Gog-le-hi-te II Real Estate and Civil Works Actions

Final Environmental Assessment 2 January 2009

Responsible Agency: The responsible agency for this work is the U.S. Army Corps of Engineers (Corps), Seattle District.

Summary: This document evaluates the effects of federal actions by the Corps. The actions are in support of a compensatory mitigation project proposed by the Port of Tacoma (Port) called Phase 1 of the Gog-le-hi-te II Mitigation Action (Mitigation Action). The purpose of the federal actions are to acquire the real estate needed for the new setback levee, to authorize the Port to use the existing federal levee for the Mitigation Action, and to approve modification of the existing flood control project.

The proposed action includes (1) acquisition by the Corps of title to a new segment of setback levee and 3.19 acres of flood protection levee easement from the Port that will be required in order to allow the Corps to operate and maintain the new setback levee as part of the full federal Puyallup River flood control project; (2) granting permission to the Port to breach a portion of the existing federal levee to create aquatic habitat for the Mitigation Action; (3) the issuance of a license to the Port on the remaining federal levee system for access to the Mitigation Action area for operation and maintenance; and (4) approval of the new levee as a modification of the existing Tacoma/Puyallup Flood Control project per Engineering Regulation 1165-2-119 and 33 CFR 208.10(a)(5). No change in fee ownership of the property will occur. A portion of the property needed for the setback levee is owned by the Tribe. The Port and the Tribe have entered into an agreement that will result in the conveyance of a perpetual easement from the Tribe to the Port and allow the Port to reconvey that easement to the Corps once the setback levee has been constructed by the Port.

The public comment period for the draft of this EA occurred from 29 June 2007 to 30 July 2007.

This document is available online under "Gog-le-hi-te II Real Estate and Civil Works Actions" at:

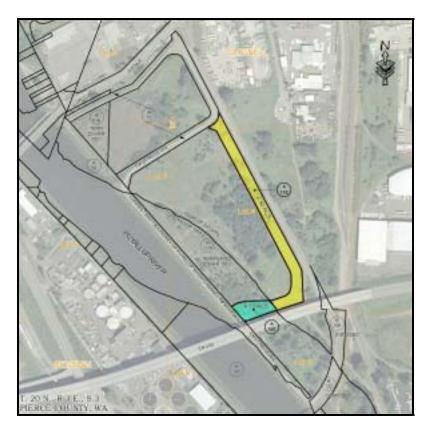
http://www.nws.usace.army.mil/ers/doc_table.cfm.

Please send questions and requests for additional information to:

Evan R. Lewis Environmental Resources Section U.S. Army Corps of Engineers P.O. Box 3755 Seattle, Washington 98124-3755 evan.r.lewis@usace.army.mil (206) 764-6922

Real Estate and Civil Works Actions Phase 1, Gog-le-hi-te II Mitigation Action

Tacoma, Pierce County, Washington



2 January 2008



TABLE OF CONTENTS

1.	INTI	RODUCTION	1
	1.1	PROJECT BACKGROUND	1
	1.2	PROJECT LOCATION	
	1.3	PURPOSE AND NEED	2
	1.4	AUTHORITY	3
2.	ALT	ERNATIVES	3
	2.1	NO-ACTION ALTERNATIVE	3
	2.1	Federal Actions	
	2.2.1		
	2.2.2		
	2.3	NON-FEDERAL ACTIONS	
3.	EXIS	STING CONDITIONS	10
	3.1	LAND USE	10
	3.2	GEOLOGY AND HYDROLOGY	
	3.3	WATER RESOURCES AND WATER QUALITY	
	3.4	BIOLOGICAL RESOURCES	
	3.4.1		
	3.4.2	e e e e e e e e e e e e e e e e e e e	
	3.4.3	Fisheries	12
	3.4.4	0 1	
	3.5	AIR QUALITY	
	3.6	SOLID AND HAZARDOUS WASTE	
	3.7	HISTORIC PROPERTIES AND CULTURAL RESOURCES	
	3.8	AESTHETICS AND RECREATION	
	3.9	SOCIOECONOMICS	
4.	ENV	IRONMENTAL EFFECTS OF THE PROPOSED ACTION	14
	4.1	NO ACTION	14
	4.2	PROPOSED ACTION	
	4.2.1		
	4.2.2	Geology and Hydrology	
	4.2.3	Water Resources and Water Quality	
	4.2.4	0	
	4.2.5 4.2.6	z	
	4.2.0		
	4.2.7		
	4.2.9		
5.	,	IULATIVE IMPACTS	
6.		PRDINATION	
7.	ENV	IRONMENTAL COMPLIANCE	
	7.1	NATIONAL ENVIRONMENTAL POLICY ACT	-
	7.2	ENDANGERED SPECIES ACT	
	7.3	MAGNUSON-STEVENS FISHERY CONSERVATION AND MANAGEMENT ACT.	
	7.4	CLEAN WATER ACT	
	7.5	RIVERS AND HARBORS ACT	
	7.6 7.7	COASTAL ZONE MANAGEMENT ACT	
	7.8	CLEAN AIR ACT	
	1.0		

i

		ENVIRONMENTAL JUSTICE TREATY RIGHTS	
		ICLUSION	
9.	REF	ERENCES	.24

LIST OF FIGURES

Figure 1. Location of Port Development and Mitigation Sites	2
Figure 2. Existing Conditions at the Gog-le-hi-te I and II Site	
Figure 3. Proposed Gog-le-hi-te II Mitigation Site Levee Alignment, Excavation,	
and Erosion Control Plan	6
Figure 4. Proposed Gog-le-hi-te II Levee Breach Details	7
Figure 5. Proposed Easement Areas for Setback Flood Control Levee	

APPENDICES

APPENDIX A.	Finding Of No Significant Impact	26
APPENDIX B.	Comments On Draft EA, With Corps Responses	29

1. Introduction

Pursuant to the National Environmental Policy Act (NEPA), this Environmental Assessment (EA) evaluates the impacts of proposed transfer of a new setback levee and easement from the Port of Tacoma (Port) to the Seattle District, U.S. Army Corps of Engineers (Corps), the Corps' approval of new setback levee as a modification of the existing Tacoma/Puyallup Flood Control project, the Corps' approval to breach a section of the existing federal flood control levee, and the granting of a perpetual license to the Port over the remaining federal levee for access to the Port's proposed Gog-Le-Hi-Te II mitigation site (the Mitigation Action area). This will occur at a site along the Puyallup River in Tacoma, Pierce County, Washington (Figure 1). The proposed action is required as part of the Port's efforts to construct tidally influenced wetland habitat to mitigate the effects of various Port development projects.¹

1.1 Project Background

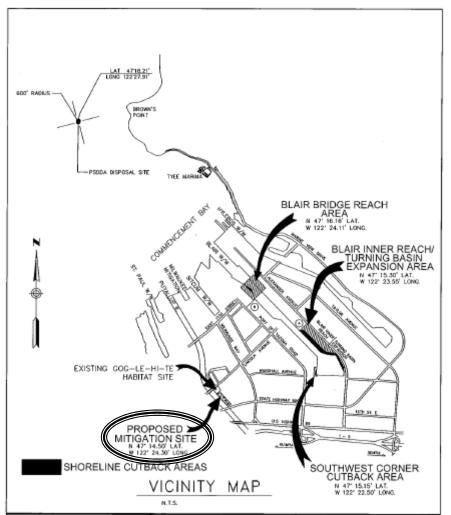
The Port of Tacoma (Port) is proposing to construct an aquatic habitat enhancement project along the lower Puyallup River in Tacoma, Washington, as compensatory mitigation for the Port's Blair Waterway Infrastructure Improvements and Barge Slip Fill projects (Port's Development Projects). The objective of the compensatory mitigation project, otherwise known as Phase 1 of the Gog-le-hi-te II Mitigation Action (Mitigation Action), is to create productive, low salinity, and tidally influenced aquatic habitat within the smolt transition zone of the Puyallup River estuary, habitat that is rare and extremely valuable to juvenile salmonids in the Puyallup River/Commencement Bay system. The project site is located in an area that is landward of an existing federal flood control levee, part of the Puyallup River Channel Improvement Project (the project that constructed federal levees on the lower portion of the river). The proposed Mitigation Action requires construction of a new setback levee to tie into and become part of the federal Puyallup River Channel Improvement Project. Construction of the new setback levee will be followed by breaching a section of the existing federal flood control levee to create the aquatic habitat.

The Mitigation Action will be constructed on properties owned by both the Port and the Tribe. An agreement between the Port and the Tribe has approved the use of these properties for mitigation use by the Port. The existing levee is owned, operated, and maintained by the U.S. Army Corps of Engineers (Corps).

1.2 Project Location

The Gog-le-hi-te II site is located within the Commencement Bay industrial area adjacent to the east side of the Puyallup River in the City of Tacoma, Pierce County, Washington (Figure 1). It is adjacent to the existing Gog-le-hi-te I mitigation site. The project site lies in

¹ The Port's development projects and the associated mitigation have been previously authorized through the procedures of the Corps regulatory program (Seattle District permit numbers 200400818 and 200500133) and will not be specifically addressed by this EA. However, the EA does describe certain expected effects of the proposed mitigation project as relevant to evaluating the long-term consequences of the proposed federal actions.



the SE ¹/₄ of Section 03, Township 20 North, Range 3 East. Access to the site is via Lincoln Avenue.

Figure 1. Location of the Gog-le-hi-te II Mitigation Site and Port Development Projects

1.3 Purpose and Need

The purpose of the federal actions are to acquire the real estate needed for the new setback levee, to authorize the Port to use the existing federal levee for the Mitigation Action, and to approve modification of the existing flood control project.

The purpose of the Port's Mitigation Action is to provide aquatic habitat to offset impacts associated with the Blair Waterway Infrastructure Improvements² (Corps permit number 200400818) and Barge Slip Fill (Corps permit number 200500133) projects.

2

² The Blair Waterway Infrastructure Improvements Project consists of three separate improvements, known as the Blair Inner Reach Cutback and Turning Basin Expansion, the Southwest Corner Cutback, and the Blair Bridge Reach Widening. These improvements are described in detail in the mitigation plan associated with this project (Grette Associates 2004a).

1.4 Authority

The Puyallup River Channel Improvement Project was authorized by the Flood Control Act of 1936 and 1938. The project is situated along the two mile stretch of the Puyallup River in the City of Tacoma, Washington. The Corps currently controls and maintains the levee system for flood control along the lower Puyallup River, from the mouth of the Puyallup River to SR 509/Interstate 5.

2. ALTERNATIVES

The Corps has considered alternatives to meet the need and achieve the purpose of the action, as summarized below.

In the course of planning their development projects, the Port evaluated a number of locations for the Mitigation Action. Various sites were considered, such as the mouth of the Puyallup River and Clear Creek, a tributary to the Puyallup River. It was decided that the proposed site, just south of the existing Gog-le-hi-te site, would best serve the project's purpose. The Port has completed an iterative mitigation planning process with federal, state, and tribal biologists to develop the Mitigation Action. The Port's proposal is to construct the first phase of a multi- or two-phased habitat action at the mitigation area. Phase 1 will use a portion of the total habitat opportunity and is compatible with a future action on the balance of the mitigation area. It should be noted that the design of the proposed Mitigation Action is based in part on a hydraulic model that assessed the physical processes of the lower Puyallup River. There is currently no schedule for implementation of the Phase 2 action.

By virtue of its location and design, the Mitigation Action would yield habitat that is rare and extremely valuable for juvenile salmonids in the Puyallup River/Commencement Bay system. The site is expected to be used by salmonids for transition between freshwater and marine areas, and would provide low salinity habitat that is tidally influenced. Osmoregulatory transition habitat has been identified as one of the principal habitat gaps in the Puyallup River/Commencement Bay system (Simenstad 2000).

2.1 No-Action Alternative

NEPA requires that each EA include an analysis of the "no-action" alternative, against which other alternatives including the proposed action can be compared. Under the "no-action" alternative, the Corps would not grant a license to the Port for modification of the Corps' levee, and consequently the levee would not be breached. The Corps would not acquire a setback levee nor a perpetual easement for the location of a setback levee and the site would not be used as mitigation for impacts associated with the Port's development projects.

2.2 Federal Actions

2.2.1 Real Estate Actions

The proposed real estate actions consist of the following components:

1. Once the setback levee has been constructed by the Port and approved by the Corps, ownership of the setback levee and a flood protection levee easement on 3.19 acres of Port and Tribal lands will be transferred to the Corps.

3

- 2. The Corps will then authorize the Port to breach that section of the existing federal levee waterward of the setback levee in order to create the aquatic habitat.
- 3. The Port will need access to these aquatic lands for operation and maintenance and therefore the Corps will grant to the Port a license over the remaining federal levee for this purpose.

See Figure 2 through Figure 5 for the project drawings.

2.2.2 Civil Works Action

The proposed Civil Works action consists of the Corps' approval of the new levee as a modification of the existing Tacoma/Puyallup Flood Control project per Engineering Regulation 1165-2-119 and 33 CFR 208.10(a)(5). The Corps' proposed approval is contingent on a finding that the completed levee does not adversely affect the authorized purpose or operations and maintenance of the existing Federal project.

2.3 Non-Federal Actions

The Port of Tacoma will construct the proposed Mitigation Action as the first phase of a multi-phased action at the mitigation area. The Phase 1 portion of the Mitigation Action will convert approximately 6.22 acres of existing upland habitat to aquatic habitat located below +13 ft Mean Lower Low Water (MLLW). Of the 6.22 acres of habitat credit, 1.38 acres will be assigned to the Blair Waterway Infrastructure Improvements Project and 4.84 acres will be assigned to the Port's Barge Slip Fill Project. The fill of the barge slip in the Blair Waterway is the subject of a separate permit submittal. However, the mitigation for the Barge Slip Fill Project will be constructed pursuant to the Blair Waterway Infrastructure Improvements Project permit.

The Mitigation Action includes the following elements:

- Setback Levee Construction
- Compacted Soil Berm Construction
- General Excavation
- Over-Excavation of Soils
- Partial Removal and Benching of the Existing Puyallup River Levee
- Seeding of Vegetated Flats
- Installation of Upland Vegetation

A setback levee will be constructed around the mitigation area (Figure 5). The levee will extend from the Puyallup River east to the Burlington Northern Santa Fe (BNSF) railroad right-of-way and continue north where it will tie into the setback levee that was constructed as part of the original Gog-le-hi-te Habitat Area. The levee will also encompass the area that will be developed as part of the Phase 2 action. The new levee will be constructed in accordance with Corps specifications in order to ensure a comparable level of flood protection.

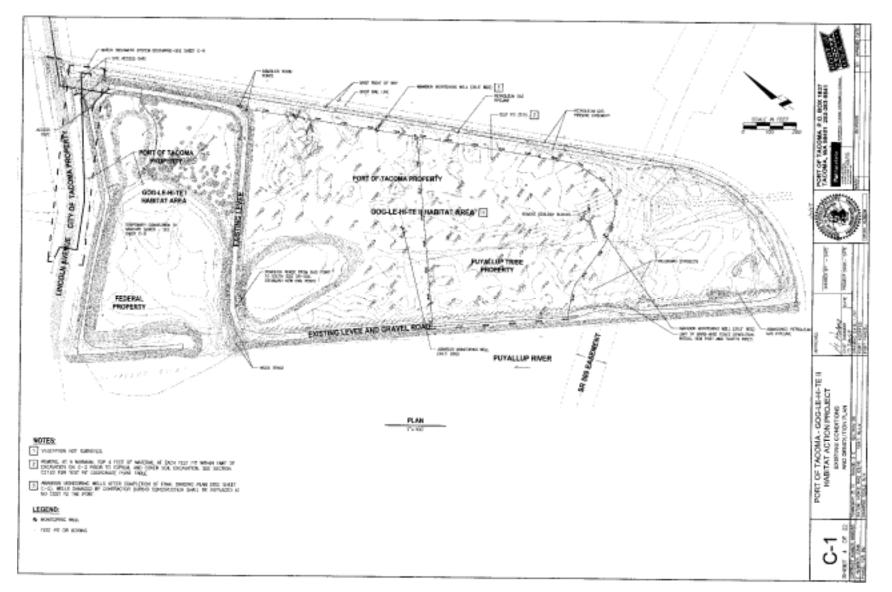


Figure 2. Existing Conditions at the Gog-le-hi-te I and II Site

Final Environmental Assessment Real Estate and Civil Works Actions 5

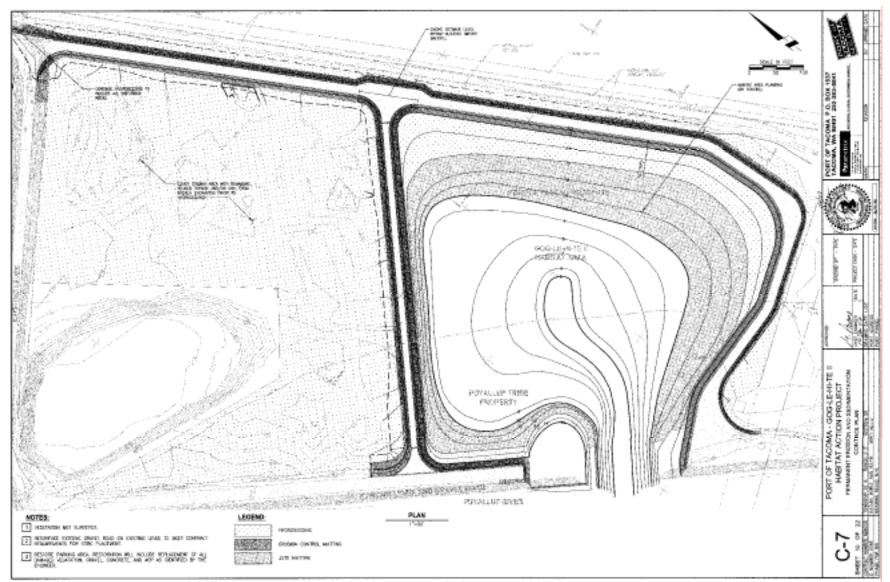


Figure 3. Proposed Gog-le-hi-te II Mitigation Site Levee Alignment, Excavation, and Erosion Control Plan

Final Environmental Assessment Real Estate and Civil Works Actions

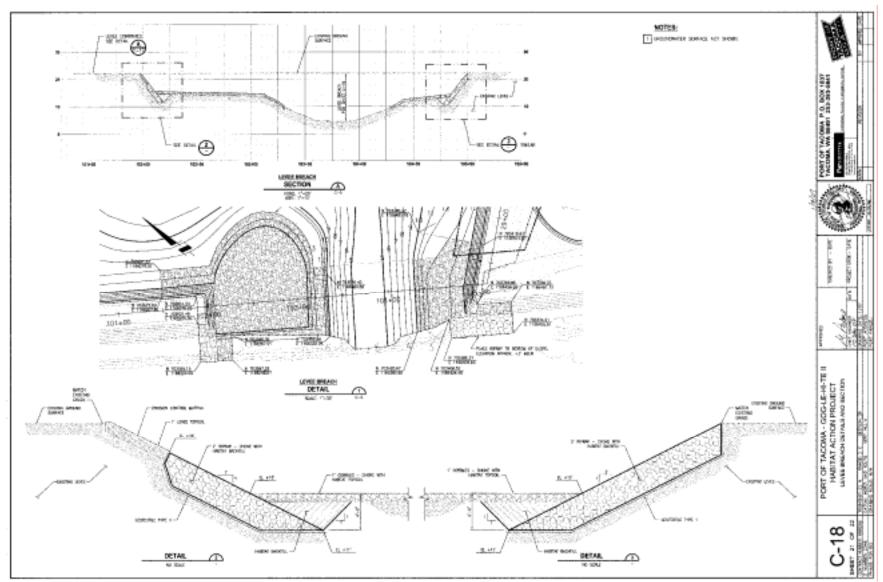


Figure 4. Proposed Gog-le-hi-te II Levee Breach Details

Final Environmental Assessment Real Estate and Civil Works Actions 7

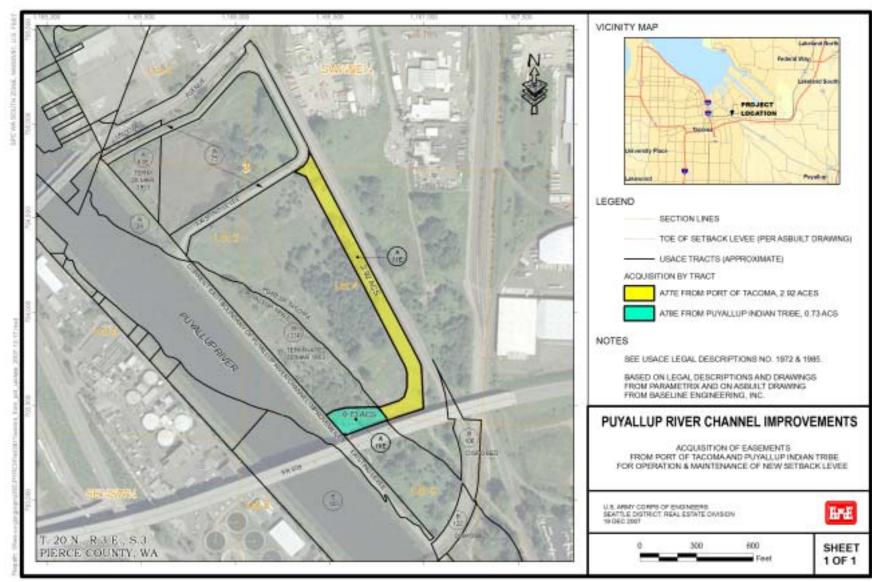


Figure 5. Proposed Easement Areas for Setback Flood Control Levee

A compacted soil berm will be constructed between the Phase 1 and Phase 2 areas. This soil berm will extend from the existing surface elevation (approximately +16 ft MLLW) up to approximately +22 ft MLLW. The soil berm will prevent the Puyallup River from inundating the Phase 2 area.

The existing surface elevation of the Phase 1 area varies between +20 ft and +16 ft MLLW. As part of the Phase 1 action, soil and municipal garbage will be excavated until native soil (approximately +11 ft MLLW) is encountered. The stratum of municipal garbage varies from 2 to 6 ft thick. Municipal garbage extending below +11 ft MLLW, will be over-excavated and backfilled with appropriate substrate, as necessary to meet the design grade. The side slopes of the berm that separates the Phase 1 area from the Phase 2 area will be over-excavated and backfilled with 3 ft of clean material at a 4H:1V slope.

Once the municipal garbage has been removed from the Phase 1 area, further excavation and reworking of the soil will yield aquatic habitat between +13 ft and +5 ft MLLW. The majority of the aquatic habitat below +13 ft MLLW will be contoured at slopes greater than 20H:1V to promote the development of freshwater marsh species. A channel, approximately 35 ft wide will be excavated to approximately +5 ft MLLW. The location of the channel is based on the hydraulic model of expected water circulation patterns within the mitigation area. The hydraulic model also indicates that deposition of fine sediments is expected over most of the aquatic habitat. Over-excavation and backfilling of the mudflat will ensure the habitat is a deposited mudflat rather than an excavated hard surface. Over-excavation and backfilling will also occur in the area where the channel is anticipated to develop following construction of the Phase 2 area. Softening the substrate in this area will facilitate natural channel migration when the Phase 2 action is completed and the Puyallup River is allowed to flow between both phases.

Approximately 200 ft of Puyallup River levee will be removed in order to establish a connection to the mitigation area. The downstream side of the mouth and approximately 275 ft of the inner side (landward side) of the Puyallup River levee will be benched above +14 ft MLLW and planted with riparian vegetation. Benched areas will be over-excavated and backfilled with suitable material and contoured to the desired slope.

The area between elevation +13 ft and +10 ft MLLW will be seeded with a mixture of freshwater marsh species. The seed mixture will contain Lyngby's sedge (*Carex lyngbyei*), hard-stemmed bulrush (*Scirpus lacustris*), small-fruited bulrush (*Scirpus microcarpus*), and slough sedge (*Carex obnupta*). This blend is consistent with the planting schedule that was established for the freshwater marsh vegetation in the recently completed addition to the Gog-le-hi-te Habitat Area, completed in 2003-2004. The Port will implement an adaptive management strategy to remove cattails (*Typha latifolia*) and direct the development of the freshwater marsh community. The intent of the vegetation management strategy is to provide a competitive advantage for the desired freshwater marsh species for the first three growing seasons. Cattails will not be eradicated by this activity and are expected to be a component of the freshwater marsh.

9

Upland trees, shrubs, and ground cover will be planted above +13 ft MLLW in areas where the structural integrity of the levee will not be compromised by the vegetation. A minimum of six native tree and shrub species will be planted as part of the Mitigation Action. Upland vegetation will be planted along the perimeter levee and in the area where the existing Puyallup River levee will be benched. Willow stakes will be planted waterward of the Puyallup River levee from the mouth of the Mitigation Action to the boundary between Phase 1 and Phase 2 (approximately 300 ft). The goal of the planting activities is to provide shading, organic input, a visual buffer, and impede the growth of invasive species, such as reed canary grass and Himalayan blackberry. Upland vegetation will not be planted on the soil berm, although it will be seeded with a mixture of native grasses.

3. Existing Conditions

3.1 Land Use

The existing levee along the project site is part of the Tacoma/Puyallup Flood Control project, a completed Corps civil works project designed to protect areas along the lower Puyallup River from flooding. The Corps maintains the levee system to ensure that it continues to provide the level of protection authorized for the project.

The proposed mitigation area for the Mitigation Action is located south of the Port's existing Gog-le-hi-te Habitat Area (Figure 2). The site is currently undeveloped and is in a conservancy shorelines designation.

The Gog-le-hi-te Habitat Area was built in 1985 and was expanded in 2003-2004 by the construction of a high marsh. The Mitigation Action is bounded to the north by the setback levee (constructed as a component of the original Gog-le-hi-te habitat area), to the west by the existing Puyallup River levee, to the east by the existing BNSF railroad right-of-way, and to the south by the SR 509 right-of-way. Historically the mitigation area was used as a municipal landfill.

3.2 Geology and Hydrology

The site lies within the historic delta of the Puyallup River. The nearby topography is a combination of depositional features associated with Pleistocene glaciation and subsequent erosional and depositional actions. During the last major glacial advance, which reached its maximum about 17,000 years ago, the area was covered by ice estimated to be up to 2,500 feet thick. By 16,500 years ago, much of the Puget Sound lowlands were free of ice. The glaciers left a combination of recessional till and outwash sediments, which formed a broad lowland plain throughout the region.

Up until at least 5,000 years ago, the Puyallup River flowed through a former outwash channel and entered Commencement Bay at a location approximately 10 miles upstream from the current mouth. Around 5,700 years ago, a massive lahar (mudflow) from Mount Rainier flowed down the White River Valley. The mudflow forged into Commencement Bay near the present city of Puyallup and formed the present tide flat area (EHC 2003).

By 1888, the margin of the delta extended to just north of the project site. In 1950, the Corps realigned the river and constructed a flood control levee along the lower portion of the Puyallup River. This levee is currently in use on the project site.

Subsurface explorations conducted at the site found a 6-12 inch layer of black to dark brown topsoil over the entire site. Under this was a 6-12 inch layer of sand/gravel, which existed above a layer of refuse. The refuse layer ranged from 1-6 feet thick. Refuse present included bottles, bricks, paper, plastic, wood waste, and concrete (Parametrix 2005b).

3.3 Water Resources and Water Quality

The Puyallup River is a glacier-fed river, and has naturally high turbidity levels (EPA 2000). Subsurface borings at the mitigation site found groundwater levels typically between 4 and 11 ft. below ground surface. Neither groundwater nor surface water at the site is used as drinking water or for irrigation.

3.4 Biological Resources

3.4.1 Habitat and Vegetation

The mitigation area is currently bounded by a Corps flood control levee, which isolates the site from direct contact with the Puyallup River. The area behind the existing levee consists of upland habitat. Dominant vegetation on the mitigation site includes Himalayan blackberry (*Rubus discolor*), scotch broom (*Cytisus scoparius*), Japanese knotweed (*Polygonum cuspidatum*), English ivy (*Hedera helix*), and reed canarygrass (*Phalaris arundinacea*). Black cottonwood (*Populus trichocarpa*), red alder (*Alnus rubra*), willow (*Salix spp.*), red-osier dogwood (*Cornus stolonifera*), and other herbaceous plants are also present (Port of Tacoma 2005).

As the site has been highly disturbed, is surrounded by industrial development, is cut-off from the river, and was formerly used as a municipal landfill, it does not provide high value or unique habitat in its present condition.

3.4.2 Wildlife

Vegetation adjacent to the mitigation area may attract waterfowl and raptors common to the Commencement Bay area. While wildlife activity on the proposed mitigation area is minimal, wildlife activity is common in the adjacent Gog-le-hi-te Habitat Area. Bird species known or likely to exist near the mitigation area include Canada goose, widgeons, great blue heron, kingfisher, grebe, and songbirds such as wrens, thrushes, and vireos. Other birds observed in and around the area include seagull, red-tailed hawk, and bald eagle.

Mammals that are likely to exist near the site include muskrat, rabbit, opossum, squirrel, weasel, raccoon, river otter, rats, mice, skunk, shrews, muskrat and nutria (EPA 2000). In the Environmental Checklist addressing actions at the mitigation area, it was reported that muskrat have been sighted in the project area (Port of Tacoma 2005).

3.4.3 Fisheries

Though the mitigation area is adjacent to the Puyallup River, it is disconnected from the river, and thus currently provides no benefit to fisheries resources in the area. The Puyallup River is home to a number of fish species, including Chinook, coho, chum, and pink salmon, steelhead, and bull trout. Since this section of the Puyallup River is tidally influenced, it is likely to contain a number of estuarine species similar to those found in Commencement Bay, such as English sole, Pacific tomcod, sand lance, sculpins, and starry flounder (EPA 2000).

3.4.4 Threatened and Endangered Species

There are several threatened or endangered animal species in the adjacent areas of the Puyallup River and Commencement Bay Area. There are no threatened or endangered plant species known to be present in the mitigation area. A Biological Evaluation (BE) and BE Addendum were prepared for the Blair Waterway Infrastructure Improvements Project, for which Gog-le-hi-te II Phase 1 provides mitigation habitat, which identified Chinook salmon (*Oncorhynchus tshawytscha*), bull trout (*Salvelinus confluentus*), humpback whale (*Megaptera novaeangliae*), Steller sea lion (*Eumetopias jubatus*), leatherback sea turtle (*Dermochelys coriacea*), southern resident killer whale (*Orcinus orca*), and bald eagle (*Haliaeetus leucocephalus*) as threatened or endangered species possibly present in the Commencement Bay area (Grette Associates 2004b). Steelhead (*Oncorhynchus mykiss*) in Puget Sound have been listed since the Port's 2004 BE and 2005 BE Addendum and effects of the proposed federal actions on steelhead are addressed in a 2007 BE prepared by the Corps (see Section 7.2).

3.5 Air Quality

The project area is located in an industrial area. Industrial and commercial sites adjacent to the project area produce direct and indirect emissions to the ambient air. Additionally, the site is adjacent to State Route 509 to the south, and Burlington Northern Santa Fe railroad tracks to the east. Both contribute directly and indirectly to air emissions. There are no activities that produce direct or indirect air emissions on the project site.

Prior to September, 2005, the project area was designated by the EPA as a "non-attainment area" due to persistent air quality problems related to ozone, particulate matter, and carbon monoxide. Recent air monitoring has shown that the Commencement Bay area is meeting health-based air quality standards. Since September 2005, the project area has been redesignated as a maintenance area based on a 10-year plan for continuing to meet and maintain air quality standards and other requirements of the Clean Air Act.

3.6 Solid and Hazardous Waste

The mitigation site has historically been used as a municipal landfill. A subsurface site characterization was conducted on the Gog-le-hi-te II site to determine the chemical nature of the soils to be excavated from the site, and to explore possible soil reuse options (Parametrix 2005a, 2005b). Soil test pits were excavated at 61 locations to depths of between 3 and 13 feet below ground surface (Parametrix 2005c). Ten soil borings were conducted to depths between 27 and 52 feet below ground surface.

A layer of refuse was identified in all but one test pit; refuse layers ranged from 1-6 feet thick and occurred at depths between approximately 5 to 9 ft below the surface. Soil below the refuse appears to be native loose silty sand. Samples taken from the refuse layer had chemical compound levels exceeding MTCA Method A cleanup levels and/or Commencement Bay Sediment Quality Objectives in a number of cases (Parametrix 2005c). The constituents exceeding the cleanup levels included lead, total petroleum hydrocarbons (TPH), polychlorinated biphenyls (PCBs), volatile organic carbon (VOC) compounds, semivolatile organic carbon (SVOC) compounds, and chlorinated pesticides. Below the refuse layer in native soil, compounds were detected at levels exceeding the cleanup levels in only a few cases (Parametrix 2005c).

Sediment samples were collected from the Puyallup River shorelines at the proposed levee breach point and analyzed according to the cleanup criteria described above. No chemical compounds exceeding cleanup criteria were detected in the sediment samples (Parametrix 2005b).

3.7 Historic Properties and Cultural Resources

A cultural resource assessment has been conducted for the Phase 1, Gog-le-hi-te II Mitigation Action (Northwest Archaeological Associates, Inc. 2005). The following sections summarize information in the Northwest Archaeological Associates report.

The project area would have been part of a delta plain and available to local inhabitants after about 4,200 years ago. The lower plain could have hosted a variety of special use locations for fishing, shellfish and plant gathering. Continued deltaic construction since 4,200 years ago eventually offered more stable land forms suitable for longer-term occupation as the upper deltaic plain developed. The modern landscape in the project vicinity has been extensively changed by industrial development over the past 150 years. The deltaic plain at the southern end of Commencement Bay, once covered with extensive tide flats, marshes, and islands, was capped with fill as the Puyallup River was widened and straightened (Kent 2004). The west edge of the Gog-le-hi-te II Mitigation Area is within the former channel of the Puyallup River. Other sediments in this portion of the project are alluvial and estuarine deposits of fine silt and sand overlain by a relatively thick layer of municipal landfill debris.

Waterman (ca. 1920) reported "a large and important village" located on the southwest side of Commencement Bay about one mile northwest of the Gog-le-hi-te II Mitigation Area. This same source also described an old village site, located at the mouth of Clear Creek approximately one mile south of the Gog-le-hi-te II Mitigation Area (Waterman ca. 1920).

As industrial development occurred in the early twentieth century along constructed waterways leading into Commencement Bay, a residential community had been established along the east bank of the Puyallup River in the general vicinity of the Gog-le-hi-te II Mitigation Area. However, in the mid-1940s the USACE began work to widen and straighten the Puyallup channel. As a result, many of the residences were eliminated prior to 1950 when the project was complete (Weaver 2003). As a result of this project, the channel in the Gog-le-hi-te II Mitigation Area was straightened, widened, and shifted to the west. The historic

channel was then filled with the dredge materials (Kent 2004; Weaver 2003). From the early 1940s until 1964, the Gog-le-hi-te II Mitigation Area was used as the Tacoma Tideflats landfill (Tacoma-Pierce County Health Department 1993).

Archaeological monitoring of geotechnical test pits excavated by the Port at the Gog-le-hi-te II Mitigation Area took place between 16 May and 19 May 2005 and 18 July through 19 July 2005. Cultural materials were not observed during any of the test pit excavations. Archaeological evidence of pre-contact, ethnohistoric, and historic use of the Gog-le-hi-te II Mitigation Area could be found in sediments below the landfill debris. The presence of the landfill may have acted as a protective cap for archaeological materials, however the irregularity of the surface suggests the surface might have been modified prior to landfill use. (Northwest Archaeological Associates, Inc. 2005).

3.8 Aesthetics and Recreation

The mitigation site is currently dominated by grasses, woody shrubs, and trees. Although the site represents one of few in the area without some sort of industrial development, the presence of numerous invasive plant species and the historic use of the site as a municipal landfill detract from the overall aesthetic quality of the existing site. The project site contains an informal path along the existing Puyallup River levee. Birding is common at the adjacent Gog-le-hi-te I mitigation site.

3.9 Socioeconomics

No human population exists within the site and the current site condition does not afford any sources of employment or income.

4. Environmental Effects of the Proposed Action

4.1 No Action

Under the no-action alternative, the existing levee would not be breached and relocated, thus, the Mitigation Action would not be built. The site would remain as uplands, and no additional aquatic habitat would be created. The existing municipal landfill material would remain in place.

Air quality and noise levels would be unchanged, as the project would not be undertaken. The aesthetic and recreational qualities would remain unchanged.

Finally, since the Mitigation Action would not be constructed, the Port would need to find another location project to satisfy their compensatory mitigation requirements.

4.2 Proposed Action

The proposed federal actions that are the subject of this EA will by themselves result in no adverse environmental effects. However, the direct consequence and purpose of the federal actions are to facilitate construction of the Mitigation Action by the Port. Since the federal actions are so closely tied with the Mitigation Action, the following sections summarize the expected environmental effects of the Mitigation Action.

4.2.1 Land Use

The proposed action will result in a change in the location of a portion of the federal levee currently protecting lands along the Puyallup River. Once the existing levee is breached, the mitigation site will no longer be behind the flood control levee and would be exposed to regular flooding by the Puyallup River as desired by the Port of Tacoma and per agreement by the Port and the Puyallup Tribe, the affected landowners.

The Corps has reviewed the levee design for the project and concluded that it meets Corps' standards. The Corps has also reviewed and approved the plans and specifications for the construction of the new levee and tie-in of the new levee to the existing flood control project.

The proposed action would not increase flooding risk for areas landward of the setback levee. The new levee would continue to protect the same improved property as the existing levee. The new levee will also consist of the same cross-sectional area and type of materials as the existing levee. As a potential benefit, the bulk of the new levee would be located away from the main river channel, which will result in lower water velocities and less scour along the structure. Additionally, the new setback levee would be shorter than the existing levee around the project site, resulting in a reduction in Corps operations maintenance responsibility.

Construction of the Mitigation Action will transform currently underutilized land into valuable and rare aquatic habitat to be used by juvenile salmonids for rearing and refuge.

4.2.2 Geology and Hydrology

The proposed federal actions will not directly affect geology or hydrology. The Mitigation Action will reconnect the project area to the main stem of the Puyallup River and provide valuable aquatic habitat for salmonids and other aquatic species. The existing Corps levee will be breached to allow a connection between the project area and the Puyallup River, facilitating tidal flow and water exchange within the site.

4.2.3 Water Resources and Water Quality

The proposed federal actions will not directly affect water resources or water quality. The Mitigation Action will enhance surface water resources in the Commencement Bay/Puyallup River area. For the Phase 1 project, approximately 6.22 acres of existing upland will be excavated and converted to aquatic habitat located below +13 ft Mean Lower Low Water (MLLW). This will increase off-channel rearing and refuge habitat for juvenile salmonids within the zone of the Puyallup River where transition from freshwater to marine areas occurs. Potential future construction of Phase 2 of the mitigation site would be facilitated by the federal actions since the levee will be re-located behind the entire Gog-le-hi-te II site.

Construction of the Mitigation Action will result in minimal, short-term effect on the water quality within the Puyallup River. To protect water quality, the flood control levee will not be breached until excavation is completed. Breaching of the existing levee will occur only after July 15 and before February 15 in compliance with the federal and state in-water work closure period.

4.2.4 Biological Resources

The proposed federal actions will facilitate work intended to benefit biological resources. The specific mitigation goal of the Mitigation Action is to provide productive, low salinity, and tidally influenced habitat within the smolt transition zone of the Puyallup River estuary.

The functional objectives of the Mitigation Action are as follows:

- Increase the acreage of tidally influenced habitat available to juvenile salmonids.
- Provide mudflat and freshwater marsh habitat.
- Provide low salinity habitat within the smolt transition zone.
- Provide net export of salmonid prey, primary, and secondary production.
- Provide a habitat that is compatible with the physical processes of the lower Puyallup River.
- Provide riparian vegetation consistent with the overall goal of maximizing aquatic habitat.

Removal and/or remediation of contamination, including solid waste, from the site are addressed in Section 4.2.6. After construction, the removal and remediation efforts will result in site conditions that are within specific state standards (see Section 4.2.6) and, therefore, suitable for support of the ecological functions that the Mitigation Action is designed to provide. Accordingly, re-introduction of tidal inundation to the site is expected to result in no adverse impacts to biota that will colonize or periodically utilize the site.

Approximately 6.22 acres of new aquatic habitat will be constructed, and is expected to serve as important habitat for salmon in the Puyallup River system. This project will not only benefit juvenile salmonids, but also bird species, amphibians, and other fish species. Three threatened fish species (Chinook salmon, bull trout and steelhead) present in the Commencement Bay/Puyallup River area (see Section 3.4.4) would benefit from construction of the Mitigation Action. This type of habitat is extremely limited along the lower Puyallup River and has been identified as a critical and necessary habitat for salmonids (Simenstad 2000). It is anticipated that the Mitigation Action will significantly enhance biological resources within the area.

With regards to threatened or endangered species, only Chinook salmon, bull trout, and steelhead are potentially affected by construction of the Mitigation Action (Port of Tacoma 2005). It is anticipated that the net effects of the Project on Chinook salmon, bull trout, and steelhead would be beneficial.

4.2.5 Air Quality

The proposed federal actions will not directly affect air quality. Additionally, long-term air quality will not be affected by the construction of the Mitigation Action. No new sources of emissions will be created in conjunction with this project. During construction, temporary increases of emissions are expected due to the use of heavy machinery associated with the construction of this project, such as excavation equipment, compactors, and dump trucks. All equipment associated with the Project will be maintained in a manner that minimizes emissions. Dust control measures will be employed as needed to minimize fugitive dust

levels and may include spraying water on construction surfaces, and/or covering loads during transportation. Routine maintenance will be performed on construction equipment to minimize air emissions. Short-term emissions associated with this project are not expected to significantly impact air quality in the area.

4.2.6 Solid and Hazardous Waste

The proposed federal actions will facilitate excavation work that would involve removal of garbage and associated contamination in the course of constructing the Mitigation Action. The project site was historically used as a municipal dump, and garbage remains in the project area to a depth of approximately 5 to 9 ft below the surface. Construction of the Mitigation Action will include removal of solid waste existing at the project site. All garbage beneath the location of the new levee will be excavated, removed, and disposed of at appropriate disposal facilities.

The Port will remove and/or remediate contamination, including solid waste, on the site in the course of constructing the Mitigation Action. Additional overexcavation and backfill will be needed to remove isolated zones of contaminated native soils under the refuse layer. The clean-up actions will ensure that (R. Brenner, Port of Tacoma pers. comm., 2007):

- 1. For areas of the site located at or lower than an elevation of 11.8 feet (mean lower low water or MLLW), contaminant levels are no higher than the Washington State Sediment Quality Objectives/Sediment Quality Standards (WAC 173-204); or
- 2. For areas of the site located higher than an elevation of 11.8 feet (MLLW), contaminant levels are no higher than Washington State's Model Toxics Control Act Method A standards for Unrestricted Land Use (WAC 173-340-704 and -740).

The Corps has reviewed the plans and specifications for the levee construction, the levee breach, and the overall Mitigation Action, including the actions proposed for removal and/or remediation of contamination. Based on this review, the Corps believes that the proposed work will remove or remediate contamination on the site such that post-construction contaminant levels (1) will not require additional remediation, removal, or containment, and (2) will not pose risks to the proposed function of the site as an estuarine marsh. In the event that additional contamination presents in the future, the Port would be responsible for any future remediation actions.

4.2.7 Historic Properties and Cultural Resources

The Cultural Resources survey and assessment concluded that there are no historical or cultural elements present in the project area (see Section 3.7; Northwest Archaeological Associates, Inc. 2005). In a letter dated 18 October 2005, the Washington Department of Archaeology and Preservation concurred with the Corps finding of No Historic Properties Affected for Port actions that include the Mitigation Action. Construction of the Mitigation Action will include professional archaeological monitoring as detailed in Appendix A of Northwest Archaeological Associates (2005). Project construction is therefore unlikely to affect historic properties or cultural resources.

4.2.8 Aesthetics and Recreation

The aesthetic and visual component of the project area will be enhanced by construction of the Mitigation Action. In addition, wildlife inhabiting the site will enhance the aesthetics of the area. Garbage will be removed from the site, and invasive plant species will be replaced with native riparian vegetation more characteristic of the undeveloped environment. An informal path that currently exists along the section of the Puyallup River levee that borders the site will be interrupted by the breaching of the levee. The new levee and associated access road will provide a new informal path.

4.2.9 Socioeconomics

The approval of the new levee will provide the same level of protection to the same improved properties and, therefore, does not pose any additional risk of flooding costs to property owners in the vicinity.

Construction of the Mitigation Action will not affect the socioeconomic status of the project area. Since there are no residences in or near the project area, no adverse effect on local populations is expected. No adverse effect on minority or low-income populations is anticipated.

5. Cumulative Impacts

According to NEPA, cumulative impacts are those impacts on the environment that results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions (40 CFR §1508.7).

Cumulative impacts in the Commencement Bay area have been well documented (Corps *et al.* 1993). The area has undergone substantial changes in the last 120 years, including virtually complete elimination of marsh habitat (Bortelson et al. 1980). The most notable changes in Commencement Bay since the 1800s are the filling of intertidal areas and marshes, the channelization of the Puyallup River, and the dredging of the industrial waterways (Bortelson *et al.* 1980). Unvegetated intertidal flats were initially lost between 1880 and 1924. Tidal marshes were most affected by development between 1924 and 1948. Within Commencement Bay approximately 1,830 acres of original intertidal area have been filled or dredged, and roughly 530 acres of intertidal and shallow subtidal habitat existed as of the year 2000 (Pacific International Engineering 2000).

In summary, intertidal mudflat and marsh habitats were historically abundant in Commencement Bay. These habitats are defined as special aquatic sites pursuant to the Clean Water Act Section 404(b)1 Guidelines. The Corps, EPA, USFWS, and NOAA (1993) have concluded that significant adverse impacts have occurred to special aquatic sites in Commencement Bay.

Recent development projects in Commencement Bay have included mitigation actions that have focused on providing benefits for fish species and focused on conversion of either water column habitat or uplands into intertidal and shallow subtidal habitat. In addition to mitigation actions, the Natural Resource Trustees are investigating and implementing habitat restoration actions as part of the Commencement Bay Natural Resource Damage Assessment (CB/NRDA) being conducted pursuant to CERCLA. The net effect of the past and future habitat improvement actions (mitigation and restoration) in the Action Area and the balance of Commencement Bay is that aquatic habitat is improved and increased in abundance with intertidal and shallow subtidal habitats being the focus of the mitigation and restoration efforts.

The proposed federal actions will facilitate the Mitigation Action, which would contribute, both individually and cumulatively, to an increase in rearing and refuge habitats that are vital for juvenile salmonids. Overall, reasonable foreseeable future actions in the Commencement Bay area would tend to maintain or improve habitat conditions in the project vicinity, as any large projects with substantial impacts would require mitigation, thereby avoiding further significant degradation.

6. Coordination

The Port has completed an iterative mitigation planning process with federal, state, and tribal biologists to develop the Gog-le-hi-te II Mitigation Action. Multiple parties were involved in the development and review of this project, including the EPA, Corps, NOAA, USFWS, WDFW, Ecology, and the Puyallup Tribe of Indians, in order to ensure compliance with applicable environmental regulations.

The public comment period for the draft of this EA occurred from 29 June 2007 to 30 July 2007.

7. Environmental Compliance

7.1 National Environmental Policy Act

Section 1500.1(c) and 1508.9(1) of the National Environmental Policy Act (NEPA) of 1969 (as amended) requires federal agencies to "provide sufficient evidence and analysis for determining whether to prepare an environmental impact statement or a finding of no significant impact" on actions authorized, funded, or carried out by the federal government to insure such actions adequately address "environmental consequences, and take actions that protect, restore, and enhance the environment". Per NEPA requirements, this assessment evaluates environmental consequences from the proposed federal actions at the Gog-le-hi-te II site, Tacoma, Pierce County, Washington. Comments were solicited from interested agencies and members of the public. One comment letter was received; this letter and responses are included in Appendix B. The Finding of No Significant Impact (FONSI) is included in Appendix A.

7.2 Endangered Species Act

In accordance with Section 7(a)(2) of the Endangered Species Act of 1973 (ESA), as amended, Federally funded, constructed, permitted, or licensed projects must take into consideration impacts to Federally listed or proposed threatened or endangered species.

The Corps has consulted with USFWS and NOAA under Section 7 of the ESA for infrastructure improvements in the Blair Waterway, including compensatory mitigation actions at the Gog-le-hi-te II site. A BE was prepared for the Port's development projects that addresses the potential effects of the proposed infrastructure improvements on threatened or endangered species (Grette Associates 2004b). On 23 May 2005, the National Marine Fisheries Service (NMFS) provided a Biological Opinion for the Port's development project (which include the Gog-le-hi-te II site). On 4 April 2005, the U.S. Fish and Wildlife Service (USFWS) concurred with the Corps' findings that the Port's project is not likely adversely affect species under their jurisdiction. In September 2005, NMFS and USFWS both responded via e-mail stating that the breach of the berm separating the Phase 1 excavation area from the Blair Waterway was covered under the original ESA consultations and did not require re-consultation. Subsequently, in December 2007, NMFS responded that placement of riprap to protect the newly exposed breach (an addition to the design of the mitigation site) was "not likely to adversely affect" Puget Sound Chinook and their critical habitat, and Puget Sound steelhead. The USFWS was contacted regarding the riprap placement and responded that this new design element did not require re-consultation. The construction of the Mitigation Action includes the proposed federal actions and therefore, with the exception of Puget Sound steelhead (see next paragraph), the consultation on the effects of the Mitigation Action fulfills the Corps ESA requirements for the federal actions.

Puget Sound steelhead have been listed since issuance of the Department of the Army permits for the Port's development projects and are thus not covered by the previous ESA consultations on the Port's Mitigation Action. Pursuant to Section 7 of the ESA, the Corps consulted with NMFS on the proposed federal actions, with primary attention given to the Corps' proposed authorization of the Port for breaching the existing levee and granting a license to the Port for their operations and maintenance of the remaining federal levee. In a letter dated 12 September 2007, NMFS concurred with the Corps determination that the proposed federal actions were not likely to adversely affect Puget Sound steelhead.

7.3 Magnuson-Stevens Fishery Conservation and Management Act

The Magnuson-Stevens Fishery conservation and Management Act requires Federal agencies to consult with NOAA regarding actions that may affect Essential Fish Habitat (EFH) for Pacific coast ground fish, coastal pelagic species, and Pacific salmon. The Act defined EFH as "those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity".

The proposed federal actions will have no effect on EFH. The Corps' permitting process for the Port's development projects, including the Mitigation Action, included an evaluation of effects on EFH and resulted in the conclusion that the Port's work is in compliance with the Magnuson-Stevens Fishery Conservation and Management Act (Port of Tacoma 2004).

7.4 Clean Water Act

Under Section 404 of the Clean Water Act (CWA), a Department of the Army permit is required for the discharge of dredged or fill material into water of the United States, including wetlands. Under Section 401 of the CWA, State Water Quality Certification is required for discharges that may impact water quality. The certification ensures that the

discharge will comply with the applicable provisions of Sections 301, 302, 303, 306 and 307 of the CWA.

The proposed federal actions will not result in discharges to waters of the United States and therefore do not require a Section 404 permit or Section 401 water quality certification. The Mitigation Action has received the necessary Clean Water Act authorization from the Seattle District Regulatory Branch and the Washington Department of Ecology.

7.5 Rivers and Harbors Act

Section 10 of the Rivers and Harbors Act of 1899 prohibits the unauthorized obstruction or alteration of any navigable water of the United States. Activities that involve the construction of dams, bridges, dikes etc. across any navigable water, or placing obstructions to navigation outside established Federal lines and excavating from or depositing material in such waters, require authorization from the Corps. The proposed federal actions will not affect navigation and therefore do not require a Section 10 permit. The Mitigation Action has received the necessary Rivers and Harbors Act authorization from the Seattle District Regulatory Branch.

7.6 Coastal Zone Management Act

The Coastal Zone Management Act of 1972, as amended, requires Federal agencies to carry out their activities in a manner that is consistent to the maximum extent practicable with the enforceable policies of a state's approved Coastal Zone Management (CZM) Program. The Shoreline Management Act of 1972 (RCW 90.58) is the core of authority of Washington's CZM Program. Primary responsibility for the implementation of the SMA is assigned to local government. The City of Tacoma implemented the SMA through the preparation of a Shoreline Master Program, codified in Chapter 13.10 of the Tacoma Municipal Code, which has been approved by the Washington State Department of Ecology. The project site is in the area bounded by lines lying 200 feet landward of the Ordinary High Water Mark (OHWM) and generally parallel to the levee of the east and west banks of the Puyallup River. The proposed federal actions do not involve any construction or alterations to the existing shoreline. In a letter dated 28 June 2005, the Washington Department of Ecology concurred with the finding that the Port's development projects, which includes the Mitigation Action, are consistent with the approved Washington State Coastal Zone Management Program.

7.7 National Historic Preservation Act

Section 106 of the National Historic Preservation Act (16 USC 470) requires that a Federal agency having direct or indirect authority to issue a license authorizing an undertaking shall take into account the effect of the undertaking on historic properties. The Section 106 process includes research and field investigation in consultation with the Washington State Office of Archaeology and Historic Preservation (OAHP), the Advisory Council on Historic Preservation, concerned Tribes, and local governments. The process generally includes identifying historic properties that may be affected by the project; gathering information sufficient to evaluate the eligibility of properties found for the National Register; and consulting among agencies and other concerned parties to avoid or mitigate adverse impacts on significant properties.

No culturally significant artifacts were found in the Mitigation Area, and it is unlikely that the Mitigation Action will affect any historic or cultural resources (Northwest Archaeological Associates, Inc. 2005). Monitoring will be conducted during landfill removal and excavation of soils. The State Archaeologist has concurred with the finding of No Historic Properties Affected by the project.

7.8 Clean Air Act

The Clean Air Act requires states to develop plans, called State Implementation Plans (SIP), for eliminating or reducing the severity and number of violations of National Ambient Air Quality Standards (NAAQS) while achieving timely attainment of the NAAQS. The Act also requires Federal actions to conform to the appropriate SIP. An action that conforms with a SIP is defined as an action that will not: (1) cause or contribute to any new violation of any standard in any area; (2) increase the frequency or severity of any existing violation of any standard in any area; or (3) delay timely attainment of any standard or any required interim emission reductions or other milestones in any area. The proposed federal actions will not result in changes to air quality.

7.9 Environmental Justice

Executive Order 12898 directs every Federal agency to identify and address disproportionately high and adverse human health or environmental effects of agency programs and activities on minority and low-income populations.

Implementation of the federal actions is not expected to result in any disproportionate adverse environmental effects or impacts on minority/low-income populations. The project does not involve the siting of a facility that will discharge pollutants or contaminants, so human health effects would not occur. Implementation of the proposed projects would not negatively affect property values in the area, or socially stigmatize local residents or businesses in any way.

7.10 Treaty Rights

In the mid-1850's, the United States entered into treaties with a number of Native American tribes in Washington. These treaties guaranteed the signatory tribes the right to "take fish at usual and accustomed grounds and stations . . . in common with all citizens of the territory" [*U.S. v. Washington*, 384 F.Supp. 312 at 332 (WDWA 1974)]. In *U.S. v. Washington*, 384 F.Supp. 312 at 343 - 344, the court also found that the Treaty tribes had the right to take up to 50 percent of the harvestable anadromous fish runs passing through those grounds, as needed to provide them with a moderate standard of living (Fair Share). Over the years, the courts have held that this right comprehends certain subsidiary rights, such as access to their "usual and accustomed" fishing grounds. More than *de minimis* impacts to access to usual and accustomed fishing area may violate this treaty right [*Northwest Sea Farms v. Wynn*, F.Supp. 931 F.Supp. 1515 at 1522 (WDWA 1996)]. In *U.S. v. Washington*, 759 F.2d 1353 (9th Cir 1985) the court indicated that the obligation to prevent degradation of the fish habitat would be determined on a case-by-case basis. The Ninth Circuit has held that this right also encompasses the right to take shellfish [*U.S. v. Washington*, 135 F.3d 618 (9th Cir 1998)].

The project alternatives have been analyzed with respect to their effects on the treaty rights described above. The federal actions will have no adverse effect on treaty fishing rights or usual and accustomed fishing grounds. Existing access to the river will not be affected by the proposed action. The proposed Mitigation Action is intended to improve fisheries in the Puyallup River.

8. Conclusion

Based on this assessment, the proposed action is not expected to result in significant adverse environmental impacts. The proposed action is not considered a major Federal action having a significant impact on the human environment and does not require preparation of an environmental impact statement.

9. References

Bortelson, G.C., M.J. Chrzastanski, and A.K. Helgerson. 1980. Historical changes of shorelines and wetlands at eleven major deltas in the Puget Sound Region, Washington, U.S. Department of Interior, U. S. Geological Survey, Atlas HA-617.

Corps, EPA, USFWS, and NOAA.1993. Commencement Bay cumulative impacts study: historic review of special aquatic sites. May/ June 1993

EHC. 2003. Puyallup River Side Channel Habitat Restoration Project, Cultural Resources Section 106 Assessment, October 13, 2003.

EPA. 2000. Biological Assessment, Commencement Bay Nearshore/Tideflats Superfund Site. Prepared by URS Greiner, July 2000.

Grette Associates. 2004a. Blair Waterway Infrastructure Improvements Project, Mitigation Plan and Mitigation Plan Addendum. Prepared for Port of Tacoma, Washington. June 2004.

Grette Associates. 2004b. Blair Waterway Infrastructure Improvements Project, Biological Evaluation and Biological Evaluation Addendum. Prepared for Port of Tacoma, Washington. June 2004.

Kent, R.J. 2004 Cultural Resources Reconnaissance Survey for the U.S. Army Corps of Engineers Puyallup River Flood Control Project, Tacoma, Pierce County, Washington. Report prepared by United States Army Corps of Engineers, Seattle District Environmental Resources Section, Seattle, Washington.

Northwest Archaeological Associates, Inc. 2005. Cultural Resources Assessment for the Port of Tacoma's Blair Waterway Infrastructure Improvements Project and Gog-le-hi-te II Mitigation Action Area, Pierce County, Washington. Prepared for the Port of Tacoma., Washington. August 5, 2005.

Pacific International Engineering. 2000. Shoreline habitat of Commencement Bay, Tacoma, Washington. Prepared for the Port of Tacoma, Tacoma, Washington

Parametrix. 2005a. Gog-le-hi-te II Habitat Action Project Phase 1 DRAFT Prime Site Characterization Report. Prepared by Parametrix, Sumner, Washington. August 2005.

Parametrix. 2005b. Gog-le-hi-te II Habitat Action Project Site Characterization Report. Prepared by Parametrix, Sumner, Washington. July 2005.

Parametrix. 2005c. Gog-le-hi-te II Habitat Action Project Site Investigation Summary Report. Prepared by Parametrix, Sumner, Washington. October 2005.

Port of Tacoma. 2005. Environmental Checklist, Gog-le-hi-te Mitigation Action. February 10, 2005.

Port of Tacoma. 2004. Blair Waterway Infrastructure Improvements Project. Essential Fish Habitat Assessment. Prepared for the Port of Tacoma by Grette Associates. June 2004.

Simenstad, C. A. 2000. Commencement Bay Aquatic Ecosystem Assessment. School of Fisheries. SoF-UW-2003.

Tacoma-Pierce County Health Department 1993. Closed Landfill Study, Tacoma-Pierce County Health Department, Environmental Health Program. Revised September 2002.

Waterman, T.T. c.1920. Puget Sound Geography. Manuscript on file, Suzzallo Library, University of Washington, Seattle.

Weaver, Robert M. 2003. Cultural Resources Section 106 Assessment of the Puyallup River Site Channel Habitat Restoration Project. Report prepared by Environmental History Company for the City of Tacoma, Washington. **APPENDIX A. Finding of No Significant Impact.**



CENWS-PM-PL-ER

Gog-le-hi-te II Real Estate & Civil Works Actions Tacoma, Pierce County, Washington

FINDING OF NO SIGNIFICANT IMPACT

- **1. Background.** The Seattle District, U.S. Army Corps of Engineers (Corps) proposes federal actions with the Port of Tacoma (Port) in order to support construction of a Port of Tacoma (Port) mitigation project along the lower Puyallup River called the Gog-le-hite II Mitigation Action (Mitigation Action).
- 2. Project Location. The Gog-le-hi-te II site is located within the Commencement Bay industrial area adjacent to the east side of the Puyallup River in the City of Tacoma, Pierce County, Washington. It is adjacent to the existing Gog-le-hi-te I mitigation action. The site lies in the SE ¹/₄ of Section 03, Township 20 North, Range 3 East. Access to the site is via Lincoln Avenue.
- **3. Purpose and Need.** The purpose of the federal action is to acquire the real estate needed for the new setback levee, to authorize the Port to use the existing federal levee for the Mitigation Action, and to approve modification of the existing flood control project.
- 4. **Proposed Action.** The proposed action includes (1) acquisition by the Corps of title to a new segment of setback levee and 3.19 acres of flood protection levee easement from the Port that will be required in order to allow the Corps to operate and maintain the new setback levee as part of the full federal Puyallup River flood control project; (2) granting permission to the Port to breach a portion of the existing federal levee to create aquatic habitat for the Mitigation Action; (3) the issuance of a license to the Port on the remaining federal levee system for access to the Mitigation Action area for operation and maintenance; and (4) approval of the new levee as a modification of the existing Tacoma/Puyallup Flood Control project per Engineering Regulation 1165-2-119 and 33 CFR 208.10(a)(5). No change in fee ownership of the property will occur. A portion of the property needed for the setback levee is owned by the Tribe. The Port and the Tribe have entered into an agreement that will result in the conveyance of a perpetual easement from the Tribe to the Port and allow the Port to re-convey that easement to the Corps once the setback levee has been constructed by the Port.
- **5. Summary of Impacts.** As outlined in the Final Environmental Assessment, the federal actions by themselves will result in no environmental impacts. Indirectly, the proposed actions will facilitate construction of the Gog-le-hi-te II Mitigation Action by the Port. This latter action will result in an improvement in habitat conditions along the lower Puyallup River for fish and wildlife, including threatened fish species such as Chinook

salmon, steelhead trout, and bull trout. Some temporary environmental impacts are possible due to construction activities, such as an increase in turbidity and a decrease in air quality, but these are expected to be negligible and are not directly tied to the federal actions.

The Port will remove and/or remediate contamination, including solid waste, on the site in the course of constructing the Mitigation Action. Additional overexcavation and backfill will be needed to remove isolated zones of contaminated native soils under the refuse layer. After construction, the removal and remediation efforts will result in site conditions that are within specific state standards and, therefore, suitable for support of the ecological functions that the Mitigation Action is designed to provide. Accordingly, re-introduction of tidal inundation to the site is expected to result in no adverse impacts to biota that will colonize or periodically utilize the site.

The new aquatic habitat will serve as important habitat for salmon, including three threatened fish species, in the Puyallup River system. This project will also benefit bird species, amphibians, and other fish species. The Mitigation Action will significantly enhance biological resources within the area since the type of habitat that would result from the project is extremely limited along the lower Puyallup River and has been identified as a critical and necessary habitat for salmonids.

6. Finding. For the reasons described above, I have determined that the federal actions will not result in significant adverse environmental impacts. The project will not constitute a major Federal action with significant impacts on the environment and, therefore, does not require an environmental impact statement.

18 Jan 2008 Date /S/ MICHAEL MCCORMICK Colonel, Corps of Engineers Commanding **APPENDIX B.** Comments on Draft EA, with Corps Responses



July 17, 2007

Evan R. Lewis Environmental Resources Section U.S. Army Corps of Engineers P.O. Box 3755 Seattle, WA 98124-3755

Via email: evan.r.lewis@usace.army.mil

Dear Mr. Lewis:

Thank you for the opportunity to comment about the Draft Environmental Assessment for the Gog-le-hi-te II Real Estate Actions.

The Chamber is supportive of these actions as described for the purpose of the federal action to acquire additional real estate for the required federal flood control project as a consequence of the Mitigation Action and to allow use of a portion of the existing federal levee for access and operation.

The Chamber is concerned however, about the statement given on page 16, third paragraph, second sentence: "Additionally, the Mitigation Action would offset some of the past cumulative impacts to Commencement Bay."

The Chamber is concerned that:

- 1) This sentence could be interpreted as a shared purpose with that earlier stated in the Draft EA.
- 2) This shared purpose could de-value the investment and applicability of the proposed action.
- 3) This shared purpose could establish a precedent for generic mitigation for impacts for which there has been no reference or apportionment of responsibility.

1

Your consideration of these comments is most appreciated.

Sincerely,

Gary D. Brackett,CCR Manager, Business and Trade

950 PACIFIC AVENUE, SUITE 300, PO BOX 1933, TACOMA WA 98401-1933 PHONE: 253-627-2175, FAX: 253-597-7305, www.tacomachamber.org

Corps Responses to Comments by Tacoma-Pierce County Chamber

1. The purpose of the Port's Mitigation Action remains as stated in Section 1.3 of the Final EA. The 'Cumulative Impacts' section of the Final EA has been slightly revised to more clearly focus on the relative habitat trends in the Commencement Bay area in consideration of past, present, and reasonably foreseeable future actions. Thus, the sentence mentioned in the comment letter has been omitted.