for each site.

Site conditions have changed somewhat since the sites were released due to on-going management, habitat enhancements, natural succession, and wildlife use. The Port has continued to monitor and manage all mitigation components to maintain the ecological improvements to the extent possible. Regular site monitoring and maintenance occurs throughout the year at all sites. General maintenance has included invasive species monitoring and control, native plantings, and wildlife habitat enhancements (e.g., turtle basking structures, pollinator habitat, etc.). A summary of the final compliance results and site activities that the Port performed beyond compliance requirements is provided below. A comprehensive plant list can be found in Appendix C.

4.3.1 *North and South Slough*

The construction and planting of wetland/upland complexes in the North and South Slough was completed in the winter of 2003–2004. Mitigation at these sites involved removal of sand and other fill materials down to native soils and revegetation of the banks with native plantings. Over the course of the mitigation monitoring period, the cover of native, desirable species successfully increased as a result of site management and invasive species control.

By Year 5, the overall average cover of desirable species (for all habitat types) exceeded 90%. The dominant herbaceous species at this site were native, desirable species. It is notable to mention that the emergent community at the North and South Slough includes only volunteer species, as it was not seeded during construction of this site. Native tree and shrub species also established well on these sites and include a variety of native willow species in the emergent community and other native trees and shrubs that were planted on the associated slopes. Year 5 results by criteria follow:

- *Establish 5.21 acres of riparian forest with 180 tree stems and 250 shrub stems per acre, including desirable volunteer species*: this criterion was exceeded with 6,297 tree stems/acre and 4,707 shrub stems/acre.
- *Establish 3.56 acres of scrub-shrub with 250 tree stems and 100 shrub stems per acre, including desirable volunteer species*: this criterion was exceeded with 1,180 tree stems/acre and 2,561 shrub stems/acre.

- *Establish 0.53 acre of emergent habitat in swale area with 80% cover from Years 3 through 5*: this criterion was not met in 2009 and was estimated at 65% cover; prolonged inundation at the time was preventing establishment in some areas of the emergent habitat.
- *Maintain five pieces of LWD within PEM/PSS habitat*: this criterion was met with at least 5 pieces of LWD present in the emergent community.
- *Positive drainage of the swale and ditch following at least two flooding events per year*: positive drainage was verified through as-built documentation and fish stranding surveys.
- *There shall be 80% visual cover in the herbaceous stratum of planted and desirable volunteer species in all forest and scrub-shrub communities from Years 3 through 5*: this criterion was exceeded in the forest and scrub-shrub communities but was not met in emergent habitat due to prolonged inundation.
- *No more than 30% cover shall consist of nonnative, undesirable invasive species*: this criterion was met.
- *80% of mitigation plantings survive for at least 5 years*: this criterion was exceeded.

Post-Compliance Conditions at North and South Sloughs

The North and South Slough enhancement sites are both well-established with dense stands of willow and cottonwood trees throughout. PEM communities include a diversity of both native and non-native wetland species. Both sites are impacted by human use including fishing of the Columbia Slough, off-trail hiking, pets and unauthorized camping and dumping. Regular site inspections are conducted by Port staff and site maintenance is scheduled as needed to control invasive species and remove trash.

Post-Compliance Enhancement Projects and Surveys at North and South Sloughs

- Planted 400 native shrubs at South Slough 2019/2020
- Constructed and deployed turtle basking rafts in February 2018
- A pollinator patch and four native bee nesting blocks were created at North Slough and were seeded with a hardy pollinator mix 2015/2016
- Temporary irrigation system removed in 2010

4.3.2 *Ramsey Enhancement Area and Visual Buffer*

Construction of the 11.68-acre Ramsey Enhancement Area began in February 2002 and was completed in January 2004. Following excavation and fill activities, the site was seeded with native herbaceous species and planted with native trees and shrubs, with the goal of creating scrub-shrub wetland and upland riparian forest habitats. Construction of the 2.15-acre Visual Buffer began in July 2003 and was completed in February 2004. The channel was seeded with native wetland species and the slope with a native upland grass mix. Following seeding, the site was planted with upland native trees and shrubs and temporary irrigation was installed.

Survival of planted trees and shrubs at the Ramsey Enhancement Area was estimated to be 99% during Monitoring Year 5 (2009). The low level of mortality in planted species was augmented by the tremendous number of desirable natural recruits that have colonized the mitigation area. By 2009, it had become nearly impossible to distinguish between installed plants, cuttings, and volunteers throughout the Ramsey Enhancement Visual Buffer. Volunteer native plants have compensated for any mortality that has subsequently occurred. Consequently, the number of plants present greatly exceeded the number of plants initially installed on the mitigation site. The site is expected to support an excess capacity of target species even if actual mortality of planted species is higher than estimated. Year 5 results by criteria follow:

- *Establish 8.0 acres of riparian forest community with 180 tree stems and 250 shrub stems per acre including desirable volunteer species*: this criterion was exceeded with 906 tree stems/acre and 472 shrub stems/acre.
- *Establish 3.6 acres of scrub-shrub community with 250 tree stems and 100 shrub stems per acre including desirable volunteer species*: this criterion was exceeded with 323 tree stems/acre and 500 shrub stems/acre.
- *80% of the plants planted at the mitigation site will have been alive for at least 5 years*: this criterion was exceeded.
- *Visual cover of planted and desirable volunteer species in the herbaceous stratum of the riparian forest and scrub-shrub communities shall be 80% from Year 3 through Year 5*: this criterion was exceeded with 302.5% estimated desirable cover in the scrub-shrub community and 115% estimated desirable cover in riparian forest community.
- *No more than 30% cover shall consist of nonnative, undesirable invasive species*: this criterion was met.
- *Maintain 20 pieces of LWD within swale areas*: this criterion was exceeded with 23 pieces.
- *No visual observations of fish entrapment within swales after flood events*: positive drainage was verified through as-built documentation and fish stranding surveys.
- *Establish approximately 2 acres of upland visual buffer with 80% survival of planted species and at least 50% herbaceous cover at Year 2*: by Year 5 this criterion was exceeded with 285% survival of woody stems including desirable native volunteer species and herbaceous cover was estimated to be 60%.

Post-Compliance Conditions at Ramsey Enhancement Area and Visual Buffer

The Ramsey Enhancement Area and Visual Buffer are both well-established with dense trees and shrubs. The PSS community of the Ramsey Enhancement Area provides approximately 90% cover with native willows and other shrubs. The PEM community includes a diversity of both native and non-native wetland species. This site is connected to the Columbia Slough at four locations during high water. The Visual Buffer is functioning as intended with dense conifers providing visual screening of the railyard and adjacent developed lands to Ramsey Lakes. Regular site inspections are conducted by Port staff and site maintenance is scheduled as needed to control invasive species and remove trash.

Post-Compliance Enhancement Projects and Surveys at Ramsey Enhancement Area and Visual Buffer

- Planted the surrounding forested understory areas with native shrubs in 2019 and 2020.
- Conducted amphibian egg mass surveys in 2014, 2015, 2017 and 2019.
- Temporary irrigation system removed in 2012

4.3.3 *Leadbetter*

The construction, seeding and planting of the Leadbetter site was completed in the winter of 2003–2004. Following removal of fill, the corridor was revegetated with native plantings and an irrigation system installed. Over the course of the mitigation monitoring period, the cover of native, desirable species successfully increased as a result of site management and weed control.

By Year 5, the overall average cover of desirable species for all habitat types exceeded 90%. See Appendix C for a comprehensive plant list. Year 5 results by criteria follow:

- *Establish 4.28 acres of riparian forest or palustrine forest with 180 tree stems and 250 shrub stems per acre including desirable volunteer species*: this criterion was exceeded with 558 tree stems/acre and 1,171 shrub stems/acre.
- *Establish 1.46 acres of 250 tree stems and 100 shrub stems per acre of palustrine scrub-shrub or just scrub-shrub community including desirable volunteer species*: this criterion was exceeded with 1,927 tree stems/acre and 4,270 shrub stems/acre.
- *Establish 8.70 acres of palustrine emergent habitat with 80% visual cover from Year 3 through Year 5*: this criterion was not met due to prolonged inundation associated with hydrologic management at Smith & Bybee Wetlands; Year 5 cover estimate was 72% but two volunteer native sedges (Columbian sedge [*Carex aperta*] and Kellogg's sedge [*Carex lenticularis*]) were establishing in the emergent community.
- *Maintain 5 pieces of LWD or debris within the emergent community*: this criterion was met then exceeded when the Port installed 15 additional logs to improve turtle basking habitat.
- *Positive drainage of the swale and ditch following at least two flooding events per year*: positive drainage was verified through as-built documentation and fish stranding surveys.
- *There shall be 80% visual cover in the herbaceous stratum of planted and desirable volunteer species in all forest and scrub-shrub communities from Year 3 through Year 5*: this criterion was exceeded with 95.9% cover in the forest communities and 95.2% cover in the scrub-shrub community.
- *No more than 30% cover shall consist of nonnative, undesirable invasive species*: this criterion was met.
- *80% of mitigation plantings survive for at least 5 years*: this criterion was exceeded.

<u>Post-Compliance Conditions at Leadbetter</u>

The Leadbetter site is well-established with areas of dense willow and large expanses of quality emergent habitat dominated by native wetland species. The slope buffer continues to establish, the sparseness providing nesting opportunity for the native painted turtle. The Leadbetter site is subject to human impact - especially off-trail hiking, pets and unauthorized camping and dumping. Regular site inspections are conducted by Port staff and site maintenance is scheduled as needed to control invasive species and remove trash.

<u>Post-Compliance Enhancement Projects and Special Surveys at Leadbetter</u>

- In 2019 work began to enhance a north buffer area of the site that was dominated by reed canarygrass. Native ash, shrubs and forbs will be installed Spring 2022.
- Installed 1,500 Columbian sedge plugs in meadow buffer area 2019/2020
- American white waterlily removal 2017/2018
- Constructed and deployed turtle basking rafts in February 2018
- Turtle nesting surveys were conducted in September 2018
- Continued to treat reed canarygrass in the buffer area and plant it with Columbian sedge and native shrubs 2017/2018
- In 2016, a 3-year project began to enhance a weedy buffer on the south side of the site. The buffer area was dominated by reed canarygrass and served as a vector for invasive species onto the mitigation site. To create a more resilient site, it was decided that the reed canarygrass and other weeds should be removed and replaced with a Columbian sedge meadow. Columbian sedge meadows are currently listed by the Oregon Natural Heritage Program as "critically imperiled" in Oregon.
- Two small turtle nesting patches were created on the upland slopes in May 2015

- Temporary irrigation system removed in 2010
- Periodic monitoring of disturbed turtle nests at the Leadbetter site occurred from 2010 - 2018

4.3.4 *40-Mile Loop Trail Site and Columbia Slough Levee Repair*

Construction, seeding and planting of the 40-Mile Loop Trail Site and the Columbia Slough Levee Repair Area was complete in February 2004. Plants were installed at a high density to account for the expected mortality of some woody species. Year 5 results by criteria follow:

- *Enhance adequate acreage to mitigate for 1.6 acres of wetland impact using a mitigation-to-impact ratio of 3:1*: this criterion was met as demonstrated in the as-built
- *A stem density of 1,000 native trees and shrubs per acre by Year 5*: this criterion was exceeded with 1,489 stems/acre.
- *A stem density of 800 native trees and shrubs per acre between elevations 7.5 and 10 feet NGVD and 500 stems per acre between elevations 10 feet NGVD and the top of bank for the duration of the monitoring period (Columbia Slough Levee Repair Area only)*: this criterion was exceeded with 9,385 stems/acre between elevations 7.5 and 10 feet and 5,444 stems/acre at 10 feet to top of bank.
- *At least five species of native trees and shrubs shall be present in the mitigation area*: this criterion was exceeded with 6 native tree species and 8 native shrub species present.
- *The plant diversity success criterion, as measured by Simpson's Index of Diversity, shall be such that the mitigation area meets or exceeds that in the reference areas*: this criterion was met with the analysis showing that species diversity between the reference site and the mitigation site was similar.
- *Tree canopy cover in the mitigation area shall reach 40% by Year 5*: this criterion was met with 66.4% aerial cover on the 5-acre site and 67.6% on the levee repair site.
- *All large woody debris removed from the project site during construction of the 40-Mile Loop Trail shall be placed in select areas across and adjacent to the mitigation area to provide additional habitat structure within this area*: this criterion was met.
- *No more than 15% cover of nonnative, invasive broad-leaf species, and no presence of purple loosestrife at any time during the monitoring period*: although cover was low (2%) in the 5-acre site, this criterion was not met due to the presence of purple loosestrife; the criterion was met in levee repair site.

<u>Post-Compliance Conditions at the 40-Mile Loop Trail Site</u>
The planted portion of the 40-Mile Loop Trail Site is well-established with dense native trees and shrubs covering approximately 90% of the 5-acre site. The pre-existing PEM area covers about half an acre and is dominated by reed canarygrass.

<u>Post-Compliance Enhancement Projects and Special Surveys at 40-Loop Trail Site</u>

- Periodic monitoring of disturbed turtle nests at the 40-Mile Loop Trail Site occurred from 2010 - 2018
- Periodic clearing of fallen trees/branches on the trail

4.3.5 *Ramsey Lakes*

Construction and planting of the Ramsey Lakes site was completed in 1990 as per the Rivergate Cooperative Agreement (1988), and included at least 16 acres of open water area, planting of the preserved wetland fringe and the new islands with native vegetation, and planting remaining upland areas between the Ramsey Lakes ponds and the Columbia Slough with appropriate upland species to provide riparian habitat. Following completion of enhancement activities specified by the Rivergate Consent Decree, which supersedes the Rivergate Cooperative Agreement, the 100-foot-wide buffer area was set aside as turtle nesting habitat, and management activities for this area focused on restoring open native grassland.

The mitigation planting plan specified that existing wetland fringe vegetation, consisting of willow-cottonwood forest and reed canarygrass, be preserved around the lake. Native tree and shrub plantings were installed on the four islands in Ramsey Lakes. The shoreline was planted with large clumps of emergent wetland vegetation, while the riparian habitat along the west bank of the Columbia Slough was preserved, and the area immediately west of the Columbia Slough was enhanced with tree and shrub plantings.

In addition, the Slough Rail Bridge mitigation planting plan (1995) consisted of enhancing the fill slope along the west edge of Ramsey Lakes with native tree and shrub plantings. The site was planted, and native grasses and wildflowers were seeded in spring 1998. This slope was replanted in 2001 then again in 2004 to meet the requirements of the Consent Decree for the Visual Buffer. Substrate consists of porous dredged sand making plant establishment challenging. See Appendix C for a comprehensive plant list.

<u>Post-Compliance Conditions at Ramsey Lakes</u>
Ramsey Lakes and the islands have received some special attention in recent years, greatly improving conditions for wildlife especially on the islands and emergent area (see projects listed below). The site is well-established and resilient – where fires, hydrology or wildlife have had the greatest impact, we see excellent recruitment of native species. The preserved upland area between the lakes and the enhancement site is well-established with native forbs, in particular Canada goldenrod, thanks to reseeding efforts by Port staff. This area left unexcavated as per the Consent Decree provides nesting opportunity for the native painted turtle. Regular site inspections are conducted by Port staff and site maintenance is scheduled as needed to control invasive species and remove trash.

<u>Post-Compliance Enhancement Projects and Special Surveys at Ramsey Lakes</u>

- Planted 800 native shrubs on the islands and wetland edges of the Ramsey Lakes site that were treated for invasive species in 2019/2020
- Planted 1,500 willows and native shrubs on the islands of the Ramsey Lakes site 2019/2020
- Turtle nesting surveys were conducted in 2013, 2014 and 2018.
- Constructed and deployed turtle basking rafts at Ramsey Lakes site in February 2018
- The southern wetland area at the Ramsey Lakes site was seeded with native species and planted with 300 collected broadfruit bur-reed tubers in 2017/2018
- Purple martin gourds installed on island at Ramsey Lakes in 2018.
- Periodic seeding of collected *Solidago canadensis* throughout the upland open field areas.
- The islands were treated for invasive species and then planted with native shrubs including 500 Douglas spirea (*Spirea douglasii*), 500 Nootka rose, and 350 red-osier dogwood in March 2017
- Dense reed canarygrass growing along the edges of the lake was treated and about 1,500 willow cuttings were installed along the entire southern perimeter of the lake leaving gaps between plantings for wildlife passage and sunlight in 2016

4.3.6 *Permit Requirements and Status Summaries*

Table 5 summarizes the permit requirements and the status of meeting those requirements for each parameter of the Rivergate Consent Decree. The Ramsey Lakes site was originally established as a result of the Rivergate Cooperative Agreement in 1988 that was superseded by the Rivergate Consent Decree signed on January 31, 2001.

Table 5. Rivergate Consent Decree Permit Requirements and Status Summaries

Permit	Requirement	Status*
Rivergate Consent Decree	Deed restrictions shall be placed on consent decree.	Notice of consent decrees and covenants affecting real property recorded 6/29/01
Rivergate Consent Decree DSL No. 23801 DSL No. 25119	An as-built site construction report will be submitted in Year 0 (Year 1 DSL†), including information as specified in the consent decree.	As-built report submitted August 2004
Rivergate Consent Decree DSL No. 23801 DSL No. 25119 COP LUR-01-567 COP LUR-01-568 COP LUR-02-125102 COP LUR-02-134231	The site shall be monitored for a minimum period of 5 years (3 years NMFS). An annual report is required by November 1 of each year (December 21 for DSL No. 25119) and shall include information as specified in the permit and consent decree.	Year 5 monitoring completed August 2009 and reports submitted 15, 2009.
Rivergate Consent Decree	The Port shall contribute $285,000 for additional mitigation projects within the Smith and Bybee Wetlands Natural Area.	$285,000 placed in an interest-bearing account until money is requested.
Rivergate Consent Decree	The Port shall contribute $64,000 to the COP for revegetation of the lower Columbia Slough outside the mitigation area.	Contribution submitted May 23, 2001.
NMFS	No herbicide application will occur within 300 feet of any stream channel unless approved by a NMFS biologist.	NOAA allowed the Port limited herbicide use as per biological opinion dated July 2004.
NMFS	No surface application of fertilizer will be used within 50 feet of any stream channel.	No fertilizer is being used with the plantings.
COP LUR-01-567 COP LUR-01-568 COP LUR-02-125102 COP LUR-02-134231	A site development permit shall be finalized following completion of planting; letter confirming plant numbers installed shall be submitted before inspection (2002 LURs).	Final inspections were approved in September and October 2004 and in February 2005.
DSL No. 23801	Swales shall be monitored for at least two flooding events per year and until positive drainage is documented.	In a 2008 report, Ellis Ecological reported that the Rivergate sites do not present a significant stranding concern.
DSL No. 23801	The site shall be maintained for a period of 5 years until vegetation has become established and the area is functioning as designed.	The Port contracted Green Earth Landscaping, Teufel Nursery, Portland Habilitation Center (now Relay Resources) and C&R Reforestation to conduct maintenance on these sites during the compliance period.
COP LUR-01-567 COP LUR-01-568 COP LUR-02-125102	A second site development permit shall be submitted after Year 5 to document completion.	Submitted site development permit letter in February 2010.

Permit	Requirement	Status*
COP LUR-02-125102 COP LUR-02-134231	Mitigation plantings shall be installed 6 months after issuance of the site development permit.	Planting was complete by February 2004.
COP LUR-02-125102	All temporary irrigation shall be removed by October 1, 2007.	All irrigation was removed by 2012.
DSL No. 25119	Mitigation for impacts to 1.67 acres of wetland during the construction of the 40-Mile Loop Trail shall consist of 5.0 acres of enhancement wetland.	Mitigation site planted in February 2002.
DSL No. 25119	Mitigation site planting shall be completed by March 31, 2003 (amended 1/17/2003 to allow planting to 3/31/2004).	Planting was complete by February 2004.
DSL No. 25119 COP LUR-02-134231	LWD removed during trail construction shall be anchored in or adjacent to the mitigation area.	Two trees removed and logs retained within general area.
DSL No. 25119	Signs "Nature Area, Please Stay on Trail, Area Protected under State and Federal Law" will be posted in two locations along the trail.	Signs were installed by March 2004.
DSL No. 25119	A performance bond for $85,000 shall be provided; release is specified according to stages of completion.	Performance bond 100% released due to compliance with success criteria at Year 5.
DSL No. 25119	Restrictive covenant will be filed for a long-term protection of the 40-Mile Loop Trail mitigation site.	Restrictive covenant filed November 13, 2002.
COP LUR-02-134231	Certification shall be provided after Year 5 showing that success criteria have been met.	Submitted certification letter in January 2010.

*Status as reported in Port's 2015–2016 Mitigation Management Program Site Status Report.

† Per DSL's monitoring conditions specified in permit No. 23801, as-built plan view and cross sections were submitted to DSL as part of the first year (Year 1) monitoring report.

5 CONSERVATION AND MANAGEMENT STRATEGY

The goal for long-term management of the Rivergate Enhancement Sites is to conserve and maintain natural conditions through continued monitoring and management of on-site natural resources. Long-term management is intended to be adaptive; therefore, adaptive management should be implemented, as defined in the federal mitigation rule 33 Code of Federal Regulations 2.332 (2008):

> ***Adaptive management*** *means the development of a management strategy that anticipates likely challenges associated with compensatory mitigation projects and provides for the implementation of actions to address those challenges, as well as unforeseen changes to those projects. It requires consideration of the risk, uncertainty, and dynamic nature of compensatory mitigation projects and guides modification of those projects to optimize performance. It includes the selection of appropriate measures that will ensure that the aquatic resource functions are provided and involves analysis of monitoring results to identify potential problems of a compensatory mitigation project and the identification and implementation of measures to rectify those problems.*

Most permit requirements specify that mitigation sites be monitored for 5 years; however, after such a short period of time, the functions and values of mitigation sites rarely match those of natural sites. To meet the Port's objective to "attain and maintain a high quality of functional performance and increased habitat value," the Port's stewardship over the Rivergate Enhancement Sites will be passed to the Steward, who will continue to monitor and maintain the site into the future. Long-term maintenance will help to ensure that habitat integrity continues to improve, and the site sustains its enhanced condition with minimal intervention.

5.1 Obligations of the Rivergate Consent Decree

As required by the Rivergate Consent Decree, the transfer of ownership or other interest in the Rivergate Enhancement Sites shall not alter or relieve the Port of its obligation to comply with the terms of the consent decree. Additionally, the Rivergate Consent Decree stated that once compensatory mitigation has been approved as complete, the Port may maintain the mitigation site in a way that is consistent with the consent decree, by such activities as nutria control or removal of invasive plant species. The Port may not engage in activities inconsistent with the consent decree (e.g., alteration of hydrology or removal of vegetation) without written approval from the USACE. Additionally, a restrictive covenant was filed for long-term protection of the 40-Mile Loop Trail Site associated with DSL permit No. 25119.

5.2 Limits of Responsibility

The Steward will not be responsible for future failure of the Rivergate Enhancement Sites attributed to natural catastrophes such as flood, drought, disease, regional pest infestation, and other circumstances that are beyond their reasonable control. Active management is not expected to prevent events of natural ecological change that come about as a result of processes such as climate change, sedimentation due to flooding, excessive drought, and other naturally occurring events that were not caused by or that could not have been prevented by on-site management activities. Over time, natural processes could occur that may reduce wetland function or reduce the current wetland habitat acreage. For example, deposition of sediments during high flows and flooding in parts of the wetland could result in a natural filling of some areas. Management activities to prevent this natural filling are unnecessary.

5.3 Public Use and Access

Given that the mitigation site is in a highly developed area dominated by industrial and transportation infrastructure, vandalism and unauthorized access are major issues that affect the maintenance of and public access to the Rivergate Enhancement Sites. In addition, portions of the Rivergate Enhancement Sites are publicly accessible via the 40-Mile Loop Trail and trail users venturing off the trail and into adjacent sensitive areas has and continues to be an issue requiring management attention. To protect the Rivergate Enhancement Sites to the best degree possible from vandalism, unauthorized camping, trail users, weeds, and disturbances to wildlife, public access to some sites are currently restricted through fencing, locked gates, and signage. In the future, the site will continue to be protected with a combination of fencing, gates, and signage maintained by the Steward. Future public access may include limited access for research and educational opportunities, such as bird watching or plant identification, if the Steward determines that these uses will not conflict with the long-term management objectives of the site. Aside from the 40-Mile Loop Trail and other areas that are accessible to the public, remaining portions of the Rivergate Enhancement Sites are intended to remain in natural condition with development limited to the existing infrastructure and publicly accessible trails, as well as minimally invasive trails needed to access portions of the site for monitoring and maintenance.

6 LONG-TERM MONITORING, RESTORATION AND RESEARCH

The Rivergate Enhancement Sites have been regularly monitored since 2004 (with the exception of Ramsey Lakes which has been actively monitored and maintained since the late 1980's) with involvement of many different organizations and consultants as well as Port mitigation staff. While released from

permit requirements there are still many opportunities for ongoing, long-term monitoring, restoration and research.

Future monitoring activities on the Rivergate Enhancement Sites are not mandated by the DSL or the USACE, but the Port plans to continue regular site inspections for invasive species and other maintenance needs to ensure conservation of habitat and wetland functionality. Monitoring activities in partnerships with other groups such as Metro, grad students and others, that would likely continue into the future and may include turtle nesting surveys, monitoring of wildlife use and site conditions, ecological succession, water quality, and diversity of wildlife usage of the site. Future hydrology monitoring on the site could involve continued surface water level observation, as well as new types of monitoring, which could either study site-specific characteristics or be a part of a larger watershed study. Other possible monitoring activities could include monitoring plant growth and changes over time (herbaceous productivity, tree/shrub growth, etc.) and avian use of the site.

6.1 Future Restoration

Continued enhancement of on-site natural resources could increase ecological functions and habitat diversity within the Rivergate Enhancement Sites to benefit both the local community and natural environment. These sites are partially accessible via the 40-Mile Loop Trail, which is contiguous with the Smith and Bybee Wetlands Natural Area and has garnered interest from many different stakeholders; therefore, continued public outreach should be incorporated into the long-term goals and restoration activities on the site. Future restoration programs could involve enhancement of one or more functions, such as improving nesting bird habitat through the creation or installation of snags, and enhancement of upland buffers by increasing native plant diversity and creating a habitat mosaic with inter-meadow spaces. Other restoration opportunities may present themselves in the future and could be pursued in conjunction with other monitoring and research efforts.

6.2 Opportunities for Research

Long-term management of the Rivergate Enhancement Sites could allow for multiple research opportunities. Many research ideas could be implemented in conjunction with regular management activities with minimal cost. Information resulting from research conducted on the site would help to inform future management actions. Understanding the effectiveness of conservation strategies could help inform future wetland mitigation programs. Select research studies may be eligible for additional funding from outside sources to aid in implementation. The research opportunities discussed below are just some of the possible ideas for long-term research that could be conducted at this site.

6.2.1 *Vegetation and Invasive Species*

- Test efficacy of invasive species removal and planting or recruitment of native plants to out-compete large infestations.
- Vegetation growth and succession for habitat types (PEM, PSS, PFO, UFO, and UPG) and the response of volunteer recruitment of native species.
- Different management techniques to produce different restoration results in planting and seeding especially in dredged sand fill material.

6.2.2 *Hydrology*

- The long-term effects of wetland restoration on water quality within the Columbia Slough.

- Surrounding land use effects on flood attenuation on the site and in nearby sloughs during storm events.

6.2.3 *Wildlife*

- Studies on native pollinators, such as determining types of local pollinators, how to provide food for pollinators year-round, and the most effective plant species for attracting pollinators to restoration sites.
- Specific bird habitat improvements (such as creating snags or other nesting structures) or detailed species population studies.
- Western painted turtle visual encounter surveys, detailed species population studies and movement analysis using tracking devices.

7 LONG-TERM MANAGEMENT ACTIONS

Long-term management actions will need to be taken to ensure continued enhanced wetland and habitat functions. These actions should be based on results of regular site inspections and specific monitoring, as described in Section 6.1, and may change over time in response to changes in site conditions. Management activities at a minimum should include invasive species management and restoration of areas where invasive species have displaced native vegetation or where other disturbance has occurred. Other management activities may include replanting or reseeding areas of native plant diversity decline, continued restoration of upland areas with native species that support pollinators and turtle nesting habitat, and repairing or installing wildlife structures, such as logs, root wads, turtle basking rafts, or other habitat features. Details of preferred best management practices (BMPs), vegetation management, and site maintenance are described in this section.

The long-term vision of management actions should be based on the following key parameters:

- Continual monitoring of vegetation and hydrology
- Controlling invasive species and promoting native vegetation
- Providing wetland and riparian habitat for wildlife
- Through management actions, strive to achieve sites that are more sustainable
- Protecting the site from incompatible land uses
- Support community outreach, research, and education opportunities

7.1 Best Management Practices

BMPs should be implemented for all management actions, including ground disturbance, herbicide application, seed application, and planting. BMPs are especially important when handling and applying herbicides on-site, because misuse of these chemicals can cause negative impacts to native plants, wildlife, and water quality. The Port's Vegetation Management Plan discusses herbicide application and includes a detailed list of invasive species commonly encountered at the Rivergate Enhancement Sites, the types of herbicides to use, and handling and operation of relevant equipment. BMPs pertaining to the prevention of invasive species reestablishment, invasive species monitoring, wildlife considerations, general equipment cleaning, and long-term herbicide use considerations are discussed as well. The latest version is available online at: https://www.portofportland.com/Environment/Mitigation

An invasive species control plan is important to establish before implementation of new methods or use of new applications. The plan should include the species that will be controlled by the measures and the strategies that will most efficiently control them. These strategies should attempt to integrate the use of mechanical, chemical, and biological methods of controlling the target species, as opposed to relying on one single method of control. Herbicides should always be applied according to their labels and the BMPs described in the most recent Port Vegetation Management Plan.

The Rivergate Enhancement Sites support hundreds of wildlife species and site management practices can potentially interfere with critical life cycles or endanger animals in other ways. BMPs provided in the Port's Vegetation Management Plan help minimize impacts to wildlife by avoiding certain management activities during critical life cycle stages, cleaning boots and other equipment to prevent the spread of amphibian disease and minimizing the use of herbicides.

One of the primary goals of the site is to establish a diverse, native wetland plant community. Given this, it is very important to use chemicals selectively on the target species to avoid contact with and harm to native plants. In general, herbicides should be applied by spot spraying or wicking rather than broadcast spraying to avoid harming native plants. All herbicide applicators must be certified and licensed by the Oregon Department of Agriculture.

7.2 Ongoing Vegetation Management

Prior to the creation of the Rivergate Enhancement Sites the area contained numerous invasive and nonnative species (see Section 2.4). Through restoration, enhancement and ongoing maintenance by the Port, these invasive and nonnative species have been largely reduced. However, because management of these species on adjacent properties is not within the Port's control (and will likely not be within the control of the Steward either), possible reintroduction and spread of invasive species is a continual threat to the site. Seasonal flooding from Smith and Bybee Lakes and the Columbia Slough will continue to provide a constant source of weed seed and propagules. Even with an intense weed management program, complete elimination of undesirable species is not reasonable and new undesirable species may be found on these sites every year. Therefore, continued monitoring and weed control at these sites is imperative to maintaining long-term control over undesirable species. The best management strategy to prevent the colonization of invasive species is to maintain a healthy, diverse native plant community. Plant communities that have a complex and diverse composition are typically more resilient in the face of invasive and nonnative species encroachment.

An adaptive management strategy is the best approach for developing long-term management actions to prevent the establishment and spread of nonnative and invasive species. Management actions should be tailored to the specific situation and conditions whenever possible to achieve the best results. These actions should entail identifying weeds on the site, mapping the distribution of these weeds, researching currently accepted methods for control, implementing weed control plans for each species, and monitoring the efficacy of control efforts.

Specific objectives to be achieved through adaptive nonnative and invasive species management include:

1. Protect and maintain healthy plant communities by minimizing unnatural ground disturbance that promotes the invasion of nonnative/invasive species.

2. Prevent the establishment of new nonnative/invasive infestations. Conduct regular surveillance for nonnative/invasive species infestations—practice Early Detection Rapid Response[2].

3. Reduce the vigor of existing nonnative/invasive populations and limit their spread.

4. Eliminate nonnative/invasive plant populations or portions of populations.

5. Exhaust the nonnative/invasive seed bank: prevent seed production and eradicate established plants.

6. Monitor efficacy of control methods.

7. As infestations decrease in size, locate and monitor isolated patches.

8. Reevaluate species and control methods.

9. Seed or plant in areas that have been disturbed or treated for invasive species with native species to establish native plant communities able to compete with invasive species.

These guidelines are circular and reflect an adaptive management approach to controlling nonnative and invasive species. The intensity of the monitoring and management actions should depend on the relative threat the invasive species pose to the site's integrity and ecosystem and the speed at which the particular species can become established and spread within the site.

7.2.1 *Vegetation Succession*

Vegetation succession is a constant driver upon the landscape. In most situations, given a lack of human or natural controls, vegetation in the Willamette Valley will trend toward becoming a mature forested community. Portions of the Rivergate Enhancement Sites may transition into a fully forested wetland; however, the majority of the sites will likely remain as palustrine emergent wetland due to seasonal flooding from the Columbia Slough and Bybee Wetland, reducing the likelihood of tree and shrub establishment in some areas. Natural succession may occur in PSS areas, converting them to PFO, with adjacent upland areas trending toward forested upland. While wetland functionality would not likely be negatively impacted by this process, the habitat complexity of the site would decrease as a result. Wetlands on this site are not required to remain within their current wetland types, if wetland characteristics persist; however, retaining a higher diversity of community types is more beneficial to wildlife (e.g., bird species). Even with the goal of creating self-sustaining and self-managing natural processes on the Rivergate Enhancement Sites, continued vegetation management will likely be required in perpetuity to protect the existing habitat diversity on the site.

7.3 General Site Maintenance

In addition to vegetation maintenance, the Steward will be responsible for general maintenance of the site. The Steward will maintain the existing fences and gates surrounding the Rivergate Enhancement Sites. The current signage associated with the mitigation site, and any signs that are erected in the future, will also be maintained by the Steward. The Steward will remove trash from the site and work to correct any damage resulting from trespassing or vandalism. Periodic tree maintenance, such as pruning or removal of dead trees that pose a safety hazard, may be required. Any tree removal within the site must be

[2] More information on Early Detection and Rapid Response prevention efforts is available at: https://www.usgs.gov/ecosystems/invasive-species-program/science/early-detection-and-rapid-response

coordinated with the COP if the tree is greater than 6 inches diameter at breast height. Other maintenance activities may include habitat enhancement like native planting or seeding to maintain site integrity.

8 LONG-TERM MANAGEMENT CONSIDERATIONS

8.1 Surrounding Land Use

Long-term management of the Rivergate Enhancement Sites is limited to areas within the property boundaries. The surrounding properties are associated with the Rivergate Industrial District and could potentially affect conditions within the site. The condition of surrounding properties, their land uses, and management practices could potentially be threats to the continued conservation of natural resources within the mitigation sites. Current zoning designations, landscape positions, and potential threats to natural resources associated with surrounding properties are described below.

8.1.1 *Railroads*

Multiple railroad lines are located adjacent to portions of the mitigation sites including the BNSF Railway to the north/northeast, the Ramsey Rail Yard to the west, and the Union Pacific Railway to the south/southwest. The railroad lines are located within COP's Heavy Industrial (IH) zoning designation. Possible threats to the long-term ecological objectives of the Rivergate Enhancement Sites would include noise disturbance to wildlife, habitat fragmentation, possible collision risk for wildlife, and potential source of incidental spills or invasive species introduction. These existing railroads are not expected to change uses in the foreseeable future.

8.1.2 *Rivergate Industrial District*

The Rivergate Industrial District surrounds the Rivergate Enhancement Sites and supports a variety of heavy industrial uses and tenants which benefit from close proximity to the Port's marine terminals, as well as railroads and interstates. The Rivergate Industrial District is considered a regional domestic distribution hub for goods. The district is located within COP's IH zoning designation and is dominated by impervious surfaces from parking lots and buildings. Possible threats to the long-term ecological objectives of the Rivergate Enhancement Sites would include stormwater runoff, air pollutants, introduction of invasive species, noise and light disturbance to wildlife, collision risk for wildlife, and a potential source of incidental spills. While these industrial land uses are not expected to change dramatically in the foreseeable future, undeveloped parcels are still available for build-out and pose an unknown potential threat to the ecological objectives of the enhancement areas.

8.1.3 *Smith and Bybee Wetlands Natural Area*

The Rivergate Enhancement Sites are located within the Smith and Bybee Management Area, which includes a large (approximately 2,100 acres) protected wetland area that is managed by Metro as an environmental preserve and public recreational area. The wetlands are located in the COP's Open Space (OS) zoning designation, and environmental protection (p) overlay zone; portions of the natural area are also within the COP's aircraft landing (h) or environmental conservation (c) overlay zones. The Smith and Bybee Wetlands Natural Area is surrounded on all sides by industrial development and provides essential habitat for rare plants and a suite of wildlife, from sensitive species such as the western painted turtle, bald eagle, and migrating songbirds, to ubiquitous species such as raccoons, striped skunks, and American robins. Pulses of wildlife enter and exit as the seasons and water levels change over the course of the year. The Smith and Bybee Wetlands Natural Area also includes the St. Johns Prairie located south

of the Leadbetter component of the Rivergate Enhancement Sites. The St. John's Prairie may at some point in the future include a trail system that links to the 40-Mile Loop Trail. Possible threats to the long-term ecological objectives of the Rivergate Enhancement Sites would include wildlife and vegetation disturbance from trail users who venture off-trail, and introduction of invasive species by trail users and their dogs, as well as seasonal flooding from the Columbia Slough and Smith and Bybee Wetlands into the Rivergate Enhancement Sites. However, the natural area also supports long-term ecological objectives of the Rivergate Enhancement Sites by attracting wildlife to the local area, providing a connection to an important wildlife corridor, and by supporting hydrologic conditions and surface water levels at some of the Rivergate Enhancement Sites. Public uses associated with Smith and Bybee Wetlands Natural Area have increased in recent years, along with increased off-trail users, unauthorized camping, and associated disturbances to plants and wildlife. Assuming these trends continue, public uses associated with Smith and Bybee Wetlands are expected to pose a continued and gradually increasing threat to local wildlife and habitats in the foreseeable future.

8.1.4 *Columbia Slough*

The Columbia Slough is approximately 19 miles long and stretches from its origin at Fairview Lake westward to its confluence with the Willamette River. In spite of its urbanized character, the Columbia Slough contains surprising biodiversity. Mammals such as deer, beaver, and river otter are common along the slough, and about 175 bird species have been documented in the watershed. In addition, western painted turtles (one of only two native turtle species in Oregon) and several salmonid species inhabit portions of the slough. The slough provides a valuable wildlife corridor that runs from the Sandy River Delta to the Willamette River.

8.2 Human Influence

Human influences could harm the Rivergate Enhancement Sites in multiple ways, including vandalism, unauthorized habitation, trespassing, and littering. Regular site visits and maintenance will be necessary to address these issues. Site cleanups could be implemented as part of a community volunteer program or nonprofit organization's operations. During regular site visits, the site can be checked for the presence of unauthorized camps and vandalism. In addition, a segment of the 40-Mile Loop Trail passes through the North Slough and 40-Mile Loop Trail Sites, and trail users have been known to leave the paved trail surface and venture into these sensitive areas, disturbing wildlife and native plantings in these areas. For these reasons, monitoring public access to the site and maintaining proper fencing and gates where feasible is an important issue for the management of the site.

Overall, the surrounding landscape is well developed and would not experience any significant change in land use. On-site hydrology could experience changes in surface water depths and durations if the hydrologic management strategy at Smith and Bybee Wetlands Natural Area is altered, which could possibly occur in response to changing conditions in the natural environment. Management of the Columbia River could also impact water levels in the Columbia Slough where tidal influence can be observed.

8.3 Catastrophic Events

Catastrophic events could be naturally driven or human caused, including climate-driven events. Possible catastrophic events at the Rivergate Enhancement Sites may include fires, massive floods, new species invasions, diseases, excessive long-term drought, etc. These rare events seldom occur in the area but could cause drastic changes to the Rivergate Enhancement Sites. However, with consideration of the regional effects of climate change on natural systems, the frequency and magnitude of certain catastrophic

events such as flooding, wildfires, and drought, is expected to increase over time (Dalton and Fleishman, 2021). If any of the events were to occur, they may affect the ability to meet the biological goals and objectives in the future at which time the ecological functions of the site should be documented and analyzed to determine future management goals. The management plan should then be revised based on the new site conditions and environmental/human drivers.

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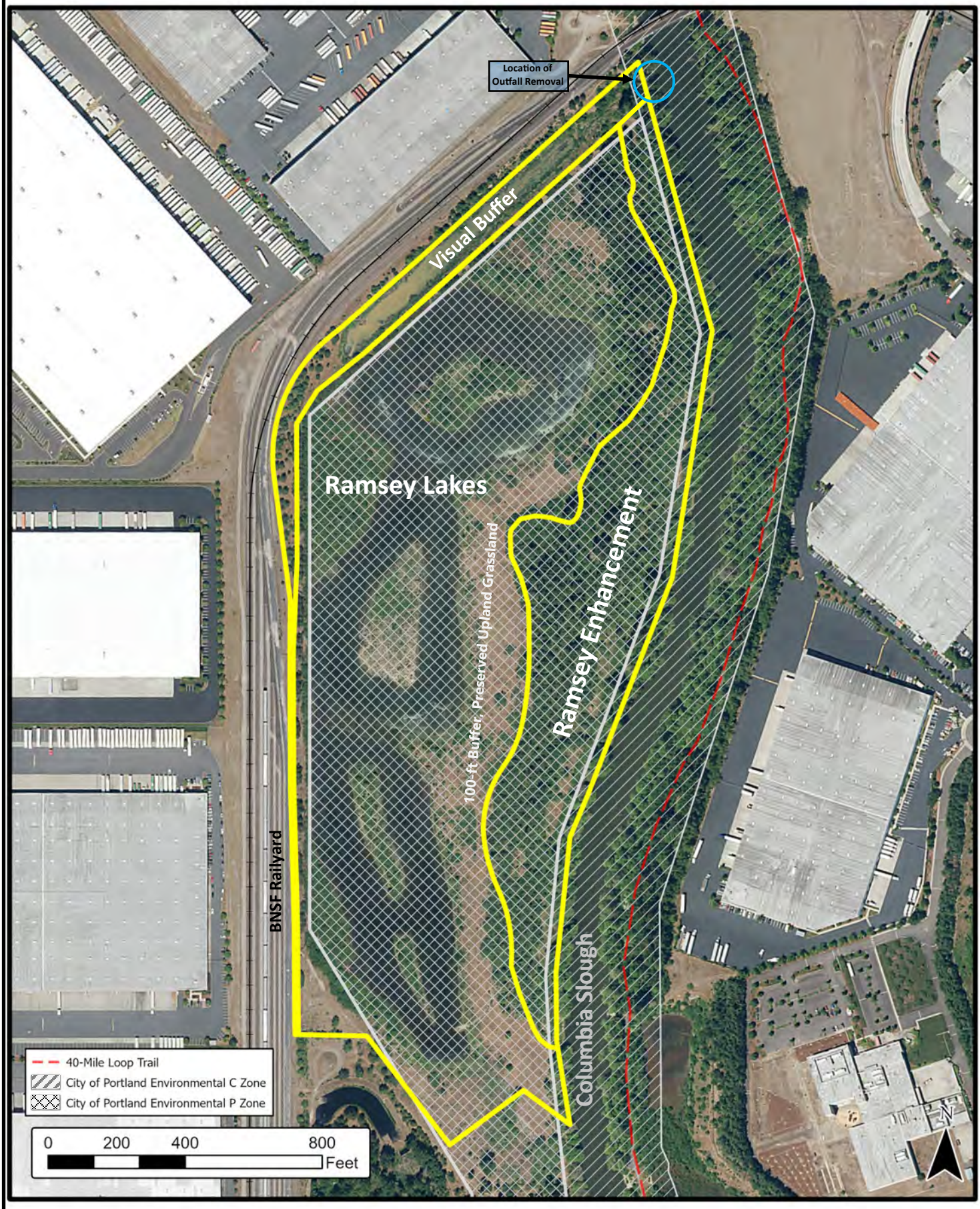
APPENDIX A

Site Figures

PORT OF PORTLAND

Appendix A-1: North and South Slough

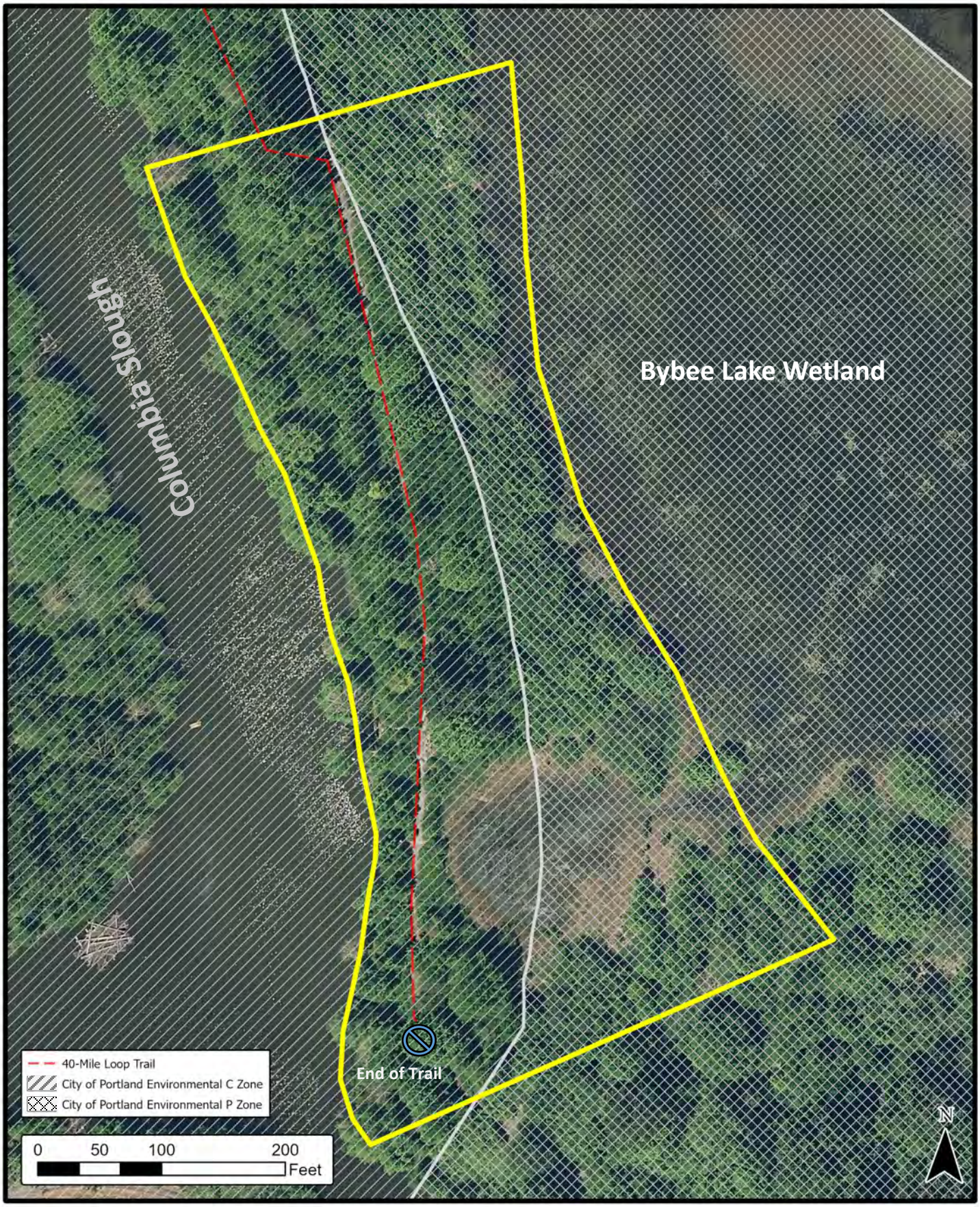


PORT OF PORTLAND

Appendix A-2: Ramsey Enhancement, Visual Buffer and Ramsey Lakes

PORT OF PORTLAND

Appendix A-3: Leadbetter



PORT OF PORTLAND

Appendix A-4: 40-Mile Loop Trail Site

APPENDIX B

Site Photographs

North Slough, August 2021

North Slough, August 2021

South Slough, August 2021

South Slough, August 2021

Leadbetter, August 2021

Leadbetter, August 2021

40-Mile Loop Site, August 2021

40-Mile Loop Site, August 2021

Columbia Slough Levee Repair, August 2021

Ramsey Enhancement, August 2021

Ramsey Lakes, south end, August 2021

Ramsey Lakes, north end, August 2021

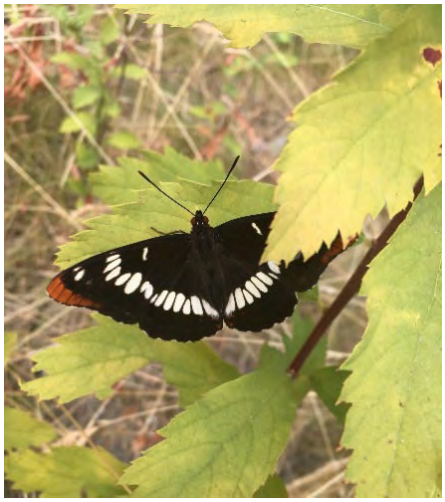
Ramsey Lakes (preserved upland grassland), August 2021

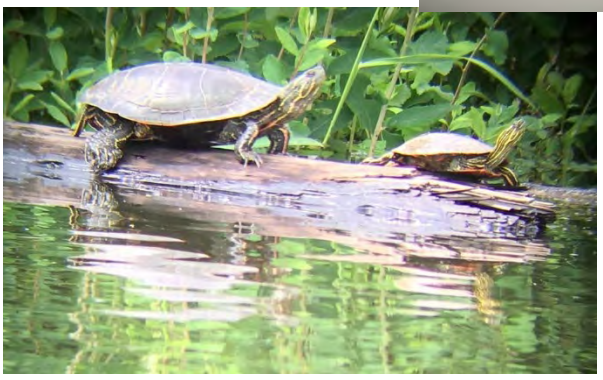
Visual Buffer, north end, August 2021

Ramsey Ditch & Visual Buffer, north end, August 2021

Visual Buffer, south end, August 2021

os





APPENDIX C

Cumulative Plant Species List

Appendix C: Cumulative Plant Species Lists for Rivergate Enhancement Sites

Locations: Leadbetter, N & S Sloughs, Ramsey Enhancement & Visual Buffer, Ramsey Lakes, 40-Mile Loop

KEY: P=Planted, S=Seeded, O=Observed

Botanical Name	Common Name	Leadbetter	N&S Slough	Ramsey Enhancement	Ramsey Lakes	Visual Buffer	40-Mile Loop Site
Abelia x grandiflora	glossy abelia		O				
Acer macrophyllum	big-leaf maple					P	
Achillea millefolium	yarrow				S,O	S	
Agrostis exarata	spike bentgrass	S,O	S,O	S		S	S
Agrostis gigantea	redtop				S		
Agrostis sp.	bentgrass species	O					
Agrostis stolonifera	creeping bentgrass		O				
Algae sp.	algae sp.		O				
Alisma plantago-aquatica v. americanum	American waterplantain	O	O	O			
Alisma triviale	Northern water plantain	O			O		
Alnus rubra	red alder	P	P	P		P	P
Alopecurus geniculatus	water foxtail	O	O		O		
Amanita sp.	Amanita mushrooms	O					
Amaranthus sp.	amaranth species			O			
Amelanchier alnifolia	Saskatoon serviceberry			P			
Amorpha fruticosa	false indigo bush		O				
Anaphalis margaritacea	pearly-everlasting	O			O		
Arbutus menziesii	Pacific madrone	O				P,O	
Arbutus unedo	strawberry tree	O					
Arctium sp.	burdock species	O					
Argentina anserina	silverweed cinquefoil		O				
Arrhenatherum elatius	tall oatgrass				O		
Artemisia douglasiana	Douglas' sagewort	O				O	
Artemisia sp.	wormwood species				O		
Aster sp.	aster species	O			O		
Athyrium filix-femina	lady fern		O				
Azolla mexicana	Mexican mosquito fern	O	O				
Beckmannia syzigachne	slough grass	P,S	S	S		P,S	
Betula pendula lacinata	cutleaf birch	O					
Betula papyrifera	paper birch	O	O				
Bidens cernua	nodding beggars-tick	O	O	O	O		

Botanical Name	Common Name	Leadbetter	N&S Slough	Ramsey Enhancement	Ramsey Lakes	Visual Buffer	40-Mile Loop Site
Bidens frondosa	leafy beggars-tick	O	O	O			
Bromus carinatus	California brome	S	S	S	S	S	S
Bromus molllis	soft brome	O					
Bromus sitchensis	Alaska brome	S			S		
Bromus sp.	brome species	O					
Bryophytae	moss				O		
Callitriche heterophylla	different-leaf Water starwort	O	O				
Calystegia sepium	hedge false bindweed		O				
Cardamine hirsuta	hairy bittercress				O		
Carex aperta	Columbia sedge	P,O	O			P	
Carex densa	dense sedge						S
Carex feta	greensheathed sedge				O		
Carex lenticularis var. lipocarpa	Kellogg's sedge	O					
Carex obnupta	slough sedge	P,S,O	S	S		P,S	
Carex scoparia	broom sedge						S
Carex sp.	sedge sp.	O	O	O	O		
Carex stipata	sawbeak sedge	P				P	S
Carex unilateralis	one-sided sedge			O			
Centaurea sp.	knapweed species				O		
Centaurea stoebe	spotted knapweed					O	
Centaurium erythraea	European centaury	O	O	O	O		
Ceratophyllum demersum	coontail	O					
Chamerion angustifolium	fireweed		O				
Chamaesyce maculata	spotted sandmat			O			
Chamaesyce serpyllifolia	thymeleaf sandmat			O			
Chenopodium album	lambsquarters				O		
Chenopodium berlandieri	netseed lambsquarters				O		
Chondrilla juncea	rush skeletonweed	O			O	O	
Cicuta douglasii	Western water-hemlock		O				
Cirsium arvense	Canada thistle	O	O	O	O		
Cirsium vulgare	bull thistle	O	O		O		
Clarkia ameona	farewell-to-spring				S		
Cladonia chlorophaea	mealy pixie cup					O	
Conium maculatum	poison hemlock				O	O	
Conyza canadensis	Canadian horseweed	O	O				
Coreopsis tinctoria	golden tickseed				O		

Botanical Name	Common Name	Leadbetter	N&S Slough	Ramsey Enhancement	Ramsey Lakes	Visual Buffer	40-Mile Loop Site
Cornus capitata	Betham's cornel	O					
Cornus sericea	red-osier dogwood	P	P,O	P	P	P	P
Crataegus douglasii	black hawthorn	P	P	P	P	P	P
Crataegus suksdorfii	black hawthorn						P
Cyperus erythrorhizos	red-rooted flatsedge	O	O		O		
Cyperus sp.	flatsedge	O	O	O	O		
Cyperus strigosus	straw-colored flatsedge	O	O				
Danthonia californica	California oatgrass	O			S		
Daucus carota	Queen Anne's Lace	O	O	O	O		
Deschampsia cespitosa	tufted hairgrass	S	S	S		S	S
Deschampsia elongata	slender hairgrass	S			S		S
Dichanthelium acuminatum	western panicgrass			O			
Digitaria sp.	crabgrass species			O			
Dipsacus fullonum	Fuller's teasel			O	O		
Echinochloa crusgalli	barnyardgrass	O	O	O	O		
Eleocharis acicularis	needle spikerush	O	O				
Eleocharis macrostachya	creeping spikerush	O	O				
Eleocharis ovata	ovoid spikerush	O	O	O	O,S		
Eleocharis palustris	common spikerush	O			O		
Elodea sp.	waterweed species	O					
Elymus glaucus	blue wildrye	S	S	S	S	S	S
Elymus trachycaulus	slender wheatgrass	S			S		
Epilobium ciliatum	hairy willowherb	O	O	O	O		
Equisetum arvense	common horsetail	O	O		O		
Equisetum hyemale	common scouring-rush		O				
Eragrostis hypnoides	teal lovegrass				O		
Eragrostis sp.	lovegrass sp.	O					
Erigeron sp.	fleabane sp.		O				
Erodium cicutarium	redstem stork's bill				O		
Eschscholzia californica	California poppy					O	
Euphorbia lathyris	moleplant				O		
Euthamia occidentalis	Western fragrant-golden-rod	O	O		O		
Festuca arundinacea	tall fescue	O	O	O			
Festuca occidentalis	western fescue	S	S	S		S	S
Festuca roemeri	Romer's fescue				S		
Festuca rubra	red fescue	O	O	O	S	S	S

Botanical Name	Common Name	Leadbetter	N&S Slough	Ramsey Enhancement	Ramsey Lakes	Visual Buffer	40-Mile Loop Site
species unidentified	filamentous algae	O					
Fragaria chiloensis	beach strawberry					O	
Frangula purshiana	Cascara buckthorn	P	P	P		P	P
Fraxinus latifolia	Oregon ash	P,O	P	P,O	P,O	P	P
Fungi	mushroom				O		
Galium aparine	stickywilly		O		O		
Galium trifidum	threepedal bedstraw		O				
Geranium lucidum	shining geranium	O			O		
Geranium sp.	geranium sp.		O				
Gilia capitata	bluefield gilia				S		
Glyceria elata	tall mannagrass	S	S	S		S	S
Gnaphalium palustre	western marsh cudweed	O	O		O		
Gnaphalium sp.	unidentified cudweed	O					
Gnaphalium uliginosum	marsh cudweed	O	O				
Hedera helix	common ivy					O	
Helenium autumnale	common sneezeweed	O	O	O			
Holcus lanatus	velvet grass	O	O	O	O	O	
Holodiscus discolor	oceanspray				P	P	
Hordeum brachyantherum	meadow barley	P,S	S	S	S	P,S	S
Hydrocotyle ranunculoides	floating marshpennywort		O				
Hypericum perforatum	St. John's wort	O	O	O	O		
Hypochaeris radicata	hairy cat's ear	O	O	O			
Impatiens capensis	jewelweed		O				
Impatiens noli-tangere	western touch-me-not		O		O		
Impatiens sp.	touch-me-not sp.		O				
Iris pseudacorus	yellow flag iris	O	O		O		
Jacobaea vulgaris	ragwort	O					
Juncus acuminatus	tapertip rush	S	S	S	O	S	
Juncus articulatus	jointed rush	O	O		O		
Juncus bufonius	toad rush	O					
Juncus effusus	soft rush	P	O	O	O	P	
Juncus ensifolius	dagger-leaf rush	P	O			P	
Juncus oxymeris	pointed rush	O	O				
Juncus sp.	rush species		O				
Juncus tenuis	slender rush	O	O				
Juncus xiphioides	irisleaf rush		O				

Botanical Name	Common Name	Leadbetter	N&S Slough	Ramsey Enhancement	Ramsey Lakes	Visual Buffer	40-Mile Loop Site
Lactuca serriola	prickly lettuce	O	O	O	O	O	
Lamium purpureum	purple deadnettle				O		
Leersia oryzoides	rice cutgrass	O	O		O		
Lemna minor	duckweed	O	O	O			
Leontodon autumnalis	autumn hawkbit		O				
Leucanthemum vulgare	oxeye daisy	O	O		O		
Lindernia dubia	false pimpernel	O					
Lolium multiflorum	annual ryegrass		O				
Lolium perenne	perenial ryegrass	O	O	O	O		
Lotus corniculatus	bird's-foot trefoil	O	O	O	O		
Lotus micranthus	desert deervetch			O	O		
Lotus pedunculatus	big trefoil	O					
Lotus unifoliolatus	American bird's-foot trefoil	O	O			S	
Ludwigia palustris	water-purslane	O	O	O	O		
Ludwigia peploides	floating primose-willow	O	O				
Lupinus albicaulis	sickle-keeled lupine				S	S	
Lupinus bicolor	miniature lupine					S	
Lupinus micranthus	field lupine				S		
Lupinus polyphyllus	bigleaf lupine				S	S	
Lupinus rivularis	streambank lupine	O	O			S	
Lupinus sp.	lupine species		O	O			
Lycopus americanus	American bugleweed	O	O		O		
Lycopus uniflorus	northern bugleweed			O			
Lysimachia nummularia	creeping jenny	O	O	O			
Lythrum salicaria	purple loosestrife		O		O	O	
Mahonia aquifolium	hollyleaved barberry				O		P
Mahonia nervosa	Cascade barberry						O
Malus fusca	western crabapple					P	P
Mazus pumilus	Japanese mazus		O		O		
Medicago lupulina	black medic	O	O				
Melilotus alba	white sweetclover				O		
Mentha arvensis	wild mint	O	O	O			
Mentha pulegium	pennyroyal	O	O	O			
Moss sp.	moss	O	O				
mustard sp.	mustard sp.	O					
Mycena sp.	bonnets					O	

Botanical Name	Common Name	Leadbetter	N&S Slough	Ramsey Enhancement	Ramsey Lakes	Visual Buffer	40-Mile Loop Site
Myosotis laxa	small-flowered forget-me-not	O	O				
Myosotis scorpioides	true forget-me-not			O	O		
Myriophyllum aquaticum	parrots feather	O	O				
Myriophyllum spicatum	Eurasian watermilfoil				O		
Navarretia intertexta	needleleaf navarretia			O			
Navarretia squarrosa	skunkbush			O			
Oemleria cerasiformis	Indian plum				P	P	
Oenothera biennis	evening primrose	O	O		O	O	
Panicum capillare	witchgrass		O	O			
Parentucellia viscosa	parentucellia	O	O	O	O		
Paspalum distichum	knotgrass	O					
Phalaris arundinacea	reed canarygrass	O	O	O	O		
Physocarpus capitatus	Pacific ninebark	P	P,O	P	P,O	P	
Pinus contorta	shore pine				P	P,O	
Pinus pondersa	Ponderosa pine					P	
Plantago arenaria	sand plantain	O			O		
Plantago lanceolata	English plantain	O	O				
Plantago major	common plantain	O	O	O			
Poa pratensis	Kentucky bluegrass	O	O				
Poa sp.	bluegrass sp.		O				
Polygonum amphibium	longroot smartweed				O		
Polygonum aviculare	doorweed	O					
Polygonum hydropiper	marshpepper knotweed			O			
Polygonum hydropiperoides	swamp smartweed		O	O			O
Polygonum lapathifolium	curlytop knotweed			O			
Polygonum persicaria	spotted ladysthumb	O	O	O	O		O
Polygonum sp.	unidentified smartweed		O		O		
Polypogon sp.	beard-grass species				O		
Polystichum munitum	sword fern		O		O		
Populus tricocarpa	black cottonwood	P	P	P	O, P	P	P
Potamogeton crispus	curly pondweed	O					
Potamogeton foliosus	leafy pondweed	O					
Prunella vulgaris	common selfheal			O			
Prunus emarginata	bitter cherry					P	
Prunus sp.	cherry sp.		O			P	
Prunus virginiana	chokecherry					P	

Botanical Name	Common Name	Leadbetter	N&S Slough	Ramsey Enhancement	Ramsey Lakes	Visual Buffer	40-Mile Loop Site
Pseudognaphalium stramineum	cottonbatting plant				O		
Pseudotsuga menziesii	Douglas-fir					P,O	
Quercus garryana	Oregon white oak					P	
Quercus velutina	black oak		O				
Ranunculus repens	creeping buttercup		O				
Ranunculus scleratus	celery-leaved buttercup	O	O				
Ranunculus sp.	buttercup species		O		O		
Ribes divaricatum	spreading gooseberry				O		
Robinia pseudoacacia	black locust		O				
Rorippa curvisiliqua	Western yellow cress	O		O	O		
Rorippa sp.	yellowcress	O	O	O	O		
Rosa gymnocarpa	dwarf rose		O				
Rosa multiflora	multiflora rose				O		
Rosa nutkana	Nootka rose	P,O	P	P		P	P
Rosa pisocarpa	swamp rose	P	P	P		P	P
Rosa sp.	rose species				O	O	
Rubus ameniacus	Himalayan blackberry	O	O	O	O		O
Rubus parviflorus	thimbleberry				P	P	
Rubus spectabilis	salmonberry					P	P
Rumex acetosella	red sorrel	O	O	O			
Rumex conglomeratus	clustered dock			O			
Rumex crispus	curly dock	O	O	O	O		
Rumex aquaticus var. fenestratus	Western dock			O			
Sagittaria latifolia	wapato	O	O	O	O		
Salix fluviatilis	Columbia river willow	P,O	P	P	O	P	
Salix hookeriana	Hooker Willow	O	O				
Salix lucida sp. lasiandra	Pacific willow	P	P	P	O	P	P
Salix piperi	Piper Willow	O	O				
Salix scouleriana	Scouler willow	P	P	P	O	P	
Salix sitchensis	Sitka willow	O	O		O	P	
Salix sp.	willow species				O	O	
Sambucus racemosa	red elderberry	P	P	P		P	P
Sambucus sp.	elderberry species				O		
Schoenoplectus acutus	hardstem bulrush	P,O	O				
Schoenoplectus americanus	chairmaker's bulrush	O					
Scirpus atrocinctus	blackgirdle bulrush		O				

Botanical Name	Common Name	Leadbetter	N&S Slough	Ramsey Enhancement	Ramsey Lakes	Visual Buffer	40-Mile Loop Site
Scirpus cyperinus	woolgrass			O			
Scirpus lacustris	bulrush			O			
Scirpus microcarpus	small fruited bulrush	P	O	O	O	P	
Schoenoplectus tabernaemontanii	softstem Bulrush	O	O	O	O		
Senecio jacobaea	tansy ragwort				O		
Sidalcea spp.	checkermallow				S,O		
Silene latifolia	bladder campion				O		
Solanum dulcamara	climbing nightshade	O			O		
Solanum nigrum	black nightshade				O		
Solidago canadensis	Canada goldenrod	O			O	S,O	
Sonchus arvensis	perennial sowthistle				O		
Sonchus sp.	sowthistle		O				
Sparganium emersum	European bur-reed	P,O			O		
Sparganium eurycarpum	giant Bur-reed	O					
Spiraea douglasii	Douglas' spirea	P	P	P	O	P	P
Spiranthes romanzoffiana	hooded lady's tresses				O		
Spirodela polyrhiza	giant duckweed		O				
Stachys chamissonis var. cooleyae	coastal hedgenettle		O				
Symphoricarpos albus	snowberry	P	P	P		P	P
Symphyotrichum subspicatum	Douglas aster				O		
Tanacetum vulgare	common tansy	O	O				
Taraxacum officinale	common dandelion	O	O				
Trifolium arvense	hare's foot clover	O	O	O	O		
Trifolium pratense	red clover	O	O	O			
Trifolium repens	white clover	O	O	O			
Trifolium sp.	clover species	O	O				
Typha angustifolia	narrowleaf cattail	O					
Typha latifolia	broadleaf cattail	O	O	O	O, P		
Urtica dioica	stinging nettle				O		
Verbascum blattaria	moth mullein				O		
Verbascum thapsus	common mullein				O		
Veronica anagallis-aquatica	water speedwell			O			
Veronica americana	American brooklime		O		O		
Veronica scutellata	marsh speedwell	O					
Vicia americana	American purple vetch	O					
Vicia disperma	European vetch						O

Botanical Name	Common Name	Leadbetter	N&S Slough	Ramsey Enhancement	Ramsey Lakes	Visual Buffer	40-Mile Loop Site
Vicia hirsuta	hairy vetch	O	O				
Vicia sativa	common vetch		O		O		
Vicia sp.	vetch species	O	O				
Vicia tetrasperma	lentil vetch						O
Vulpia myuros	rat-tail fescue	O	O				
Xanthium strumarium	rough cocklebur	O			O		

APPENDIX D

Cumulative Wildlife Observations

Appendix D: Cumulative Wildlife Observations at Rivergate Enhancement Sites ♦2004-2020

Locations: Leadbetter, N & S Sloughs, Ramsey Enhancement & Visual Buffer, Ramsey Lakes, 40-Mile Loop

Observations collected by Port of Portland and Ellis Ecological Services (fish surveys)

Common Name	Scientific Name	Leadbetter	N&S Slough	Ramsey Enhancement	♦Ramsey Lakes	40-Mile Loop
BIRDS						
Accipiter	unidentified	X		X	X	X
*American coot	*Fulica americana*	X	X	X	X	X
American crow	*Corvus brachyrhynchos*	X	X	X	X	X
American goldfinch	*Carduelis tristis*	X	X	X	X	X
American kestrel	*Falco sparverius*	X	X	X	X	X
*American robin	*Turdus migratorius*	X	X	X	X	X
American white pelican	*Pelecanus erythrorhynchos*	X	X		X	
American wigeon	*Anas americana*	X		X	X	X
Anna's hummingbird	*Calypte anna*				X	
Bald eagle	*Haliaeetus leucocephalus*	X	X	X	X	X
Band-tailed pigeon	*Columba fasciata*	X	X	X	X	X
barn owl	*Tyto alba*				X	
Barn swallow	*Hirundo rustica*	X	X	X	X	X
Barrow's goldeneye	*Bucephala islandica*				X	
Belted kingfisher	*Ceryle alcyon*	X	X	X	X	X
Bewick's wren	*Thryomanes bewickii*	X	X	X	X	X
Black-capped chickadee	*Poecile atricapillus*	X	X	X	X	X
*Black-headed grosbeak	*Pheucticus melanocephalus*	X	X	X	X	X
Black-throated gray warbler	*Dendroica nigrescens*					X
*Blue-winged teal	*Anas discors*	X			X	X
Brewer's blackbird	*Euphagus cyanocephalus*	X	X	X	X	X
Brown creeper	*Certhia americana*	X			X	X
Brown-headed cowbird	*Molothrus ater*	X	X	X	X	X
Bufflehead	*Bucephala albeola*	X		X	X	X
*Bullock's oriole	*Icterus bullockii*	X	X		X	X
*Bushtit	*Psaltriparus minimus*	X	X	X	X	X
Cackling goose	*Branta canadensis minima*	X		X	X	X
California scrub jay	*Aphelocoma californica*	X	X	X	X	X
*Canada goose	*Branta canadensis*	X	X	X	X	X
Cedar waxwing	*Bombycilla cedrorum*	X	X	X	X	X

Common Name	Scientific Name	Leadbetter	N&S Slough	Ramsey Enhancement	♦Ramsey Lakes	40-Mile Loop
Chestnut-backed chickadee	*Poeci/e rufescens*	X				
Chipping sparrow	*Spizella passerina*			X	X	
*Cinnamon teal	*Anas cyanoptera*	X	X	X	X	X
clay-colored sparrow	*Spizella pallida*				X	
*Cliff swallow	*Petrochelidon pyrrhonota*	X	X	X	X	X
Common merganser	*Mergus merganser*	X			X	
*Common yellowthroat	*Geothlypis trichas*	X		X	X	X
Cooper's hawk	*Accipiter cooperii*	X			X	X
Dark-eyed junco	*Junco hyemalis*	X	X	X	X	X
Double-crested cormorant	*Phalacrocorax auritus*	X	X	X	X	X
Downy woodpecker	*Picoides pubescens*	X	X	X	X	X
Eurasian collared-dove	*Streptopelia chinensis*	X			X	X
Eurasian wigeon	*Anas penelope*	X			X	
*European starling	*Sturnus vulgaris*	X	X	X	X	X
Forster's tern	*Sterna forsteri*				X	
Fox sparrow	*Passerella iliaca*	X			X	X
Flycatcher	unidentified		X		X	X
Gadwall	*Anas strepera*	X		X	X	X
Glaucous-winged gull	*Larus glaucescens*				X	
Gold-crowned kinglet	*Regulus satrapa*				X	X
Golden-crowned sparrow	*Zonotrichia atricapilla*	X	X	X	X	X
Golden eagle	*Aquila chrysaetos*				X	
Great blue heron	*Ardea herodias*	X	X	X	X	X
Great egret	*Ardea alba*	X		X	X	X
*Great horned owl	*Bubo virginianus*			X	X	X
Greater scaup	*Aythya marila*				X	
Greater white-fronted goose	*Anser albifrons*	X			X	
Greater white-fronted x Canada goose hybrid	*Anser albifrons x Branta canadensis*				X	
Greater yellowlegs	*Tringa melanoleuca*	X		X	X	X
Green heron	*Butorides virescens*	X	X		X	
Green-winged teal	*Anas crecca*	X	X	X	X	X
Gull	*Larus sp.*	X	X	X	X	X
hairy woodpecker	*Picoides villosus*				X	
Hermit thrush	*Catharus guttatus*			X	X	
Hooded merganser	*Lophodytes cucullatus*	X		X	X	X
horned grebe	*Podiceps auritus*	X				

Common Name	Scientific Name	Leadbetter	N&S Slough	Ramsey Enhancement	♦Ramsey Lakes	40-Mile Loop
Horned lark	*Eremophila alpestris*				X	
House finch	*Carpodacus mexicanus*	X	X	X	X	X
*House wren	*Troglodytes aedon*	X	X	X		X
Hummingbird	unidentified	X		X		
Hutton's vireo	*Vireo huttoni*				X	
*Killdeer	*Charadrius vociferus*	X	X	X	X	X
lark sparrow	*Chondestes grammacus*	X		X	X	
least sandpiper	*Calidris minutilla*	X			X	
lesser goldfinch	*Spinus psaltria*				X	
lesser yellowlegs	*tringa flavipes*	X		X		X
lesser scaup	*Aythya affinis*				X	
Lincoln's sparrow	*Melospiza lincolnii*				X	X
Long-billed dowitcher	*Limnodromus scolopaceus*	X			X	X
*Mallard	*Anas platyrhynchos*	X	X	X	X	X
*Marsh wren	*Cistothorus palustris*	X		X	X	X
Merlin	*Falco columbarius*	X			X	
Mourning dove	*Zenaida macroura*	X	X	X	X	X
Northern flicker	*Colaptes auratus*	X	X	X	X	X
Northern harrier	*Circus cyaneus*	X	X	X	X	X
Northern pintail	*Anas acuta*	X			X	X
*Northern rough-winged swallow	*Stelgidopteryx serripennis*	X	X		X	X
northern saw-whet owl	*Aegolius acadicus*			X		
Northern shoveler	*Anas clypeata*	X		X	X	X
nuthatch	*Sitta sp.*	X				
Olive-sided flycatcher	*Contopus cooperi*				X	
Orange-crowned warbler	*Vermivora celata*		X		X	X
Osprey	*Pandion haliartus*	X	X	X	X	X
Owl, unidentified	unidentified	X				X
Peregrine falcon	*Falco peregrinus*	X			X	X
phalarope, unidentified	*Phalaropus* sp.				X	
*pied-billed grebe	*Podilymbus podiceps*	X	X	X	X	X
Pigeon	*Columba livia*	X			X	
Pine siskin	*Spinus pinus*				X	
Pileated woodpecker	*Dryocopus pileatus*	X				X
Purple martin	*Progne subis*		X		X	
Red-breasted nuthatch	*Sitta canadensis*			X	X	

Common Name	Scientific Name	Leadbetter	N&S Slough	Ramsey Enhancement	♦Ramsey Lakes	40-Mile Loop
red-eyed vireo	*Vireo olivaceus*				X	
Red-necked grebe	*Podiceps grisegena*				X	
Red-shouldered hawk	*Buteo lineatus*	X			X	X
*red-tailed hawk	*Buteo jamaicensis*	X	X	X	X	X
*red-winged blackbird	*Agelaius phoeniceus*	X	X	X	X	X
ring-billed gull	*Larus delawarensis*				X	
Ring-necked duck	*Aythya collaris*	X		X	X	X
ring-necked pheasant	*Phasianus colchicus*				X	
Rock dove	*Columba livia*					
Ruby-crowned kinglet	*Regulus calendula*	X	X	X	X	X
Ruddy duck	*Oxyura jamaicensis*	X				
Rufous hummingbird	*Selasphorus rufus*				X	
Sandhill crane	*Grus canadensis*	X			X	X
sandpiper	unidentified	X				
Savannah sparrow	*Passerculus sandwichensis*	X	X	X	X	X
Say's phoebe	*Sayornis saya*	X				X
Sharp-shinned hawk	*Accipiter striatus*	X		X	X	X
short-billed dowitcher	*Limnodromus griseus*	X			X	
Shrike	*Laniidae sp.*				X	
snow goose	*Chen caerulescens*	X				
Solitary vireo	*Vireo solitarius*				X	
Song sparrow	*Melospiza melodia*	X	X	X	X	X
Sparrow	unidentified					X
*spotted sandpiper	*Actitis macularia*	X	X	X	X	X
Spotted towhee	*Pipilo maculatus*	X	X	X	X	X
Stellar's jay	*Cyanocitta stelleri*				X	
Swainson's thrush	*Catharus ustulatus*			X	X	X
Swallow	unidentified			X		
swamp sparrow	*Melospiza georgiana*				X	
Swan (unidentified)	*Cygnus sp.*	X				X
Townsend's warbler	*Dendroica townsendi*			X		
*Tree swallow	*Tachycineta bicolor*	X	X	X	X	X
tri-colored blackbird	*Agelaius tricolor*				X	
Tundra swan	*Cygnus columbianus*				X	
Turkey vulture	*Cathartes aura*	X	X	X	X	X
Vaux's swift	*Chaetura vauxi*	X	X	X	X	X

Common Name	Scientific Name	Leadbetter	N&S Slough	Ramsey Enhancement	♦Ramsey Lakes	40-Mile Loop
Varied thrush	*Ixoreus naevius*			X		X
Violet-green swallow	*Tachycineta thalassina*	X	X	X	X	X
Virginia rail	*Rallus limicola*		X	X		
Warbling vireo	*Vireo gilvus*		X		X	
Western flycatcher	*Myiotriccus ornatus stellatus*				X	
western kingbird	*Tyrannus verticalis*	X		X	X	
Western meadowlark	*Sturnella neglecta*			X	X	
Western sandpiper	*Calidris mauri*	X		X		X
Western tanager	*Piranga ludoviciana*	X	X	X	X	X
Western wood-peewee	*Contopus sordidulus*	X	X	X	X	X
White-breasted nuthatch	*Sitta carolinensis*			X		X
*white-crowned sparrow	*Zonotrichia leucophrys*	X	X	X	X	X
White-throated sparrow	*Zonotrichia albicollis*				X	
Willow flycatcher	*Empidonax trailii*	X	X	X	X	X
Wilson's snipe	*Gallinago delicata*	X	X	X	X	X
Wilson's warbler	*Cardellina pusilla*			X	X	
Winter wren	*Troglodytes hiemalis*				X	
Wood duck	*Aix sponsa*	X	X	X	X	X
Yellow-breasted chat	*Icteria virens*				X	
Yellow-headed blackbird	*Xanthocephalus xanthocephalus*	X				X
yellowlegs	*Tringa* sp.		X			
Yellow-rumped warbler	*Dendroica coronata*	X	X	X	X	X
Yellow warbler	*Dendroica petechia*	X		X	X	X
MAMMALS						
Canine, domestic	*Canis familiaris*	X	X	X	X	X
Coyote	*Canis latrans*	X	X	X	X	X
Beaver	*Castor canadensis*	X	X	X	X	X
opossum	*Didelphis marsupialis*	X				
Cat, domestic	*Felis catus*				X	
River otter	*Lutra canadensis*	X		X	X	
Skunk	*Mephitis mephitis*				X	
Vole	*Microtus* sp.	X	X	X	X	X
Mink	*Mustela vison*				X	
Nutria	*Myocastor coypus*	X	X	X	X	X
Shrew mole	*Neurotrichus gibbsii*				X	

Common Name	Scientific Name	Leadbetter	N&S Slough	Ramsey Enhancement	♦Ramsey Lakes	40-Mile Loop
Black-tailed deer	*Odocoileus hemionus*	X	X	X	X	X
Muskrat	*Ondatra zibethicus*	X		X	X	X
Deer mouse	*Peromyscus maniculatus*			X	X	
Raccoon	*Procyon lotor*	X	X	X	X	X
Mole	*Scapanus* sp.	X	X	X	X	X
shrew	*Sorex* sp.				X	
Brush rabbit	*Sylvilagus bachmani*				X	
Eastern cottontail	*Sylvilagus floridanus*	X	X	X	X	X
pocket gopher	*Thomomys* sp.				X	
Rodent	unidentified					X
Townsend mole	Scapanus townsendi				X	
HERPTILES						
*long-toed salamander	*Ambystoma macrodactylum*	X		X	X	
*Western painted turtle	*Chrysemys picta bellii*	X	X	X	X	X
Western pond turtle	*Clemmys marmorata*				X	
*Pacific treefrog	*Pseudacris regilla*	X	X	X	X	X
bullfrog	*Rana catesbeiana*	X	X	X	X	X
common garter snake	*Thamnophis sirtalis*	X	X	X	X	X
northwestern garter snake	*Thamnophis ordinoides*				X	
*red-eared slider	*Trachemys scripta*	X			X	
garter snake	unidentified	X	X	X	X	X
*turtle	unidentified	X		X	X	X
FISH						
goldfish	*Carassius auratus*	X				X
carp	*Cyprinus carpio*	X		X	X	X
banded killifish	*Fundulus diaphanous*	X	X	X		
mosquito fish	*Gambusia affinis*	X	X	X	X	X
three-spine stickleback	*Gasterosteus aculeatus*	X	X			
pumpkinseed	*Lepomis gibbosus*	X	X	X		
bluegill	*Lepomis macrochirus*	X	X	X		
sunfish	*Lepomis* sp.			X		
fish	unidentified	X	X			X
catfish, unidentified	unidentified	X				

Common Name	Scientific Name	Leadbetter	N&S Slough	Ramsey Enhancement	♦Ramsey Lakes	40-Mile Loop
OTHER (by taxonomic order)						
Order Coleoptera						
alder flea beetle	*Altica ambiens*		X			
Klamath weed beetle	*Chrysolina quadrigemina*				X	
common lady beetle	subfamily *Coccinellinae*				X	
ten-lined June beetle	*Polyphylla decemlineata*				X	
Order Hymenoptera						
brown-belted bumble bee	*Bombus griseocollis*				X	
Nevada bumble bee	*Bombus nevadensis*		X			
yellow-faced bumble bee	*Bombus vosnesenskii*				X	
bumble bee	unidentified				X	
wood wasp	unidentified					
bald-faced hornet	*Dolichovespula maculata*				X	
Order Lepidoptera						
Lorquin's admiral	*Limenitis lorquin*	X			X	
western tiger swallowtail	*Papilio rutulus*				X	
monarch	*Danaus picta bellii*				X	
gray hairstreak	*Strymon melinus*	X				
Order Odonata						
blue damselfly	unidentified				X	
dragonfly	unidentified				X	
eight-spotted skimmer	*Libellula forensis*				X	
Order Unionidae						
Fresh-water clams	unidentified	X	X	X		X
Miscellaneous						
grasshoppers	unidentified				X	

*Observed nest or young on site

♦Ramsey Lakes observations date back to 1997

Note: data is based (primarily) on incidental observation of a species or evidence of species presence; intentional surveys for amphibian and reptiles were conducted periodically; fish stranding surveys were conducted in 2003 and 2008 in conjunction with permit compliance.

APPENDIX E

Rivergate Enhancement Sites Document List

Appendix E: Rivergate Enhancement Sites Document List

Documents	Author	Date
Rivergate Cooperative Agreement, 1988	DSL, ODFW, EPA, USACE, USFWS, and the Port	1988
North Portland Peninsula Study by the Columbia Slough Environment Improvement Task Force	Columbia Slough Environment Improvement Task Force	December 1972
Summary of Mitigation Results Ramsey Lake 1988–1992	C. Turner	1992
Ramsey Lakes Mitigation Monitoring Report August 1990–July 1994	MHCC	July 1994
Ramsey Lakes Mitigation Monitoring Report July 1994–December 1995	MHCC	December 1995
Ramsey Lakes Mitigation Monitoring Report May 1996–April 1997	MHCC	April 1997
Ramsey Lakes Mitigation Monitoring Report May 1997–December 1997	MHCC	December 1997
Ramsey Lakes Mitigation Monitoring Report November 1997–October 1998	Intern	October 1998
Vegetation Survey (Ramsey Lakes)	FES	July 1998
Ramsey Lakes Water Surface Calculations	Port	July 1998
Port of Portland Wetland Mitigation Monitoring Report 1998 Ramsey Lakes	FES	November 1999
Ramsey Lakes Mitigation Monitoring Report 1999	Port	December 1999
Water Quality Evaluation of Drainage Ditch/Swale in the Ramsey Lake Area	Virgil-Agrimis	July 2000
Consent Decree, Order of Dismissal with Prejudice and Release	Unites States District Court (US Dis. Crt.)	January 2001
Consent Decree, Settling United States' Cross-Claim Against Port of Portland	US Dis. Crt.	January 2001
Fish Species and Their Habitat near the Rivergate Industrial District, Baseline Conditions Report	Ellis	April 2001
Geotechnical Investigation, Rivergate Industrial District Habitat Mitigation and Revegetation	Foundation Engineering	May 2001
Wetland Delineation Report	DEA	July 2001
A Cultural Resources Study For the Proposed Rivergate Fill Removal Project, Portland	AIN, Inc.	July 2001
Graphical Soil Analysis Report	A&L Labs	August 2001
Endangered Species Act – Section 7 Consultation & Magnuson-Stevens Act Essential Fish Habitat Consultation Biological Opinion	NMFS	December 2001
Ramsey Slope Replant As-built 2001	Port	March 2002
Port of Portland 40-Mile Loop Trail Wetland Mitigation Plan	Beak-Jones & Stokes	April 2002
Endangered Species Act – Section 7 Consultation & Magnuson-Stevens Act Essential Fish Habitat Consultation Biological Opinion	USACE/NOA A	August 2002
First Amendment to Consent Decree and to Enforcement Consent Decree	US Dis. Crt.	September 2002
Declaration of Restrictive Covenant 40-Mile Loop Site	DSL	November 2002
Archaeological Monitoring of Rivergate Fill Removal Project. AINW Report No. 1027	AIN, Inc.	December 2002
Archaeological survey, Port of Portland's Bybee Lake "breach" repair project AINW Report No. 1174	AIN, Inc.	August 2003
Fish Stranding Survey	Ellis	August 2003
2003 Status Report Rivergate Enhancement Mitigation Projects	MF&A, Inc.	October 2003
Archaeological Monitoring Report for 2003 Rivergate Fill- Removal Project AINW Report No. 1241	AIN, Inc.	December 2003

Documents	Author	Date
Fish Stranding Survey	Ellis	August 2004
As-Built Report Rivergate Habitat Restoration and 40-Mile Loop Trail, Section I: North Slough, South Slough and Leadbetter Work Areas	DEA	August 2004
As-Built Report Rivergate Habitat Restoration and 40-Mile Loop Trail, Section II: Ramsey Lake, Culvert Removal and Visual Buffer Work Areas	DEA	August 2004
As-Built Report Rivergate Habitat Restoration and 40-Mile Loop Trail, Section III: 40-Mile Loop Trail Segment	DEA	August 2004
BES Monitoring Report for Leadbetter Port and Leadbetter Port TRAIL sites	BES	November 2004
2004 Wetland Mitigation Status Report 40-Mile Loop Trail and Columbia Slough Levee Repair	Jones and Stokes	December 2004
Ramsey Lake and Visual Buffer 2004 Wetland Mitigation Status Report	Jones and Stokes	December 2004
2004 Status Report Rivergate Enhancement Mitigation Projects Leadbetter and North & South Slough	Tetra Tech FW, Inc.	December 2004
2005 Monitoring Report Rivergate Enhancement Mitigation Projects, Leadbetter and North and South Slough (Year 1); includes original plot/transect drawings	Port of Portland	October 2005
2005 (Year 1) Wetland Mitigation Monitoring Report Ramsey Enhancement and Visual Buffer	Jones and Stokes	October 2005
2005 (Year 1) Wetland Mitigation Monitoring Report 40-Mile Loop Trail and Columbia Slough Levee Repair	Jones and Stokes	October 2005
2006 (Year 2) Monitoring Report Rivergate Enhancement Mitigation Projects, Leadbetter and North and South Slough	Port of Portland	December 2006
2006 (Year 2) Wetland Mitigation Monitoring Report Ramsey Enhancement and Visual Buffer	Jones and Stokes	October 2006
2006 (Year 2) Wetland Mitigation Monitoring Report 40-Mile Loop Trail and Columbia Slough Levee Repair	Jones and Stokes	October 2006
2007 (Year 3) Monitoring Report Rivergate Enhancement Mitigation Projects, Leadbetter and North and South Slough	Port of Portland	October 2007
2007 (Year 3) Wetland Mitigation Monitoring Report Ramsey Enhancement and Visual Buffer	Jones and Stokes	October 2007
2007 (Year 3) Wetland Mitigation Monitoring Report 40-Mile Loop Trail and Columbia Slough Levee Repair	Jones and Stokes	October 2007
2008 (Year 4) Monitoring Report Rivergate Enhancement Mitigation Projects, Leadbetter and North and South Slough	Port of Portland	December 2008
2008 (Year 4) Wetland Mitigation Monitoring Report Ramsey Enhancement and Visual Buffer	Jones and Stokes	October 2008
2008 (Year 4) Wetland Mitigation Monitoring Report 40-Mile Loop Trail and Columbia Slough Levee Repair	Jones and Stokes	October 2008
2009 (Year 5) Monitoring Report Rivergate Enhancement Mitigation Projects, Leadbetter and North and South Slough	Port of Portland	December 2009
2009 (Year 5) Wetland Mitigation Monitoring Report Ramsey Enhancement and Visual Buffer	Jones and Stokes	December 2009
2009 (Year 5) Wetland Mitigation Monitoring Report 40-Mile Loop Trail and Columbia Slough Levee Repair	Jones and Stokes	December 2009
DSL Release Letter for permit No. 25119-RF	DSL	August 2010
DSL Release Letter for permit No. 23801-RF	DSL	August 2010

Source: Port of Portland Mitigation Management Program Site Status Report, 2015-2016.

APPENDIX F

Supporting Documents

APPENDIX F-1

Consent Decree, Order of Dismissal with Prejudice and Release. Case. No. CV-97-1674-ST, November 22, 2000

2000-17D

UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF OREGON

WILLIAM MICHAEL JONES, Plaintiff, v. MIKE THORNE, director of the Port of Portland, et al., Defendants.	Case No. CV-97-1674-ST **CONSENT DECREE, ORDER OF DISMISSAL WITH PREJUDICE AND RELEASE**
UNITED STATES OF AMERICA, Cross-claim Plaintiff, v. PORT OF PORTLAND, Cross-claim Defendant.	

WHEREAS, Plaintiff, William Michael Jones ("Jones"), appearing *pro se*, filed a complaint on November 25, 1997 pursuant to the citizen suit provisions of the Clean Water Act, 33 U.S.C. § 1365, the Administrative Procedure Act ("APA") and the National Environmental Policy Act ("NEPA"). In his complaint, plaintiff contends, among other things: (i) that defendant Mike Thorne, Executive Director of the Port of Portland ("Port of Portland" or "Port"), has filled waters of the United States within Rivergate either without obtaining a permit under section 404 of the Clean Water Act ("CWA"), 33 U.S.C. § 1344, or

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pursuant to permits and extensions of permits issued by the U.S. Army Corps of Engineers ("COE") that were invalid or otherwise unlawful; (ii) that defendants COE and the U.S. Environmental Protection Agency ("EPA") failed to perform nondiscretionary duties under the Clean Water Act in failing to prevent the Port of Portland from conducting unlawful filling in Rivergate; (iii) that defendant U.S. Department of Transportation ("DOT"), through defendant Federal Highway Administration ("FHWA") and defendant U.S. Coast Guard ("USCG"), failed to perform nondiscretionary duties under the Clean Water Act with respect to unlawful filling in Rivergate; (iv) that defendants DOT, FHWA, USCG and COE unlawfully issued permits and unlawfully undertook other actions related to the filling of waters of the United States within Rivergate and in the construction of the Columbia Slough Rail Bridge; and (v) that defendants DOT, FHWA, USCG and COE violated the provisions of NEPA and related legal requirements in connection with one or more fill permits and projects within Rivergate. All defendants have appeared and answered the complaint by denying, in all material respects, Jones' allegations.

WHEREAS, United States Magistrate Judge Janice M. Stewart entered Findings and Recommendations dated July 15, 1999 resolving the Port's Motion for Summary Judgment (docket #41) and Jones' Cross-Motion for Summary Judgment (docket #92). In the Findings and Recommendations, the Magistrate determined on the merits, inter alia, that: the Port should be granted summary judgment dismissing Jones' First Cause of Action with respect to (i) fill placed by the Port in Rivergate within the boundaries and during the time frames of the COE Permit DA 071-OYA-2-005294 (effective November 30, 1984) and the August 17, 1989 and July 19, 1990 extensions of that permit and (ii) fill placed by the Port north of Smith Lake and adjacent to Marine Drive. The Findings and Recommendations also determined that COE Permit 071-OYA-1-008624 (effective June 3, 1991) did not authorize the filling of any

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wetlands pursuant to section 404 of the Clean Water Act and, accordingly, that all wetland filling by the Port in Rivergate during the period of this permit was unauthorized (unless permitted under a separate COE Permit) subject only to the Port's affirmative defenses of equitable estoppel, laches and mootness. The Port timely objected to portions of the Findings and Recommendations; however, consideration of the Port's objections has been stayed.

WHEREAS, simultaneous with the filing of this Consent Decree, the United States of America, on behalf of the COE, has filed an enforcement cross-claim against the Port. The United States' cross-claim alleges that the filling of certain wetlands within Rivergate by the Port violated section 301(a) of the Clean Water Act, 33 U.S.C. § 1311(a), because dredged or fill material was discharged into waters of the United States within Rivergate without authorization under section 404 of the CWA, 33 U.S.C. § 1344. The cross-claim seeks to require the Port to provide appropriate mitigation and/or restoration for the unauthorized filling of wetlands and to require the Port to pay a civil penalty as provided in 33 U.S.C. § 1319(d). Jones and the Port have consented to the filing of the enforcement cross-claim by the United States and to the related consent decree (the "Enforcement Consent Decree").

WHEREAS, plaintiff Jones, defendant Port of Portland, and defendants COE, EPA, DOT, FHWA and USCG (the "United States") agree that settlement of this case is in the public interest and that entry of this Consent Decree and the Enforcement Consent Decree are the most appropriate means of resolving Jones' claims against all defendants and the United States' cross-claim under the CWA against the Port.

WHEREAS, Jones, the Port of Portland and the United States (collectively, the "Parties") also recognize and agree that matters addressed by this litigation are complicated and substantially affected by: (i) the broad physical area encompassed by Rivergate, which has been filled over many decades; (ii) the many permits, agreements and decisions issued or entered into over a period of decades with respect to filling within Rivergate; (iii) the ownership or management of Rivergate lands, or permitting authority, of numerous non-parties including METRO, the City of Portland, the Smith and Bybee Lakes Management Committee,

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the Oregon Division of State Lands, the Oregon Department of Fish and Wildlife, the Oregon Department of Transportation and other private persons and entities; (iv) the divergent views of the parties and numerous interested non-parties with respect to planned industrial development, natural resource values, appropriate mitigation measures, and appropriate or required public comment and process; and (v) the practical difficulties of successful restoration, revegetation or buffering of filled areas.

NOW, THEREFORE, it is hereby ORDERED, ADJUDGED and DECREED as follows:

I. GENERAL PROVISIONS

1. Parties' Intent

In furtherance of purposes of the CWA, the parties have agreed to: (i) finally and specifically resolve all mitigation and restoration obligations of the Port of Portland under specified permits for filling of waters of the United States within the Rivergate area of Portland, Oregon as of the Effective Date, subject to specified exceptions; and (ii) finally and specifically resolve Jones' challenges to any action taken or not taken by the United States with respect to any filling performed by the Port in Rivergate and the construction of the Columbia Slough Rail Bridge. These purposes are achieved through the provisions of this Consent Decree and the Enforcement Consent Decree.

2. No Admission of Liability

Neither the Port of Portland nor the United States admit to any liability to Plaintiff or otherwise arising out of the transactions, occurrences, actions or inaction alleged in Jones' Complaint; nor do they admit any violation of any federal or state laws or regulations.

3. Commitments by the Port of Portland

The Port of Portland shall: (i) perform the mitigation and restoration measures specified in section III of this Consent Decree and the related referenced appendices; (ii) consent to entry of the Enforcement Consent Decree, including payment of a civil penalty to

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the United States pursuant to 33 U.S.C. § 1319(d); and (iii) pay Jones the sum of Fifty Thousand Dollars ($50,000.00) in cash in settlement for his litigation costs.

4. Commitments by the United States

The United States shall: (i) find that the terms of this Consent Decree and the Enforcement Consent Decree are the final and complete restoration and mitigation obligations of the Port of Portland under the Clean Water Act for all fill material placed in Rivergate in accordance with the terms of the specified permits, subject to specified exceptions, as provided in paragraph 21 of this Consent Decree; (ii) lodge and seek entry of the Enforcement Consent Decree, pursuant to which the fill identified in the cross-claim of the United States and the activities required by the Enforcement Consent Decree shall be authorized by Nationwide Permit 32; and (iii) terminate the *Cooperative Agreement* as provided in paragraph 22 of this Consent Decree.

5. Commitments by Plaintiff

Upon the entry of this Consent Decree, Plaintiff, William Michael Jones, shall: (i) release and forever discharge all claims against the Port of Portland and the United States as provided in paragraph 25 of this Consent Decree; and (ii) dismiss his claims in this litigation with prejudice.

II. DEFINITIONS

6. Whenever terms listed below are used in this Consent Decree or in the appendices, the following definitions shall apply:

a. "Columbia Slough Rail Bridge" shall mean the rail line bridge within Rivergate located at approximately mile point 0.8 of the Columbia Slough, as depicted and labeled on the map of Rivergate that is **Appendix A**.

b. "Consent Decree" shall mean this Consent Decree and all appendices incorporated by reference. In the event of a conflict between this Consent Decree and any appendix, this Consent Decree shall control.

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c. "*Cooperative Agreement*" shall mean the *Cooperative Agreement Between the Port of Portland, Oregon Division of State Lands, Oregon Department of Fish and Wildlife, U.S. Environmental Protection Agency, U.S. Fish and Wildlife Service, U.S. Army Corps of Engineers To Establish A Rivergate Development Program And An Acceptable Mitigation Program For Wetland Impacts* executed in 1988 and 1989.

d. "Effective Date" shall mean the later date on which the Court executes either this Consent Decree or the Enforcement Consent Decree.

e. "Enforcement Consent Decree" shall mean the separate consent decree entered in this litigation in settlement of the enforcement cross-claim of the United States.

f. "Lombard Street Bridge" shall mean the public vehicular bridge that crosses the Columbia Slough at the approximate intersection of Lombard Street and Marine Drive in Rivergate, as depicted and labeled on the map of Rivergate that is **Appendix A**.

g. "Rivergate" is, in general, the area within the City of Portland located at the confluence of the Willamette and Columbia Rivers as depicted on the map that is **Appendix A**.

h. "United States" shall mean the United States of America, including the Department of Transportation, the U.S. Coast Guard, the Federal Highway Administration, the U.S. Environmental Protection Agency, and the U.S. Army Corps of Engineers, as well as any successor agencies, departments or instrumentalities of the United States, except where otherwise indicated.

i. "Waters of the United States" shall have the same meaning as defined in 33 C.F.R. § 328.3(a).

III. PORT OF PORTLAND'S SECTION 404 MITIGATION

7. Construction of Path Under the Lombard Street Bridge

The Port of Portland shall construct a path on the existing riprap rock embankment beneath and adjacent to the Lombard Street Bridge. The path shall consist of an eight-foot wide asphalt paved surface and a two-foot wide unpaved shoulder on the down-slope (west)

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side of the path for a distance of approximately 140 feet. A clearance of ten feet minimum will be maintained between the surface of the path and the soffits of the bridge girders. A description and plan for the path is provided in **Appendix B**. The Port of Portland shall in good faith expeditiously seek all necessary approvals and to the extent reasonably practicable construct the path within twelve months of the Effective Date.

8. Columbia Slough Restoration and Revegetation

The Port of Portland shall remove fill from areas along the north and south banks of the Columbia Slough, between the Columbia Slough Rail Bridge and the Lombard Street Bridge, landward of the Port's surveyed property boundary, and revegetate, as follows:

a. North Bank. The project area shall be located on the north side of the Columbia Slough, for a distance of approximately 1,400 lineal feet between the Lombard Street Bridge and the Columbia Slough Rail Bridge (excepting the bridge approaches), and landward (east) of the Port's property boundary, as established by survey dated May 13, 1975, for a distance of 150 linear feet. Extending west from the 150-foot buffer line to the edge of the existing vegetation, the Port of Portland shall remove existing sand fill and other fill material down to native soils, except fill may be left at the location of the 40 Mile Loop Trail (the "Trail) for the sole purpose of providing a base for the trail. The Port will make best efforts to minimize the width of the base for the Trail. The fill slope located eastward of the 150-foot buffer line shall be no steeper than 3:1. Within the area requiring fill removal under this paragraph, the Port shall construct the Trail. See paragraph 12 for details of the Trail. The Trail shall be located adjacent to the toe of the fill slope wherever feasible, but the location may vary within the area to accommodate topographical or vegetative features. The Port shall construct within the native soil within the buffer area a swale or swales of a total combined lineal length of 800 feet. Each swale shall be at least ten (10) feet wide at the bottom and one to two feet below the surface of the native soil. The swale or swales shall be constructed parallel to the Columbia Slough. The Port of Portland shall submit to the COE, within 120 days of the Effective Date, a vegetation and final grading plan for the North Bank

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(including the fill slope east of the 150-foot buffer line). The COE shall confer with the Port regarding questions, concerns or changes, and shall approve, disapprove or modify the plan and transmit that decision to the Port within thirty (30) days of receipt of the plan. The vegetation and final grading plan, as approved or modified by the COE, shall become an enforceable part of this Consent Decree. The Port shall have the right to seek judicial review of the terms of the vegetation and final grading plan, as approved or modified by the COE, pursuant to the dispute resolution provisions of paragraphs 27 through 29 of the Enforcement Consent Decree only. A depiction of the North Bank project is provided in **Appendix C**.

b. South Bank. The project area shall be located on the south side of the Columbia Slough for a distance of approximately 1,550 linear feet between the Lombard Street Bridge and the Columbia Slough Rail Bridge (excepting the bridge approaches), landward (west) of the Port's property boundary, as established by survey dated May 13, 1975, for a distance of 50 linear feet. Extending west from the surveyed property boundary for a distance of approximately 50 feet, the Port of Portland shall remove existing sand fill and other fill material down to native soils. The fill slope located westward of the 50-foot buffer line shall be no steeper than 3:1. The Port of Portland shall submit to the COE, within 120 days of the Effective Date, a vegetation and final grading plan for the South Bank, including the fill slope west of the 50-foot buffer line. The COE shall confer with the Port regarding questions, concerns or changes, and shall approve, disapprove or modify the plan and transmit that decision to the Port within thirty (30) days of receipt of the plan. The vegetation and final grading plan, as approved or modified by the COE, shall become an enforceable part of this Consent Decree. The Port shall have the right to seek judicial review of the terms of the vegetation and final grading plan, as approved or modified by the COE, pursuant to the dispute resolution provisions of paragraphs 27 through 29 of the Enforcement Consent Decree only. A depiction of the south bank project is provided in **Appendix D**.

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c. Project schedule. Removal of existing fill within the North Bank and South Bank project areas as described in subparagraphs a. and b. above, will be completed within eighteen (18) months of the Effective Date.

9. Leadbetter Peninsula Restoration and Revegetation

The project area shall be a 200-foot corridor bordering the current eastern, southern and western boundaries of the Leadbetter Peninsula as identified in **Appendix E**. Within this area of approximately 15 acres, the Port of Portland shall remove existing sand fill and other fill material down to native soils for a minimum of 125 feet of the 200-foot corridor on the slough and lake side of the corridor and provide a contoured slope, with an average of no greater than a 4:1 grade, to meet the existing elevation of the top of the remaining fill at the upland edge of the remaining 75 feet of the 200-foot corridor. The Port shall construct within the native soils within the 200-foot corridor a swale or swales of a total combined lineal length of approximately 1,500 feet. Each swale shall be at least ten (10) feet wide at the bottom and two to four feet below the surface of the native soil. The swales shall be constructed parallel to the toe of the fill slope. The Port shall submit to the COE, within 120 days of the Effective Date, a vegetation and final grading plan for the Leadbetter Peninsula. The COE shall confer with the Port regarding questions, concerns or changes, and shall approve, disapprove or modify the plan and transmit that decision to the Port within thirty (30) days of receipt of the plan. The vegetation and final grading plan, as approved or modified by the COE, shall become an enforceable part of this Consent Decree. The Port shall have the right to seek judicial review of the terms of the vegetation and final grading plan, as approved or modified by the COE, pursuant to the dispute resolution provisions of paragraphs 27 through 29 of the Enforcement Consent Decree only. Within and adjacent to the 200-foot corridor, the location of the 40 Mile Loop Trail may vary. See paragraph 12 for details of the Trail. See **Appendix E**. In addition, construction of a stormwater outfall, if otherwise lawfully permitted, shall be permissible within the 200-foot corridor. Removal of the existing fill within the project area will be completed within eighteen (18) months of the Effective Date.

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10. Ramsey Lake Mitigation Area Restoration and Revegetation

a. Visual Vegetation Buffer. The project area shall be located within a corridor bordering the top of the slope west and north of the Ramsey Lake Mitigation Area. Within a corridor varying from 10 feet to 100 feet in depth, as depicted in **Appendix F**, a visual buffer of shrubs and trees shall be planted. The height of the visual buffer shall be limited as necessary to accommodate existing utility poles and transmission lines. The Port shall submit to the COE, within 120 days of the Effective Date, a vegetation and final grading plan for the visual vegetation buffer. The COE shall confer with the Port regarding questions, concerns or changes, and shall approve, disapprove or modify the plan and transmit that decision to the Port within thirty (30) days of receipt of the plan. The vegetation and final grading plan, as approved or modified by the COE, shall become an enforceable part of this Consent Decree. The Port shall have the right to seek judicial review of the terms of the vegetation and final grading plan, as approved or modified by the COE, pursuant to the dispute resolution provisions of paragraphs 27 through 29 of the Enforcement Consent Decree only. This mitigation project does not include or authorize filling of the existing swale within the project area.

b. Wetland and Riparian Enhancements North of Ramsey Lake

The project area shall include the Port's property bounded by the Columbia Slough on the east and north and Ramsey Lake on the west and south. The Port shall remove existing sand fill, other fill material and native soil down to an elevation of 14 NGVD within the project area except for a 100-foot wide strip as measured from toe to toe which extends the full length (southeast to northwest) of the project area as shown in **Appendix G**. The Port shall construct within the project area two meandering swales of a total combined lineal length of 2,000 feet. Each swale shall be at least 50 feet wide at the bottom and the bottom of the swale shall be approximately elevation 10 NGVD. The ends of the swales will be protected with appropriate erosion control methods which may include the placement of fill material. At two locations within the project area, one upstream and one downstream, swales shall connect with

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the slough. The Port shall submit to the COE, within 120 days of the Effective Date, a vegetation and final grading plan for the wetland and riparian enhancements. The COE shall confer with the Port regarding questions, concerns or changes, and shall approve, disapprove or modify the plan and transmit that decision to the Port within thirty (30) days of receipt of the plan. The vegetation and final grading plan, as approved or modified by the COE, shall become an enforceable part of this Consent Decree. The Port shall have the right to seek judicial review of the terms of the vegetation and final grading plan, as approved or modified by the COE, pursuant to the dispute resolution provisions of paragraphs 27 through 29 of the Enforcement Consent Decree only. Removal of the existing fill within the project area will be completed within eighteen (18) months of the Effective Date.

11. Culvert Removal

The Port shall remove the culvert which is adjacent to and east of the railroad bridge on the south side of the Columbia Slough and related fill to the bottom of the elevation of the existing culvert as shown on **Appendix H**. The Port shall implement appropriate erosion control measures, which may include the placement of fill material. Culvert removal and erosion control measures shall be completed within three (3) years of the Effective Date.

12. 40 Mile Loop Trail

The Port shall construct a portion of the 40 Mile Loop Trail along the north and east sides of the Columbia Slough extending from the Columbia Slough Rail Bridge south to the Port's property line, unless the City of Portland withdraws the Trail requirement with respect to the Port. The Trail will be located within the buffers established along the Columbia Slough. The Port shall attempt to negotiate with the City of Portland an agreement that the width the Trail shall not exceed sixteen (16) feet toe to toe at the base, and if possible, shall be narrower. The height of the Trial shall not exceed three (3) feet above native soil. The COE may assist the Port in these negotiations with the City. The Trail may include the placement of base fill material within the buffers. The design of the 40 Mile Loop Trail throughout the

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mitigation areas identified in this Consent Decree shall be included within the appropriate vegetation and final grading plans.

13. Vegetation and Final Grading Plans

All vegetation and final grading plans required by this Consent Decree shall, in addition to vegetation and fine grading, describe in detail (i) the design and location of all swales and benches, and (ii) slope vegetation at the particular mitigation sites.

14. Mitigation Monitoring and Reporting

Mitigation monitoring and reporting shall be provided for in, and enforced through, the Enforcement Consent Decree.

15. Mitigation Success and Remediation

Mitigation success and remediation requirements shall be provided in, and enforced through, the Enforcement Consent Decree.

16. Maintenance

Once the compensatory mitigation has been approved as complete, the Port may maintain the mitigation site, if consistent with this Consent Decree, by such activities as control of nutria and removal of exotic (non-native) vegetative species. The Port may not engage in activities inconsistent with the Consent Decree, such as removal of vegetation or alteration of hydrology, without written approval from the COE.

17. Inspection

The COE and EPA shall be provided the opportunity to inspect the mitigation areas upon reasonable notice to the Port.

18. Additional Mitigation Funding

In addition, the Port shall contribute the sum of Two Hundred Eighty-Five Thousand Dollars ($285,000.00) cash for the express and sole purpose of performance of additional mitigation projects within the Smith & Bybee Lakes Management Area.

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a. Within thirty (30) days of the Effective Date, the Port shall place the specified funds in an interest-bearing account with U.S. Bank. Interest shall accrue for the benefit of the fund, not for the benefit of the Port.

b. The Port shall withdraw and make payment of such funds for projects within ten (10) days after the Port has been notified that such withdrawal and payment has been approved by the COE. The COE may approve payments for projects in its discretion, provided that such projects shall provide environmental mitigation within the Smith & Bybee Lakes Management Area and provided that the COE consults with Mr. Jones regarding potential projects prior to approving such projects for funding. Prior to approving the withdrawal and payment of any funds, the COE shall provide the Parties with a minimum of forty-five (45) days actual written notice describing the project to be funded and the amount of the funding. Mr. Jones shall have the right to object to the withdrawal of such funds on the grounds only: (i) that insufficient information has been provided by the COE from which to evaluate the project and the amount of funding; or (ii) that the proposed project is inconsistent with the purposes of this consent decree or the CWA. Mr. Jones shall make his objection by filing a motion with the Court within the forty-five (45) day period. Mr. Jones shall state all reasons for his objections and shall seek a hearing and determination by the Court. In the event Mr. Jones timely files an objection with the Court pursuant to this provision, the COE shall not approve the withdrawal and payment of the proposed funds until the Court has heard and resolved Mr. Jones' objection or the Parties otherwise mutually agree in writing.

c. As described above, the Port's obligations under this paragraph shall be strictly limited to making the initial payment into the fund and making payments from the fund as approved by the COE.

19. Nationwide Permit Authorization

The Parties acknowledge that in accordance with the terms of the Enforcement Consent Decree, Nationwide Permit 32, found at 61 Fed. Reg. 65,913 (Dec. 13, 1996), authorizes any fill that was placed in the areas identified in **Appendix I** between June 3, 1991 and February

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15, 1996 to remain in place subject to the conditions provided in the Nationwide Permit and the Enforcement Consent Decree. The parties further acknowledge that in accordance with the terms of the Enforcement Consent Decree, Nationwide Permit 32 authorizes the discharge of dredged or fill material insofar as such discharge is necessary to complete the work required to be performed pursuant to this Consent Decree.

IV. COMMITMENTS OF THE UNITED STATES

20. Enforcement Consent Decree

The Parties acknowledge that the Enforcement Consent Decree provides the terms of a complete and final settlement of all civil claims for injunctive relief and civil penalties alleged in the cross-claim of the United States against the Port under CWA section 301 concerning the identified filling.

21. Completion of Port of Portland's Permitting and Mitigation Obligations

a. the Port of Portland has dredged and filled areas within Rivergate pursuant to the following Department of Army (DA) permits:

- DA Permit 1507-27-155 (effective May 30, 1971)
- DA Permit 071-OYA-1-001349 (effective June 3, 1974)
- DA Permit 071-OYA-1-001353 (effective June 3, 1974)
- DA Permit 071-OYA-1-001354 (effective June 3, 1974)
- DA Permit 071-OYA-1-001370 (effective June 3, 1974)
- DA Permit 071-OYA-2-003158 (effective May 29, 1979, and extended effective June 1, 1984)
- DA Permit 071-OYA-2-005294 (effective November 30, 1984, and twice extended, on August 17, 1989 and July 19, 1990)
- DA Permit 071-OYA-1-008624 (effective June 3, 1991)
- DA Permit 95-00534 (effective September 22, 1995)
- Nationwide Permit 15 Authorization re: application No. 95-983 (effective December 5, 1995)
- DA Permit 95-986 (effective March 26, 1996)

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♦ DA Permit 96-00711 (effective October 9, 1996)

b. Except as to those permits and conditions enumerated in subparagraph (d) below, the Parties agree and the Court finds that the mitigation and restoration activities (i) to be performed by the Port of Portland pursuant to paragraphs 7 through 18 of this Consent Decree, and (ii) previously performed by the Port of Portland pursuant to the *Cooperative Agreement*, constitute adequate mitigation and restoration under the Clean Water Act for all fill material placed in Rivergate in accordance with the terms of the permits enumerated in subparagraph (a) and all unauthorized filling as alleged in the enforcement cross-claim of the United States. Accordingly, except as specified in subparagraph (d), the Parties agree and the Court finds that the obligations of the Port of Portland under this Consent Decree are the complete and final restoration and mitigation obligations of the Port of Portland under the Clean Water Act (i) for fill material it has placed in the area of Rivergate in accordance with the enumerated permits and (ii) for unauthorized filling as alleged in the enforcement cross-claim of the United States.

c. To the maximum extent permitted by federal law, the findings in this paragraph 21 are intended to and shall be accorded res judicata and collateral estoppel effect, and to the maximum extent permitted by federal law shall also be found binding upon other private parties who may hereafter file a citizen suit against the Port of Portland for alleged violations of the Clean Water Act which have been alleged in this action.

d. Notwithstanding the other provisions of this paragraph, the Port of Portland's obligations under the following enumerated permits remain fully effective: DA permit 95-534, General Condition 6, subparagraphs d.2, f.1-.3 and h; DA Permit 95-986, General Condition 6, subparagraphs k.1-.4 and m; DA Permit 96-711, General Condition 5; and any and all future permits obtained by the Port of Portland after the execution of this Consent Decree.

22. The United States, on behalf of the COE, EPA and the U.S. Fish & Wildlife Service, releases the Port of Portland from any and all remaining or existing obligations,

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responsibilities or liability to the United States under the *Cooperative Agreement* upon entry of this Consent Decree.

V. COMMITMENTS BY JONES

23. Adequate Legal Representation

Plaintiff acknowledges that defendants advised him to involve qualified legal counsel in the prosecution of this litigation and the negotiation and drafting of the settlement and Consent Decree, that he has consulted legal counsel as he deemed appropriate, and that he has freely elected to proceed, *pro se*.

24. Dismissal of Claims With Prejudice

Jones hereby agrees to and by this Consent Decree requests the dismissal of his claims asserted in the above-captioned litigation with prejudice.

25. Reservation of West Hayden Island Claims and Release

The parties agree that Mr. Jones' dismissal and release of the defendants does not foreclose Mr. Jones' claims of whatever nature with respect to West Hayden Island. In addition, except as otherwise provided in this Consent Decree and the Enforcement Consent Decree, Mr. Jones' may bring future claims that could not have been brought in this litigation based upon actions in Rivergate occurring after the Effective Date. However, in consideration for this reservation of rights with respect to West Hayden Island, which Mr. Jones raised at least in part in the present litigation, to the maximum extent permitted by law Mr. Jones hereby releases and forever discharges the Port of Portland and the United States, and their successors, assigns, agents and employees, from any and all claims, demands, damages, losses, liabilities, injuries, actions, fees, costs, expenses, taxes, penalties, or fines, whether equitable or legal, and whether based upon the statutes, regulations, common-law, executive orders, ordinances or guidance of the United States, the State of Oregon, or the City of Portland, and whether known or unknown, that were or could have been brought in this litigation, including specifically and without limitation any and all claims with respect to the

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entire Rivergate area of Portland. This release does not affect enforcement of the express terms of this Consent Decree.

26. Cooperation

Jones agrees to cooperate in good faith with the United States and the Port of Portland to obtain Court approval of this Consent Decree and to facilitate the completion of the obligations of Parties under this Consent Decree.

VI. FORCE MAJEURE & DISPUTE RESOLUTION

27. "Force Majeure" for purposes of this Consent Decree is defined as any event arising from causes, including but not limited to unusually severe weather, beyond the control of a party or parties to this Consent Decree, including their contractors, that delays or prevents the performance of an obligation under this Consent Decree despite a party's or parties' diligent efforts to fulfill the obligation. A Force Majeure event does not include, inter alia, increased costs of performance, changed economic circumstances, changed labor relations, normal preciptation or climate events, changed circumstances arising out of the sale, lease or other transfer or conveyance of title or ownership or possession of a mitigation site, or the failure to obtain necessary federal, state or local permits, if the Port has failed to exercise due diligence in applying for and pursuing such permits. Default by a contractor providing plantings to the Port for this project may be considered a Force Majeure event provided that the Port diligently monitors performance under the contract and provided the contract contains a reasonable liquidated damages provision.

28. If the performance of any obligation under this Consent Decree is delayed, whether or not caused by a Force Majeure event, the party or parties whose performance is delayed shall notify the other parties to this Consent Decree in writing within fifteen (15) days of the discovery that a delay will occur. The notice shall provide in reasonable detail an explanation and description of the reasons for the delay, the anticipated duration of the delay and a schedule for completion of the delayed performance. In the event that this information cannot yet be determined, in whole or in part, by the date of the written notice, then the notice

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shall provide a date certain not to exceed an additional thirty (30) days by which time the remaining information will be provided.

29. In the event that a party does not agree that a delay or anticipated delay has been or will be caused by a Force Majeure event, or does not agree with the revised schedule for completion of the delayed performance, such party shall notify all other parties in writing of its decision within thirty (30) days of the receipt of the written notice and information identified in paragraph 28 of this Consent Decree and the parties shall negotiate in good faith in an effort to resolve the dispute. No sooner than thirty (30) days after providing a timely written objection of a delay and alternative schedule, but no later than an additional forty-five (45) days thereafter, a party having previously provided a timely written objection may apply to the Court for appropriate relief. In resolving the dispute, the Court shall give due weight and consideration to the intent of the Parties as stated in this Consent Decree, and the objectives of this Consent Decree and the CWA.

30. Notwithstanding paragraphs 27 through 29 of this Consent Decree, any dispute between the Port of Portland and the United States over terms of this Consent Decree which are identical to or incorporated into the Enforcement Consent Decree or concern Force Majeure, shall be governed by the Force Majeure and/or Dispute Resolution provisions of the Enforcement Consent Decree.

VII. NOTICES AND SUBMISSIONS

31. Notices and Submissions to COE

Whenever under the terms of section III of this Consent Decree, written notice is required to be given or a report or other document is required to be sent to the COE, it shall be directed to the following individual at the identified address, unless notice of a change is given to the parties in writing: Chief, Regulatory Branch, Portland District, U.S. Army Corps of Engineers, P.O. Box 2946, Portland, OR 97208-2946. All notices and submissions shall be considered effective upon receipt, unless otherwise provided.

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32. Notices and Submissions to the Parties

Whenever, under the terms of this Consent Decree, written notice is required to be given or a report or other document is required to be sent by one party to the other parties, it shall be directed to the parties through the individuals specified below at the identified addresses, unless a party gives notice of a change to the other parties, in writing. All notices and submissions shall be considered effective upon receipt, unless otherwise provided.

As to the United States:

G. Scott Williams
Environmental Defense Section
Environment & Natural Resources Division
U.S. Department of Justice
P.O. Box 23986
Washington, D.C. 20026
(202) 514-1950
(202) 514-8865 (facsimile)

As to the Port of Portland:

Jeffrey W. Ring
Assistant General Counsel
Port of Portland
121 NW Everett Street
P.O. Box 3529
Portland, OR 97208
(503) 944-7033
(503) 944-7038 (facsimile)

As to Plaintiff, William Michael Jones:

William Michael Jones
2716 N.E. Mason
Portland, OR 97211

This provision is not intended to require the submission to the Parties of materials specified in section III of the Consent Decree for submission to the COE, unless otherwise indicated.

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VIII. RETENTION OF JURISDICTION

33. This Court retains jurisdiction over both the subject matter of this Consent Decree and the Parties until this Consent Decree is terminated pursuant to paragraph 35 below, for the purpose of enabling any of the Parties to apply to the Court at any time for such further order, direction and relief as may be necessary or appropriate: (i) for the construction or modification of this Consent Decree; (ii) to effectuate or enforce compliance with its terms; and (iii) to resolve disputes between or among the Parties.

IX. MODIFICATION AND TERMINATION OF CONSENT DECREE

34. Upon entry by the Court, this Consent Decree shall have the force and effect of a final judgment. Any modification of this Consent Decree shall be in writing, and shall not take effect unless signed by the Parties and approved by the Court; except that the schedules specified in this Consent Decree and its appendices may be modified by unanimous agreement of the Parties. All such agreed modifications shall be made in writing.

35. It is the intent of the Parties that this Consent Decree shall be terminated, upon motion of the Port of Portland, after completion by the Port of the provisions of this Consent Decree. The requirements of this Consent Decree do not include completion of the mitigation monitoring and reporting, and the mitigation success and remediation requirements specified in the Enforcement Consent Decree as provided in paragraphs 14 and 15 of this Consent Decree.

36. Nothing in this Consent Decree shall be deemed to alter the Court's power to enforce, supervise, terminate or approve modifications to this Consent Decree.

37. The provisions, agreements and findings in paragraphs 19, 21, 22, 24, 25 and 40 of this Consent Decree are intended by the parties and shall by ORDER of this Court, survive termination of this Consent Decree.

X. COSTS OF SUIT

38. Attorneys' Fee and Litigation Costs

The Parties shall each bear their own attorneys' fees incurred in connection with this litigation. Within thirty (30) days of the entry of this Consent Decree, the Port of Portland

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Telephone (206) 624-0900

shall pay Jones the sum of Fifty Thousand Dollars ($50,000.00) in complete and final satisfaction for any and all of his litigation costs and expenses of whatever kind incurred in this litigation.

XI. APPENDICES

39. The following appendices are attached to and incorporated into this Consent Decree:

"Appendix A" is an aerial map of the Rivergate area.

"Appendix B" is a depiction of and plan for the path required by paragraph 7.

"Appendix C" is a depiction of the North Bank mitigation project required by paragraph 8(a).

"Appendix D" is a depiction of the South Bank mitigation project required by paragraph 8(b).

"Appendix E" is an depiction of the Leadbetter Peninsula mitigation project required by paragraph 9.

"Appendix F" is a depiction of the Ramsey Lake Mitigation Area visual vegetataon buffer mitigation project required by paragraph 10(a).

"Appendix G" is a depiction of the Ramsey Lake Mitigation Area wetland and riparian mitigation project required by paragraph 10(b).

"Appendix H" is a depiction of the culvert removal mitigation project required by paragraph 11.

"Appendix I" depicts the locations of the unauthorized filling in Rivergate that is addressed in the Enforcement Consent Decree.

In the event of any conflict between the appendices and any written provision stated in paragraphs 1 through 44 of this Consent Decree, the written provisions shall be controlling.

XII. PUBLIC INTEREST AND DILIGENT PROSECUTION

40. The Parties recognize, and the Court by entering this Consent Decree finds, that this Consent Decree has been negotiated by the Parties in good faith, is the product of diligent prosecution by the United States, that implementation of this Consent Decree will avoid prolonged and complicated litigation between and among the Parties, and will expedite

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performance of certain wetland-mitigation and natural resource enhancement measures, that this Consent Decree is fair, reasonable, consistent with the requirements and purposes of the Clean Water Act (including specifically sections 301 and 404) and all other applicable federal law, and that this Consent Decree adequately protects and is in the public interest.

XIII. LODGING AND OPPORTUNITY FOR PUBLIC COMMENT

41. This Consent Decree shall be lodged with the Court for a period of not less than thirty (30) days for public notice and comment. The United States reserves the right to withdraw or withhold its consent if the comments regarding the Consent Decree disclose facts or considerations which indicate that the Consent Decree is inappropriate, improper or inadequate.

42. Jones and the Port of Portland hereby agree not to oppose entry of this Consent Decree by this Court or to challenge any provision of this Consent Decree.

43. If for any reason the Court should decline to approve this Consent Decree in the form presented, this Consent Decree is voidable at the sole discretion of any party.

XIV. SIGNATORY AUTHORITY

44. Each undersigned representative of the Parties, including the Assistant Attorney General for Environment and Natural Resources of the Department of Justice, certifies that he or she is fully authorized to enter into the terms and conditions of this Consent Decree and to execute and legally bind such Party to this document.

STOEL RIVES LLP
ATTORNEYS
600 University Street, Suite 3600, Seattle, WA 98101-3197
Telephone (206) 624-0900

SO ORDERED THIS _____ DAY OF _____, 2000.

Helen J. Frye
United States District Judge

FOR THE UNITED STATES OF AMERICA

LOIS J. SCHIFFER
Assistant Attorney General
Environment & Natural Resources Division

Dated: 11/22/00

G. Scott Williams
Environmental Defense Section
U.S. Department of Justice
P.O. Box 23986
Washington, D.C. 20026

FOR THE PORT OF PORTLAND

Dated: 11/27/00

Mike Thorne
Executive Director, Port of Portland

Dated: 11/21/00

Jeffrey W. Leppo, WSBA. #11099
Beth S. Ginsberg, WSBA #18523
Richard Gleason, OSB #81239
STOEL RIVES LLP
600 University St., Suite 3600
Seattle, Washington 98101-3197

FOR PLAINTIFF

Dated: 11-27-00

William Michael Jones, *pro se*
2716 N.E. Mason, Portland OR 97211

STOEL RIVES LLP
ATTORNEYS
600 University Street, Suite 3600, Seattle, WA 98101-3197
Telephone (206) 624-0900

APPENDIX F-2

Consent Decree Settling United States' Cross-Claim Against Port of Portland, January 31, 2001

2000-171

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF OREGON

WILLIAM MICHAEL JONES, Plaintiff, v. MIKE THORNE, et al., Defendants.	)	Case No. CV97-1674-ST
UNITED STATES OF AMERICA, Cross-claim Plaintiff, v. PORT OF PORTLAND, Cross-claim Defendant.	)	

CONSENT DECREE SETTLING UNITED STATES' CROSS-CLAIM AGAINST PORT OF PORTLAND

WHEREAS, the Cross-claim Plaintiff, the United States of America ("United States"), on behalf of the United States Department of the Army, Corps of Engineers ("COE"), filed the Cross-claim herein against the Cross-claim Defendant, Port of Portland ("Port"), concurrently with this Consent Decree, alleging that the Port violated Section 301(a) of the Clean Water Act ("CWA"), 33 U.S.C. § 1311(a);

WHEREAS, the Cross-claim alleges that the Port violated CWA Section 301(a) by discharging dredged or fill material and/or controlling and directing the discharge of dredged or fill material into waters of the United States in the Rivergate area of Portland, Oregon (the "Site,"

which is described more fully in Exhibit 1 to this Consent Decree, which is incorporated herein by reference);

WHEREAS, in the Cross-claim and this Consent Decree, the United States seeks and the Port consents to (1) mitigation and/or restoration of the damages caused by the Port's unlawful activities, such mitigation and/or restoration to be performed by the Port at its own expense, as provided in the Consent Decree; and (2) payment of a civil penalty by the Port to the United States as provided in 33 U.S.C. §§ 1319(d) and 1344(s)(4);

WHEREAS, this Consent Decree is intended to constitute a complete and final settlement of the United States' claims under the CWA set forth in the Cross-claim regarding the Site;

WHEREAS, the United States and the Port agree that settlement of this case is in the public interest and that entry of this Consent Decree is the most appropriate means of resolving the United States' claims under the CWA against the Port in this case; and

WHEREAS, the Court finds that this Consent Decree is a reasonable and fair settlement of the United States' claims against the Port in this case, and that this Consent Decree adequately protects the public interest in accordance with the CWA and all other applicable federal law.

THEREFORE, before the taking of any testimony upon the pleadings, without further adjudication of any issue of fact or law, and upon consent of the parties hereto by their authorized representatives, it is hereby ORDERED, ADJUDGED and DECREED as follows:

I. JURISDICTION AND VENUE

1. This Court has jurisdiction over the subject matter of this action and over the parties pursuant to 28 U.S.C. §§ 1331, 1345, and 1355, and Sections 309(b) and 404(s) of the CWA, 33 U.S.C. §§ 1319(b), 1344(s).

2. Venue is proper in the District of Oregon pursuant to CWA Sections 309(b) and 404(s), 33 U.S.C. §§ 1319(b), 1344(s) and 28 U.S.C. §§ 1391(b) and (c), because the Port conducts business in this District, the Site is located in this District, and the causes of action alleged in the Cross-claim arose in this District.

3. The Cross-claim states claims upon which relief can be granted pursuant to Sections 301, 309 and 404 of the CWA, 33 U.S.C. §§ 1311, 1319 and 1344.

II. APPLICABILITY

4. The obligations of this Consent Decree shall apply to and be binding upon the Port, its officers, directors, agents, employees and servants, and its successors and assigns and any person, firm, association or corporation who is, or will be, acting in concert or participation with the Port whether or not such person has notice of this Consent Decree. In any action to enforce this Consent Decree against the Port, the Port shall not raise as a defense the failure of any of its officers, directors, agents, employees, successors or assigns or any person, firm or corporation acting in concert or participation with the Port, to take any actions necessary to comply with the provisions hereof.

5. The transfer of ownership or other interest in the property subject to restoration and/or mitigation as described in Exhibit 2 to this Consent Decree, which is incorporated herein by reference, shall not alter or relieve the Port of its obligation to comply with all of the terms of this Consent Decree. At least five (5) days prior to the transfer of ownership or other interest in such property, the Port shall provide written notice and a true copy of this Consent Decree to its successors in interest and shall simultaneously notify the COE and the United States Department of Justice at the addresses specified in Section X below that such notice has been given. As a

condition to any such transfer, the Port shall reserve all rights necessary to comply with the terms of this Consent Decree.

III. SCOPE OF CONSENT DECREE

6. This Consent Decree shall constitute a complete and final settlement of all civil claims for injunctive relief and civil penalties alleged in the Cross-claim against the Port under CWA Section 301 concerning the Site.

7. It is the express purpose of the parties in entering this Consent Decree to further the objectives set forth in CWA Section 101, 33 U.S.C. § 1251. All plans, construction, remedial maintenance, monitoring programs, and other obligations in this Consent Decree or resulting from the activities required by this Consent Decree shall have the objective of causing the Port to achieve and maintain full compliance with, and to further the purposes of, the CWA.

8. The parties acknowledge that Nationwide Permit 32, found at 61 Fed. Reg. 65,913 (Dec. 13, 1996), authorizes any fill that was placed in the areas identified in Exhibit 1 between June 3, 1991, and February 15, 1996, to remain in place, subject to the conditions provided in the Nationwide Permit and this Consent Decree. The parties further acknowledge that Nationwide Permit 32 (61 Fed. Reg. 65,913) authorizes the discharge of dredged or fill material insofar as such discharge is necessary to complete the work required to be performed pursuant to this Consent Decree. Any such discharge of dredged or fill material necessary for work required by this Consent Decree shall be subject to the conditions of the Nationwide Permit and this Consent Decree.

9. Except for the provisions of paragraph 8 of this Consent Decree, this Consent Decree is not and shall not be interpreted to be a permit or modification of any existing permit

issued pursuant to Sections 402 or 404 of the CWA, 33 U.S.C. §§ 1342 or 1344, or any other law. Nothing in this Consent Decree shall limit the ability of the COE to issue, modify, suspend, revoke or deny any individual permit or any nationwide or regional general permit, nor shall this Consent Decree limit the ability of the Environmental Protection Agency to exercise its authority pursuant to Section 404(c) of the CWA, 33 U.S.C. § 1344(c). This paragraph shall not alter or affect in any way the provisions of paragraph 22 of the Consent Decree, Order of Dismissal with Prejudice and Release filed in Jones v. Thorne, Case No. CV-97-1674-ST (D. Oregon).

10. Except for the provisions of paragraph 8 of this Consent Decree, this Consent Decree in no way affects or relieves the Port of its responsibility to comply with any applicable federal, state, or local law, regulation or permit.

11. This Consent Decree in no way affects the rights of the United States as against any person not a party to this Consent Decree.

12. The United States reserves any and all legal and equitable remedies available to enforce the provisions of this Consent Decree and applicable law.

13. Except for the provisions of paragraph 8 of this Consent Decree, nothing in this Consent Decree shall constitute an admission of fact or law by any party.

IV. SPECIFIC PROVISIONS

CIVIL PENALTIES

14. The Port shall pay a civil penalty to the United States in the amount of Fifty Thousand Dollars ($50,000) within 30 days of entry of this Consent Decree.

15. The Port shall make the above-referenced payment by FedWire Electronic Funds Transfer ("EFT" or wire transfer) to the U.S. Department of Justice account in accordance with

current electronic funds transfer procedures, referencing DOJ case number 90-5-1-4-585. Payment shall be made in accordance with instructions provided to the Port by the Department of Justice. Any payments received by the Department of Justice after 4:00 P.M. (Eastern Time) will be credited on the next business day.

16. Upon payment of the civil penalty required by this Consent Decree, the Port shall provide written notice, at the addresses specified in Section X of this Consent Decree, that such payment was made in accordance with Paragraph 15.

17. Civil penalty payments pursuant to this Consent Decree (including stipulated penalty payments under Section IX) are penalties within the meaning of Section 162(f) of the Internal Revenue Code, 26 U.S.C. § 162(f), or of 26 C.F.R. § 1.162-21 and are not tax deductible expenditures for purposes of federal law.

RESTORATION, MITIGATION AND PRESERVATION

18. The Port shall perform restoration and mitigation projects under the terms and conditions stated in Exhibit 2 appended hereto and incorporated herein by reference.

19. Upon completion of the terms and conditions of Exhibit 2, the Port shall not mow, cut, clear, cultivate, dredge, excavate, farm, fill, dewater, drain or otherwise disturb in any manner whatsoever any location identified in Exhibit 2, except as provided in Exhibit 2 or otherwise approved in writing by the COE. The COE may refuse to process or issue a permit pursuant to section 404 of the Clean Water Act, 33 U.S.C. § 1344, for activities at any location identified in Exhibit 2 on the ground that such activities would be inconsistent with the purposes of this Consent Decree.

20. Within six (6) months of entry of this Consent Decree, the Port shall record a certified copy of this Consent Decree with the Recorder of Deeds Office in Multnomah County, Oregon. If required to properly record this Consent Decree, a legal description of the property identified in Exhibit 2 shall also be included. Any deed, title, or other instrument by which the Port conveys an interest in any property identified in Exhibit 2 shall contain a notice stating that the property is subject to this Consent Decree and shall reference the recorded location of the Consent Decree and any restrictions applicable to the property under this Consent Decree. Failure to comply with the requirements of this paragraph shall constitute a breach of this Consent Decree.

V. NOTICES AND OTHER SUBMISSIONS

21. Within 30 days after the deadline for completing any task set forth in Exhibit 2 of this Consent Decree, the Port shall provide the United States with written notice, at the addresses specified in Section X of this Consent Decree, of whether or not that task has been completed.

22. If the required task has been completed, the notice shall specify the date when it was completed, and explain the reasons for any delay in completion beyond the scheduled time for such completion required by the Consent Decree.

23. In all notices, documents or reports submitted to the United States pursuant to this Consent Decree, the Port shall, by signature of a senior management official, certify such notices, documents and reports as follows:

> I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering such information, the information submitted is, to the best of my knowledge and belief, true, accurate

and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

VI. RETENTION OF RECORDS AND RIGHT OF ENTRY

24. Until the termination of this Consent Decree, the Port shall preserve and retain all records and documents now in its possession or control or which come into its possession or control that relate in any manner to the performance of the tasks in Exhibit 2, regardless of any corporate retention policy to the contrary. Until the termination of this Consent Decree, the Port shall also instruct its contractors and agents to preserve all documents, records, and information of whatever kind, nature or description relating to the performance of the tasks in Exhibit 2.

25. At the conclusion of the document retention period, the Port shall notify the United States at least 90 days prior to the destruction of any such records or documents, and, upon request by the United States, the Port shall deliver any such records or documents to the COE. The Port may assert that certain documents, records and other information are privileged under the attorney-client privilege or any other privilege recognized by federal law. If the Port asserts such a privilege, it shall provide the United States with the following: (1) the title of the document, record, or information; (2) the date of the document, record, or information; (3) the name and title of the author of the document, record, or information; (4) the name and title of each addressee and recipient; (5) a description of the subject of the document, record, or information; and (6) the privilege asserted by the Port. However, no documents, reports or other information created or generated pursuant to the requirements of the Consent Decree shall be withheld on the grounds that they are privileged.

26. A. Until termination of this Consent Decree, the United States and its authorized representatives and contractors shall have authority at all reasonable times to enter the Port's premises to:

1) Monitor the activities required by this Consent Decree;

2) Verify any data or information submitted to the United States;

3) Obtain samples;

4) Inspect and evaluate the Port's restoration and/or mitigation activities; and

5) Inspect and review any records required to be kept under the terms and conditions of this Consent Decree and the CWA.

B. This provision of this Consent Decree is in addition to, and in no way limits or otherwise affects, the statutory authorities of the United States to conduct inspections, to require monitoring and to obtain information from the Port as authorized by law.

VII. DISPUTE RESOLUTION

27. Any dispute that arises with respect to the meaning or requirements of this Consent Decree shall be, in the first instance, the subject of informal negotiations between the United States and the Port to attempt to resolve such dispute. The period for informal negotiations shall not extend beyond thirty (30) days beginning with written notice by one party to the other party that a dispute exists, unless agreed to in writing by those parties. If a dispute between the United States and the Port cannot be resolved by informal negotiations, then the position advanced by the United States shall be considered binding unless, within fourteen (14) days after the end of the informal negotiations period, the Port files a motion with the Court seeking resolution of the dispute. The motion shall set forth the nature of the dispute and a

proposal for its resolution. The United States shall have thirty (30) days to respond to the motion and propose an alternate resolution. In resolving any such dispute, the Port shall bear the burden of proving by a preponderance of the evidence that the United States' position is not in accordance with the provisions of this Consent Decree and the CWA, and that the Port's position will achieve compliance with the terms and conditions of this Consent Decree and the CWA.

28. If the United States believes that a dispute is not a good faith dispute, or that a delay would pose or increase a threat of harm to the public or the environment, it may move the Court for a resolution of the dispute prior to the expiration of the thirty (30) day period for informal negotiations. The Port shall have fourteen (14) days to respond to the motion and propose an alternate resolution. In resolving any such dispute, the Port shall bear the burden of proving by a preponderance of the evidence that the United States' position is not in accordance with the provisions of this Consent Decree, and that the Port's position will achieve compliance with the terms and conditions of this Consent Decree and the CWA.

29. The filing of a motion asking the Court to resolve a dispute shall not extend or postpone any obligation of the Port under this Consent Decree, except as provided in Paragraph 37 below regarding payment of stipulated penalties.

VIII. FORCE MAJEURE

30. The Port shall perform the actions required under this Decree within the time limits set forth or approved herein, unless the performance is prevented or delayed solely by events which constitute a Force Majeure event. A Force Majeure event is defined as any event arising from causes, including but not limited to unusually severe weather, beyond the control of Port, including its employees, agents, consultants and contractors, which could not be overcome

by due diligence and which delays or prevents the performance of an action required by this Consent Decree within the specified time period. A Force Majeure event does not include, inter alia, increased costs of performance, changed economic circumstances, changed labor relations, normal precipitation or climate events, changed circumstances arising out of the sale, lease or other transfer or conveyance of title or ownership or possession of a site, or failure to obtain federal, state or local permits, if the Port has failed to exercise due diligence in applying for and pursuing such permits. Default by a contractor providing plantings to the Port for this project may be considered a Force Majeure event provided that the Port diligently monitors performance under the contract and provided the contract contains a reasonable liquidated damages provision.

31. If the Port believes that a Force Majeure event has affected its ability to perform any action required under this Consent Decree, the Port shall notify the United States in writing within seven (7) calendar days after the event at the addresses listed in Section X. Such notice shall include a discussion of the following:

A. what action has been affected;

B. the specific cause(s) of the delay;

C. the length or estimated duration of the delay; and

D. any measures taken or planned by the Port to prevent or minimize the delay and a schedule for the implementation of such measures.

The Port may also provide to the United States any additional information that it deems appropriate to support its conclusion that a Force Majeure event has affected its ability to perform an action required under this Consent Decree. Failure to provide timely and complete

notification to the United States shall constitute a waiver of any claim of Force Majeure as to the event in question.

32. If the United States determines that the conditions constitute a Force Majeure event, then the deadline for the affected action shall be extended by the amount of time of the delay caused by the Force Majeure event. The Port shall coordinate with the COE to determine when to begin or resume the operations that had been affected by any Force Majeure event.

33. If the parties are unable to agree whether the conditions constitute a Force Majeure event, or whether the length of time for fulfilling the provision of the Consent Decree at issue should be extended, any party may seek a resolution of the dispute under the procedures in Section VII of this Consent Decree.

34. The Port shall bear the burden of proving (1) that the noncompliance at issue was caused by circumstances entirely beyond the control of the Port and any entity controlled by the Port, including its contractors and consultants; (2) that the Port or any entity controlled by the Port could not have foreseen and prevented such noncompliance; and (3) the number of days of noncompliance that were caused by such circumstances.

IX. STIPULATED PENALTIES

35. A. After entry of this Consent Decree, if the Port fails to timely fulfill any requirement of the Consent Decree (including Exhibit 2) identified in Paragraph 35.B. below, the Port shall pay a stipulated penalty to the United States for each violation of each requirement as follows:

(i)	For Day 1 up to and including Day 30 of non-compliance	$200.00 per day

(ii)	For Day 31 up to and including Day 60 of non-compliance	$2,000.00 per day
(iii)	For Day 61 and beyond of non-compliance	$3,000.00 per day

Such payments shall be made without demand by the United States on or before the last day of the month following the month in which the stipulated penalty accrued.

B. Stipulated penalties shall accrue for failure to fulfill the following requirements under this Consent Decree (including Exhibit 2):

(i) Payment of the civil penalty pursuant to paragraph 14 of this Consent Decree;

(ii) Submission of the vegetation and final grading plan pursuant to paragraphs 2-4 of Exhibit 2;

(iii) Removal of fill pursuant to paragraphs 2-4 of Exhibit 2;

(iv) Completion of plantings as provided in the vegetation and final grading plan as approved or modified by the COE pursuant to paragraphs 2-4 of Exhibit 2;

(v) Completion of subsequent plantings as provided in any remediation plans as approved or modified by the COE pursuant to paragraph 9 of Exhibit 2;

(vi) Submission of annual mitigation monitoring reports pursuant to paragraph 8 of Exhibit 2;

(vii) Payment of the mitigation funding pursuant to paragraphs 11 and 12 of Exhibit 2.

36. Any disputes concerning the amount of stipulated penalties, or the underlying violation that gives rise to the stipulated penalties, that cannot be resolved by the parties pursuant

to the Dispute Resolution provisions in Section VII and/or the Force Majeure provisions in Section VIII shall be resolved upon motion to this Court as provided in Paragraphs 27 and 28.

37. The filing of a motion requesting that the Court resolve a dispute shall stay the Port's obligation to pay any stipulated penalties with respect to the disputed matter pending resolution of the dispute. Notwithstanding the stay of payment, stipulated penalties shall continue to accrue from the first day of any failure or refusal to comply with any term or condition of this Consent Decree. In the event that the Port does not prevail on the disputed issue, stipulated penalties shall be paid by the Port as provided in this Section.

38. To the extent the Port demonstrates to the Court that a delay or other non-compliance was due to a Force Majeure event (as defined in Paragraph 30 above) or otherwise prevails on the disputed issue, the Court shall excuse the stipulated penalties for that delay or non-compliance.

39. In the event that a stipulated penalty payment is applicable and not made on time, interest will be charged in accordance with the statutory judgment interest rate provided for in 28 U.S.C. § 1961. The interest shall be computed daily from the time the payment is due until the date the payment is made. The interest shall also be compounded annually.

40. The Port shall make any payment of a stipulated penalty by FedWire Electronic Funds Transfer ("EFT" or wire transfer) to the U.S. Department of Justice account in accordance with current electronic funds transfer procedures, referencing DOJ case number 90-5-1-4-585. Payment shall be made in accordance with instructions provided to the Port by the Department of Justice. Any payments received by the Department of Justice after 4:00 P.M. (Eastern Time) will

be credited on the next business day. Further, upon payment of any stipulated penalties, the Port shall provide written notice, at the addresses specified in Section X of this Decree.

X. ADDRESSES

41. All notices and communications required under this Consent Decree shall be made to the parties through each of the following persons and addresses:

A. TO THE COE:

Chief, Regulatory Branch
Portland District
U.S. Army Corps of Engineers
P.O. Box 2946
Portland, OR 97208-2946

B. TO THE UNITED STATES DEPARTMENT OF JUSTICE

G. Scott Williams, Attorney
Environmental Defense Section
Environment and Natural Resources Division
U.S. Department of Justice
P.O. Box 23986
Washington, D.C. 20026-3986

C. TO THE PORT:

Jeffrey W. Ring, Esq.
Assistant General counsel
Port of Portland
121 NW Everett Street
P.O. Box 3529
Portland, OR 97209

XI. COSTS OF SUIT

42. Each party to this Consent Decree shall bear its own costs and attorneys' fees in this action. Should the Port subsequently be determined by the Court to have violated the terms or conditions of this Consent Decree, the Port shall be liable for any costs or attorneys' fees

incurred by the United States in any action against the Port for noncompliance with or enforcement of this Consent Decree.

XII. PUBLIC COMMENT

43. The parties acknowledge that after the lodging and before the entry of this Consent Decree, final approval by the United States is subject to the requirements of 28 C.F.R. § 50.7, which provides for public notice and comment. The United States reserves the right to withhold or withdraw its consent to the entry of this Consent Decree if the comments received disclose facts which lead the United States to conclude that the proposed judgment is inappropriate, improper, or inadequate. The Port agrees not to withdraw from, oppose entry of, or to challenge any provision of this Consent Decree, unless the United States has notified the Port in writing that it no longer supports entry of the Consent Decree.

XIII. CONTINUING JURISDICTION OF THE COURT

44. This Court shall retain jurisdiction over this action in order to enforce or modify the Consent Decree consistent with applicable law or to resolve all disputes arising hereunder as may be necessary or appropriate for construction or execution of this Consent Decree. During the pendency of the Consent Decree, any party may apply to the Court for any relief necessary to construe and effectuate the Consent Decree.

XIV. MODIFICATION

45. Upon its entry by the Court, this Consent Decree shall have the force and effect of a final judgment. Any modification of this Consent Decree shall be in writing, and shall not take effect unless signed by both the United States and the Port and approved by the Court.

XV. TERMINATION

46. The Port shall demonstrate to the satisfaction of the United States that the Port has complied with all the terms of this Consent Decree. One hundred eighty (180) days after such a showing by the Port, the United States agrees not to oppose a motion to terminate the Consent Decree. The provisions of paragraphs 19 and 20 of this Consent Decree shall survive the termination of this Consent Decree.

IT IS SO ORDERED.

Dated and entered this _____ day of _____, 200_.

_____
United States District Judge

ON BEHALF OF THE UNITED STATES:

LOIS J. SCHIFFER
Assistant Attorney General
Environment and Natural Resources Division

Dated: 11/21/00

G. Scott Williams, Attorney
Environmental Defense Section
Environment and Natural Resources Division
U.S. Department of Justice
P.O. Box 23986
Washington, D.C. 20026-3986

Dated: 11-22-00

Lawrence C. Evans
Chief, Regulatory Branch
Portland District
U.S. Army Corps of Engineers
P.O. Box 2946
Portland, OR 97208-2946

FOR THE PORT OF PORTLAND:

Dated: 11-27-00

Mike Thorne
Executive Director, Port of Portland

Dated:_____

Jeffrey W. Leppo, WSBA #11099
Beth S. Ginsberg, WSBA #18523
Richard Gleason, OSB #81239
STOEL RIVES LLP
600 University St., Suite 3600
Seattle, Washington 98101-3197

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF OREGON

WILLIAM MICHAEL JONES, Plaintiff, v. MIKE THORNE, et al., Defendants.	)	Case No. CV97-1674-ST
UNITED STATES OF AMERICA, Cross-claim Plaintiff, v. PORT OF PORTLAND, Cross-claim Defendant.	)	

EXHIBIT 2
TO
CONSENT DECREE SETTLING UNITED STATES'
CROSS-CLAIM AGAINST PORT OF PORTLAND

The Port of Portland ("Port") shall perform the following mitigation and restoration in the Rivergate area of Portland, Oregon. A map of the Rivergate area is included as Appendix A.

1. Construction of Path Under the Lombard Street Bridge

The Port shall construct a path on the existing riprap rock embankment beneath and adjacent to the Lombard Street Bridge. The path shall consist of an eight-foot wide asphalt paved surface and a two-foot wide unpaved shoulder on the down-slope (west) side of the path for a distance of approximately 140 feet. A clearance of ten feet

minimum will be maintained between the surface of the path and the soffits of the bridge girders. A description and plan for the path is provided in Appendix B. The Port of Portland shall in good faith expeditiously seek all necessary approvals and to the extent reasonably practicable construct the path within twelve months of the Effective Date. The "Effective Date" for purposes of this Consent Decree shall mean the date on which the Court executes this Consent Decree.

2. Columbia Slough Restoration and Revegetation

The Port of Portland shall remove fill from areas along the north and south banks of the Columbia Slough, between the Columbia Slough Rail Bridge and the Lombard Street Bridge, landward of the Port's surveyed property boundary, and revegetate, as follows:

a. North Bank. The project area shall be located on the north side of the Columbia Slough, for a distance of approximately 1,400 lineal feet between the Lombard Street Bridge and the Columbia Slough Rail Bridge (excepting the bridge approaches), and landward (east) of the Port's property boundary, as established by survey dated May 13, 1975, for a distance of 150 linear feet. Extending west from the 150-foot buffer line to the edge of the existing vegetation, the Port of Portland shall remove existing sand fill and other fill material down to native soils, except fill may be left at the location of the 40 Mile Loop Trail (the "Trail") for the sole purpose of providing a base for the trail. The Port will make best efforts to minimize the width of the base for the Trail. The fill slope located eastward of the 150-foot buffer line shall be no steeper than 3:1. Within the area requiring fill removal under this paragraph, the Port

shall construct the Trail. See paragraph 6 for details of the Trail. The Trail shall be located adjacent to the toe of the fill slope wherever feasible, but the location may vary within the area to accommodate topographical or vegetative features. The Port shall construct within the native soil within the buffer area a swale or swales of a total combined lineal length of 800 feet. Each swale shall be at least ten (10) feet wide at the bottom and one to two feet below the surface of the native soil. The swale or swales shall be constructed parallel to the Columbia Slough. The Port of Portland shall submit to the United States Department of the Army, Corps of Engineers ("COE"), within 120 days of the Effective Date, a vegetation and final grading plan for the North Bank (including the fill slope east of the 150-foot buffer line). The COE shall confer with the Port regarding questions, concerns or changes, and shall approve, disapprove or modify the plan and transmit that decision to the Port within thirty (30) days of receipt of the plan. The vegetation and final grading plan, as approved or modified by the COE, shall become an enforceable part of this Consent Decree. The Port shall have the right to seek judicial review of the terms of the vegetation and final grading plan, as approved or modified by the COE, pursuant to the dispute resolution provisions of paragraphs 27 through 29 of this Consent Decree. A depiction of the North Bank project is provided in Appendix C.

b. South Bank. The project area shall be located on the south side of the Columbia Slough for a distance of approximately 1,550 linear feet between the Lombard Street Bridge and the Columbia Slough Rail Bridge (excepting the bridge approaches), landward (west) of the Port's property boundary, as established by survey dated May 13, 1975, for a distance of 50 linear feet. Extending west from the surveyed

property boundary for a distance of approximately 50 feet, the Port of Portland shall remove existing sand fill and other fill material down to native soils. The fill slope located westward of the 50-foot buffer line shall be no steeper than 3:1. The Port of Portland shall submit to the COE, within 120 days of the Effective Date, a vegetation and final grading plan for the South Bank, including the fill slope west of the 50-foot buffer line. The COE shall confer with the Port regarding questions, concerns or changes, and shall approve, disapprove or modify the plan and transmit that decision to the Port within thirty (30) days of receipt of the plan. The vegetation and final grading plan, as approved or modified by the COE, shall become an enforceable part of this Consent Decree. The Port shall have the right to seek judicial review of the terms of the vegetation and final grading plan, as approved or modified by the COE, pursuant to the dispute resolution provisions of paragraphs 27 through 29 of this Consent Decree. A depiction of the south bank project is provided in Appendix D.

c. Project schedule. Removal of existing fill within the North Bank and South Bank project areas as described in subparagraphs a. and b. above, will be completed within eighteen (18) months of the Effective Date.

3. Leadbetter Peninsula Restoration and Revegetation

The project area shall be a 200-foot corridor bordering the current eastern, southern and western boundaries of the Leadbetter Peninsula as identified in Appendix E. Within this area of approximately 15 acres, the Port of Portland shall remove existing sand fill and other fill material down to native soils for a minimum of 125 feet of the 200-foot corridor on the slough and lake side of the corridor and provide a contoured slope,

with an average of no greater than a 4:1 grade, to meet the existing elevation of the top of the remaining fill at the upland edge of the remaining 75 feet of the 200-foot corridor. The Port shall construct within the native soils within the 200-foot corridor a swale or swales of a total combined lineal length of approximately 1,500 feet. Each swale shall be at least ten (10) feet wide at the bottom and two to four feet below the surface of the native soil. The swales shall be constructed parallel to the toe of the fill slope. The Port shall submit to the COE, within 120 days of the Effective Date, a vegetation and final grading plan for the Leadbetter Peninsula. The COE shall confer with the Port regarding questions, concerns or changes, and shall approve, disapprove or modify the plan and transmit that decision to the Port within thirty (30) days of receipt of the plan. The vegetation and final grading plan, as approved or modified by the COE, shall become an enforceable part of this Consent Decree. The Port shall have the right to seek judicial review of the terms of the vegetation and final grading plan, as approved or modified by the COE, pursuant to the dispute resolution provisions of paragraphs 27 through 29 of this Consent Decree. Within and adjacent to the 200-foot corridor, the location of the 40 Mile Loop Trail may vary. See paragraph 6 of this Exhibit for details of the Trail. See Appendix E. In addition, construction of a stormwater outfall if otherwise lawfully permitted, shall be permissible within the 200-foot corridor. Removal of the existing fill within the project area will be completed within eighteen (18) months of the Effective Date.

4. Ramsey Lake Mitigation Area Restoration and Revegetation

a. Visual Vegetation Buffer. The project area shall be located within

a corridor bordering the top of the slope west and north of the Ramsey Lake Mitigation Area. Within a corridor varying from 10 feet to 100 feet in depth, as depicted in Appendix F, a visual buffer of shrubs and trees shall be planted. The height of the visual buffer shall be limited as necessary to accommodate existing utility poles and transmission lines. The Port shall submit to the COE, within 120 days of the Effective Date, a vegetation and final grading plan for the visual vegetation buffer. The COE shall confer with the Port regarding questions, concerns or changes, and shall approve, disapprove or modify the plan and transmit that decision to the Port within thirty (30) days of receipt of the plan. The vegetation and final grading plan, as approved or modified by the COE, shall become an enforceable part of this Consent Decree. The Port shall have the right to seek judicial review of the terms of the vegetation and final grading plan, as approved or modified by the COE, pursuant to the dispute resolution provisions of paragraphs 27 through 29 of this Consent Decree. This mitigation project does not include or authorize filling of the existing swale within the project area.

b. Wetland and Riparian Enhancements North of Ramsey Lake

The project area shall include the Port's property bounded by the Columbia Slough on the east and north and Ramsey Lake on the west and south. The Port shall remove existing sand fill, other fill material, and native soil down to an elevation of 14 NGVD within the project area except for a 100-foot wide strip as measured from toe to toe which extends the full length (southeast to northwest) of the project area as shown in Appendix G. The Port shall construct within the project area two meandering swales of a total combined lineal length of 2,000 feet. Each swale shall be at least 50 feet wide at the

bottom and the bottom of the swale shall be approximately elevation 10 NGVD. The ends of the swales will be protected with appropriate erosion control methods which may include the placement of fill material. At two locations within the project area, one upstream and one downstream, swales shall connect with the slough. The Port shall submit to the COE, within 120 days of the Effective Date, a vegetation and final grading plan for the wetland and riparian enhancements. The COE shall confer with the Port regarding questions, concerns or changes, and shall approve, disapprove or modify the plan and transmit that decision to the Port within thirty (30) days of receipt of the plan. The vegetation and final grading plan, as approved or modified by the COE, shall become an enforceable part of this Consent Decree. The Port shall have the right to seek judicial review of the terms of the vegetation and final grading plan, as approved or modified by the COE, pursuant to the dispute resolution provisions of paragraphs 27 through 29 of this Consent Decree. Removal of the existing fill within the project area will be completed within eighteen (18) months of the Effective Date.

5. Culvert Removal

The Port shall remove the culvert which is adjacent to and east of the railroad bridge on the south side of the Columbia Slough and related fill to the bottom of the elevation of the existing culvert as shown on Appendix H. The Port shall implement appropriate erosion control measures, which may include the placement of fill material. Culvert removal and erosion control measures shall be completed within three (3) years of the Effective Date.

6. 40 Mile Loop Trail

The Port shall construct a portion of the 40 Mile Loop Trail along the north and east sides of the Columbia Slough extending from the Columbia Slough Rail Bridge south to the Port's property line, unless the City of Portland withdraws the Trail requirement with respect to the Port. The Trail will be located within the buffers established along the Columbia Slough. The Port shall attempt to negotiate with the City of Portland an agreement that the width of the Trail shall not exceed sixteen (16) feet toe to toe at the base, and if possible, shall be narrower. The height of the trail shall not exceed three feet above native soil. The COE may assist the Port in these negotiations with the City. The Trail may include the placement of base fill material within the buffers. The design of the 40 Mile Loop Trail throughout the mitigation areas identified in this Consent Decree shall be included within the appropriate vegetation and final grading plans.

7. Vegetation and Final Grading Plans

All vegetation and final grading plans required by this Consent Decree shall, in addition to vegetation and fine grading, describe in detail (i) the design and location of all swales and benches, and (ii) slope vegetation at the particular mitigation sites.

8. Mitigation Monitoring and Reporting

a. The Port shall provide the COE with a yearly report providing information on the status of the project

b. For year zero, the year in which the mitigation site is constructed and planted, the Port shall provide the COE with an as-built mitigation site report. That report shall include as-built plan and cross-section drawings, and full photographic

coverage of the mitigation site from fixed locations,

c. For the first through fifth years after planting of the site (years 1-5) the Port shall provide the COE with annual mitigation monitoring reports. These reports shall include: i) full photographic coverage of the site, ii) vegetation transect data, iii) hydrology information (including depth and duration of open water and emergent areas), iv) wildlife use, v) success of efforts to establish effective buffers to protect the wetlands and adjacent upland and vi) such other information as may be necessary to substantiate success of the mitigation effort. Sample points (photographic coverage, vegetation transects, hydrology samples, etc.) shall remain constant throughout the monitoring period and shall be clearly indicated on the maps submitted with the report.

d. All reports shall be due by November 1 of each year.

9. Mitigation Success and Remediation

a. After the COE receives the final mitigation monitoring report, it shall compare the results with the success criteria below, determine whether the Port has met its mitigation obligations and notify the Port of its determination.

b. The mitigation effort shall be considered successful when 80 percent of the plants planted by the Port, in each of the project areas described in paragraphs 2(a), 2(b), 3, 4(a) and 4(b) have been alive for at least five years.

c. If at any point during the monitoring period, it appears that more than 20 percent of the plants planted by the Port, in any of the project areas described in paragraph 2(a), 2(b), 3, 4(a) and 4(b) have died, the Port shall submit a remediation plan to the COE. The monitoring period set forth in paragraph 8(c) of this Exhibit shall be

extended to the degree determined necessary by the COE. The COE shall confer with the Port regarding questions, concerns or changes and shall approve, disapprove or modify the remediation plan and transmit that decision to the Port within thirty (30) days of receipt of the plan. The remediation plan, as approved or modified by the COE, shall become an enforceable part of this Consent Decree. The Port shall have the right to seek judicial review of the terms of the remediation plan, as approved or modified by the COE, pursuant to the dispute resolution provisions of paragraphs 28 through 30 of this Consent Decree.

10. Maintenance

Once the compensatory mitigation has been approved as complete, the Port may maintain the mitigation site, if consistent with this Consent Decree, by such activities as control of nutria and removal of exotic (non-native) vegetative species. The Port may not engage in activities inconsistent with the Consent Decree, such as removal of vegetation or alteration of hydrology, without written approval from the COE.

11. Additional Mitigation Funding

In addition, the Port shall contribute the sum of Two Hundred Eighty-Five Thousand Dollars ($285,000) cash for the express and sole purpose of performance of additional mitigation projects within the Smith & Bybee Lakes Management Area.

a. Within thirty (30) days of the Effective Date, the Port shall place the specified funds in an interest-bearing account with U.S. Bank. Interest shall accrue for the benefit of the fund, not for the benefit of the Port.

b. The Port shall withdraw and make payment of such funds for projects

within ten (10) days after the Port has been notified that such withdrawal and payment has been approved by the COE. The COE may approve payments for projects in its discretion, provided that such projects shall provide environmental mitigation within the Smith & Bybee Lakes Management Area and provided that the COE consults with Mr. Jones regarding potential projects prior to approving such projects for funding. Prior to approving the withdrawal and payment of any funds, the COE shall provide the parties with a minimum of forty-five (45) days actual written notice describing the project to be funded and the amount of the funding. Mr. Jones shall have the right to object to the withdrawal of such funds on the grounds only: (i) that insufficient information has been provided by the COE from which to evaluate the project and the amount of funding; or (ii) that the proposed project is inconsistent with the purposes of this consent decree or the CWA. Mr. Jones shall make his objection by filing a motion with the Court within the forty-five (45) day period. Mr. Jones shall state all reasons for his objections and shall seek a hearing and determination by the Court. In the event Mr. Jones timely files an objection with the Court pursuant to this provision, the COE shall not approve the withdrawal and payment of the proposed funds until the Court has heard and resolved Mr. Jones' objection or the parties otherwise mutually agree in writing.

c. As described above, the Port's obligations under this paragraph shall be strictly limited to making the initial payment into the fund and making payments from the fund as approved by the COE.

12. Mitigation Funding to the City of Portland

The Port shall contribute the sum of Sixty Four Thousand Dollars ($64,000.00) to

the City of Portland for the purpose of the City or its agents performing vegetation and revegetation of the lower Columbia Slough banks and buffer areas, in areas outside of the mitigation areas addressed in this Consent Decree. The Port's obligation under this provision are strictly limited to payment of the specified funds as conditioned by this provision. Payment shall be made within one hundred eighty (180) days of the Effective Date. This Consent Decree shall not create any obligation enforceable against the City of Portland.

APPENDIX F-3

First Amendment to Consent Decree and to Enforcement Consent Decree, September 20, 2002

PTICST

Rec'd

UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF OREGON

WILLIAM MICHAEL JONES,

Plaintiff,

v.

MIKE THORNE, director of the Port of Portland, et al.,

Defendants.

UNITED STATES OF AMERICA,

Cross-claim Plaintiff,

v.

PORT OF PORTLAND,

Cross-claim Defendant.

Case No. CV-97-1674-ST

FIRST AMENDMENT TO CONSENT DECREE AND TO ENFORCEMENT CONSENT DECREE

ORIGINAL

For good cause the Parties have collectively stipulated to modifications of the Consent Decree and the Enforcement Consent Decree as provided below. Accordingly,

It is hereby ORDERED, ADJUDGED AND DECREED as follows:

I. MODIFICATIONS TO THE CONSENT DECREE

Pursuant to paragraphs 33 and 34 of the Consent Decree, by agreement of Jones, the United States and the Port of Portland, and for good cause, the Consent Decree is modified as follows:

STOEL RIVES LLP
ATTORNEYS
600 University Street, Suite 3600, Seattle, WA 98101-3197
Telephone (206) 624-0900

1. Definitions. The terms used in this First Amendment and in the attachment shall have the same meanings as provided in the Consent Decree.

2. Appendix G-1. Appendix G-1, attached to this First Amendment, shall supercede and replace in all respects Appendix G to the Consent Decree. In addition, Appendix G-1 depicts mitigation different from the written terms of paragraph 10(b) of the Consent Decree as follows: (a) certain specified portions of the project area are to be preserved rather than excavated to an elevation of 14 NGVD in order to protect existing trees; (b) as a consequence of (a), the unexcavated "100-foot wide strip" of land extending the full length of the project area is wider than 100 feet in identified areas; and (c) the swales will be connected to the slough at four, instead of just two, locations. As to these specified differences, Appendix G-1 shall supercede the written terms of paragraph 10(b) of the Consent Decree.

3. Completion Date. The last sentence of paragraph 10(b) of the Consent Decree is stricken. With respect to the matters addressed in paragraph 10(b) of the Consent Decree, as modified by this First Amendment, removal of the existing fill within the project area will be completed before December 31, 2002 if reasonably feasible in the exercise of due diligence and, in any event, on or before July 31, 2003.

4. Notices and Submissions. Paragraph 32 of the Consent Decree is modified to provide that the Port of Portland's designated representative shall be:

Carla L. Kelley, Esq.
General Counsel
Port of Portland
P.O. Box 3529
Portland, OR 97208-3529

5. No Other Modifications. Except as provided above, the terms of the Consent Decree remain unchanged, effective and enforceable.

STOEL RIVES LLP
ATTORNEYS
600 University Street, Suite 3600, Seattle, WA 98101-3197
Telephone (206) 624-0900

II. MODIFICATIONS TO THE ENFORCEMENT CONSENT DECREE

Pursuant to paragraphs 44 and 45 of the Enforcement Consent Decree, by agreement of the United States and the Port of Portland, and for good cause, the Consent Decree is modified as follows:

6. Definitions. The terms used in this First Amendment and in the attachment shall have the same meanings as provided in the Enforcement Consent Decree.

7. Appendix G-1. Appendix G-1, attached to this First Amendment, shall supercede and replace in all respects Appendix G to Exhibit 2 to the Enforcement Consent Decree. In addition, Appendix G-1 depicts mitigation different from the written terms of paragraph 4(b) of Exhibit 2 of the Enforcement Consent Decree as follows: (a) certain specified portions of the project area are to be preserved rather than excavated to an elevation of 14 NGVD in order to protect existing trees; (b) as a consequence of (a), the unexcavated "100-foot wide strip" of land extending the full length of the project area is wider than 100 feet in identified areas; and (c) the swales will be connected to the slough at four, instead of just two, locations. As to these specified differences, Appendix G-1 shall supercede the written terms of paragraph 4(b) of Exhibit 2 of the Enforcement Consent Decree.

8. Completion Date. The last sentence of paragraph 4(b) of Exhibit 2 of the Enforcement Consent Decree is stricken. With respect to the matters addressed in paragraph 4(b) of the Consent Decree, as modified by this First Amendment, removal of the existing fill within the project area will be completed before December 31, 2002 if reasonably feasible in the exercise of due diligence and, in any event, on or before July 31, 2003.

9. Notices and Submissions. Paragraph 41(C) of the Consent Decree is modified to provide that the Port of Portland's designated representative shall be:

Carla L. Kelley, Esq.
General Counsel
Port of Portland
P.O. Box 3529
Portland, OR 97208-3529

STOEL RIVES LLP
ATTORNEYS
600 University Street, Suite 3600, Seattle, WA 98101-3197
Telephone (206) 624-0900

10. No Other Modifications. Except as provided above, the terms of the Enforcement Consent Decree remain unchanged, effective and enforceable.

III. SIGNATORY AUTHORITY

11. Each undersigned representative of the Parties certifies that he or she is fully authorized to enter into the terms and conditions of this First Amendment and to execute and legally bind such Party to this document.

SO ORDERED THIS 16 DAY OF September, 2002.

Helen J. Frye
United States District Judge

FOR THE UNITED STATES OF AMERICA

~~LOIS J. SCHIFFER~~ THOMAS L. SANSONETTI
Assistant Attorney General
Environment & Natural Resources Division

Dated: 9/11/02

G. Scott Williams
Environmental Defense Section
U.S. Department of Justice
P.O. Box 32986
Washington, D.C. 20026

FOR THE PORT OF PORTLAND

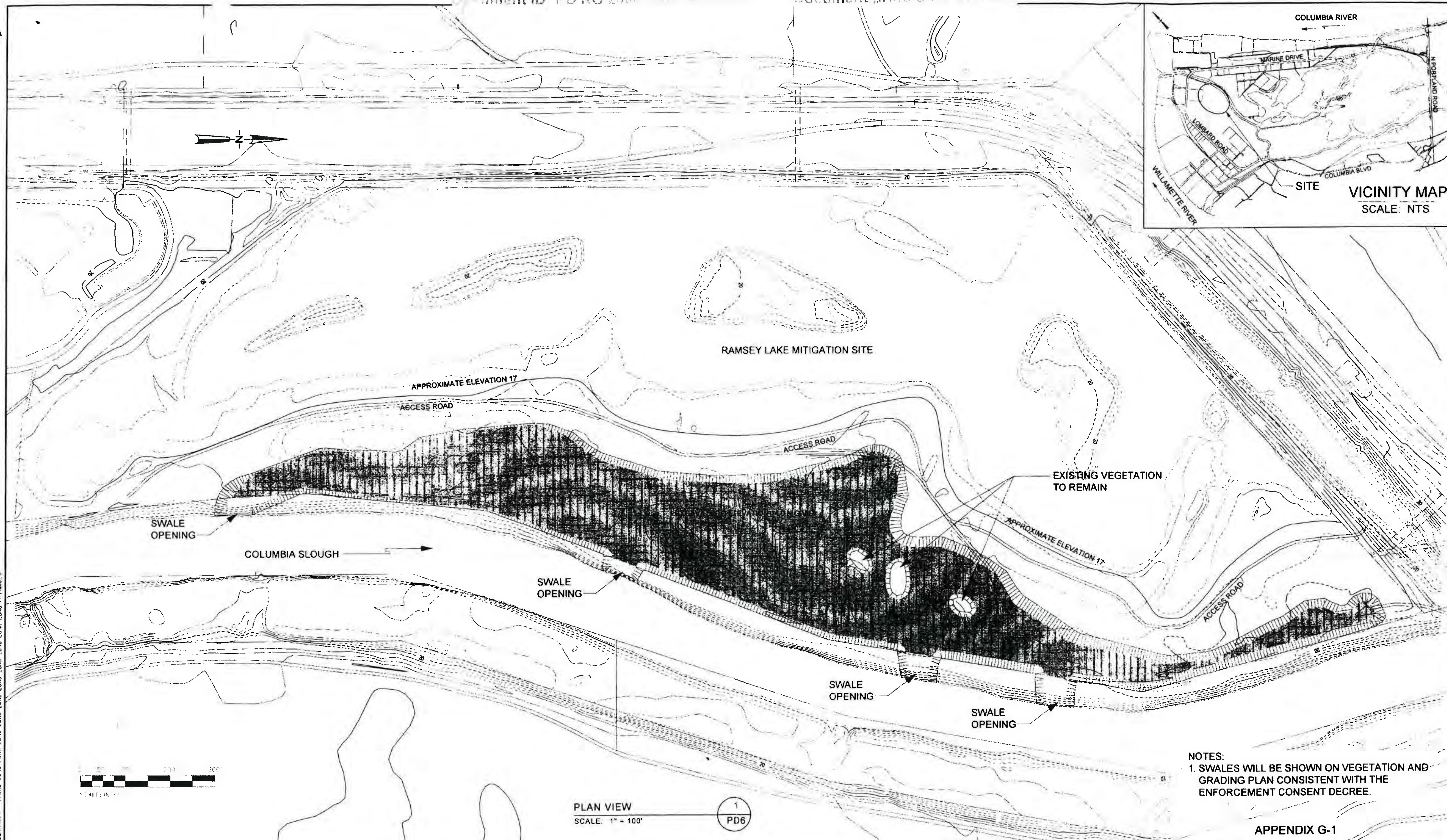
Dated: 6-7-02

Jeffrey W. Leppo, WSBA #11099
Richard Gleason, OSB #81239
STOEL RIVES LLP
600 University St., Suite 3600
Seattle, Washington 98101-3197

FOR PLAINTIFF

Dated: 6-7-02

William Michael Jones, *pro se*
2716 N.E. Mason, Portland OR 97211



NOTES:
1. SWALES WILL BE SHOWN ON VEGETATION AND GRADING PLAN CONSISTENT WITH THE ENFORCEMENT CONSENT DECREE.

APPENDIX G-1

NO	DATE	BY	REVISIONS	CK'D	APP'VD
1	6/10/02	SPS	REVISION NO 1 BY DEA		

PORT OF PORTLAND
PORTLAND, OREGON

SR. MGR., CORP PROPERTY DEVELOPMENT

DESIGNED BY
DRAWN BY P. REYNOLDS
CHECKED BY G. MEYER
DATE MAR 2000

RIVERGATE INDUSTRIAL DISTRICT

CONSENT DECREE

WETLAND AND RIPARIAN ENHANCEMENTS E OF RAMSEY LK

SUBMITTED BY — PROPERTY DEVELOPMENT MANAGER

TYPE PD | DRAWING NO RG 2000-5 | 6A/9 (PD6)

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APPENDIX F-4

Rivergate Cooperative Agreement, 1988

(Provided for historical context; agreement was superseded by the Consent Decree)

COOPERATIVE AGREEMENT
BETWEEN
PORT OF PORTLAND,
OREGON DIVISION OF STATE LANDS,
OREGON DEPARTMENT OF FISH AND WILDLIFE,
U.S. ENVIRONMENTAL PROTECTION AGENCY,
U.S. FISH AND WILDLIFE SERVICE,
U.S. ARMY CORPS OF ENGINEERS
TO
ESTABLISH A RIVERGATE DEVELOPMENT PROGRAM
AND AN ACCEPTABLE MITIGATION PROGRAM FOR WETLAND IMPACTS

THE AGREEMENT IMPLEMENTS, IN PART, THE
SMITH AND BYBEE LAKES MANAGEMENT PLAN

I. PURPOSE

This Cooperative Agreement (Agreement) is entered into to establish an understanding between the Port of Portland (PORT) and the Agencies (AGENCIES) listed above. This Agreement establishes the boundaries of the PORT's planned development of the Rivergate Industrial District, and outlines mitigation actions for all lands to be filled which are subject to state fill and removal laws and Section 404 of the federal Clean Water Act. The map of the development boundaries, the resource inventories, and the Alternatives Analysis and Environmental Impact Evaluation are attached to the Agreement and become a part of it by reference.

This Agreement further sets forth, subject to applicable requirements of law (see Section II.), an understanding between the PORT and the AGENCIES concerning the PORT's commitment to perform specified actions as mitigation/compensation for lands to be filled, in return for recognition from the signatory AGENCIES that additional future mitigation/compensation is not necessary for those filled lands, based upon current information.

The Agreement is entered into by all parties in the spirit that industrial development and wetland/environmentally sensitive values can coexist through proper planning and the cooperation of development and regulatory interests. This is a reaffirmation by the AGENCIES that they continue to recognize the purpose and long term need to complete appropriate development of North and South Rivergate, and by the PORT that it recognizes the need for wetland habitat preservation.

II. LIMITATIONS ON THE AGREEMENT

Notwithstanding any other provision contained in this Agreement, the parties acknowledge that this Agreement is subordinate to any applicable state or federal laws. The PORT is not released from the necessity of applying for and complying with state or federal permits and complying with applicable laws. Nothing in this Agreement shall restrict the Corps of Engineers (Corps) or Division of State Lands (DSL) from exercising their legal duties within their authority as permit issuing agencies. Based on current information, the Agreement does provide positive direction from the signatory agencies to the Corps and DSL regarding Section 404(b)(1) and fill/removal law evaluations. This Agreement is entered into with the understanding that current information indicates that:

a) Wetland fill for the Rivergate project, as shown on Attachment A, meets the alternative test in accordance with 404(b)(1) guidelines and state fill/removal law;

b) The amount of mitigation proposed for wetland fill associated with the Rivergate project meets the intent of the 404(b)(1) guidelines and state fill/removal law; and

c) The location, acreage, technical features, and quality of mitigation is acceptable to offset wetland loss.

Information which becomes known subsequent to this Agreement shall be considered by these agencies, acting in their permit issuing capacities, in determining whether to issue future permits, and the conditions under which a permit would be issued.

III. BACKGROUND

The PORT currently has a valid state fill permit and federal Section 10/404 permit to complete the development of the Rivergate Industrial complex. There are approximately 330 acres of land that could be filled using this permit, of which about 235 are wetlands. The current federal permit expires in November 1989. The final completion of the entire Rivergate development will be governed by market demand and may not take place until after the year 2000.

The PORT, AGENCIES, local government, environmental organizations, and Smith and Bybee Lake property owners have worked together to develop a Smith and Bybee Lakes Management Plan. This group is committed to establishing the Smith and Bybee Lakes area as a regional public passive recreation and natural area. Significant investment in water control structures and flushing canal projects, identified by the Management Plan,

have been proposed in order to properly manage the Smith and Bybee Lakes complex for the purposes set forth in the Management Plan. The undeveloped part of the Rivergate Industrial District is within the Smith and Bybee Lakes management planning area, but outside the area set aside for environmental and recreational uses.

As a result of these factors, the PORT and AGENCIES determined that it would be in the best interests of:

(1) The Smith and Bybee Lakes Management Plan;

(2) The orderly development of Rivergate; and

(3) The effective application of mitigation efforts for future Rivergate fills

to review the Rivergate development program prior to expiration of the PORT's permit and enter into a Cooperative Agreement.

The Agreement reduces the current area available to the PORT for development by approximately 60 acres and assigns mitigation actions to both enhance the natural resource base and meet the immediate needs identified in the Smith and Bybee Lakes Management Plan. The Agreement initiates projects to implement the Smith and Bybee Lakes plan. It also allows the PORT to continue appropriate development of Rivergate with minimal uncertainty concerning future mitigation requirements. The Smith and Bybee Lakes Advisory Committee, which developed the Smith and Bybee Lakes Management Plan, has reviewed and approved the project concepts included in this Agreement as consistent with the plan.

IV. MITIGATION PROGRAM

It is mutually agreed that the following actions constitute a mitigation program for the completion of fill and development in Rivergate. These measures will be incorporated into permit applications for fill activities within the boundaries established by this Agreement, and may become enforceable as conditions of any permit issued under Section 404 or state fill/removal law, subject to the limitations indicated in Section II.

1) The PORT's fill boundary is shown on Attachment A. This boundary line marks the toe of the fill slope. As of the date of this Agreement, approximately 270 acres remain within this line to be filled, of which about 203 acres are wetlands.

2. New fill slopes, indicated on Attachment A, will be no steeper than 3:1. After permanent fill slopes are formed in these areas, they will be planted using the specifications in Attachment B. A vegetative screen to lessen the impact of the industrial development on the wetland area will be planted using the guidelines in the Smith and Bybee Lakes Management Plan, or the City's E zone standards if the Management Plan has not been adopted.

3. The Ramsey Lake wetland and part of the adjacent upland area will be excavated to create year-round ponding, wetland fringe and islands, as indicated on Attachment A. Three separate ponds will be created with a total of at least 16 acres of water surface area. The wetland fringe and islands associated with the ponds will be planted as specified in Attachment B. Creation of the new ponds will leave the existing fringe vegetation in place (to the extent practical) on the east side of Ramsey Lake. Material removed from Ramsey Lake may be used for construction of adjacent fill dikes and/or islands, or used to enhance upland soil before vegetation is planted.

4. The remaining upland area between Ramsey Lake and the Columbia Slough will be planted with appropriate upland species, using the specifications in Attachment B. At least 20 acres of riparian habitat will be created in this project.

5. The PORT will provide a minimum 100-foot buffer (measured from ordinary high water) along the slough in South Rivergate, and continue to maintain a 150-foot buffer adjacent to the slough in North Rivergate. The latter will include a 100-foot vegetative buffer next to the slough and a 50-foot easement area for the 40-mile loop trail. The exact location of the trail may vary in order to accommodate topographical or vegetative features. These buffers may also be the location for storm water outfall passive treatment facilities (i.e., constructed wetlands). The PORT will replant riparian vegetation in these buffer areas where it has been destroyed through the PORT's filling or construction activities (see Attachment B). At least 5 acres of riparian habitat will be enhanced in these buffer areas.

6. The existing ponds adjacent to the new fill line in the North Bybee Lake area will be deepened and enlarged as indicated on Attachment A. At least 2 acres of wetland will be enhanced in this project.

7. The PORT will have an analysis prepared of the surface water flow patterns in the Columbia Slough system. This analysis will determine design characteristics for the two water level control projects described in IV. 8. and 9. below. DONE Brian

8. The PORT will construct a water control structure in Smith Channel between Smith and Bybee Lakes (Project #1 from the Smith and Bybee Lakes Management Plan). The objectives of this project are to: 1) be able to hold Smith Lake at a maximum elevation of 10 feet m.s.l.; and 2) allow water to flow into or out of Smith Lake through a low maintenance flood control device that can be operated by hand. Additional functions or features may be added to the project, but are not part of this Agreement. This project will be designed following the parameters determined in IV. 7. above, but it will include the following (or equivalent) features:

   a.) An earth dam with an adjustable flood control gate.

   b.) Reconstruction of the banks of Smith Channel where needed to assure minimal leakage into Bybee Lake when Smith Lake is maintained at higher levels.

   c.) Construction of an earth berm across a low spot north of Smith Channel, also to contain leakage.

   This project will enable habitat modifications to be made in Smith Lake through water level manipulation.

9. The PORT will construct a channel between the western end of Bybee Lake and Columbia Slough (Project #2 - Alternative from the Smith and Bybee Lakes Management Plan) following the design parameters determined in IV.7. above. The objective of this project is to allow Bybee Lake to function as an integral part of the Columbia Slough/Willamette River system again. The channel depth will be set at approximately the same elevation as the connection between the lakes and North Slough before it was dammed in 1983. The intent is to allow habitat diversification to occur in a more or less natural way in Bybee Lake as a result of seasonal/tidal water level fluctuations. Approximately 170 acres of lake and wetland habitat will be enhanced by this project. Additional lake shore acreage may also be affected.

10. The PORT will design and construct a public storm drainage system which will be built to City of Portland standards. Upon completion, elements of the system will be transferred to City ownership for operation and maintenance. Water from this public storm drainage system will not be routed into the Columbia Slough, Smith, Bybee, or Ramsey Lakes wetland

systems without first entering a passive treatment facility to filter out commonly occuring substances, such as oil, grease, etc., which would have a significant negative impact on water quality. Emergency spill containment will also be part of the passive treatment facility above the wetlands. Attachment C indicates the current PORT plan for storm drainage in Rivergate.

V. IMPLEMENTATION SCHEDULE

Subject to the limitations of Section II., the PORT will implement the measures described above according to the following schedule. This schedule assures that appropriate mitigation will be completed before, or simultaneously with, fills authorized under Sec. 404 or state fill/removal law.

1. The two water level control projects (IV.8. and 9. above) will be designed and constructed following the modeling and analysis (IV.7. above) of the projected flow patterns of the Columbia Slough/Bybee Lake/Smith Lake system. Construction of the two water control projects will begin by late summer of 1990. Work on these projects, barring unforeseen problems, will be complete by Jan. 1, 1991.

2. The new fill boundaries (IV.1. above) will be physically established on the ground (e.g., by dikes, survey markers, etc.) in association with the next fill projects in North and South Rivergate respectively.

3. Projects IV.3., and 4. (i.e., the Ramsey Lake area projects) will be completed as part of preparation for the next South Rivergate fill project. This preparation activity is currently scheduled for summer/fall of 1988. planted 88-89

4. Project IV.6. (i.e., the North Bybee wetlands project) will be completed as part of the next North Rivergate fill project, which is projected to occur in the early to mid-1990s.

5. Storm drainage improvements (IV.10. above) will be constructed as needed to service anticipated development in Rivergate.

VI. OPERATIONAL PROVISIONS

Subject to the conditions in Section II.:

1. The Agreement, and its attachments, shall be in effect throughout the life of the Rivergate fill program, which is comprised of future fill activities within the fill boundary set by this Agreement. The Agreement shall terminate upon completion of the fill program, or five years after the completion of the last mitigation project, whichever is later.

2. The PORT will meet all the terms of the "Mitigation Program" within the time periods indicated in the "Implementation Schedule". If circumstances beyond the PORT's control (e.g., the City not adopting the Management Plan) make it impractical to complete a project within the specified time frame, a monitoring group composed of one representative from each signatory agency will meet to recommend appropriate modifications to the terms of this Agreement.

3. The AGENCIES accept the resource inventories and maps attached to this Agreement as an accurate description of currently known conditions in the Rivergate development area. These documents, in conjunction with the Alternatives Analysis and Environmental Impact Evaluation, provide an accurate overview of current relevant information concerning the Rivergate fill area. The filling of wetlands in Rivergate has historically been considered in the public interest, and an Environmental Impact Statement (EIS) has never been required. Based on the permit history and current available information, the Corps has made a preliminary determination, subject to the limitations noted in Section II. above, that a federal EIS is not required for the Rivergate wetland fill. The other signatory agencies agree with this determination.

4. Subject to the applicable requirements of law outlined in Section II., including any substantive, relevant new information received during the public review process: a) the actions specified in the Mitigation Program (Section IV.) meet Agency policy requirements, and provide acceptable quality and kinds of mitigation; and b) the Rivergate development program, as outlined in this document, is in substantial compliance with Section 404(b)(1) of the Clean Water Act and state fill/removal law.

5. The Smith and Bybee Lakes Management Plan designates the City of Portland Parks Bureau as the management organization for the lakes resource area. If the City adopts the Management Plan as presently written, a Management Committee will be formed by the Parks Bureau to oversee implementation of the Plan, including the water level control structures which the PORT will construct as part of this Agreement. If the Management Plan is changed to designate a different agency to manage the resource area, that agency will assume the functions of the Management Committee. If no agency accepts the responsibilities of the Management Committee, the monitoring group set up in VI.2. above will convene to make appropriate recommendations to modify this Agreement.

6. The Management Committee (or other responsible agency) will review the design of the water level control facilities to assure that they meet the design objectives as stated in IV.8 and 9 of this Agreement. The PORT will guarantee that the construction of the water level control facilities will meet the design objectives and will continue to function as designed for one year. The one-year warranty period will commence for each facility on the day it is put into operation. The Management Committee will become the permit holder for these facilities after construction, and will be responsible for operation and maintenance. The PORT will not be responsible under the terms of this Agreement for operation, maintenance or future design modifications to either facility. The PORT and the permit holder also will not be held responsible by the other signatory agencies for adverse long term habitat impacts in Smith and Bybee Lakes and the Columbia Slough which may be caused by these facilities, since all of the signatories have agreed that they need to be constructed.

7. Other structural improvements referred to in Section IV.3. and 6. (the new and deepened ponds) will be implemented by the Port following the design parameters in Attachment A. After these improvements have been constructed and approved in writing by the members of the monitoring group (see VI. 2. above), they will be allowed to evolve naturally, with no further modifications required by the Port.

8. Vegetative improvements will be maintained by the PORT for three years after planting. Within that time, plant material will be replaced, if necessary, to assure the viability of buffers and screens. After three years, planted buffer areas will be left alone to mature naturally. Vegetative screens will be maintained by the PORT, or its tenants, to assure continued effectiveness.

9. Based on preliminary engineering estimates, the approximate cost of the mitigation projects described in the Mitigation Program section is $500,000 (1988 dollars). The PORT reserves the right to design all mitigation projects to meet the design objectives described in Section IV. of this Agreement. The design objectives of these mitigation projects shall not be altered without renegotiation of this Agreement.

10. The monitoring group (see V.2. above) will tour the area at least once every year to review the progress of implementation of the Agreement's provisions throughout the life of any applicable Rivergate fill permit. If after five years all parties to the Agreement indicate that there is no need to meet annually, the monitoring group will tour the area once every two years.

11. This Agreement shall take effect upon the execution of the Agreement by all signatory parties. Modifications of this Agreement can only be made in writing and must be signed by all parties to this Agreement.

12. Congressional representatives and members of their staffs shall not benefit from this Agreement.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement as of the day and year last written below.

Director — 11/28/88
Oregon Division of State Lands — Date

Director — 11/25/88
Oregon Department of Fish and Wildlife — Date

Field Sup. — 12/6/88
U. S. Fish and Wildlife Service — Date

Reg. Admin. — 1-6-89
U. S. Environmental Protection Agency — Date

Col, CE — 1-27-89
U. S. Army Corps of Engineers — Date

11-22-88
Port of Portland — Date

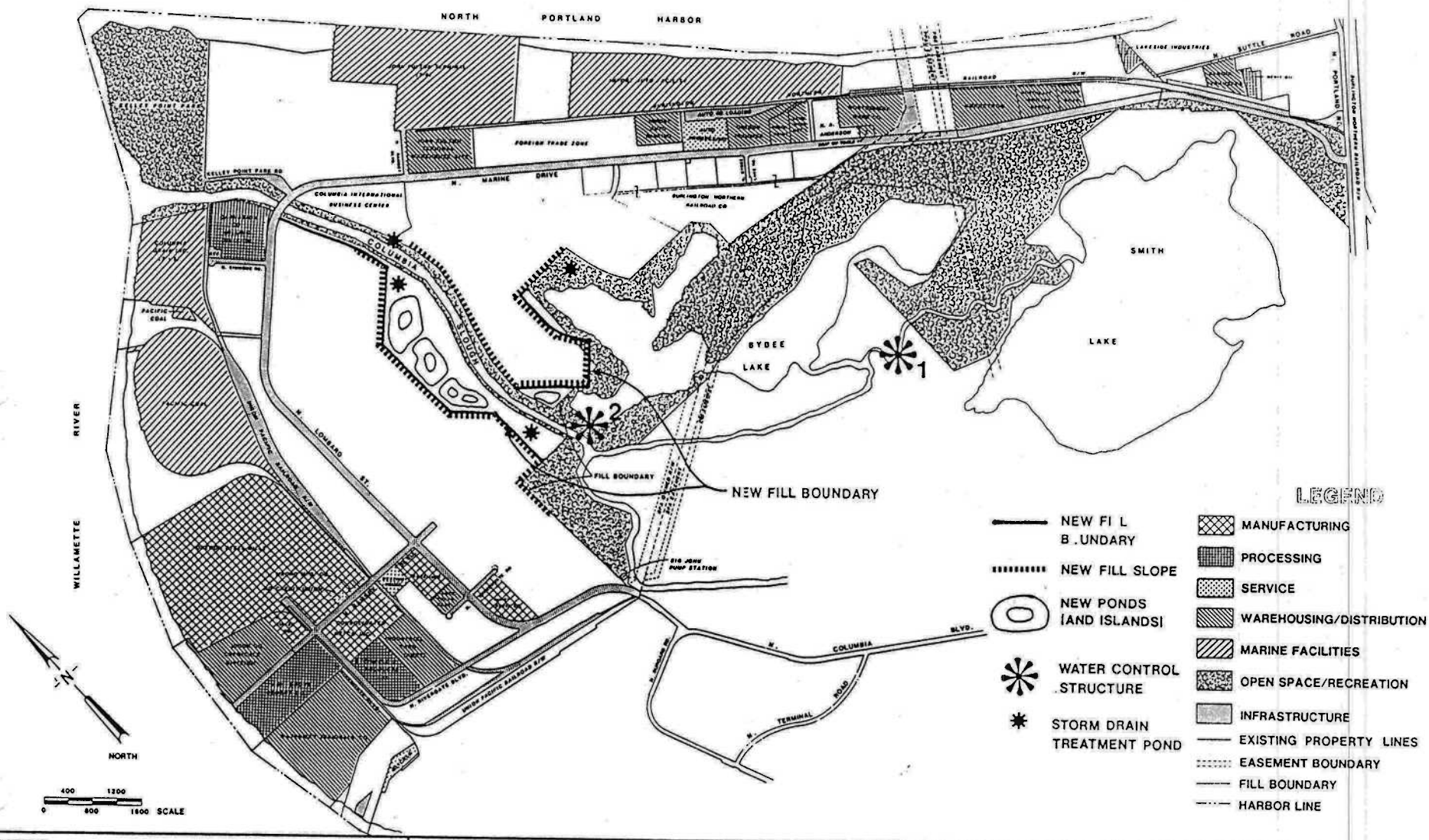
PRESIDENT

ASST. SECRETARY

0864N
10/04/88

APPROVED AS TO LEGAL SUFFICIENCY:

M. Brian Playfair
General Counsel



NOTES: 1. See Port Drawing RG98-7 For Fill Boundary Dimensions

RIVERGATE FILL AGREEMENT

Port of Portland

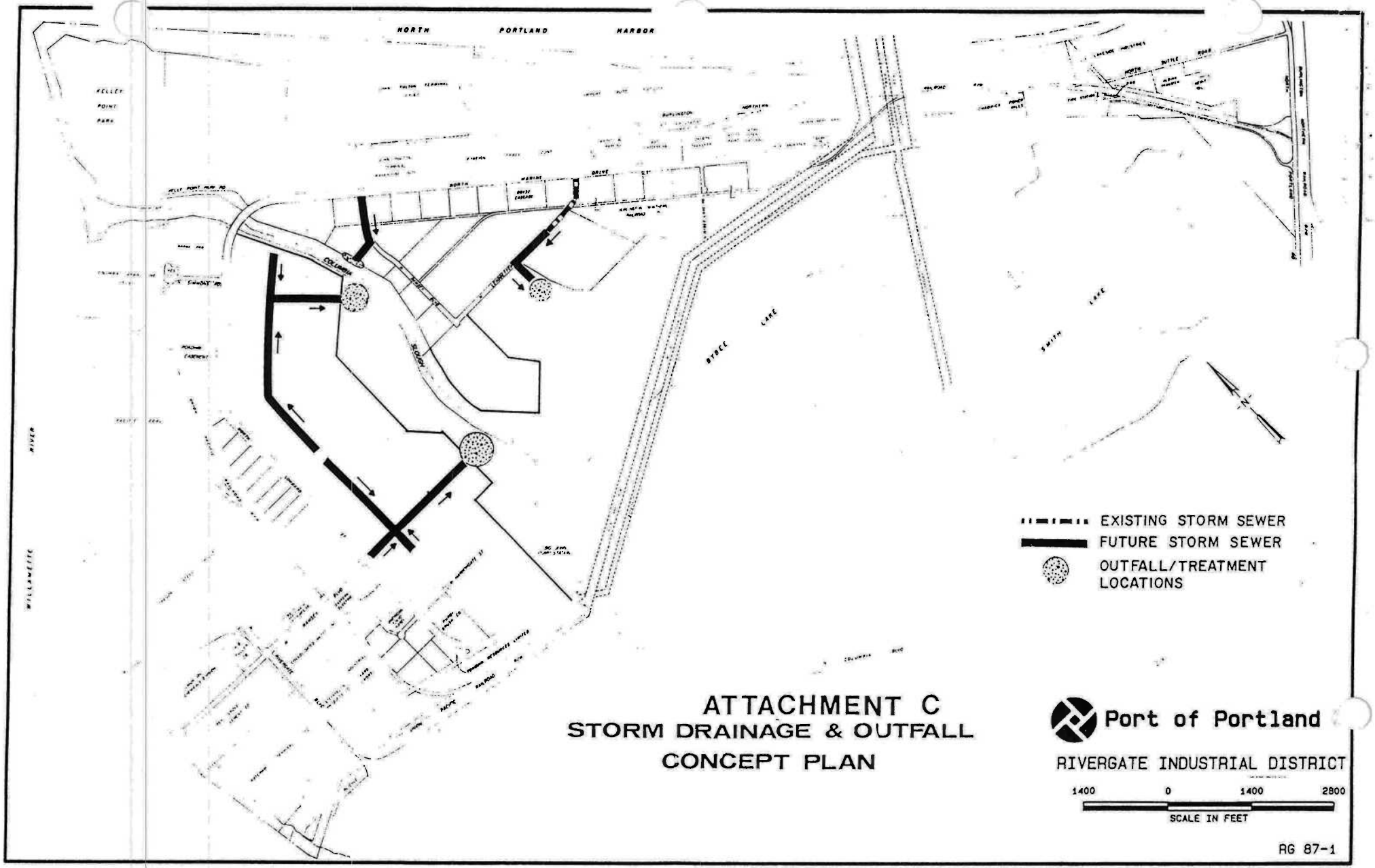
ATTACHMENT A

RIVERGATE STORM DRAINAGE CONCEPT PLAN

The attached Concept Plan map shows the approximate location of the major storm sewer lines for the Rivergate area which will empty into the Smith-Bybee Lake, Columbia Slough system. These lines will be sized to accommodate the projected runoff from future development in the area. All runoff will be directed to holding ponds which will be generally located as indicated on the attached Concept Plan.

The holding ponds will be capable of accommodating a one year storm event. Any event less than a one year storm will be provided with passive treatment of the discharge water. Treatment will be accomplished by settling and contact with certain wetland plants known for their ability to treat waste material in water. Cattails are an example of this type of plant. The ponds will be configured so the inlet and outlet are on opposite ends. This will allow as long a path as possible for the water flow, thus providing the longest possible contact with the vegetation/treatment system.

The outlet from the pond will be equipped with a valve to allow isolation from the receiving waters in the event of a hazardous materials spill which contaminates the storm drainage system. It should be noted that spill contaminant will not be effective if the area is experiencing rainfall in excess of a one-year event, due to flat topographical conditions, the size of the area, and the anticipated flows at full development.



ATTACHMENT C
STORM DRAINAGE & OUTFALL CONCEPT PLAN

Port of Portland

RIVERGATE INDUSTRIAL DISTRICT

1400 0 1400 2800

SCALE IN FEET

RG 87-1

COLUMBIA

SLOUGH

EXISTING RIPARIAN VEGETATION (TO BE PRESERVED)

BORROW AREA

(WITHIN REVEGETATION OF THIS AREA WILL BE APPLIED ENVIRONMENTAL TREATMENTS. WETLAND / UPLAND SEQUENCE WILL BE USED WHICH MIMIC SIMILAR TO PROPOSED PLANTING.)

EXISTING WETLAND FRINGE VEGETATION (TO BE PRESERVED)

HAUL ROAD (TO BE MAINTAINED)

P2

island

open water

P3

island

open water

EXISTING WETLAND FRINGE VEGETATION (TO BE PRESERVED)

1 : 3 slope

← dike →

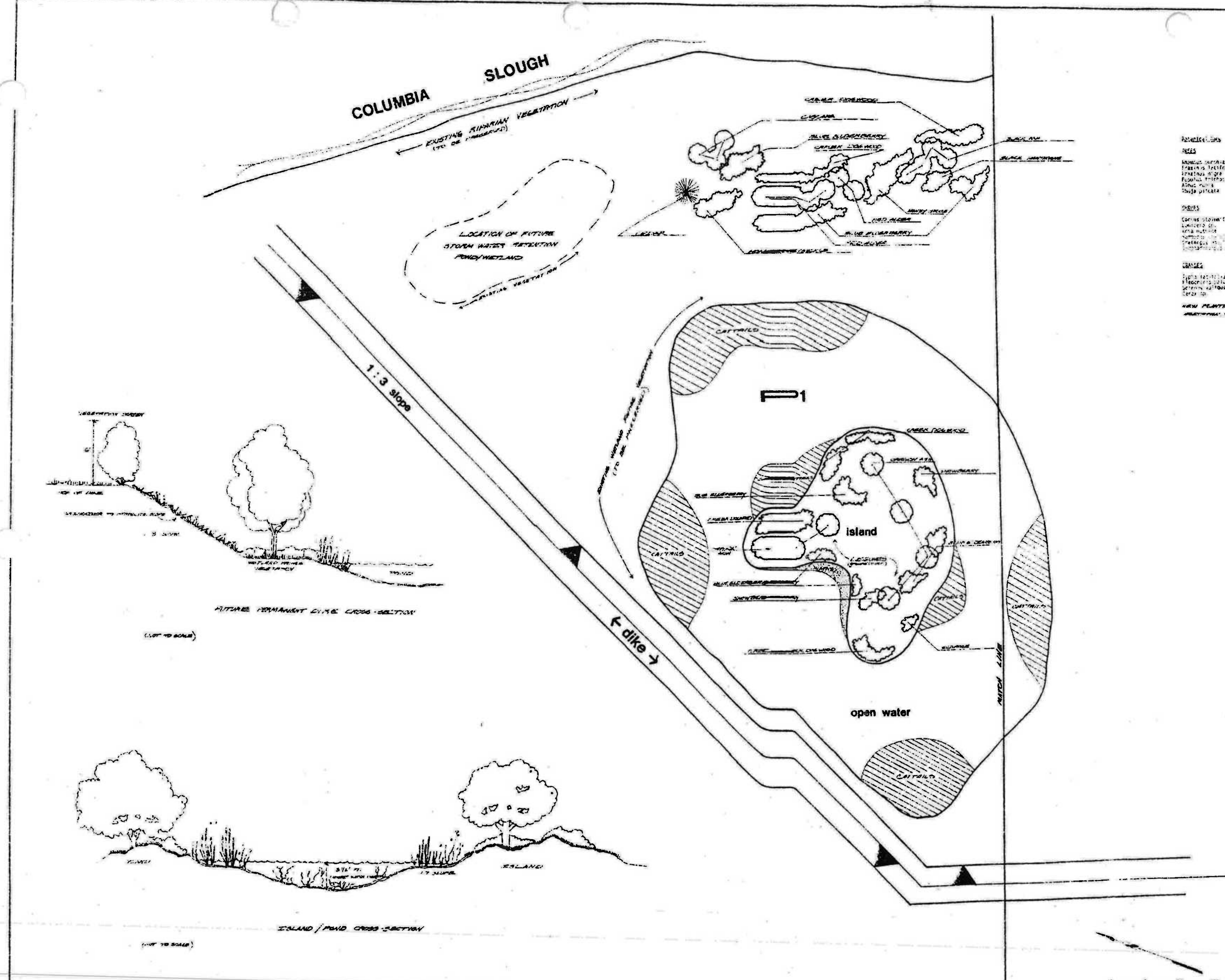
PORT OF PORTLAND
PORTLAND, OREGON

PROJECT MANAGER

RIVERGATE INDUSTRIAL DISTRICT

RAMSEY LAKE MITIGATION PONDS

RG88-33 1/2



Western Red Cedar
Creek Dogwood
Common Cattail
Common Spike Rush
Hardstem Bulrush
Sedge

ATTACHMENT B

PORT OF PORTLAND
PORTLAND, OREGON
PROJECT MANAGER

RIVERGATE INDUSTRIAL DISTRICT

RAMSEY LAKE MITIGATION PONDS

RG88-33 2/2

APPENDIX F-5

DSL Mitigation Release Letters

Oregon
Theodore R. Kulongoski, Governor

Department of State Lands
775 Summer Street NE, Suite 100
Salem, OR 97301-1279
(503) 986-5200
FAX (503) 378-4844
www.oregonstatelands.us.

August 3, 2010

mmc600/25119
PORT OF PORTLAND
ATTN: LARRY DEVROY
7200 NE AIRPORT WAY
PORTLAND, OR 97218

Re: DSL Permit #25119-RF, Corps #2002-00133
40-Mile Loop & Columbia Slough Levee Repair Sites
Portland, Multnomah County
Final Year Monitoring Report Approval

Dear Mr. Devroy:

We have reviewed the 5th year (final) monitoring report for this project and concur with its findings. The Oregon Department of State Lands (DSL) recognizes the outstanding amount of effort that the Port of Portland dedicated to this project in order to successfully accomplish the goals and objectives.

Please be advised that wetlands and related habitats designated as compensatory mitigation areas under this permit are subject to protection under the State of Oregon's Removal-Fill Law, as is the case for any wetlands under DSL's jurisdiction. Furthermore, permits are required for any alterations to wetland mitigation areas and, under OAR 141-085-0690(4), ratios for certain impacts are doubled.

In conclusion, this letter constitutes formal notice from DSL that the Port is in compliance with Removal-Fill Permit #25119-RF. The Port of Portland is therefore released from further obligations under this permit. Thank you and your staff for your responsible stewardship regarding Oregon's environment.

Sincerely,

Michael V. McCabe
Senior Resource Coordinator
Wetlands and Waterways Conservation Division

cc: Tom Taylor, Corps of Engineers (Portland)

Oregon
Theodore R. Kulongoski, Governor

Department of State Lands
775 Summer Street NE, Suite 100
Salem, OR 97301-1279
(503) 986-5200
FAX (503) 378-4844
www.oregonstatelands.us.

August 3, 2010

mmc600/23801
PORT OF PORTLAND
ATTN: LARRY DEVROY
7200 NE AIRPORT WAY
PORTLAND, OR 97218

Re: DSL Permit #23801-RF, Corps #2001-00247
North &South Slough, Leadbetter, Ramsey Mitigation Sites
Portland, Multnomah County
Final Year Monitoring Report Approval

Dear Mr. Devroy:

We have reviewed the 5th year (final) monitoring report for this project and concur with its findings. The Oregon Department of State Lands (DSL) appreciates the Port of Portland for the significant amount of effort that your staff has dedicated in order to achieve the wetland mitigation goals and objectives.

Please be advised that wetlands designated as compensatory mitigation areas under this permit are subject to protection under the State of Oregon's Removal-Fill Law, as is the case for any wetlands under DSL's jurisdiction. Furthermore, permits are required for any alterations to wetland mitigation areas and, under OAR 141-085-0690(4), ratios for certain impacts are doubled.

In conclusion, this letter constitutes formal notice from DSL that you are in compliance with Removal-Fill Permit #23801-RF. The Port of Portland is therefore released from further obligations under this permit. Thank you for your good stewardship and concern for Oregon's environment.

Sincerely,

Michael V. McCabe
Senior Resource Coordinator
Wetlands and Waterways Conservation Division

cc: Tom Taylor, Corps of Engineers (Portland)

APPENDIX F-6

Declaration of Restrictive Covenant

02-173

02-173

After recording return to:
Port of Portland
121 NW Everett St.
Portland OR 97209
Attn: Manager, Property & Development

Send all tax statements to:
No change.

Recorded in the County of Multnomah, Oregon
C. Swick, Deputy Clerk
Total : 59.00
2002-206634 11/13/2002 02:25:25pm ATSMP
E31 5 REC SUR DOR OLIS NSTDF
25.00 3.00 10.00 1.00 20.00

DECLARATION OF RESTRICTIVE COVENANT

A. The Port of Portland, a port district of the State of Oregon (the "Port"), is the owner in fee simple of certain real property consisting of approximately 5.00 acres located in the City of Portland, Multnomah County, Oregon, commonly known as the Rivergate Mitigation Site, which property is legally described on **Exhibit A** and more particularly shown on **Exhibit B** hereto (the "Site").

B. The Port desires to perform mitigation of wetlands on the Site, and wishes to place a restrictive covenant against the Site. Said covenant will protect the Site in perpetuity, with respect to the Port and all future owners of all or any portion of the Site, as an area to be used exclusively for natural habitat, with management for non-native species removal and weed control.

C. This Declaration of Restrictive Covenant (this "Declaration") is granted subject to all recorded and unrecorded easements. In making this Declaration, the Port reserves the right for itself and its assigns to access and use the Premises or to grant easements for the purpose of installing, maintaining, repairing, replacing and removing new or existing utilities related to the operation or use of Port properties, provided that such easements do not conflict with the purposes of this Declaration, including the preservation of the Site as natural habitat, and that any grades and vegetation within the Site which are disturbed during such work are completely restored upon completion of the work.

D. The Port further reserves the right, subject to prior approval by the Oregon Division of State Lands, to amend the boundaries of the Site as described in **Exhibit A** and shown on **Exhibit B**, provided that the Port shall not reduce the total acreage protected as wetlands under this Declaration.

5

IN WITNESS WHEREOF, the Port has set its hand this 12 day of November, 2002.

THE PORT OF PORTLAND

By: _____
Bill Wyatt, Executive Director

APPROVED AS TO LEGAL SUFFICIENCY
FOR THE PORT OF PORTLAND

By: _____
Counsel for Port of Portland

STATE OF OREGON)
) ss.
COUNTY OF MULTNOMAH)

This instrument was acknowledged before me on November 12, 2002, by Bill Wyatt as Executive Director of the Port of Portland.

_____
Notary Public for Oregon

OFFICIAL SEAL
ELISE L STARK
NOTARY PUBLIC-OREGON
COMMISSION NO. 335248
MY COMMISSION EXPIRES JUNE 4, 2004

My Commission Expires: June 4, 2004

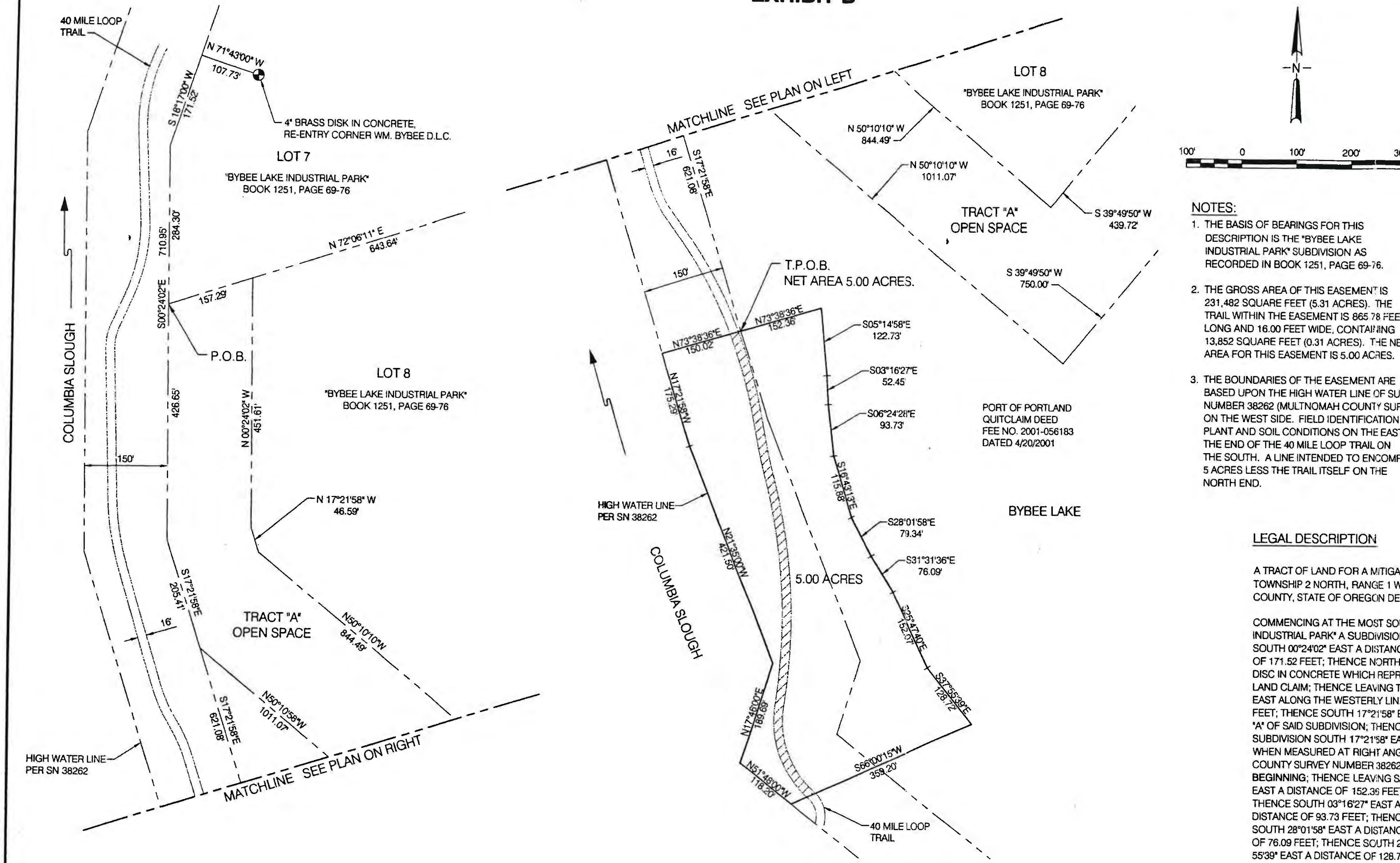
Exhibit A
Legal Description

A tract of land for a mitigation site located in the southwest ¼ of Section 25, Township 2 North, Range 1 West, Willamette Meridian, City of Portland, Multnomah County, State of Oregon described as follows:

Commencing at the most southerly southeast corner of Lot 7 "Bybee Lake Industrial Park" a subdivision recorded in book 1251, pages 69-76, said point being South 00°24'02" East a distance of 284.30 feet; thence South 18°17'00" West a distance of 171.52 feet; thence North 71°43'00" West a distance of 107.73 feet from a 4" brass disc in concrete which represents the re-entry corner of the WM. Bybee donation land claim; thence leaving the south line of lot 7 of said subdivision South 00°24'02" East along the westerly line of Tract "A" of said subdivision a distance of 426.65 feet; thence South 17°21'58" East a distance of 205.41 feet to an angle point in Tract "A" of said subdivision; thence leaving the westerly line of tract "A" of said subdivision South 17°21'58" East along a line that is parallel to and 150.00 feet East when measured at right angles to the high water line as defined in Multnomah county survey number 38262 a distance of 621.08 feet to the TRUE POINT OF BEGINNING; thence leaving said 150.00 foot high water offset line North 73°38'36" East a distance of 152.36 feet; thence South 05°14'58" East a distance of 122.73 feet; thence South 03°16'27" East a distance of 52.45 feet; thence South 06°24'28" East a distance of 93.73 feet; thence South 16°43'13" East a distance of 115.88 feet; thence South 28°01'58" East a distance of 79.34 feet; thence South 31°31'36" East a distance of 76.09 feet; thence South 25°47'40" East a distance of 152.07 feet; thence South 37°55'39" East a distance of 128.72 feet; Thence South 66°00'15" West a distance of 359.20 feet to the high water line as defined in said Multnomah County Survey; thence along said high water line the following four (4) courses; 1) North 51°48'00" West a distance of 118.20 feet; 2) thence North 17°46'00" East a distance of 189.69 feet; 3) thence North 21°35'00" West a distance of 421.50 feet; 4) thence North 17°21'58" West a distance of 175.29 feet; thence leaving said high water line North 73°38'36" East a distance of 150.02 feet to the TRUE POINT OF BEGINNING, containing 5.31 acres, more or less.

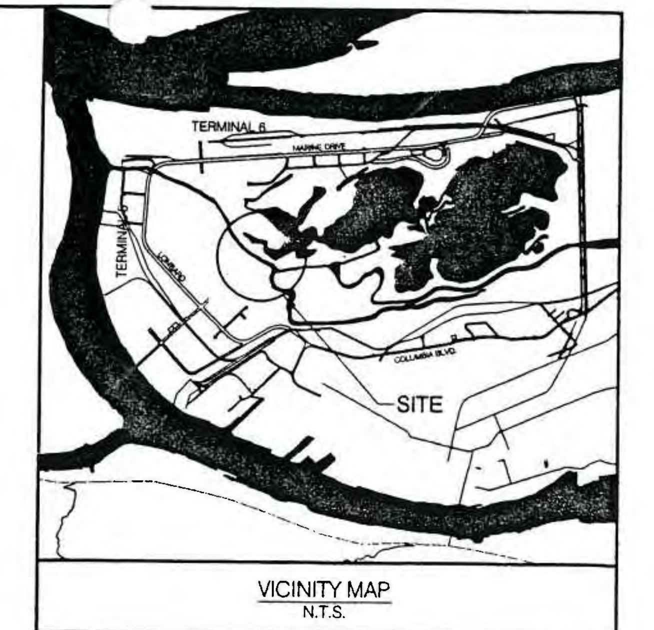
Excepting there from all that area encompassed by the 865.78 foot long by 16.00 foot wide bike path containing 0.31 acres.

EXHIBIT B



NOTES:

1. THE BASIS OF BEARINGS FOR THIS DESCRIPTION IS THE "BYBEE LAKE INDUSTRIAL PARK" SUBDIVISION AS RECORDED IN BOOK 1251, PAGE 69-76.
2. THE GROSS AREA OF THIS EASEMENT IS 231,482 SQUARE FEET (5.31 ACRES). THE TRAIL WITHIN THE EASEMENT IS 865.78 FEET LONG AND 16.00 FEET WIDE, CONTAINING 13,852 SQUARE FEET (0.31 ACRES). THE NET AREA FOR THIS EASEMENT IS 5.00 ACRES.
3. THE BOUNDARIES OF THE EASEMENT ARE BASED UPON THE HIGH WATER LINE OF SURVEY NUMBER 38262 (MULTNOMAH COUNTY SURVEYOR), ON THE WEST SIDE. FIELD IDENTIFICATION OF PLANT AND SOIL CONDITIONS ON THE EAST. THE END OF THE 40 MILE LOOP TRAIL ON THE SOUTH. A LINE INTENDED TO ENCOMPASS 5 ACRES LESS THE TRAIL ITSELF ON THE NORTH END.



VICINITY MAP
N.T.S.

LEGAL DESCRIPTION

A TRACT OF LAND FOR A MITIGATION SITE LOCATED IN THE SOUTHWEST ¼ OF SECTION 25, TOWNSHIP 2 NORTH, RANGE 1 WEST, WILLAMETTE MERIDIAN, CITY OF PORTLAND, MULTNOMAH COUNTY, STATE OF OREGON DESCRIBED AS FOLLOWS:

COMMENCING AT THE MOST SOUTHERLY SOUTHEAST CORNER OF LOT 7 "BYBEE LAKE INDUSTRIAL PARK" A SUBDIVISION RECORDED IN BOOK 1251, PAGES 69-76, SAID POINT BEING SOUTH 00°24'02" EAST A DISTANCE OF 284.30 FEET; THENCE SOUTH 18°17'00" WEST A DISTANCE OF 171.52 FEET; THENCE NORTH 71°43'00" WEST A DISTANCE OF 107.73 FEET FROM A 4" BRASS DISC IN CONCRETE WHICH REPRESENTS THE RE-ENTRY CORNER OF THE WM. BYBEE DONATION LAND CLAIM; THENCE LEAVING THE SOUTH LINE OF LOT 7 OF SAID SUBDIVISION SOUTH 00°24'02" EAST ALONG THE WESTERLY LINE OF TRACT "A" OF SAID SUBDIVISION A DISTANCE OF 426.65 FEET; THENCE SOUTH 17°21'58" EAST A DISTANCE OF 205.41 FEET TO AN ANGLE POINT IN TRACT "A" OF SAID SUBDIVISION; THENCE LEAVING THE WESTERLY LINE OF TRACT "A" OF SAID SUBDIVISION SOUTH 17°21'58" EAST ALONG A LINE THAT IS PARALLEL TO AND 150.00 FEET EAST WHEN MEASURED AT RIGHT ANGLES TO THE HIGH WATER LINE AS DEFINED IN MULTNOMAH COUNTY SURVEY NUMBER 38262 A DISTANCE OF 621.08 FEET TO THE **TRUE POINT OF BEGINNING**; THENCE LEAVING SAID 150.00 FOOT HIGH WATER OFFSET LINE NORTH 73°38'36" EAST A DISTANCE OF 152.36 FEET; THENCE SOUTH 05°14'58" EAST A DISTANCE OF 122.73 FEET; THENCE SOUTH 03°16'27" EAST A DISTANCE OF 52.45 FEET; THENCE SOUTH 06°24'28" EAST A DISTANCE OF 93.73 FEET; THENCE SOUTH 16°43'13" EAST A DISTANCE OF 115.88 FEET; THENCE SOUTH 28°01'58" EAST A DISTANCE OF 79.34 FEET; THENCE SOUTH 31°31'36" EAST A DISTANCE OF 76.09 FEET; THENCE SOUTH 25°47'40" EAST A DISTANCE OF 152.07 FEET; THENCE SOUTH 37°55'39" EAST A DISTANCE OF 128.72 FEET; THENCE SOUTH 66°00'15" WEST A DISTANCE OF 359.20 FEET TO THE HIGH WATER LINE AS DEFINED IN SAID MULTNOMAH COUNTY SURVEY; THENCE ALONG SAID HIGH WATER LINE THE FOLLOWING FOUR (4) COURSES; 1) NORTH 51°48'00" WEST A DISTANCE OF 118.20 FEET; 2) THENCE NORTH 17°46'00" EAST A DISTANCE OF 189.69 FEET; 3) THENCE NORTH 21°35'00" WEST A DISTANCE OF 421.50 FEET; 4) THENCE NORTH 17°21'58" WEST A DISTANCE OF 175.29 FEET; THENCE LEAVING SAID HIGH WATER LINE NORTH 73°38'36" EAST A DISTANCE OF 150.02 FEET TO THE TRUE POINT OF BEGINNING, CONTAINING 5.31 ACRES, MORE OR LESS.

EXCEPTING THERE FROM ALL THAT AREA ENCOMPASSED BY THE 865.78 FOOT LONG BY 16.00 FOOT WIDE BIKE PATH CONTAINING 0.31 ACRES.

RECORDED ______________, AS FEE # ______________

NO.	DATE	BY	REVISIONS	CK'D	APPV'D	NO.	DATE	BY	REVISIONS	CK'D	APPV'D

PORT OF PORTLAND
PORTLAND, OREGON

PROJECT MANAGER

2002D053 — DESIGN NUMBER
23375-191 — PROJECT NUMBER

REGISTERED PROFESSIONAL LAND SURVEYOR
OREGON
JULY 25, 1980
CHARLES L. WILEY
2474
SIGNED: 10/16/2002
EXP: 6/30/2004

DESIGNED BY	C. WILEY
DRAWN BY	P. SHIELDS
CHECKED BY	C. VANDERWERF
DATE	OCT 2002
SCALE	1" = 100'

SUBMITTED BY
SURVEY MANAGER

RIVERGATE INDUSTRIAL DISTRICT

40 MILE LOOP MITIGATION
EXHIBIT PLAT

EXHIBIT B

TYPE	DRAWING NO.		
EP	RG	2002-9	1/1 SU-1