ATTACHMENT 2

HYLEBOS CREEK/ PARSONS SITE CONSOLIDATED MARSH AND WILDLIFE HABITAT AREA

CITY OF TACOMA
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This document was prepared by Grette Associates, LLC for the Port of Tacoma, on behalf of the City of Tacoma. Questions concerning the information presented can be directed to Glenn Grette at the following address and phone number.

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I. INTRODUCTION

The Port of Tacoma ("Port") is proposing to develop a consolidated marsh and wildlife habitat area ("habitat area") on a property located at 1621 Marine View Drive, Tacoma, Washington (Hylebos Creek/Parsons Site). The majority of the habitat area (14.25 acres) is to serve as a replacement for the City of Tacoma's previously proposed Hylebos Marsh and Wildlife Habitat Restoration Project.

The Hylebos Creek/Parsons site ("property") is comprised of two parcels, city parcel numbers 0421313048 and 0421313049, and is approximately 31.37 acres in size. The property is located on property located immediately east of Marine View Drive and north of Hylebos Creek near the head of the Hylebos Waterway. The majority of the property is vacant with the exception of a maintenance shop which occupies the northwest portion of the property. The property, along with the adjoining parcels to the north, has historically been utilized as a gravel mine.

The habitat area is comprised of three separate actions. The central focus of the habitat area is the Natural Resource Damage Assessment (NRD) restoration (NRD Restoration Action) which serves as the replacement for the City of Tacoma's previously proposed Hylebos Marsh and Wildlife Habitat Restoration Project. The habitat area also includes actions to finalize previous permit requirements (Parsons Mitigation Action) and explore the possibility of furthering habitat improvement through the addition of complementary Port Mitigation activities (Port Mitigation Action). If utilized to the maximum extent shown on Figure 3 of this document, the habitat area could encompass up to 25 acres of the subject property. The use of portions of the property not dedicated to this habitat area will be determined at a future date by the Port.

The comprehensive goal of the habitat area is to construct new aquatic habitat, restore wetlands, riparian areas and buffer habitat and preserve existing habitat (aquatic, riparian, wetlands and upland). Activities associated with site habitat restoration include construction of habitat suitable for juvenile salmonids and other freshwater marsh species; restoration of habitat for wetland-dependent species; removal of invasive vegetation; planting riparian vegetation; and preserving on-site aquatic, riparian and upland habitats. Habitat restoration activities are designed to create additional aquatic and riparian habitat and better link existing but somewhat fragmented riparian environments along the lower Hylebos Creek corridor in order to provide a continuous complex of aquatic, wetland and upland habitat.

This document is the synthesis of previous documents generated by Grette Associates for the Port including the Hylebos Creek Site, Habitat Restoration Project, Project Concept Plan dated March 2007 as well as the Hylebos Creek Site, Habitat Restoration Project Addendum dated May 2008. This document has been generated to provide clarity on the three separate actions and demonstrate how the three actions will be able to provide a cohesive habitat improvement project while maintaining distinct project boundaries. The

final section of this document briefly outlines the construction timelines for these projects.

II. HYLEBOS CREEK/ PARSONS SITE: HISTORY AND SITE CONDITIONS

Site History and Land Use

The property is located on uplands in the northern extent of the Puyallup River delta. The two dominant existing features of the restoration site are Hylebos Creek flowing generally east to west along the south border of the property, and Morningside Drain flowing north to south along the west border of the property. Historic aerial photography indicates Hylebos Creek meandered as an estuarine slough roughly parallel to the toe of the Fife Heights slope. The course of Hylebos Creek adjacent to the restoration property has remained largely unchanged throughout the past 70 years, as evidenced from aerial photography from 1931. In 1949, the site was in agricultural use. By 1961 Hylebos Creek immediately west of the site had been channelized into the head of the Hylebos Waterway.

The second dominant feature on the property is the Morningside Drain. The drain parallels the west boundary of the restoration property, entering Hylebos Creek immediately southwest of the property. The drain is absent in historic aerial photography from both 1931 and 1949. By 1961, Morningside Drain appears in its present location; it is unclear when the drain was built. Land use activities in the intervening years have modified its configuration.

The habitat area is located near the base of the Fife Heights slope. The areas south and west of the property were historically a mix of tidal sloughs and marsh. Over time, these areas were converted to agriculture or filled for industrial uses.

The history of land use on the property was investigated in 2005 by GeoEngineers, Inc. for the Port. This Phase I environmental site assessment consisted of a review of existing information including historic aerial photographs, various federal, state and local environmental databases, topographic and geologic maps (both past and present), soil surveys, tax parcel information, and various other pertinent sources of information. According to the review by GeoEngineers, the site has been operated primarily as an aggregate mine since 1967, and has also been utilized as a landfill for inert demolition materials such as concrete, asphalt and brick since 1988 (GeoEngineers, 2005).

The historic photographs reviewed by GeoEngineers date back to 1969. Aerial photography from 1931 and 1950 (from the City of Tacoma's govME website) indicate the property was vacant, and was likely utilized for agriculture or pasture. The former channel of Hylebos Creek generally occupied the present location of Marine View Drive, flowing along the south edge of the property, then turning north along the west side of the property.

The GeoEngineers investigation identified several Recognized Environmental Conditions (REC) at the site, including the former presence of both Underground Storage Tanks (UST) and Above-ground Storage Tanks (AST), storage of waste oil on the site, stained soil observed at the site, stockpiling of asphalt and concrete rubble, high pH observed in surface waters, and wood waste historically utilized as fill (GeoEngineers, 2005). Based on these findings, GeoEngineers recommended a Phase II site assessment be conducted to determine if soil and/or groundwater contamination were present at the site. The Phase II portion of the GeoEngineers investigation included:

1. Excavation and examination of 19 test pits;

2. Examination of 17 hand excavations;

3. Examination of four borings;

4. Installation of four monitoring wells at the locations of the borings;

5. Priority pollutant analysis for one or more soil samples from each excavation and groundwater samples from each monitoring well; and

6. Evaluation of chemical analytical data relative to MTCA Method A and B cleanup criteria and Sediment Management Standards.

A summary of the chemical analytical data is presented in Tables 1-4. Table 1 presents summary data for petroleum hydrocarbons in soil; Table 2 presents summary data for metals in soil; Table 3 presents summary data for semi-volatile organic compounds (SVOCs) in soil; and Table 4 presents summary data for petroleum hydrocarbons and metals in groundwater.

TABLE 1
SUMMARY OF CHEMICAL ANALYTICAL DATA
FOR PETROLEUM HYDROCARBONS IN SOIL[1]

Exploration Number	Sample ID	Date Sampled	Depth (feet)	NWTPH-HCID[2]			NWTPH	NWTPH- Dx[4]	
				Gasoline (mg/kg)	Diesel (mg/kg)	Heavy Oil (mg/kg)	Gasoline (mg/kg)	Diesel (mg/kg)	Heavy Oil (mg/kg)
TP1	S1 S2	4/25/2005	1 - 1.5 7.5 - 8	20 (U) 20 (U)	50 (U) 50 (U)	100 (U) 100 (U)			
TP2	S1 S2	4/25/2005	3 - 3.5 9 - 9.5	20 (U) 20 (U)	50 (U) 50 (U)	100 (U) 100 (U)			
TP3	S1 S2	4/25/2005	2.5 - 3 13.5 - 14	20 (U) 20 (U)	50 (U) 50 (U)	present 100 (U)		10 (U)	640
TP4	S1 S2	4/25/2005	1 - 1.5 11 - 11.5	20 (U) 20 (U)	50 (U) 50 (U)	present 100 (U)		45	103
TP5	S1	4/25/2005	2.5 - 3	20 (U)	50 (U)	100 (U)			
TP6	S1	4/25/2005	3 - 3.5	20 (U)	50(U)	100 (U)			
TP7	S1 S2	4/25/2005	1 - 1.5 6 - 6.5	20 (U) 20 (U)	> 50 50 (U)	present present		10 (U) 16	360 394
TP9	S1	4/25/2005	1 - 1.5					10 (U)	100 (U)
TP10	S1 S2	4/25/2005	2 - 2.5 8 - 8.5				74 8	990 10 (U)	100 (U) 100 (U)
TP11	S1 S2	4/25/2005	2 - 2.5 6.5 - 7	20 (U) 20 (U)	50 (U) 50 (U)	100 (U) 100 (U)			
TP12		4/26/2005	0.5 - 1					10 (U)	100 (U)
TP13	S2	4/26/2005	2.5 - 3					10 (U)	350
TP14	S3 S5	4/26/2005	8 - 8.5 14 - 14.5					10 (U) 10 (U)	1200 100 (U)
TP15	S1	4/26/2005	1 - 1.5					10 (U)	**2300**
TP16	S1	4/26/2005	0 - .5					10 (U)	100 (U)
TP17	S1	4/26/2005	4.5 - 5					10 (U)	100 (U)
TP18	S1	4/26/2005	0 - .5					10 (U)	890
TP19	S1 S2	4/26/2005	1 - 1.5 1.5 - 2					10 (U) 10	640 100 (U)
HE	LF1	4/27/2005	0 - 6	20 (U)	50 (U)	100 (U)			
HE	Shack 1	4/27/2005	0 - 6	20 (U)	50 (U)	present		10(U)	450
HE	MVN1	4/27/2005	0 - 6	20 (U)	50 (U)	present		10(U)	170
HE	CONC 4	4/27/2005	0 - 6	20 (U)	50 (U)	100 (U)			
HE	C5	4/27/2005	0 - 6	20 (U)	50 (U)	present		10(U)	470
B1	S2	4/28/2005	7 - 8.5	20 (U)	50 (U)	presents		10 (U)	100 (U)
B2	S4	4/28/2005	17 - 20.5	20 (U)	50 (U)	presents		10 (U)	100 (U)
B3	S2	4/28/2005	5.5 - 8.5	20 (U)	50 (U)	100 (U)			
B4	S4	4/28/2005	12.5 - 16.5	20 (U)	50 (U)	100 (U)			
MTCAs Method A Cleanup Level				30/100[5]	2,000	2,000	30/100[7]	2,000	

Notes appear on next page

Notes:

[1] Chemical analysis performed by Spectra Laboratories of Tacoma, Washington.

[2] Qualitative method for identification of petroleum hydrocarbons.

[3] Method for quantifying gasoline-range petroleum hydrocarbons.

[4] Method for quantifying diesel- and heavy oil-range petroleum hydrocarbons.

[5] Model Toxics Control Act cleanup levels.

[6] Qualitative analysis indicated that heavy oil-range petroleum hydrocarbons were present in the sample, however, quantitative analysis indicates that the concentration of heavy oil-range petroleum hydrocarbon is less than the method reporting limit of 100 mg/kg.

[7] The MTCA Method A cleanup level for gasoline-range petroleum hydrocarbons is 30 mg/kg if benzene is present and 100 mg/kg if benzene is not.

mg/kg = milligrams per kilogram.

"(U)" = Not detected at or greater than the indicated reporting limit.

"--" = Sample was not tested for the indicated analyte.

">" = Greater than

HE = Hand Excavated Exploration

Bolded text and shaded cell indicates that the detected concentration is greater than the MTCA Method A cleanup level.

TABLE 2
SUMMARY OF CHEMICAL ANALYTICAL DATA
FOR METALS IN SOIL[1]

Exploration Number	Sample Number	Area	Metals[2]						
			Arsenic	Cadmium	Chromium			Lead	Mercury
					Total	III[4]	VI		
TP1	S1	HC	17	0.7	31	31	1 (U)	6	0.05 (U)
	S2		14	0.9	20	20	1 (U)	4 (U)	0.05 (U)
TP2	S1	HC	5 (U)	3 (U)	23	23	1 (U)	4 (U)	0.05 (U)
	S2		5 (U)	3 (U)	20	20	1 (U)	4 (U)	0.05 (U)
TP3	S1	HC	**34**	3 (U)	68	68	1 (U)	250	0.05 (U)
	S2		5(U)	3 (U)	17	17	---	4 (U)	0.05 (U)
TP4	S1	HC	5 (U)	3 (U)	18	18	---	9	0.05 (U)
	S2		5 (U)	3 (U)	15	15	---	4 (U)	0.05 (U)
TP5	S1	EF	5 (U)	3 (U)	25	25	1 (U)	10	0.05 (U)
TP6	S1	EF	5 (U)	3 (U)	25	25	1 (U)	5	0.05 (U)
TP7	S1	LYA	5 (U)	0.5	23	23	1 (U)	25	0.05 (U)
	S2		5 (U)	3 (U)	24	24	1 (U)	42	0.05 (U)
TP10	S1	LYA	5 (U)	3 (U)	27	27	1 (U)	4 (U)	0.05 (U)
	S2		5 (U)	3 (U)	29	29	1 (U)	4 (U)	0.05 (U)
TP11	S1	LYA	5 (U)	3 (U)	36	36	1 (U)	4 (U)	0.05 (U)
	S2		5 (U)	3 (U)	28	28	1 (U)	4 (U)	0.05 (U)
B1	S2	HC	14	0.9	16	16	---	4 (U)	0.05 (U)
B2	S4	HC	5 (U)	0.5	23	23	1 (U)	4	0.05 (U)
B3	S2	LYA	5 (U)	0.5	18	18	---	4	0.05 (U)
B4	S4	MVN	5 (U)	0.5	14	14	---	4	0.05 (U)
Windows	1	WS	13	3 (U)	27	27	1 (U)	4 (U)	0.05 (U)
Windows	2	WS	5 (U)	3 (U)	0.7 (U)	0.7 (U)	---	4 (U)	0.05 (U)
NA	LF1	EF	5 (U)	3 (U)	23	23	1 (U)	29	0.05 (U)
NA	Shack 1[5]	Misc	5 (U)	3 (U)	25	25	1 (U)	14	0.05 (U)
NA	MVN1	ES	5 (U)	3 (U)	17	17	---	4 (U)	0.05 (U)
NA	CONC 4	EF	14	3 (U)	23	23	1 (U)	7	0.05 (U)
NA	C5	EF	10	3 (U)	27	27	1 (U)	34	0.05 (U)
MTCA Method A Cleanup Level[3]			**20**	**2**	**n/a**	**2000**	**19**	**250**	**2**

Notes:

[1] Chemical analysis performed by Spectra Laboratories of Tacoma, Washington.

[2] Total metals analyzed by EPA 6000/7000 Series.

[3] Model Toxics Control Act Cleanup Criteria

[4] The MTCA Method A Cleanup Level is 2000 mg/kg for chromium III and 19 mg/kg for chromium VI. The concentration of chromium III is the difference between total chromium and chromium VI.

[5] This sample was also analyzed for PCBs and volatile organic compounds (VOCs). PCBs and VOCs were not detected at concentrations greater than the reporting limits.

"---" = Not Analyzed

Bold indicates that the detected concentration is greater than the MTCA Method A cleanup level.

"NA" = not applicable or not available

Table 3 Notes Cont.

(U) = The analyte was not detected greater than the indicated reporting limit.
HC = Hylebos Creek Area
EF = Existing Fill Area
ES = Existing Stockpile
LF = Inert Landfill
Shack 1 = Miscellaneous Area
MVN = Marine View North
WS = Window Materials Stockpile
LYA = Lower Yard Area

TABLE 3
SUMMARY OF CHEMICAL ANALYTICAL DATA[1] FOR SEMIVOLATILE ORGANIC COMPOUNDS (SVOCs) IN SOIL[2]

SVOCs (mg/kg)	Sample ID					MTCA Method B Cleanup Level (mg/kg)	SMS Criteria (dry wt. + AET Values) (mg/kg)
	TP2 S2	TP3 S1	TP4 S2	TP10 S1	MTCA[3] Method A Cleanup Level		
2-Methylnaphthalene	0.08 (U)	0.83 (U)	0.08 (U)	0.13	NE	NE	0.67
Benzo (ghi) perylene	0.08 (U)	0.92	0.08 (U)	0.08 (U)	NE	NE	0.67
Fluoranthene	0.08 (U)	2.6	0.08 (U)	0.08 (U)	NE	3,200	1.7
Phenanthrene	0.08 (U)	1.42	0.08 (U)	0.36	NE	NE	1.5
Pyrene	0.08 (U)	2.64	0.08 (U)	0.08 (U)	NE	2,400	2.6
Benzo (a) anthracenec	0.08 (U)	**1.13**	0.08 (U)	0.08 (U)	NE	0.137	1.3
Benzo (a) pyrenec	**0.46**	**1.27**	0.09	0.08 (U)	0.1	0.137	1.6
Benzo (b) fluoranthene[c]	0.08 (U)	**1.12**	0.08 (U)	0.08 (U)	NE	0.137	3.2
Benzo (k) fluoranthene[c]	0.08 (U)	**1.63**	0.08 (U)	0.08 (U)	NE	0.137	3.2
Chrysene[c]	0.08 (U)	**1.64**	0.08 (U)	0.08 (U)	NE	0.137	1.4
Dibenz (a,h) anthracene[c]	0.08 (U)	**0.83**	0.08 (U)	0.08 (U)	NE	0.137	0.23
Indeno (1,2,3-cd) pyrene[c]	0.08 (U)	**0.87**	0.08 (U)	0.08 (U)	NE	0.137	0.6
Total cPAHs[5]	**0.46**	**2.09**	0.09	ND	0.1		

Notes:

[1] Chemical analysis performed by Spectra Laboratories of Tacoma ,Washington.

[2] This table presents only the results of SVOCs that were detected in one or more of the samples analyzed. Samples TP1-S1, TP1-S2, TP2-S1, TP3-S2, TP4-S1, TP10-S2, TP11-S1, TP11-S2 were also analyzed for SVOCs, but SVOCs were not detected in those samples.

[3] Model Toxics Control Act cleanup levels for unrestricted site uses.

[4] The Sediment Management Standards (SMS) dry wt. Apparent Effects Threshold (AET) values was used to evaluate the data because total organic carbon data for the samples were not available. The chemical analytical data for only samples TP252 and TP452 were evaluated relative to SMS criteria because these samples were collected from the potential future exposed surface in the Hylebos Creek area.

[5] Total cPAHs were calculated by summing the TEF-modified concentrations of the cPAHs and compared to the MTCA Method A cleanup level for benzo(a)pyrene (0.1 mg/kg).

[c] Carcinogenic PAH

(U) = Not detected at the indicated laboratory reporting limit

mg/kg = milligrams per kilogram

NE = Not established ND = Not detected

Bold indicates that the detected concentration is greater than the MTCA Method A cleanup level.

TABLE 4
SUMMARY OF CHEMICAL ANALYTICAL DATA
FOR PETROLEUM HYDROCARBONS AND METALS IN GROUNDWATER[1]

Sample ID	NWTPH-HCID2			DISSOLVED METALS				
	Gasoline (mg/l)	Diesel (mg/l)	Heavy Oil (mg/l)	Arsenic (mg/l)	Cadmium (mg/l)	Chromium (mg/l)	Mercury (mg/l)	Lead (mg/l)
MW-1	0.25 (U)	0.63 (U)	0.63 (U)	0.002 (U)	0.003 (U)	0.007 (U)	0.0002 (U)	0.001 (U)
MW-2	0.25 (U)	0.63 (U)	0.63 (U)	0.002 (U)	0.003 (U)	0.007 (U)	0.0002 (U)	0.001 (U)
MW-3	0.25 (U)	0.63 (U)	0.63 (U)	0.002 (U)	0.003 (U)	0.007 (U)	0.0002 (U)	0.001 (U)
MW-4	0.25 (U)	0.63 (U)	0.63 (U)	0.002 (U)	0.003 (U)	0.007 (U)	0.0002 (U)	0.001 (U)
MTCA[3] Method A Cleanup Level	0.8/1.0[4]	0.500	0.500	0.005	0.005	0.050	0.002	0.015

Notes:

[1] Chemical analysis performed by Spectra Laboratories of Tacoma, Washington.

[2] Qualitative method for identification of petroleum hydrocarbons.

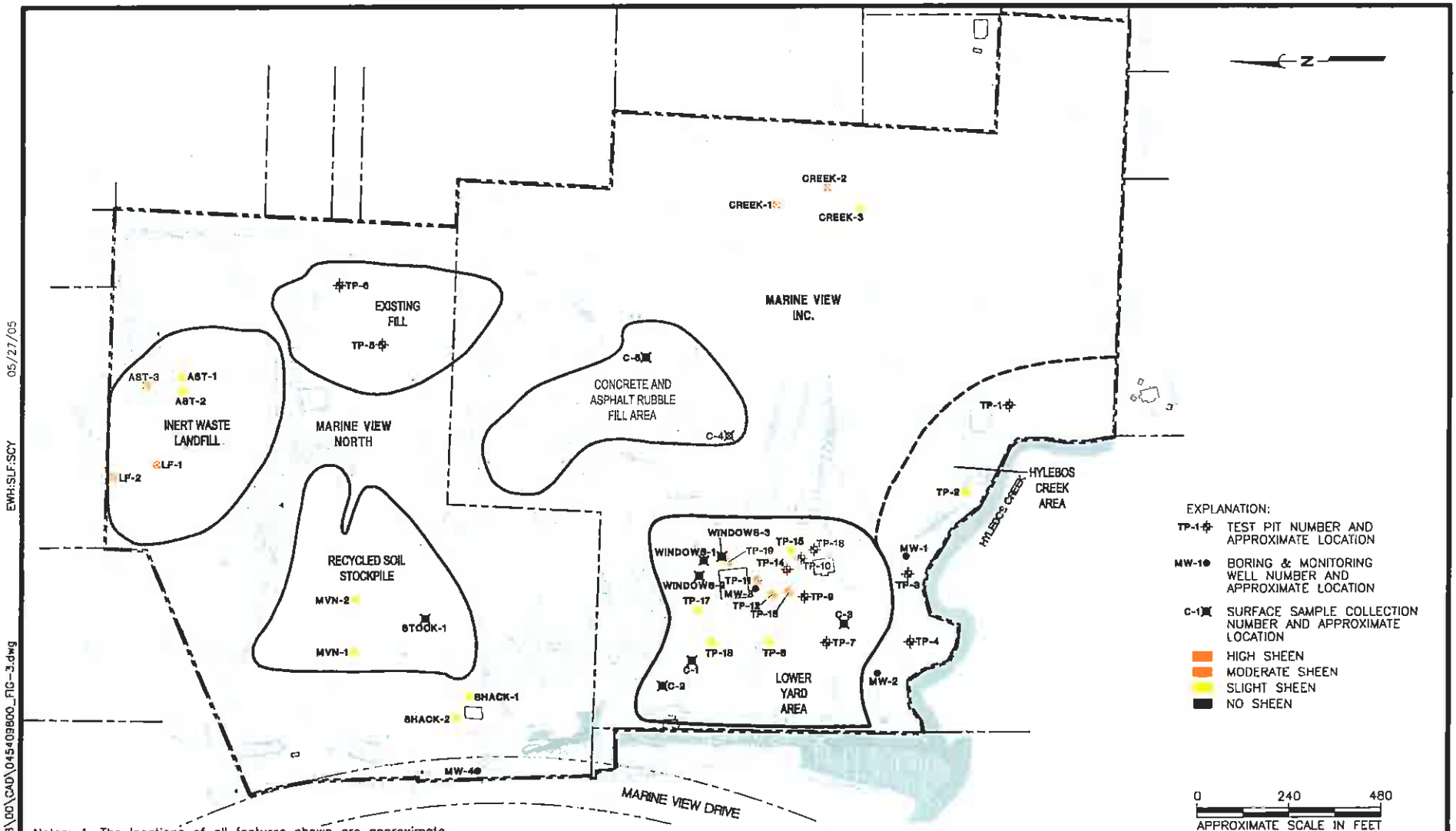
[3] Model Toxics Control Act cleanup levels.

[4] The MTCA Method A Cleanup Level for gasoline-range petroleum hydrocarbons is 0.8 mg/l if benzene is present and 1.0 mg/l if benzene is not present.

mg/l = milligrams per liter.

(U) = Not detected at the indicated reporting limit.

"--" = Sample was not tested for the indicated analyte.



Notes: 1. The locations of all features shown are approximate.
2. This figure is for informational purposes only. It is intended to assist in the identification of features discussed in a related document. Data were compiled from sources as listed in this figure. The data sources do not guarantee these data are accurate or complete. There may have been updates to the data since the publication of this figure. This figure is a copy of a master document. The master hard copy is stored by GeoEngineers, Inc. and will serve as the official document of record.

Reference: Drawing provided by AHBL and Walker and Associates.

GEOENGINEERS

SUBSURFACE EXPLORATION LOCATIONS

FIGURE 1

TACO\0\0454098\00\CAD\0454098_FIG-3.dwg EWH:SLF:SCY 05/27/05

Subsurface Explorations

Subsurface soil and groundwater conditions were investigated at the excavation locations to depths ranging from 2 to 14 feet below ground surface (bgs) (GeoEngineers, 2005). The four borings extended to between 15 and 25 feet bgs. Soil and groundwater samples examined at these locations were field tested for the presence of petroleum hydrocarbons.

The test pits and borings were located at the site to address four general areas of concern:

1. the Hylebos Creek area;
2. the Lower Yard area;
3. existing fill and stockpile areas; and
4. miscellaneous areas of concern.

The results of the field tests for petroleum hydrocarbons indicate that the Lower Yard and Hylebos Creek areas have been impacted by petroleum hydrocarbons. Specifically, heavy sheen and odor were observed at 5 test sites and moderate sheen was observed at one site in the Lower Yard. These test sites occurred in the vicinity of the former site of a log cabin site as well as adjacent to the maintenance shop. Additionally, a slight sheen was observed at one test site in the Hylebos Creek area.

Based on the above information indicating the presence of petroleum hydrocarbon contamination in the area near the maintenance shop and log cabin site, the Port and the previous owner of the property agreed that the previous owner would remove the contaminated soil. The soil was excavated and transported to the northeast corner of the site, where it was isolated and bioremediated.

The remainder of the contaminated soils within the Lower Yard and Hylebos Creek areas (see Figure 1) have not been remediated. The soils in these areas will be removed during construction and disposed of in an appropriate offsite disposal facility.

Monitoring Wells

Four monitoring wells were installed at the site, with depths ranging from 12 to 24 feet, and were logged by a supervising geologist. Well logs indicate that coarse gravel and sand fill exists on the site to a depth of approximately 3-13 feet. Gravel and sand fill is generally underlain by moist silt and, at depths of 10-15 feet., fine to coarse native gravel and sand.

Groundwater samples were collected from each of the four monitoring wells, and were analyzed for the presence of petroleum hydrocarbons and metals. Neither petroleum hydrocarbons or metals were detected in the groundwater samples analyzed.

Surface water samples were collected at 10 locations within the site, and each sample was field tested for pH. The pH of the water in 8 of the 10 samples tested were relatively normal, ranging from 7.2 to 8.5 (GeoEngineers, 2005). Two of the samples tested, one from a pond in the Lower Yard area and the other from a pond near the concrete and asphalt rubble pile on the hillside in the central portion of the site, contained pH levels

that were relatively high (10.6 and 11.5, respectively). It is likely the pH of these samples were high due to the presence of crushed concrete and concrete rubble in those areas (GeoEngineers, 2005).

Existing Site Conditions

Hylebos Creek flows from east to west across the southern boundary of the property, and includes approximately 1,000 feet of incised shoreline. The creek is tidally-influenced, with flow velocities corresponding to high and low tidal cycles. Two constructed mudflat areas are present on either bank of the creek at the entrance of Morningside Drain. The creek channel in this area is approximately 25 feet wide and is incised.

Immediately above Morningside Drain the channel is particularly incised, with bank heights up to 15 feet along the north shoreline. Bank composition along this portion of the creek is primarily clay, with mud and silt overlaying. Some small pieces of woody debris are exposed at lower flows. However, these features are likely not permanent and would be expected to move during high flows. Vegetation along both shorelines near the drain is dominated by dense Himalayan blackberry (*Rubus discolor*) which extends over the top of the bank. Sparse Scot's broom (*Cytisus scoparius*) is also present further up the bank. Flow velocities in this area are generally slow and are heavily influenced by marine tides from Commencement Bay.

Further upstream of Morningside Drain (approximately 540 feet), the channel remains heavily incised. However, low flows within this area expose less-steep mud banks along either side of the creek. Vegetation along both banks continues to be dominated by Himalayan blackberry. Several larger Pacific willow (*Salix lasiandra*) are present along the south bank, but do not offer any shading to the channel. Also, small level benches are present near the base of the channel bank, particularly along the north bank. These benches are approximately 1 to 2 feet wide and are vegetated with Lyngby's sedge (*Carex lyngbyei*).

At approximately 660 feet upstream of Morningside Drain, a larger continuous bench approximately 15 feet wide is present along the north side of the creek. This bench is dominated by Lyngby's sedge under a canopy of Pacific willow, with sparse common horsetail (*Equisetum arvense*) and skunk cabbage (*Lysichiton americanum*) also present. The bench substrate is composed primarily of silt and mud, with clay present beneath. The bank above this bench is dominated by Himalayan blackberry and scouring-rush (*Equisetum hyemale*). Larger Pacific willow are also present along the south bank, and combined with the willows along the north bank offer shading over the creek channel.

Approximately 890 feet upstream of Morningside Drain, a wetland seep from the hillside north of the creek flows over the creek bank and onto the vegetated bench below. The bench in this area contains sparse Lyngby's sedge and skunk cabbage, while the wetland seep above contains common rush (*Juncus effusus*) and reed canary grass (*Phalaris arundinacea*). The vegetated bench along the north bank ends at the wetland seep location; however, reed canary grass persists along the creek bank immediately below the blackberry

upstream to the project area boundary. Much of the creek channel in this area continues to be shaded by large willows along the south bank.

Within the Hylebos Creek channel in this area, several dilapidated pile are present. Along the south side of the creek, the remains of several historic bulkheads are present along with one dilapidated outbuilding. Another historic bulkhead is also present at the project area boundary on the north bank of the creek. The creek upstream to the boundary of the project area remains tidally influenced and incised.

Wildlife use of the site consists primarily of small mammals, including coyote (*Canis latrans*), raccoon (*Procyon lotor*), squirrel and chipmunk. Black-tailed deer (*Odocoileus hemionus*) are also likely present. Avian species likely to use the site include red-tailed hawk (*Buteo jamaicensis*), great blue heron (*Ardea herodias*), American crow (*Corvus brachyrhynchos*), glaucous-winged gull (*Larus glaucescens*) and belted kingfisher (*Ceryle alcyon*) along with various songbirds.

Existing On-site Wetlands

The existing on-site wetlands were reviewed and delineated by Grette Associates during the years of 2004 and 2005. The findings of those delineations were presented in a document entitled Port of Tacoma, Marine View Drive Gravel Pit, Revised Wetland Delineation Technical Memorandum dated January 2007. The location of the wetlands identified in that report are summarized below:

Based on the results of the site inspections, six wetlands were identified on the subject property (Table 5 as well as Figures 2 and 3). Wetland A is located along the north bank of Hylebos Creek in the southeast portion of the Study Area. The wetland includes as small seep located on the gravel access road bed. The seep spills over the top of the bank and down onto a vegetated bench within the Hylebos Creek channel. Wetland B is located northeast of Wetland A and consists of a small linear depression on the north side of the gravel access road. Wetland C is located west of Wetlands A and B and lies within the Morningside Drain channel along the east side of Marine View Drive. This wetland area includes vegetated and unvegetated mudflat near the connection to Hylebos Creek, below the OHWM. The regulated portions of Wetland C occur above the OHWM, and include scrub-shrub and emergent vegetation. North of the main gate vehicle entrance crossing, Wetland D is located north and east of the Morningside Drain channel. Wetland E is located south of Wetland D within the Morningside Drain channel as well as in an area at the base of the adjacent hillside to the east. Wetland E also includes a small stormwater settling pond north of the entrance road and east of Morningside Drain. Wetland F is located approximately 115 feet southeast of Wetland A and consists of a small seasonal creek and wetland fringe.

Wetlands delineated on site above the OHWM of Hylebos Creek and Morningside Drain total approximately 0.33 acres, and are comprised of palustrine emergent, palustrine scrub-shrub and palustrine forested vegetation communities.

Table 5: Wetland Summary

Wetland	Size (Sq. Ft.)	Category
A[1]	3,051	III
B	1,916	III
C[1]	1,361	II
D	1,177	III
E	4,172	III
F	2,713	II
Total	14,390	

[1] Portions of Wetlands A and C occur below the OHWM of Hylebos Creek and Morningside Drain; these portions are not within the City of Tacoma's jurisdiction under TMC 13.11, and are not included.

III. CONSOLIDATED MARSH AND WILDLIFE HABITAT AREA

As noted in the introduction, the subject parcel currently has three separate actions proposed on it. Those three actions are the NRD Restoration Action, the Parsons Mitigation Action and the Port Mitigation Action. The following text within this subsection provides a brief overview of each action:

NRD Restoration Action

As noted in the Introduction, the Port of Tacoma ("Port") is presenting the NRD Restoration Action as a replacement for the City of Tacoma's previously proposed Hylebos Marsh and Wildlife Habitat Restoration Project. The project elements described in this Section are the elements that were presented at the Trustees Technical Meeting on December 12, 2006. These elements are outlined in the following text as well as in Table 8 and Figure 2.

The following are elements of the NRD Restoration Action:

1. Construction of Intertidal Habitat

A 0.09-acre intertidal bench would be constructed along the north bank of Hylebos Creek at the south end of the site (Figure 2). A portion of the bank would be cut back, lowering the elevation of the bank to allow for periodic flooding of the area during the incoming tide. This action will increase the aquatic habitat area on the site, and will also provide additional intertidal habitat for juvenile salmonid and avian species. This restoration activity is represented in green as project element "1" on Figures 2 and 3.

2. Restore Riparian Buffer Habitat along Hylebos Creek

Approximately 0.59 acre of riparian buffer area along Hylebos Creek would be relocated and restored (Figure 2). The riparian buffer area would be relocated to encompass a constructed tidal channel and freshwater marsh system (see Project Element 3), and would extend landward approximately 50 feet from the top of the slope of the constructed freshwater marsh system (approximately +10 to + 12 ft Mean Lower Low Water [MLLW]). Restoring the function of this riparian buffer would increase the quality of 0.59 acre of riparian buffer habitat within the site. This restoration activity is represented in green as project element "2" on Figures 2 and 3.

Two planting schemes are proposed within the restored riparian buffer. The first scheme will extend from +10 to +12 ft MLLW up to approximately +20 ft MLLW, and will consist of shrub species. The second planting scheme will be installed between approximately +20 ft and +35 ft MLLW, and will consist of a mix of tree and shrub species. A schedule of species to be planted in the restored riparian buffer area is presented below in Table 6.

Table 6 Restored Riparian Area Planting Plan.

SCIENTIFIC NAME	COMMON NAME	PLANTING ELEVATION	% OF PLANTING	SPACING
TREES				
Populus trichocarpa	Black cottonwood	Above +20 ft MLLW	40	170 trees per acre
Alnus ruba	Red alder	Above +20 ft MLLW	15	
Thuja plicata[2]	Western red cedar	Above +20 ft MLLW	15	
Pseudotsuga menziesii	Douglas fir	Above +20 ft MLLW	15	
Acer macrophyllum	Big-leaf maple	Above +20 ft MLLW	15	
SHRUBS				
Cornus stonlonifera	Red osier dogwood	Between +12 and +20 ft MLLW	25[1]	1,800 shrubs per acre
Salix lasiandra	Pacific willow	Between +12 and +20 ft MLLW	20[1]	
Salix sitchensis	Sitka willow	Between +12 and +20 ft MLLW	20[1]	
Salix hookeriana	Hooker's willow	Between +12 and +20 ft MLLW	20[1]	
Rubus spectabilis	Salmonberry	Between +12 and +20 ft MLLW	15[1]	
Rosa nutkana	Nootka rose	Above +20 ft MLLW	25[2]	
Corylus cornata v. *californica*	Beaked hazelnut	Above +20 ft MLLW	20[2]	
Symphoricarpos albus	Snowberry	Above +20 ft MLLW	20[2]	
Sambucus racemosa	Red elderberry	Above +20 ft MLLW	20[2]	
Oemleria cerasiformis	Indian plum	Above +20 ft MLLW	15[2]	
DRY SEEDING MIX				
Festuca rubra var. *rubra*	Native red fescue	Above +10 ft MLLW	50	-
Species to be determined			20	
Species to be determined			30	

[1] These percentages are only for the area between +10 ft and +20 ft MLLW.
[2] These percentages are only for the area above +20 ft MLLW

3. *Construction of Tidal Channel and Freshwater Marsh Habitat*

Approximately 1.0 acre of tidal channel and freshwater marsh habitat would be constructed immediately north of the Hylebos Creek channel (Figure 2). This habitat would be constructed north of the intertidal habitat constructed under Project Element 1, and would consist of approximately 0.05 acre of open water tidal channel and 0.95 acre of freshwater marsh. Project Element 3 would provide an additional 1.0 acre of quality habitat for juvenile salmonids as well as avian species. This restoration activity is represented in green as Project Element 3 on Figures 2 and 3.

The north bank of Hylebos Creek, from the outlet of Morningside Drain to approximately 650 feet upstream, would be excavated to an elevation of approximately +10 ft MLLW. This excavation would extend north of the Hylebos Creek channel approximately 700 feet. Within this excavated area, three tidal channels would be excavated, each with a bottom elevation of approximately +6 ft MLLW (Figure 2). Once the excavation is complete, the areas from +10 ft to +12 ft MLLW would be planted with a mix of high marsh vegetation.

The vegetation within the High Marsh Zone (between +10 ft and +12 ft MLLW within the constructed freshwater marsh area) would be planted by broadcast seeding over the top of jute matting. The species used for seeding this High Marsh Zone are listed in Table 7 below.

Table 7. High Marsh Planting Plan.

SCIENTIFIC NAME	COMMON NAME	PLANTING ELEVATION (NGVD)	% OF SEED MIX	SEEDING RATE
Marsh Seeding Mix (SEED MIXTURE BETWEEN +10 FT AND +12 FT MLLW)				
Scirpus microcarpus	Small fruited bulrush	Entire area	25	20 lbs per acre
Scirpus acutus	Hardstem bulrush	Entire area	25	20 lbs per acre
Carex obnupta	Slough sedge	Entire area	25	20 lbs per acre
Carex lyngbyei	Lynby's sedge	Entire area	25	20 lbs per acre

4. *Preservation of Open Water Habitat*

Approximately 0.68 acre of existing open water habitat within the Hylebos Creek channel would be preserved (Figure 2). Currently, the Hylebos Creek channel provides holding and foraging habitat for juvenile salmon, and foraging habitat for great blue heron, kingfisher, and various other aquatic and terrestrial species. Preservation of this 0.68 acre portion of the creek channel would permanently protect the existing aquatic habitat functions from impacts of potential future development. This restoration activity is represented in green as Project Element 4 on Figures 2 and 3.

5. *Restoration of Native Riparian Vegetation*

Riparian vegetation along approximately 244 lineal feet of Hylebos Creek, totaling approximately 0.24 acre, would be restored (Figure 2). The native vegetation to be utilized in this area would be similar to that planted in Project Element 2 (Table 6). Prior to planting, invasive vegetation within the restoration area would be removed. Restoration of the riparian vegetation along this portion of Hylebos Creek will increase the quality of riparian habitat, providing increased native species diversity and increased

wildlife habitat function. This restoration activity is represented in green as Project Element 5 on Figures 2 and 3.

6. Construction of Freshwater Marsh Habitat

Approximately 0.05 acre of freshwater marsh habitat would be constructed adjacent to the freshwater marsh that is part of Project Element 3 (Figure 2). Excavation of this habitat area would be to between elevation +10 ft and +12 ft MLLW and would occur concurrently with Project Element 3. Once excavated, the area will be covered with jute matting and broadcast seeded with the marsh seeding mix described in Table 7 above. This restoration activity is represented in green as Project Element 6 on Figures 2 and 3.

Construction of this freshwater marsh will increase the amount of aquatic habitat on the site by 0.05 acre, providing an increase in quality habitat for juvenile salmonid and avian species.

7. Preservation of Forested Riparian Habitat

Approximately 0.47 acre of forested riparian habitat east of Wetland F near the existing concrete pond would be preserved (Figure 2). Initially, this area was identified as forested wetland using aerial photographs. Subsequent field efforts have identified this area as forested riparian habitat adjacent to a seasonal stream. This restoration activity is represented in green as Project Element 7 on Figures 2 and 3.

The forested riparian areas to be preserved consist of moderately dense vegetation including Douglas fir (*Pseudotsuga menziesii*), big-leaf maple (*Acer macrophyllum*), and red alder (*Alnus rubra*) over an understory of Indian plum (*Oemleria cerasiformis*), Oregon grape (*Mahonia nervosa*) and sword fern (*Polystichum munitum*). These areas provide quality foraging, refuge, and nesting habitat to a variety of terrestrial and avian species. Preservation of this forested riparian habitat would permanently protect the existing riparian functions from impacts of potential future development.

8. Restoration of Forested Riparian Habitat

Approximately 0.37 acre of forested riparian habitat west of and surrounding the existing concrete pond would be restored through planting of native trees and shrubs (Figure 2). As with Project Element 7 above, this area initially was identified as forested wetland using aerial photographs. Subsequent field efforts have identified this area as forested riparian habitat adjacent to Hylebos Creek. The forested riparian habitat to be restored provides quality foraging, refuge, and nesting habitat to a variety of terrestrial and avian species. Preservation of this forested riparian habitat would permanently protect the existing riparian functions from impacts of potential future development. This restoration activity is represented in green as Project Element 8 on Figures 2 and 3.

9. Construction of Freshwater Marsh and Open Water Habitat

Approximately 0.31 acre of freshwater marsh and open water habitat would be constructed at and near the location of the existing concrete pond (Figure 2). As mentioned above under Table 8, the existing concrete pond would be removed and deepened (to the extent possible with the adjacent slopes). The area surrounding the pond would also be excavated to provide suitable habitat for freshwater marsh vegetation and would slope toward Hylebos Creek. Upon completion of excavation activities within the former pond, the area would be broadcast seeded with the high marsh vegetation species described above in Table 7. This restoration activity is represented in green as Project Element 9 on Figures 2 and 3.

10. Preservation of Forested Habitat

Approximately 7.61 acres of forested hillside habitat east and south of Wetland F would be preserved (Figure 2). The forested hillside to be preserved consists of dense forest vegetation including mature Douglas fir (*Pseudotsuga menziesii*), big-leaf maple (*Acer macrophyllum*), and Pacific madrone (*Arbutus menziesii*) over an understory of Indian plum (*Oemleria cerasiformis*), Oregon grape (*Mahonia nervosa*) and sword fern (*Polystichum munitum*). This forested hillside provides quality foraging, refuge, and nesting habitat to a variety of terrestrial and avian species. Preservation of this forested habitat would permanently protect the existing habitat functions from impacts of potential future development. This restoration activity is represented in green as Project Element 10 on Figures 2 and 3.

11. Plant Installation in Disturbed Buffer Habitat

Approximately 2.55 acres of disturbed buffer habitat would be planted with native tree and shrub species (Figure 2). The area to be planted would include the hillside north of the existing concrete pond. This area appears to have been clear cut in the recent past, and currently consists of young to medium-aged Douglas fir and Pacific madrone. The area also contains dense thickets of Himalayan blackberry, trailing blackberry and Scot's broom. This restoration activity is represented in green as Project Element 11 on Figures 2 and 3.

The species to be planted would include the native tree and shrub species described in Table 6 (those species to be planted above +20 ft MLLW). Planting these species along the hillside would increase the native vegetation species diversity in the area, enhancing the quality of foraging, nesting and refuge habitat functions.

The planting plan will be developed during project permitting and would be subject to the review, comment and approval of resource and permitting agencies prior to the issuance of project permits. Planting will be designed for 100% of the riparian area and shall be based upon a review of similar projects in the Commencement Bay Area. Drip irrigation will be established to provide water to plantings and soil amendments will be applied in a manner consistent with requirements for fertilizer use in shoreline areas.

Parsons Mitigation Action

The Port of Tacoma continues to work with City staff to resolve outstanding mitigation requirements generated during previous review processes. The Parsons Mitigation Action includes two separate elements. Those elements are as follows: buffer restoration and enhancement work on the Morningside Drain and Hylebos Creek required as part of previously approved permit packages, and mitigation for an unpermitted wetland fill on the Morningside Drain that occurred in 2002.

The proposed buffer restoration and enhancement work involves buffer enhancement along Hylebos Creek and the Morningside Drain to comply with the original Shoreline and Wetland conditions of approval established by the City of Tacoma File Nos. 141.588 and 110.055. Approximately 1.4 acres of buffer enhancement planting along Morningside Drain is proposed and will include a mix of native trees, shrubs, and seed mixes. This mitigation activity is represented in yellow as project element "B" on Figures 2 and 3.

The Hylebos Mitigation element will involve approximately 1.9 acres of buffer enhancement plantings within the southern portion of the property. This mitigation element will include a mix of native trees, shrubs, and seed mixes. This mitigation activity is represented in yellow as project element "A" on Figures 2 and 3.

Note: The configuration of the Hylebos Mitigation element must be modified if the marsh and wildlife habitat restoration project is to be utilized to the maximum extent shown on Figure 3of this document. This modification is outlined in the portion of this document entitled Port Mitigation Action and can be viewed by comparing Figures 2 and 3.

The proposed fill mitigation element is to construct an approximately 1,000 SF wetland in an area adjacent to Hylebos Creek in the southeast corner of the property. In addition to the wetland mitigation area, a buffer enhancement/restoration component of 1,800 square feet is proposed adjacent to the constructed wetland to further improve the habitat function of the mitigation wetland and will also have the added benefit of improving buffer function for Hylebos Creek. This mitigation activity is represented in yellow as project element "C" on Figures 2 and 3.

Parson Mitigation Action	
Element	**Action**
A – Hylebos	Enhance quality of 1.9 acres of buffer
B – Morningside	Enhance quality of 1.4 acres of buffer
C – Wetland Fill/ Buffer	Create 1,000 square feet of wetland area and 1,800 square feet of associated buffer.

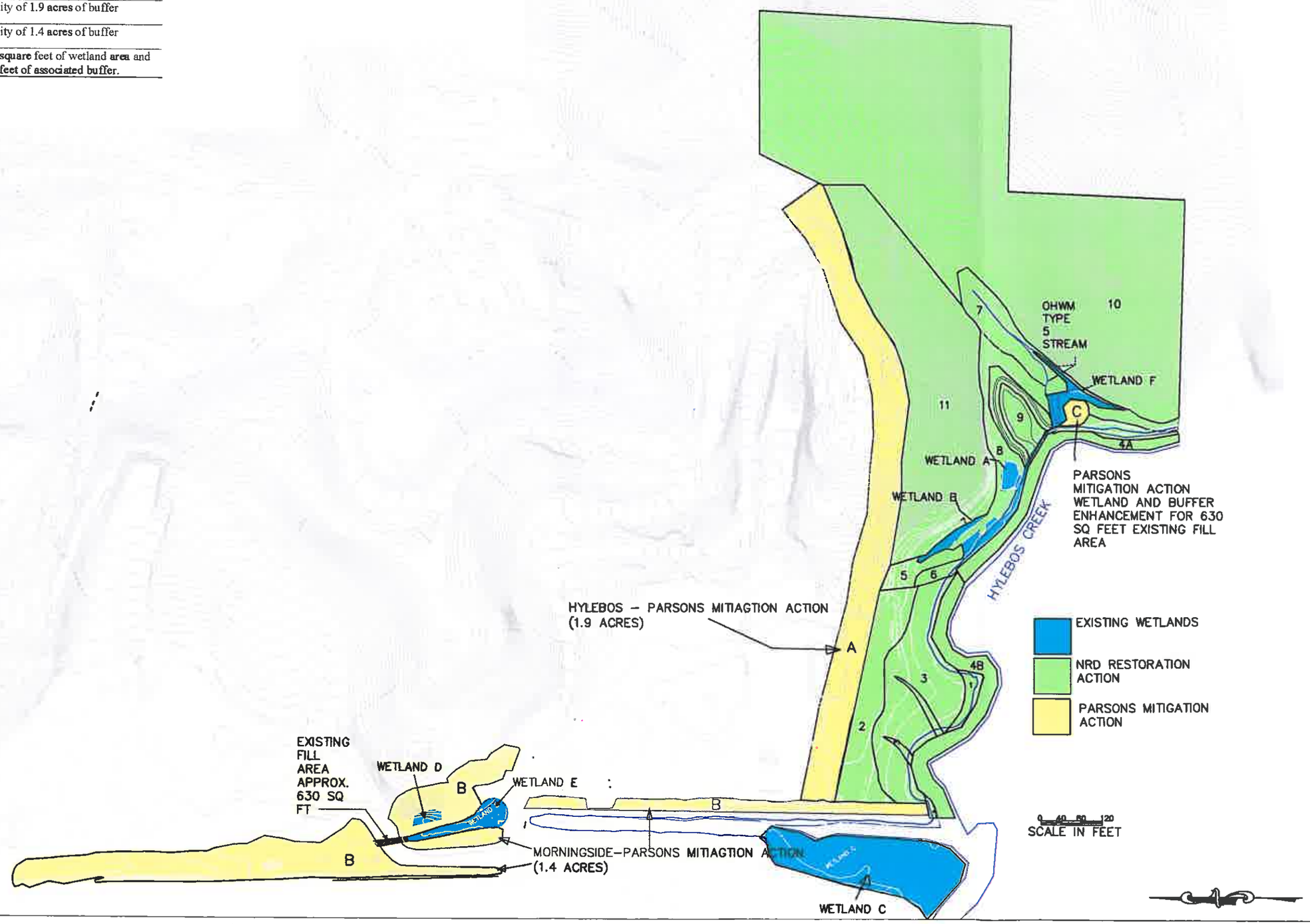


FIGURE 2: NRD RESTORATION/PARSONS MITIGATION ACTIONS (SEE TABLE 8)

Table 8. NRD Restoration Action Elements

Project Element	HABITAT FOCUS	Net Increase in Function
1 - Construct 0.09 acre of intertidal habitat	Avian and salmonid	Increase aquatic habitat by 0.09 acre[2]
2 - Restore 0.59 acre of riparian area buffer habitat along Hylebos Creek	Avian	Increase quality of 0.59 acres of riparian area habitat[2]
3 - Construct 1.0 acre of tidal channel and freshwater marsh[2] - 0.05 acre of open water tidal channel - 0.95 acre of freshwater marsh	Avian and salmonid	Increase aquatic habitat by 1.0 acre[2]
4A and B - Preserve 0.68 acre of open water habitat in Hylebos Creek	Avian and salmonid	Protection of existing function
5 - Restore native riparian vegetation along 244 lineal feet (0.24 acre) of Hylebos Creek	Avian and salmonid	Increase quality of 0.24 acre of riparian habitat
6 - Construct 0.05 acre of freshwater marsh	Avian and salmonid	Increase aquatic habitat by 0.05 acre
7 - Preserve 0.47 acre of forested riparian habitat[3]	Avian	Protection of existing function
8 - Restore 0.37 acre of forested riparian habitat[3]	Avian	Increase quality of 0.37 acre of riparian habitat
9 – Construct 0.31 acre of freshwater marsh and palustrine open water habitat (concrete pond)[2]	Avian	Increase freshwater marsh habitat by 0.23 acre and increase quality of 0.08 acre of wetland habitat
10 - Preserve 7.61 acres of forested habitat	Avian	Protection of existing function
11 - Plant native forest tree and shrub species on 2.55 acres of disturbed buffer habitat	Avian	Increase quality of 2.55 acres of buffer habitat (Note: .89 acres of this area would be re-graded and replanted if Figure 3 is installed)
Wetland shrubs will be planted within the existing wetlands to increase quality of 0.29 acre of wetland habitat	Avian	Increase quality of 0.29 acre of wetland habitat

[1] Acreages presented in this table are all approximate.

[2] The existing concrete pond would be removed and deepened (to the extent possible with the adjacent slopes). The area surrounding the pond would also be excavated to provide suitable habitat for freshwater marsh and would slope toward Hylebos Creek.

[3] All material excavated from the property would be removed to the appropriate disposal site.

Port Mitigation

In addition to the above-listed Parsons Mitigation and NRD Restoration actions, the Port of Tacoma is planning a mitigation action. The Port mitigation action is comprised of two separate components. These components are identified in purple on Figure 3. One component is the creation of tidally influenced marsh. This mitigation proposal is designed to correlate to and expand upon the NRD Restoration Action element of the construction of 1.0 acre of tidal channels and freshwater marsh habitat. At maximum sizing, this mitigation proposal could encompass approximately 4 acres of aquatic habitat. However, this mitigation area could also be modified to less than this maximum amount to meet the needs of the Port. The second component addresses steep slopes that remain on the project site generated by previous gravel mining activities by proposing to re-grade the area.

The Port is currently designing a new container shipping terminal on the Blair-Hylebos Peninsula and associated road and rail improvements. The development project is driving a need for a large volume of fill material for container yard development and construction of aquatic mitigation. The development project provides the opportunity to increase excavation activity at the Port's mitigation site while using the material beneficially. Therefore, there is an opportunity to maximize the size of the Port's mitigation site and re-grade some of the steep slopes left by past gravel mining all with cost–effective beneficial use of the excavated material.

Parson Mitigation Action	
Element	**Action**
A – Hylebos	Enhance quality of 1.9 acres of buffer
B – Morningside	Enhance quality of 1.4 acres of buffer
C – Wetland Fill/ Buffer	Create 1,000 square feet of wetland area and 1,800 square feet of associated buffer.

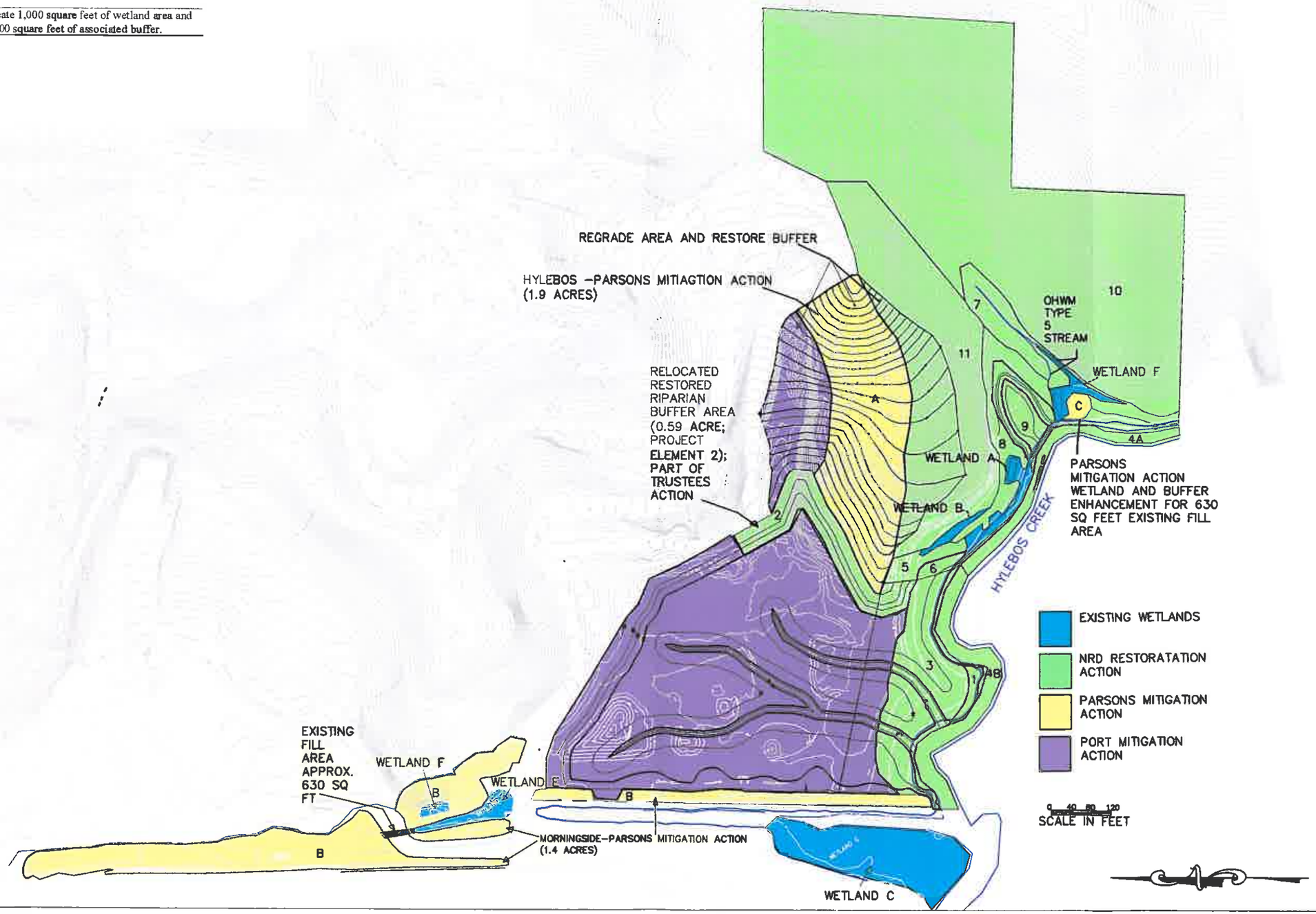


FIGURE 3: NRD RESTORATION/ PARSONS MITIGATION/ PORT OF TACOMA MITIGATION

Minor modifications to elements of both the Parsons Mitigation and NRD Restoration actions will need to occur in order to accomplish the Port mitigation action. However, the Port mitigation elements have been laid out to be compatible with and maintain the area requirements of the NRD Restoration and Parson Mitigation actions. The elements of the NRD Restoration and Parsons Mitigation actions that must be modified in order to accomplish the consolidated marsh and wildlife habitat area as identified in Figure 3are as follows:

1. Modification to the location of A – Hylebos Element of the Parsons Mitigation Action In comparing, Figures 2 and 3 note that Element A moves from long band that runs almost the length of the NRD restoration area in Figure 2 to the wider band that is located in the center of the Figure 3. The element of this item remains at 1.90 acres for both figures.

2. Modification of contours Figure 3 shows a contour modification associated with the proposed Port mitigation action. This contour modification includes a re-grade and restoration of a portion of the disturbed buffer that was slated for installation of additional vegetation (a portion of NRD Restoration Project Element 11 as well as Parsons Project Element A). The Port's mitigation action would not change the acreage of the Trustee or Parsons site (Table 8 and Figures 2and 3) but would entail greater earth moving. The area to be re-graded is very disturbed ground with abundant blackberry and other weedy vegetation. The Port's re-grading of this area would allow greater vegetation success as it would remove more of these weedy species. Installation of the portion of NRD Restoration Project Element 11 as well as Parsons Project Element A would occur concurrently with the Port Mitigation Action.

3. Rotation of element 2 In Figure 2, NRD Restoration project element 2 is located in an east-west orientation near the center of the mitigation area. In Figure 3, Element 2 of the NRD Restoration action is rotated to a north-south orientation and borders the eastern side of the proposed port of Tacoma Mitigation. The area of this element remains at 0.59 acres for both figures. The exact configuration of the element will be determined by the final size of the port mitigation site.

Construction Timing

It is anticipated that majority of the construction for the NRD Restoration/ Parsons Mitigation actions would occur in the summer of 2009. If the Port proceeds with the Port Mitigation Action, the Port would commit to implement the Action within two (2) construction seasons after implementation of the Trustee action, with an anticipated start date during the summer of 2010 or 2011. The elements of the NRD Restoration and Parsons Mitigation actions (Elements A, 2 as well as portions of 11) that are modified to incorporate the Port Mitigation Action would be installed concurrently with the Port action.

As the construction of the Port's mitigation site is likely to occur in 2010, the Port would take precautions to ensure that the Parsons Mitigation and NRD Restoration actions are protected during implementation of the mitigation action. Methods of protection could include (but are not limited to): designation of appropriate staging areas for construction equipment and material stockpiles, erection of

fencing around areas to be protected from disturbance, immediate stabilization of disturbed areas adjacent to protected areas, and development of a contractor work plan clearly identifying areas to be protected during construction.

In the event that unforeseen circumstances prevent the Port mitigation elements from occurring, elements A, 2 and 11 will be installed as shown on Figure 2.

References

Hylebos Creek Site, Habitat Restoration Project, Project Concept Plan dated March 2007 by Grette Associates

Hylebos Creek Site, Habitat Restoration Project Addendum dated May 2008 by Grette Associates

Port of Tacoma, Marine View Drive Gravel Pit, Revised Wetland Delineation Technical Memorandum dated January 2007 by Grette Associates

HYLEBOS CREEK/ PARSONS SITE
CONSOLIDATED MARSH AND WILDLIFE HABITAT AREA
CONSTRUCTION TIMING ADDENDUM
September 11, 2008

This addendum including the attached figure (Figure 4) serves to clarify the construction timing presented in the primary document, Hylebos Creek/ Parsons Site Consolidated Marsh and Wildlife Habitat Area dated September 9, 2008.

As noted in the primary document, the habitat area is comprised of three separate actions. The central focus of the habitat area is the Natural Resource Damage Assessment (NRD) restoration (NRD Restoration Action) which is proposed as the replacement for the City of Tacoma's NRD Hylebos Marsh and Wildlife Habitat Restoration Project. The habitat area also includes actions to finalize previous permit requirements (Parsons Mitigation Action) and explores the possibility of furthering habitat improvement through the addition of complementary Port Mitigation activities (Port Mitigation Action). Each action is composed of project elements that address various restoration or mitigation activities. Further information regarding each project element can be obtained in the primary document.

The installation of the consolidated habitat area will occur in two separate phases. The first phase will occur during the summer of 2009. The second phase will occur during the summer of 2010 or 2011. Figure 4 utilizes a red line to demonstrate the separate phases. Additionally, the figure contains an orange hatched area which represents a construction transition area approximately 20 feet wide that extends into the 2009 construction area. This construction transition area has been provided to allow for a more successful merging of the two installations as well as the movement of construction equipment during the installation process.

The majority of the NRD restoration elements will be installed during the summer of 2009. In addition to the NRD restoration elements, Parsons Mitigation Element C and a portion of B will also be installed in 2009. The elements to be installed in 2009 are located to the south of the red line shown on Figure 4.

The elements that are to be installed during the summer of 2010 or 2011 are depicted to the north of the red line on Figure 4. The elements of the NRD Restoration and Parsons Mitigation actions (Elements A, 2, as well as a portion of 11) that are modified to incorporate the Port Mitigation Action activities would be installed concurrently with the Port Mitigation Action. A portion of Parsons – Morningside Project Element B would also be installed during the Port Mitigation Action construction.

As noted in the primary document, the extent of the Port Mitigation Action area has not been confirmed at this time. Final construction of the consolidated habitat area may be somewhere between Figure 2 as shown in the primary document and the maximum extent shown in Figure 4 of this document. It is anticipated that the extent of the 2010 or 2011 construction will have been confirmed before construction begins on the 2009 elements. As such, the tidal channels located in NRD Project Element 3 will be constructed to correlate directly with the extention into the

Port Mitigation Action area. The intent is to avoid having to modify element alignment or establishment in areas that have already been constructed.

Parson Mitigation Action Element	Action
A – Hylebos	Enhance quality of 1.9 acres of buffer
B – Morningside	Enhance quality of 1.4 acres of buffer
C – Wetland Fill/ Buffer	Create 1,000 square feet of wetland area and 1,800 square feet of associated buffer.

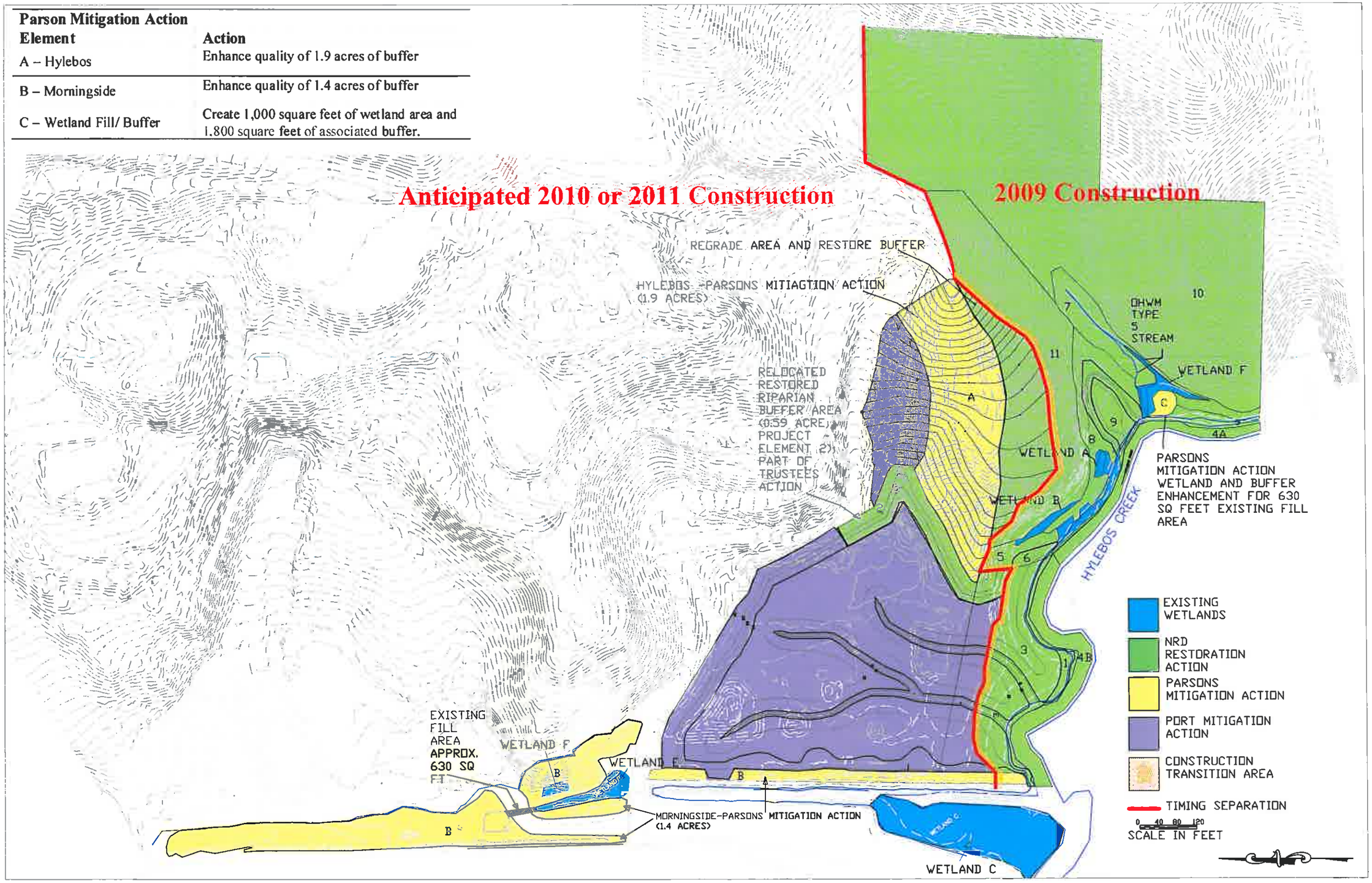


Figure 4: NRD Restoration/Parsons Mitigation/Port of Tacoma Mitigation Construction Timing – September 11, 2008

ATTACHMENT 3

RESOLUTION NO. 37547

A RESOLUTION relating to the Hylebos Marsh Project; authorizing the execution of a Memorandum of Understanding with the Port of Tacoma providing for the sale of an approximate 15.7-acre parcel of property owned by Tacoma Public Utilities, Light Division, to the Port of Tacoma.

WHEREAS, in 1988, the City signed a Natural Resource Damages Assessment Consent Decree ("Consent Decree"), which required the construction of five habitat restoration projects, and

WHEREAS one of the habitat restoration projects, known as the Hylebos Marsh Project ("Project"), is required to be constructed on a portion of an approximate 15.7-acre parcel of property owned by Tacoma Public Utilities, Light Division, located at 1300 Taylor Way, and

WHEREAS the Port of Tacoma ("Port") desires to acquire the property on which the Project is to be constructed, and

WHEREAS the Port proposes an alternative site for the development of the City's Project and has agreed to work with the City to obtain the court's approval to substitute the alternative site for the Taylor Way site, and

WHEREAS a Memorandum of Understanding will set forth the process, financial commitments, and risk allocation between the City and the Port to effect the substitution and completion of the alternative project, and

WHEREAS the City will not incur more costs other than what the Consent Decree already requires; Now, Therefore,

BE IT RESOLVED BY THE COUNCIL OF THE CITY OF TACOMA:

That the proper officers of the City are hereby authorized to execute a Memorandum of Understanding with the Port of Tacoma for the purpose of

implementing the substitution of an alternative site for the City's Natural Resource Damages Assessment Hylebos Marsh Project, said document to be substantially in the form on file in the office of the City Clerk.

Adopted JUL 29 2008

Mayor

Attest:

City Clerk

Approved as to form:

Assistant City Attorney

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LEG 004 (11/89)

Agreement by and Between the City of Tacoma and Port of Tacoma to Substitute the Hylebos Creek Habitat Restoration Project for the Hylebos Marsh Habitat Restoration Project

RECITALS

Purpose

The City of Tacoma ("City") and its Department of Public Utilities ("TPU"), Light Division (d.b.a. "Tacoma Power") are parties to a Consent Decree ("NRDA Consent Decree") entered by the United States District Court on December 30, 1997, in the matter of *United States, et al. v. The City of Tacoma and the Tacoma Public Utility*, Civ. No. 97-5336 (W.D. Wash.), that resolves all Natural Resource Damages liability for the City of Tacoma and TPU.

The NRDA Consent Decree requires the City to construct a series of five habitat restoration projects. One of the habitat restoration projects, known as the "Hylebos Marsh Project," is required to be constructed on a portion of an approximately 15.7-acre parcel of property owned by Tacoma Power, located at 1300 Taylor Way, in Tacoma, Washington ("Property"). For purposes of this Agreement, the Property excludes an approximately 0.7-acre portion of the property owned by Tacoma Power that is currently used for the Alexander substation.

The Port of Tacoma ("Port") desires to acquire the Property on which the Hylebos Marsh Project is to be constructed for Port purposes, and the proposed use of the Property by the Port is inconsistent with development of the habitat restoration project on the site. At the request of, and for the benefit of the Port, the parties to this Agreement, the City and the Port, collectively the "Parties," propose to substitute a new project, the "Hylebos Creek Project," on property owned by the Port, for the Hylebos Marsh Project, and to obtain approval from the appropriate federal, state, and tribal entities, collectively known as the Natural Resource Trustees ("Trustees") and the Department of Justice officials responsible for enforcing the NRDA Consent Decree, for the substitution.

This Agreement sets forth the process, financial commitments, and risk allocation of the Parties to effect the project substitution and completion of the Hylebos Creek Project.

A separate Agreement between TPU and the Port will be developed to address transfer of ownership of the existing Hylebos Marsh Project site to the Port and the Port's assumption of TPU's remaining obligation to provide in-kind services toward the

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construction of the Hylebos Marsh Project. If an agreement cannot be reached between TPU and the Port for transfer of ownership, this Agreement between the City and the Port will be voided.

Mutual Benefits

The proposed substitution would result in a habitat project larger in size and containing the same freshwater wetland habitat types, as well as higher-value, fish-accessible habitat types. It is tributary to and a similar distance from the same waterway within Commencement Bay ("Bay") and is directly connected to the Bay via Hylebos Creek, as opposed to the stormwater pipe connection offered by the Hylebos Marsh site.

Locations

The Hylebos Marsh Habitat Restoration Project would provide approximately 9.9 acres of habitat at 1300 Taylor Way, Tacoma, on land owned by TPU except for a small adjoining parcel which was to be acquired. The Hylebos Creek Habitat Restoration Project would provide approximately 14.25 acres of habitat on land owned by the Port at 1621 Marine View Drive.

AGREEMENT

The Recitals of this Agreement are incorporated by this reference.

A. Project Substitution Process

1. With the assistance of the Port, the City will propose the "alternate project" to the Trustees and Department of Justice under paragraph 18 of the NRDA Consent Decree and described by the project concept plan attached as Appendix XX to this Agreement and incorporated by this reference. The proposal will request approval for the substitution of the Hylebos Creek Project for the Hylebos Marsh Project and for the release of all encumbrances, including the use restriction created by the NRDA Consent Decree on the Property. The proposal will also transfer the milestones of the Hylebos Marsh Habitat Project to the Hylebos Creek Habitat Project.

2. Should it be necessary, the City and the Port will cooperate on a 30-day public comment period for the Hylebos Creek Project concept plan and the proposal to substitute the alternate site.

B. Hylebos Creek Project Contingencies

1. The Port and the City's obligations under this Agreement for the substitution of the Hylebos Creek Project for the Hylebos Marsh Project are contingent upon successful negotiation of an Agreement between TPU and the Port for the purchase of the Property upon which the Hylebos Marsh Project is to be

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constructed. For purposes of this Agreement, "successful negotiation" of an Agreement will mean that TPU and the Port have executed an agreement defining the terms and conditions for the transfer of the Property to the Port and the Port's assumption of TPU's remaining obligations for in-kind services, notwithstanding the fact that TPU and the Port may not have agreed upon a final purchase price or have obtained final approval from the Tacoma Public Utility Board, Tacoma City Council, or Port Commission. The Parties acknowledge that the TPU/Port Agreement for purchase of the Property also will be contingent upon approval by the appropriate federal entities of the substitution of the Hylebos Creek Project for the Hylebos Marsh Project.

2. The rights and obligations of Sections C through D of this Agreement are further contingent upon approval by the appropriate federal entities of the substitution of the Hylebos Creek Project for the Hylebos Marsh Project, together with the release of restrictions on the Property.

3. In the event that the appropriate federal entities do not approve the substitution of the Hylebos Creek Project for the Hylebos Marsh Project, the Parties shall have no further obligations under this Agreement.

C. Hylebos Creek Habitat Project Development Process

1. Upon approval by the appropriate federal entities of the substitution of the Hylebos Creek Project, the Port agrees to assume responsibility for completing the City's NRDA Consent Decree obligations with respect to the Hylebos Creek Project and will indemnify and hold the City harmless for said requirements, provided that the City provides funding for those activities, as set forth in Section D.2 below.

2. Upon approval by the appropriate federal entities of the substitution of the Hylebos Creek Project, the Port will finalize the Hylebos Creek Project design and submit permit applications. The Port will be the project proponent for all permitting purposes and will be the lead agency for SEPA purposes.

3. The City will support the Port's position before the federal agencies (and the position that has been upheld on the City's previous NRDA projects) that the alternative project will not require additional mitigation for the NRDA restoration itself.

4. The Parties also acknowledge and expect that there are a number of specific preexisting conditions that were the subject of other land use actions and permits on the property on which the Hylebos Creek Project is to be constructed and the Port agrees to comply with and to incorporate compliance into its habitat restoration plan in a manner acceptable to the City and the Trustees.

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5. Once applicable approvals have been given and permits issued, the Port will issue bid documents to construct the Hylebos Creek Project.

6. The bid documents will specify milestones and deadlines for substantial completion that comport with the requirements of the NRDA Consent Decree, accompanied by liquidated damages for failure to meet contracted deadlines.

7. The Port's policies and procedures for selection of the low responsible bidder will apply and include the evaluation of the bidders' qualifications and environmental and safety records prior to award. The Port will coordinate the specifications with the City's approach to past NRDA projects and the efforts used to ensure Trustee approval of the contractor.

8. Prior to contract award the Port will notify the City of the name and qualifications of the proposed contractor and of any proposed changes in the selection of a contractor. The Port will not enter into a contract with a contractor to whom the City has a reasonable objection. The Port will also notify the City of any proposed subcontractor. The City's assent to the proposed subcontractor may be presumed unless the City notifies the Port in writing of its objection within 45 days of the Port's notification.

9. The Port will consult with the City prior to issuance of substantial completion.

10. The Port will impose all necessary restrictions on the Hylebos Creek Project site to ensure that the Port, all future owners, lessees, assigns, and their authorized agents, employees, or persons acting under their direction or control, not use such property for any purpose the effect of which is inconsistent with the purposes of the NRDA restoration project. It is recognized that the Port has the option of implementing a mitigation action contiguous with the planned restoration action that is consistent with that presented in the "Hylebos Creek Site Habitat Restoration Project Concept Plan."

11. The Port will be responsible for unforeseen issues such as contamination, property infringements, or construction contingencies inherent in the Hylebos Creek Project.

12. The Port may use or develop the remainder of the Hylebos Creek Project site in accordance with the NRDA Consent Decree, applicable laws, regulations, and codes in effect as of the date of execution of this Agreement.

D. Costs

1. The Parties estimate that the Total Project Cost for the Hylebos Creek Project for design, permitting, construction, monitoring, Adaptive Management Plan, and

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contingency is **$2,095,114.74**, including applicable taxes. The Total Project Cost does not include the Port's costs for land acquisition. The Parties will refine the Total Project Cost during the final design process.

2. The City agrees to reimburse the Port for that portion of the Total Project Cost that represents the total cost the City would have incurred to complete its obligations under the NRDA Consent Decree for the original Hylebos Marsh Project. This amount is $ 134,962. This amount shall constitute the City's total contribution toward the completion of the Hylebos Creek Project.

3. The Port shall fully fund any and all costs of the substitute Hylebos Creek Project in excess of the costs that would have been incurred by the City in fulfilling its NRDA obligations to construct the Hylebos Marsh Project. Any new or additional costs imposed by the NRDA Trustees on the substitute Hylebos Creek Project shall be undertaken and paid exclusively by the Port.

4. If it appears that the costs for completion of the Hylebos Creek Project will exceed the total estimated project cost, the Parties will explore options to redesign the project to bring the cost back within budget subject to Trustee approval, or any party may elect to contribute additional funds to complete the project as originally designed and obtain such mitigation credits as may be available for the additional funding contribution.

E. Miscellaneous

1. Dispute Resolution. Subject to the terms of paragraph 38 of the NRDA Consent Decree, if the Parties are unable to resolve a dispute at the department level, the dispute shall be referred to executive management for resolution. If the Parties

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are unable to resolve the dispute 30 days after referral to executive management, the Parties shall appoint a mediator and enter into mediation, as set forth in paragraph 38 of the Consent Decree.

Dated this 4th day of September, 2008.

PORT OF TACOMA

Dorcas Nepple, Contracts Director

CITY OF TACOMA

Eric A. Anderson
City Manager

Robert K. Biles
Finance Director

Attest:

8-25-08
Doris Sorum, City Clerk

Debbie Dahlstrom, Risk Manager

Approved as to Form and Legality:

Assistant City Attorney

Michael P. Slevin III, P.E.
Interim Public Works Director

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