

Environmental Assessment
for the Jordan Property/Hylebos Creek
Off-Channel Habitat Restoration Project
Fife, Washington

Prepared for the
Commencement Bay
Natural Resource Trustees

by
Ridolfi Inc.
and NOAA

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**JORDAN PROPERTY/HYLEBOS CREEK
OFF-CHANNEL HABITAT RESTORATION PROJECT**

Project Location: Commencement Bay, Tacoma, Washington

Lead federal agency for EA: National Oceanic and Atmospheric Administration (NOAA)

Cooperative federal agency for EA: U.S. Fish and Wildlife Service (USFWS)
(U.S. Department of the Interior)

State Environmental Policy Act (SEPA) lead agency: City of Fife

Participating agencies and tribes: Commencement Bay Natural Resource Trustees: Washington Department of Ecology (Ecology, as lead state Trustee), Washington Department of Fish and Wildlife (WDFW), Washington Department of Natural Resources (WDNR), Puyallup Tribe of Indians, and Muckleshoot Indian Tribe

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Abstract: This EA has been prepared for the Trustees' Jordan Property/Hylebos Marsh Off-Channel Habitat Restoration Project to disclose potentially significant impacts to the human environment associated with restoration of natural resources adjacent to Hylebos Creek in Fife, Washington. The proposed restoration project, preferred Alternative 6a, consists of creating in-stream, off-channel, and wetland habitat through regrading and replanting.

Administrative Record: This EA and its supporting documentation may be reviewed by contacting the case records manager at 206-526-4566/gail.e.siani@noaa.gov or the contact person identified above.

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LIST OF ABBREVIATIONS AND ACRONYMS

Adolfson	Adolfson Associates, Inc.
AES	Applied Environmental Services, Inc.
BIA	Bureau of Indian Affairs
BMP	best management practice
BO	Biological Opinion (programmatic)
CEQ	Council on Environmental Quality
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act of 1980
CFR	Code of Federal Regulations
cfs	cubic feet per second
CHB	Citizens for a Healthy Bay
CO-OPS	Center for Operational Oceanographic Products and Services
CWA	Clean Water Act
DOI	U.S. Department of the Interior
EA	Environmental Assessment
Ecology	Washington Department of Ecology
EFH	Essential Fish Habitat
EIS	Environmental Impact Statement
EO	Executive Order
EPA	U.S. Environmental Protection Agency
ESA	Endangered Species Act
ESU	Evolutionarily Significant Unit
FEMA	Federal Emergency Management Agency
FMC	Fife Municipal Code
FONSI	Finding Of No Significant Impact
FWCA	Fish and Wildlife Coordination Act
HFA	Habitat Focus Areas
HPA	Hydraulic Project Approval
HRA	Historical Research Associates, Inc.
MLLW	mean lower low water
MSFCMA	Magnuson-Stevens Fishery Conservation and Management Act
MSL	mean sea level
MTCA	Model Toxics Control Act
NEPA	National Environmental Policy Act
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
NPL	National Priorities List
NRCS	Natural Resources Conservation Service
NRDA	Natural Resource Damage Assessment and Restoration
OAHP	Washington Office of Archaeology and Historic Preservation
OPA	Oil Pollution Act of 1990
RCW	Revised Code of Washington
Ridolfi	RIDOLFI Inc. (prior to 2003, Ridolfi Engineers Inc.)
SEPA	State Environmental Policy Act
SFA	Sustainable Fisheries Act
TESCP	Temporary Erosion and Sedimentation Control Plan

Trustees	Commencement Bay Natural Resource Trustees
USACE	U.S. Army Corps of Engineers
USC	United States Code
USFWS	U.S. Fish and Wildlife Service, US Department of the Interior
USGS	U.S. Geological Survey
WAC	Washington Administrative Code
WDFW	Washington Department of Fish and Wildlife
WDNR	Washington Department of Natural Resources
WFAM	Wetland Function Assessment Method
WSDOT	Washington State Department of Transportation

EXECUTIVE SUMMARY

This Environmental Assessment was prepared under the requirements of the National Environmental Policy Act (NEPA) (42 USC 4321 *et seq.*) to disclose potentially significant impacts to the quality of the human environment from implementation of the preferred alternative for the Jordan Property/Hylebos Creek Off-Channel Habitat Restoration Project (Project) in Commencement Bay, Fife, Washington.

The Commencement Bay Natural Resource Trustees (Trustees) propose to create in-stream, off-channel, and wetland habitat and to enhance existing habitat along Hylebos Creek in the City of Fife, providing particular benefit for juvenile salmonids but also benefiting a variety of other plants and animals that use these resources. The Jordan property consists of 15.3 acres and is adjacent to a tidally-influenced reach of Hylebos Creek. The preferred alternative, Alternative 6a, Meandering Creek Transition to Dendritic Marsh, was created in response to comments from the Trustees, the City of Fife, Pierce County, and the public. Under this alternative, approximately six acres of the property will be regraded along Hylebos Creek to create channels, backwater pools, and saltwater marshes to serve as rearing and feeding habitat for juvenile salmon outmigrating in the Hylebos Creek. Existing wetlands and vegetation will be enhanced to provide wildlife habitat for birds and small mammals in the buffer areas. Native vegetation will be planted on gently sloping surfaces fringing the pools and on the upland portions of the site.

The proposed project is being designed to allow for potential future expansion into the adjacent property, known as the Milgard Mitigation Wetland Site. Should an expanded project come to fruition, it would complete a system of fully migrating channels (Alternative 6b). The landowner of that site participated in the early planning for such an enhanced project and the proposed conceptual design, which incorporates the adjacent mitigation project but has made no commitment regarding such future expansion onto his mitigation site.

The Trustees have determined that the proposed project would result in no significant adverse environmental impacts. Short-term, temporary and localized construction-related impacts to water quality and air quality, and temporary increases in noise from the use of construction equipment are anticipated. However, over the long-term, this habitat restoration project would benefit fish and wildlife, help to protect and improve water quality and flood control, bolster native plant communities, benefit the area's natural resources, enhance the visual quality of the area, and provide educational opportunities for the public.

1. PURPOSE AND NEED FOR RESTORATION

1.1 Overview

Commencement Bay is the harbor for Tacoma, Washington, occupying about 5,700 acres in south Puget Sound. The Bay and its surrounding environment are heavily urbanized and serve as an industrial and commercial activity center. In 1981, the U.S. Environmental Protection Agency (EPA) placed the Bay on a national list of high priority hazardous waste sites due to elevated concentrations of hazardous substances. The Washington Department of Ecology (Ecology) issued a Record of Decision in 1989 that identified contaminated sediment problem areas in the Bay (EPA 1989).

The Commencement Bay Natural Resource Trustees (Trustees) are conducting a natural resource damage assessment (NRDA) under the Comprehensive, Environmental Response, Compensation, and Liability Act (CERCLA), 42 USC 9601 *et seq.*, the Oil Pollution Act of 1990 (OPA), 33 USC 2701-2761, and other applicable laws. The Trustees are also conducting a parallel planning process to restore, replace, rehabilitate, and acquire the equivalent of the injured natural resources and/or services. A Restoration Plan was prepared to guide restoration project site selection, design, and development (Trustees, 1997). The Restoration Plan includes a combination of projects designed to provide maximum benefit to the Bay's injured natural resources and services in accordance with the goals and objectives of the Trustees and is incorporated here by reference.

The Trustees consist of the following agencies and Indian tribes: the National Oceanic and Atmospheric Administration (NOAA) of the U.S. Department of Commerce; the U.S. Department of the Interior, including the U.S. Fish and Wildlife Service (USFWS) and the Bureau of Indian Affairs (BIA); the Washington State Departments of Ecology (Ecology, as lead state Trustee), Fish and Wildlife (WDFW), and Natural Resources (WDNR); the Puyallup Tribe of Indians; and the Muckleshoot Indian Tribe. The Trustees have partnered with the City of Fife and Pierce County in the acquisition, planning and design, construction, implementation, and long-term management activities associated with this project.

1.2 Purpose and Need

This Environmental Assessment (EA) was prepared under the requirements of the National Environmental Policy Act (NEPA), 42 USC 4321 *et seq.*, 40 CFR Parts 1500-1508, to determine whether or not there would be significant impacts to the quality of the human environment from implementation of the preferred alternative for the Jordan Property/Hylebos Creek Off-Channel Habitat Restoration Project in Commencement Bay, Fife, Washington (Figure 1). NOAA is the lead agency for purposes of this EA. The other Trustees are cooperating agencies. This EA has also been prepared to be consistent with the Washington State Environmental Policy Act (SEPA), Ch. 43 Revised Code of Washington (RCW), Ch. 197-11 Washington Administrative Code (WAC), with the City of Fife assuming lead agency status under SEPA.

The Trustees propose to create in-stream, off-channel, and wetland habitat and to enhance existing habitat along Hylebos Creek in the City of Fife, providing particular benefit for juvenile salmonids but also benefiting a variety of other plants and animals that use these resources.

The Jordan property consists of 15.3 acres and is adjacent to a tidally-influenced reach of Hylebos Creek. The Trustees, Pierce County, and the City of Fife purchased this property in February 2003. The parcel was annexed by the City with the intent of restoring it to a more functioning habitat for the natural resources of the area. These

partners are designing, developing, implementing, and constructing the restoration project, and planning the related project maintenance and adaptive management activities. The City will be responsible for ordinary upkeep and maintenance of the property. These parties will also be monitoring the project to ensure that any potential environmental impacts that may arise during the course of project development are addressed.

The preferred alternative, Alternative 6a, Meandering Creek Transition to Dendritic Marsh, was created in response to comments from the Trustees, its partners, and the public. Under this alternative, approximately six acres of the property will be regraded along Hylebos Creek to create channels, backwater pools, and saltwater marshes to serve as rearing and feeding habitat for juvenile chinook salmon (*Oncorhynchus tshawytscha*) outmigrating in the Hylebos Creek. Chinook salmon is listed as threatened in Puget Sound under the Endangered Species Act (ESA), 16 USC 1531 *et seq.*, 50 CFR 223.102(16), but other marine species such as waterfowl and shorebirds, will also benefit from this project. Existing wetlands and vegetation will be enhanced to provide wildlife habitat for birds and small mammals in the buffer areas. Native vegetation will be planted on gently sloping surfaces fringing the pools and on the upland portions of the site. Lookout points and a handicapped-accessible nature trail will be constructed, and interpretive signs will be posted. The environmental impacts for the larger combined site would be similar although the beneficial impacts would exponentially increase as a result of the larger habitat acreage.

1.3 Public Participation

The Trustees have provided several opportunities for the public to comment on the overall Restoration Plan and to comment on the conceptual designs for the Jordan restoration project. The Trustees hold quarterly public briefings and public meetings are held throughout the year depending on the need or interest. A public meeting was held in April 2003 to solicit comments on conceptual restoration designs for this proposed project. The alternatives described in this EA, along with the selection of the preferred alternative 6a, and an optional expanded alternative 6b, were a result of this public input, along with that of the Trustees and its partners. Public meetings were also held by the City of Fife Planning Commission when considering whether to grant the project a Shoreline Management Permit and Critical Areas Permit. During all these meetings, comments and statements of support for the project were received from members of the general public, including residents of nearby properties, and from volunteer organizations such as Citizens for a Healthy Bay (CHB), and Friends of the Hylebos Wetlands. No verbatim record of these comments was kept but they were summarized in the meeting minutes, and letters of support were issued.

1.4 Administrative Record

This EA references a number of resource documents prepared by and for the Trustees and through the NEPA and SEPA processes. These documents, incorporated by reference into this EA, are part of the administrative record on file for these projects with the lead federal agency and may be viewed at:

NOAA Damage Assessment and Restoration Center NW
7600 Sand Point Way NE
Seattle, WA 98115-0070
Contact: Gail Siani
Phone: (206) 526-4566
Fax: (206) 527-1542
Email: gail.e.siani@noaa.gov

Two other repositories have been identified for the public's convenience, one at the City of Fife (as the landowner, SEPA lead agency, and co-partner in this project):

Fife City Hall
5411 23rd Street East
Fife, WA 98424
Contact: Steve Worthington

Phone: (253) 922-2489
Fax: (253) 922-5355
Email: sworthington@ci.fife.wa.us

and another at Citizens for a Healthy Bay, a non-profit public organization:

Citizens for a Healthy Bay
917 Pacific Avenue, Suite 406
Tacoma, WA 98402
Phone: (253) 383-2429

2. ENVIRONMENTAL SETTING/AFFECTED ENVIRONMENT

Commencement Bay, located in the southern portion of Puget Sound, is an estuarine bay of approximately 5,700 acres comprised of a variety of shoreline areas, intertidal areas and waterways. The Bay serves as the port harbor for the City of Tacoma. Beginning around the turn of the century, intertidal areas and tidelands were filled in and meandering streams were channelized to allow for industrial and commercial development. This development has resulted in the present configuration of seven waterways (Hylebos, Blair, Sitcum, St. Paul, Middle, Thea Foss, and Wheeler-Osgood) leading into the Bay.

The Jordan property is located adjacent to Hylebos Creek (Figure 1). The Trustees identified six Habitat Focus Areas (HFA) for restoring Commencement Bay (Trustees, 1997). Hylebos Creek is part of HFA 6, which comprises the Hylebos and Wapato creeks. Target habitats identified for this area in the Restoration Plan include wetland/corridors, with target habitats of freshwater channels, wetlands, and riparian corridor for salmonid migration and spawning, waterfowl and wildlife use, and fur-bearing mammals.

2.1 Property Description

The property is located in the southeast quarter of the northwest quadrant of Section 6, Township 20 North, Range 4 East at the northwest corner of 8th Street East and 62nd Avenue East, City of Fife, Pierce County, Washington (Pierce County, 2003a).

The parcel is irregularly shaped and consists of 15.30 acres (see Figure 1). According to the 1961 (revised 1994) U.S. Geological Survey (USGS) Poverty Bay, Washington Quadrangle 7.5 Minute Series topographic map, the site is at an elevation of between 10 and 160 feet above mean sea level (MSL) (USGC, 1994). The eastern portion of the site slopes steeply down toward the west. The central and western portions of the site are relatively flat with a slight slope westward. Hylebos Creek runs along the western boundary and flows towards the northwest. The centerline of Hylebos Creek defines the western property line. Hylebos Creek drains into the Hylebos Waterway, which is located 3,600 feet to the northeast. At the downstream (northwest) end of the property, Hylebos Creek is tidally influenced.

The site is accessed from a gate located near the intersection of 8th Street East and 62nd Avenue East. A dirt track, wide enough for one lane of vehicular traffic, runs through the property from the access gate to 4th Street. No buildings or structures are present on site. Ditches and pools on the eastern side of the road at the toe of slope collect and convey seasonal ground water.

A steep bluff runs along the entire length of the eastern portion of the site. The bluff ranges between 100 to 200 feet in height and is nearly vertical in some areas near the southern portion of the Site. Exposed soil along the bluff was observed during site visits and appeared to consist of gravelly sand. The ground surface is covered with thick low-lying vegetation in most of the flat area below the bluff (Ridolfi Engineers Inc. [Ridolfi], 2001).

In February 2003, a site cleanup was conducted at the time of the site annexation by the City of Fife; various debris and mechanical parts, observed in earlier visits were hauled off-site (Ridolfi, 2001).

2.2 Local and Regional Context

The site is part of the Puget Sound Lowland Ecobasin (NMFS, 1998). The Trustees¹ have been conducting and coordinating habitat restoration efforts at multiple sites in or around Commencement Bay, including several in the Hylebos watershed (NOAA, 2002). In addition, other entities have also undertaken various habitat conservation, restoration, or enhancement projects in the Hylebos watershed (Friends of the Hylebos Wetlands, 2000, 2001). Project proponents include local governments such as King County, the City of Federal Way, and the City of Milton; volunteer groups such as Friends of the Hylebos Wetlands; the Puyallup Tribe; and federal and state agencies.

However, most of these projects are situated in the upper reaches of the watershed, in Milton and Federal Way, upstream of the confluence of the East and West Forks of Hylebos Creek at the Porter Way Bridge. The only projects identified as in progress or completed between the Porter Way Bridge and the mouth of Hylebos Creek into the Hylebos Waterway are the NRDA Mowitch restoration project, the Washington State Department of Transportation (WSDOT)'s SR-509 mitigation wetland project, and Milgard Manufacturing Inc.'s mitigation wetland project. The NRDA Mowitch and the SR-509 mitigation wetland projects are situated at the mouth of the Hylebos Creek, while the Milgard Mitigation Wetland project is located between 4th Street and 8th Street East in Fife, directly across Hylebos Creek from the Jordan property. The proposed project will provide a link between other restoration sites and contribute to habitat connectivity, quality, and diversity in this portion of the watershed.

2.3 Geological and Soil Resources

2.3.1 Geology

The area encompassing the project site is part of the southern Puget Lowland, a physiographic province characterized by unconsolidated deposits described as quaternary sediments, dominantly glacial drift, including alluvium (Schuster, 2002). The bluff crossing the property is part of one of the sides of the southeast-northwest trending valley where the now-channelized Puyallup River formerly meandered before reaching Commencement Bay.

2.3.2 Soils

The Natural Resources Conservation Service (NRCS) has produced soil survey maps for the area encompassing the project site, but the classes indicated did not reflect site-specific conditions when verified during site visits and the wetland survey (Adolfson Associates, Inc. [Adolfson], 2003).

Exposed soil along the bluff observed during site visits is a gravelly sand. Five boreholes and 16 test pits were dug in March and April 2003 in the flat area of the property. These showed a two-foot thick layer brown moist sandy gravel fill, overlying a five- to nine-foot thick layer of moist, brown and red fibrous wood debris mixed with traces of sand and gravel. Under these two layers of fill was a medium-dense silty fine gray sand, moist to wet, with occasional traces of clay and organic materials. In a few locations, a one-foot thick layer of gray silty clay with organics was present immediately below the wood debris (Ridolfi, 2003).

¹ The Trustees have settled lawsuits with several entities who either provided funding to initiate NRDA restoration activities or were willing to manage the implementation of restoration projects. For additional information, please see <http://www.darp.noaa.gov/northwest/cbay/index.html>.

Six wetland data plots were also examined. The soils observed in wetland areas included organic muck and sandy and silt foam. Upland soils were dark brown sandy loam to fine sand and clay.

2.3.3 Slope Stability and Geological Hazards

The eastern portion of the property consists of a steep bluff with slopes greater than 45% (Pierce County, 2003c). Pierce County has not rated its slope stability.

According to Pierce County hazard identification maps, the western portion of the property is identified as being located within a High Potential Liquefaction Hazard Area and a High Potential Dynamic Settlement Hazard Area with the upper part of the property being situated in a Potential Landslide Hazard Area (Pierce County, 2003b, 2003c).

In addition, the lower part of the property is classified as Case II Inundation Level for debris flow (lahars) and debris avalanche zone from volcanic hazards (100 to 500-year frequency), while the upper part is classified as Case I Inundation Level (500 to 1,000-year frequency) (Pierce County, 2003b, 2003c).

2.4 Climate

The Puget Sound Basin has a mild climate characterized by wintertime clouds and rain but summertime sunshine. Average total precipitation for this area is 39 inches, falling almost entirely as rain with November and December being the wettest months. Average temperatures range from 37 to 65°F. The Puget Sound Basin pattern of precipitation strongly influences the character of local water resources (Section 2.6 and subsections) and is an important design consideration for the project.

2.5 Air Quality

The Puget Sound area, including part of Pierce County which encompasses the proposed project area, is listed by Ecology as a "Maintenance Area" for ozone, particulate matter, and carbon monoxide (Ecology, 2003a), meaning that the area meets air quality standards and has a ten-year plan for continuing to meet and maintain air quality standards.

2.6 Water Resources

2.6.1 Surface Water

The Hylebos Creek watershed drains an area of approximately 18 square miles through 25 miles of streams (Federal Way and King County, 1990). At the upstream boundary of the site, the drainage area of the stream is approximately 16.7 square miles (Kresch and Prych, 1989). Hylebos Creek is tidally influenced in the project reach. Historically, Hylebos Creek may have been one of the most productive small, fish-spawning streams in the Puget Sound Basin. The system may have supported annual returns of several thousand coho and chum salmon and hundreds of chinook, steelhead and cutthroat trout (Federal Way and King County, 1990). More recently, small runs of coho and chum have been reported along with rare chinook observations (Mobrand Biometrics, 2001).

Hylebos Creek is classified by Ecology as a Class A water body. This corresponds to "excellent" water quality, meeting or exceeding the requirements for all or substantially all uses (WAC 173-201A-030 (2)). According to the City of Fife, Hylebos Creek is considered a Category 3 stream, requiring a 150-ft buffer (Ridolfi, 2001).

USGS, King County, and Ecology have installed several temporary and permanent water monitoring stations in the watershed over the years (USGS, 2003) and conducted modeling at points of Hylebos Creek, including at the 8th St. Bridge, which is the upstream boundary of the site. The reach of Hylebos Creek encompassing the Jordan property is characterized by low gradients (0.2%) and is highly channelized. Based on these data, summer base flows are estimated around 6 to 7 cubic feet per second (cfs), the mean annual discharge is estimated at 21 cfs, bankfull flow (one-day, two-year flow) or about 117 cfs, and the 100-year discharge is estimated at 455 cfs (Kresch and Prych, 1989).

Man-made structures are present in Hylebos Creek in the project reach. These include a wood plank wall that runs for approximately 1,000 feet along the western bank, and wooden pilings aligned in two rows parallel to the creek banks. The original purposes of these structures have not been ascertained. In one location, erosion behind the wooden wall has allowed the stream to carve a notch between the bank and the wall.

To obtain site-specific hydrological data, a transducer recorded data, such as water temperature, pH, dissolved oxygen, conductivity, and pressure, under the 4th St. Bridge (downstream edge of property) from November 2002 to March 2003. The transducer was then installed at the upstream end of the property, under the 8th St. Bridge, where it has been collecting data since March 4, 2003.

Analysis of the 4th St. Bridge data, and comparison to tide data obtained from the NOAA Center for Operational Oceanographic Products and Services (CO-OPS) for Tacoma station 9446484 for the same period (NOAA, 2003), revealed that Hylebos Creek was tidally influenced at the downstream end of the property. Salinity in the Hylebos at that location reaches concentrations similar to undiluted seawater levels at high tide, and then returns to freshwater levels at low tide. Temperature is more influenced by tide than by diel (daily) cycles. At the 8th St. Bridge (upstream end), data collected indicate that the Hylebos is still tidally influenced but salinity remains in the freshwater range and temperature is more influenced by diel cycles than by tide (Ridolfi, 2003).

2.6.2 Ground Water

Six piezometers were installed on site in March 2003, in the flat area below the bluff where the proposed restoration activities are proposed. Measurements of ground water elevations onsite range from approximately 14.20 feet above mean lower low water (MLLW) near the edge of the delineated wetland area, to 17.80 feet MLLW at the toe of the bluff.

The City of Fife operates backup water supply wells immediately adjacent to the site, near 8th Street. These wells are screened at least 100 feet below ground surface.

No ground water springs have been identified on-site although seepage from the toe of the bluff to the wetlands in their widest portion near the southwest corner of the site was observed (Ridolfi, 2003).

2.7 Floodplain and Flood Control

Pierce County and Ecology flood hazard maps indicate that part of the property is situated in the 100-year floodplain, "Special Flood Hazard Area", as established in the Flood Insurance Rate Maps prepared by the Federal Emergency Management Agency (FEMA) (Pierce County, 2003c; Ecology, 2003b).

2.8 Biological Resources

Biological resources at this location include upland, riparian, and wetland vegetation, several fish species, and wildlife species. Special-status species that have a chance of being encountered in the vicinity have been identified (Section 2.8.4).

The City of Fife regulations require that a Habitat Management Plan be prepared when regulated activities are proposed for a site situated within 1,000 feet of a designated fish and wildlife habitat area (Fife Municipal Code [FMC] 17.15.080). The Habitat Management Plan is also listed as a condition in the Shoreline Management/Critical Areas Permit issued by the City of Fife in September 2003 for this project.

2.8.1 Vegetation

Trees at the property include mostly alders (*Alnus* sp.), maples (*Acer rubrum*), and cottonwoods (*Populus balsamifera*). A survey conducted in February 2003 counted 131 trees with a diameter of 12 inches or more, most of them in the 12 to 20 inch range, primarily along the upper edge of the wetland area or near the access road crossing the site in a band oriented parallel to Hylebos Creek. Trees larger than 30 inches in diameter included one cedar (*Thuja plicata*) (44-in.), one maple (36-in.), and five cottonwoods (four 36-in., one 48-in.). Understory vegetation prominently features Himalayan blackberry brambles (*Rubus discolor*) and undifferentiated grasses (Ridolfi, 2003).

Wetland areas include several emergent species such as cattail (*Typha latifolia*), red-osier dogwood (*Cornus stolonifera*), willows (*Salix* spp.), irises (*Iris* spp.), and rushes (*Juncus* spp.).

Non-native and invasive species found on site include Himalayan blackberry, reed canary-grass (*Phalaris arundinacea*), knotweed (*Polygonum* spp.), and creeping buttercup (*Ranunculus repens*).

2.8.2 Fish and Aquatic Resources

A fall run of chinook salmon (*Oncorhynchus tshawytscha*), which is listed as a threatened species under the ESA, inhabits the Hylebos Creek system and its tributaries during its life cycle (see Section 2.8.4). The reach encompassing the proposed project site is identified by WDFW for "Priority Anadromous Fish Presence" and "Other Fish Presence" (WDFW, 2003). The WDFW Priority Anadromous Fish Presence Report records observations of chum salmon (*Oncorhynchus keta*), coho salmon (*Oncorhynchus kisutch*), searun cutthroat (*Oncorhynchus clark*), and winter steelhead (*Oncorhynchus mykiss*) in Hylebos Creek.

2.8.3 Wildlife

Raptors, songbirds, and passerine birds have been observed in the surrounding area, while ducks and geese have been spotted nearby using the open water areas at the Milgard Wetland Mitigation site (AES, 2002a, 2002b). Other bird and mammal species use the available habitats in this area. Table 1 lists species reported at the Milgard site, across Hylebos Creek from the project site. The WDFW Habitats & Species Report cites observations of a State-listed endangered species (western pond turtle) approximately 1.25 mile from the project site in a neighboring creek (see Section 2.8.4 and Appendix A). A federal species of concern (bald eagle) is known to occur in the greater Commencement Bay area, but there are no eagle nest sites, perches, or roosts known to occur within one mile of the project (WDFW, 2003) (see Section 2.8.4 and Appendix A).

Table 1: Wildlife Identified near the Project Site

Bird Species	Amphibian Species
American robin (<i>Turdus migratorius</i>)	Tree frog (<i>Pseudocris regilla</i>)
Barn owl (<i>Tyto alba</i>)	
Black-capped chickadee (<i>Poecile atricapilla</i>)	
Canada goose (<i>Branta canadensis</i>)	
European starling (<i>Sturnus vulgaris</i>)	
Kingfisher (<i>Ceryle alcyon</i>)	
Mallard duck (<i>Anas platyrhynchos</i>)	
Red-tailed hawk (<i>Buteo jamaicensis</i>)	
Swallow (<i>Tachyneta spp.</i> and <i>Hirunda rustica</i>)	

Source: AES, 2002a, 2002b.

Both the riparian area of the proposed project, and the bluff area of the property where no work is proposed, are identified by WDFW as priority habitats. The riparian area is designated as Riparian priority habitat and described by WDFW as providing “general habitat for a variety of birds and mammals”; the bluff is designated as Urban Natural Open Space and described as providing “raptor habitat and refugia for many bird and mammal species” (WDFW, 2003).

2.8.4 Special-Status Species and Habitats

Special-status species and habitats discussed in this section include federally-listed endangered species, threatened species, proposed threatened species, candidate species, and species of concern; State-listed endangered species, threatened species, candidate species, monitored species, sensitive species, and species of concern; and critical habitat designated under the ESA. State-designated priority habitat was discussed in Section 2.8.3. Essential Fish Habitat designated under the Magnuson-Stevens Fishery Conservation and Management Act is discussed separately in Section 2.8.5.

Consultation occurred under the programmatic Biological Opinion in compliance with the Section 7(c) of the ESA to evaluate the potential impacts to listed species resulting from construction and restoration of stream and wetlands habitat at the Jordan property (Appendix A). Three species listed as threatened under the ESA are potentially present in the vicinity of Hylebos Creek: Puget Sound Evolutionarily Significant Unit (ESU) chinook salmon, bald eagle (*Haliaeetus leucocephalus*), and Puget Sound coastal bull trout (*Salvelinus confluentus*). Additionally, the BA considers potential impacts to Puget Sound/Straight of Georgia ESU coho salmon a candidate species under ESA provisions and to western pond turtle (*Clemmys marmorata*) as a federal species of concern and a State-listed endangered species. Briefly, no critical habitat has been proposed for Puget Sound/Straight of Georgia ESU coho salmon although the site provides rearing habitat. Potential western pond turtle habitat, such as basking sites, refugia, and backwater pools, are very marginal at the site.

There is no critical habitat designation under the ESA for Puget Sound ESU chinook salmon (NMFS, 2002), or for the bald eagle or the coastal bull trout (Appendix A). There are no eagle nest sites, perches, or roosts known to occur within one mile of the project. Bull trout is not known to inhabit the Hylebos watershed, though it is conceivable that the anadromous form could migrate through or rear within Hylebos Creek. They are unlikely to spawn in the reach encompassing the Jordan property because of the lack of cover, spawning gravel, and complex habitat.

The consultations concluded that the project may affect, but is not likely to adversely affect, those five species. Measures to address the consultation terms and conditions have been incorporated into the designs and the permitting process.

2.8.5 Essential Fish Habitat

The Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA) and the 1996 Sustainable Fisheries Act (SFA) require consultation with NMFS for all federal agency actions that may adversely affect Essential Fish Habitat (EFH) (16 USC 1801 *et seq.*, 50 CFR 600) (Pacific Fishery Management Council, 2003). EFH is defined by the MSFCMA in 50 CFR 600.905-930 as "those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity." Consultation with NMFS regarding MSFCMA-managed species residing or migrating near the restoration project can be found at Appendix A.

2.9 Wetlands

A wetland delineation survey was performed at the property in February 2003 (Adolfson, 2003). The results are displayed on Figure 2. The wetland areas delineated showed a fringe between the floodplain and stream.

Two wetland areas were identified. Wetland A is a forested/emergent palustrine wetland located along the east side of Hylebos Creek. The on-site portion includes 65,800 square feet (1.51 acres). This wetland also continues off-site to the south, onto the lot owned by City of Fife where the backup water supply wells are located, for another 23,100 square feet (0.53 acres). Wetland B is a forested/emergent palustrine wetland located to the southeast of Wetland A, near the site access gate, covering 11,200 square feet (0.26 acres) (Adolfson, 2003). The City has adopted the Puget Sound region wetland rating system developed by Ecology to determine wetland category for regulatory purposes (FMC 17.17.020.D). Based on this rating system, Wetland A is considered a Category II wetland requiring 100-foot buffers and Wetland B, a Category III wetland, requires 50-foot buffers (Adolfson, 2003).

Boreholes and test pits were performed in March and April 2003 in the flat area of the property where the restoration project is proposed. These revealed a thick (5- to 9-foot) layer of wood debris and bark lying approximately two feet below the current ground surface. A possible explanation for the presence of this organic layer is that the wood debris was used to fill existing wetlands. The date of placement and the source of the wood layer are not known, but it is not anticipated to impact the wetland component of the project. As a precaution, the footprint of the new pools and meanders will be slightly over-excavated and a layer of clean topsoil will be placed over all exposed areas during construction of the project.

In 2004, a Wetland Functions Assessment was prepared for the Jordan and Milgard sites, using the Wetland Function Assessment Method (WFAM) as described by Ecology in Hruby et al. (1999). The model results indicate that the greatest increase in functions will occur on the Jordan site within one year after restoration is complete, especially for habitat functions. Within this assessment unit, the model indicates that the functions that are most likely to have the greatest increase by the first year after restoration are general habitat suitability, habitat suitability for anadromous fish, habitat suitability for resident fish, habitat suitability for wetland-associated birds, and habitat suitability for wetland-associated mammals. Of these functions, habitat suitability for anadromous fish, habitat suitability for resident fish, and habitat suitability for wetland associated birds retain relatively high index scores through Year 10. Most of the other functions will be providing a moderate level of performance, except for potential for reducing peak flows, potential for recharging ground water, and habitat suitability for amphibians. These three functions will continue provide a relatively low level of performance ten years after restoration is complete (Ridolfi and Adolfson, 2004).

Most of the functions assessed for the Milgard site are not expected to increase over time because no changes to the Milgard site will occur as part of the proposed restoration project. Changes to the hydrological characteristics of the Milgard site by constructing the Jordan site are anticipated to be minimal because of the depressional, ground water-fed nature of the wetlands. Therefore, no changes in the level of performance for this assessment unit are expected within the first year that restoration is complete on the Jordan site. Three functions (potential for removing sediment, potential for decreasing downstream erosion, and primary production and export) will likely show a slight increase in index scores in ten years relative to current conditions because of the continued growth of deciduous trees at the site (Ridolfi and Adolfson, 2004).

2.10 Energy and Natural Resources

The property contains no known sources of energy or exploitable natural resources on-site. The site was used to mine gravel from approximately 1940 to 1995; however, this was done on a small-scale, opportunistic basis. The former owner of the site, who resides in the house directly overlooking the site at the top of the bluff, never considered a full-scale gravel mining operation to be economically attractive, and may have had concerns about the potential impacts to his residence and the rest of his property. The site lacks suitable access for full-scale gravel mining and the access road does not have sufficient bearing capacity. In addition, a full-scale gravel mining operation at the toe of the bluff could potentially create stability problems and would create a nuisance for the nearby residences, including those situated above the bluff.

2.11 Environmental Health and Noise

There are no known hazards to environmental health at this site, including toxic chemicals, risk of fire and explosion, spill, or hazardous waste.

The property is located near light traffic and commercial activities, which generate moderate amounts of ambient noise.

2.12 Land and Shoreline Use

The project site is located in a developed area that supports a mix of residential uses and light industrial and commercial activities. The parcel is located in a shoreline area designated as Type I under the City of Fife's Shoreline Management Program (Boyle, 2003). The site was used to mine gravel on an opportunistic basis from approximately 1940 to 1995 (see Section 2.10), and as a dairy farm during some of that time period (Ridolfi, 2001). In addition to some housing (see Section 2.13 below), one nearby lot (tax parcel 0420061024) is designated as "residential vacant land that has a major functional or economic problem" by Pierce County (2003a), presumably because of the sharp bluff that crosses it. The adjacent Milgard Wetland Mitigation project is classified as "open space."

2.13 Housing

The City of Fife has zoned this area for single-family residential use. There are a few nearby private residences. For example, there is a residence located near the southwest corner of the site along the north side of 8th Street, adjacent to the City of Fife water wells. Another residence is situated on the north side of 4th Street, across from the Milgard site, on the west side of Hylebos Creek. Other properties immediately adjoining the site include eight single-family dwellings and three vacant lots designated for residential use.

No housing units are proposed for construction or demolition in relation to the project. A restrictive covenant and cooperative agreement restricting non-habitat valued activities was approved by the parties (2003).

2.14 Aesthetics, Light and Glare

The property has moderate aesthetic value because the habitat has been extensively modified and simplified as a result of past activity in the area. For example, the stream channel has been straightened, and the property has been overtaken by non-native plant species, particularly Himalayan blackberry brambles. However, the recent growth of alders, maples and cottonwoods gives the property a forested appearance which improves the aesthetics of the area.

No significant sources of light or glare have been noted in the immediate project area.

2.15 Recreation and Education

The proposed project is located within a developed mixed light industrial and residential area. There is no public access to the property and it is not designated nor used as a recreational area. The adjacent Milgard mitigation project, a 15-acre natural area, is open to the public and is accessed by a recreational trail.

2.16 Historical and Cultural Resources

The Commencement Bay area contains numerous recorded archaeological and historical sites. However, much of the Bay has not been subject to surface or subsurface investigation. As a result, the Programmatic EIS notes that NRDA restoration projects could affect prehistoric sites, historic shipwrecks or buildings and Native American traditional cultural properties (USFWS and NOAA, 1996).

A review of the history of site use was conducted under the Phase I Environmental Site Assessment in 2001 (Ridolfi, 2001). An historical and cultural resources assessment was conducted by Historical Research Associates, Inc. (HRA, 2003). During the surface survey, HRA archaeologists described the site as highly disturbed and found no prehistoric or historic-period archaeological sites or structures. However, the assessment points out that prior to development by settlers, the areas along creeks and wetlands were utilized by the Puyallup Tribe of Indians for hunting, fishing, and gathering. The areas along Hylebos Creek are considered high sensitivity areas² for cultural resources, particularly prehistoric archaeological sites (HRA, 2003).

The site is not designated as a historical place or district and there are no historic landmarks on or near the property (Ridolfi, 2001). See Appendix A for consultation with the Office of Archaeology and Historic Preservation.

2.17 Transportation, Utilities, and Public Services

The site is not served by public transit although services are available in about a distance of one mile. WSDOT design and construction plans for extending SR 167 could result in a highway running roughly parallel to the

² The term is not defined in any regulations but is commonly used by professional archaeologists. A high (or higher) sensitivity area is one that is more likely to contain cultural resources than a low (or lower) sensitivity area. These areas are defined on the basis of information about the known distribution of archaeological sites, of past Indian and historical land use, and landform characteristics. The reason that the area along the creek has a higher sensitivity is that it is more likely to have seen more intensive use by prehistoric populations than, for example, an inland area without any water features. Thus, archaeological sites are more likely to occur along the creek (Thompson, personal communication, 2003).

alignment of Hylebos Creek, passing at some points within 0.25 miles (400 m) of the site. Construction is tentatively planned for 2008 to 2013 (WSDOT, 2003).

There are no utilities or public services available at the Site, however, such services exist in the immediate area and could be extended to the site if needed.

3. ALTERNATIVES, INCLUDING THE PROPOSED ACTION

The proposed alternatives for the Jordan Property/Hylebos Creek Off-Channel Habitat Restoration Project were selected and evaluated against the criteria in the Restoration Plan (Trustees 1997):

- Site is or can be made available for restoration
- Source control is or will be sufficient
- Restoration will provide functional benefits to injured natural resources
- Functional connectivity
- Location of the site in the system
- Separation from sources of contamination or human disturbances
- Cost-effectiveness
- Sustainability
- Size
- Ownership and management
- Land use compatibility
- Water quantity and flow
- Physical ability of public to access or view the restoration site.

The selected alternatives for the proposed project consist of a range of options focusing on potential habitat features. These alternatives include a meandering side channel (Alternative 1), an off-channel wetlands (Alternative 2), a dendritic marsh (Alternative 3), rerouted meandering creek with dendritic marsh (Alternative 4), meandering creek with backwater pools and dendritic marsh (Alternative 5), meandering creek transition to dendritic marsh (Alternative 6a), an expanded Alternative 6a (Alternative 6b), and no-action or natural recovery (Alternative 7).

3.1 Alternative 1: Meandering Side Channels

Alternative 1 creates meandering side channels, recalling the more sinuous nature of lower Hylebos Creek prior to human intervention. The side channels are connected to the main channel in several locations and are installed so that they drain to avoid stranding fish at low tide. Figure 3 shows a schematic of the Meandering Side Channel Alternative.

3.2 Alternative 2: Off-Channel Wetlands

Alternative 2 focuses on developing off-channel wetlands habitat. This alternative creates side pools which take advantage of the salinity gradient along the reach to provide habitat suitable for different plant, invertebrate, and aquatic communities. Deeper areas of the pools remain permanently flooded, while the rest drains at lower flows. Figure 4 shows the Off-Channel Wetland Alternative.

3.3 Alternative 3: Dendritic Marsh

Alternative 3 creates a finger-like dendritic marsh habitat along the stream. This alternative connects to the existing Hylebos Creek channel at both ends of the reach and attempts to reflect the natural geometry of historic fringe wetlands along the edge of the bay. This geometry works to maximize the area and complexity of available habitat for various communities by playing with gradients and geometry. There are deeper pools and shallower marshy areas. The Dendritic Marsh Alternative is shown in Figure 5.

3.4 Alternative 4: Rerouted Meandering Creek with Dendritic Marsh

Alternative 4 is a combination of Alternatives 1 and 3, which was created in response to comments from the Trustees, the City of Fife, and the public. It combines the meanders and additional flow-through connections from Alternative 1 with the dendritic marsh geometry of Alternative 3. It includes possible future work on the western side of Hylebos Creek, to tie in the Jordan Habitat Restoration Project with the Milgard Mitigation Wetland Site. Part of the existing channel is abandoned to force flow through the new channel and marsh. The Rerouted Meandering Creek with Dendritic Marsh is shown in Figure 6.

3.5 Alternative 5: Meandering Creek with Backwater Pools and Dendritic Marsh

Alternative 5 is a combination of Alternatives 1 and 3, which was created in response to comments from the Trustees, the City of Fife, and the public. It combines the meanders and additional flow-through connections from Alternative 1 with the dendritic marsh geometry of Alternative 3. It includes possible future work on the western side of Hylebos Creek that could tie together the Jordan Habitat Restoration Project with the Milgard Mitigation Wetland Project. The current channel remains active but boulders are placed in strategic locations to control flow and create riffles. Alternative 5, the Meandering Creek with Backwater Pools and Dendritic Marsh, is shown in Figure 7.

3.6 Alternative 6: Meandering Creek Transition to Dendritic Marsh

Alternative 6 is a combination of Alternatives 1 and 3, which was created in response to comments from the Trustees, the City of Fife, and the public. It combines the meanders and additional flow-through connections from Alternative 1 with the dendritic marsh geometry of Alternative 3.

3.6.1 Alternative 6a

Alternative 6a takes advantage of the difference in aquatic conditions (salinity, temperature, water level) between the upstream and downstream portions of the site. It emphasizes the meandering character in the upstream part of the site, and the dendritic character in the downstream portion. It includes:

- Removal of the wall and pilings from within Hylebos Creek
- Excavation of existing wetland and upland areas at the upstream end of the Site to form meandering side-channels
- Excavation of existing wetland and upland areas at the downstream end of the Site to form a dendritic marsh
- Excavation of some deeper pool areas
- Placement of boulders and large woody debris to provide cover, increase habitat complexity, and direct flow
- Grading to prevent stranding of pools and meanders at low water levels
- Preservation of as many existing trees as possible
- Revegetation using native emergent marsh plants, herbaceous plants, shrubs, and trees
- Conversion of an existing dirt road into a nature trail
- Construction of nature viewing platforms
- Posting of interpretive signs

Except for the removal of the in-stream wall and pilings, all the work will take place on the property itself.

A conceptual grading plan (Figure 9) and typical cross-section (Figure 10) were developed. The excavation volumes were estimated at 43,000 cubic yards. Approximately 3,400 cubic yards of this material will be excavated in 0.2 acres of existing wetlands to create channels connecting Hylebos Creek to the new off-channel areas, but the project will result in a net wetland increase of approximately one acre. Some 1.8 acres of new side-channel aquatic habitat will also become available. Approximately 1,700 feet of nature trail and three viewing platforms will be constructed.

3.6.2 Alternative 6b: Expanded Alternative 6a

Alternative 6b takes into account expansion of the restoration project to include the adjacent Milgard Mitigation Wetland Site. If allowable under its permitting conditions and should the adjacent landowner wish to consider expansion to include both the Trustees' restoration project and their mitigation project, the Trustees prepared some conceptual drawings (Alternative 6b, Figure 11). The additional work would most likely include the following:

- Excavation of approximately 2,300 cubic yards of material from 0.45 acres on the Milgard Mitigation Wetland Project to form counter-meanders and additional side-channels
- Placement of boulders and large woody debris to provide cover, increase habitat complexity, and direct flow
- Grading to prevent stranding of pools and meanders at low water levels
- Revegetation using native emergent marsh plants, herbaceous plants, shrubs, and trees at the Milgard Mitigation Wetland Project, compatible with previous planting, to increasing shade along the riparian corridor

3.7 Alternative 7: The No-Action Alternative

Under Alternative No. 7, No Action/Natural Recovery, the Trustees would not take any direct action to restore injured natural resources. The No Action/Natural Recovery Alternative allows biological impacts to recovery naturally. However, for Alternative No. 7 to be selected as the preferred alternative: (1) the natural process must be more effective in restoring the environment than available or potentially available remediation or restoration options and alternatives, (2) the time to recovery must not be significantly different from that resulting from human intervention, (3) the affected area will not suffer from additional adverse ecological effects before the site returns to a natural state, (4) no negative threats to the health and safety of the general public will be caused by the time lag of natural recovery, and (5) funds are not available.

The Trustees and their partners have determined that the habitat functions being created and enhanced under their preferred alternative are valuable for use by the natural resources in the vicinity of the Jordan property.

3.8 Preferred Alternative

After a review of the Restoration Plan criteria, the NEPA intensity factors (see Section 4 and subsections), and consultation with the City of Fife and with the public, the Trustees selected Alternative 6a, the Meandering Creek Transition to Dendritic Marsh, as their preferred alternative for the Jordan/Hylebos Creek Habitat Restoration Project. Should circumstances change and an expansion becomes feasible that combines the NRDA project with the Milgard mitigation project, the existing preferred alternative can be modified as described under Alternative 6b. Construction is expected to last approximately 10 to 12 weeks (Phase I work). Should Alternative 6b become viable, it is anticipated that the additional construction effort would take another 4 to 6 weeks (Phase II work).

4. ENVIRONMENTAL CONSEQUENCES OF THE PROPOSED ACTION

The Trustees compared the proposed project activities and purpose with the criteria identified in the Restoration Plan, then evaluated that information against the environmental settings described in Section 2 and the specific NEPA factors identified below to determine the significance of the impacts. Because NEPA requires consideration of context and intensity (40 CFR 1508.27), the proposed action must be analyzed in several contexts, e.g., the society as a whole, the affected region and interests, and the locality and by consideration of the intensity (severity) of impacts by assessing the direct, indirect, and cumulative impacts that could potentially arise from implementation of the proposed project. The significance of impacts factors under 40 CFR 1508.27(b) are to be considered in evaluating the intensity of both the beneficial and adverse impacts under short- and long-term conditions. Therefore, this section analyzes the affected environment (described in Section 2) against those specific factors (40 CFR 1508.27(b)) in order to determine whether or not the proposed Alternative 6a would have a significant effect on the quality of the human environment. In addition, the potential impacts of the project were examined in light of NOAA Administrative Order Series 216-6, *Environmental Review Procedures for Implementing the National Environmental Policy Act* (NAO 216-6).

The Trustees and project partners have concluded overall that any potential adverse environmental impacts at the restoration site would be short-term and construction-related, while beneficial environmental impacts would result in long-term habitat values to the area's natural resources and the aesthetic pleasures for humans.

4.1 Likely impacts of the proposed projects [40 CFR 1508.27(b)(1)]

As noted above, the adverse environmental impacts are all short-term and construction-related impacts. The magnitude of environmental impacts would generally be a function of the extent and duration of construction. In response to public comments on the project and regulatory requirements, mitigation measures have been included to minimize these short-term impacts. The long-term impacts are beneficial to the area's natural resources by, for example, protecting and improving water quality, bolstering native plant communities, and increasing aesthetics in the area. The project will be developed to comply with all applicable local, state, tribal, and federal permits and approvals.

4.2 Likely effects of the projects on public health and safety [40 CFR 1508.27(b)(2)]

As noted above, the adverse environmental impacts are all short-term and construction-related impacts and thereafter can be considered beneficial to area humans and natural resources.

Aesthetics, Light, and Glare. Natural habitat conditions at the project site will be restored through re-grading and revegetation. Although the project will result in short-term aesthetic impacts during earth-moving activities, restoration will help restore native vegetation communities and habitat thereby improving aesthetic conditions over the long term. Views of the property and its surrounding area will not be adversely impacted, and will likely be improved instead.

There will be no light and glare produced by the completed restoration project since lighting will not be available on-site. The Trustees do not anticipate that lighting as it exists now from the surrounding parcels will adversely affect the natural resources that are the intended beneficiaries of the project.

Air Quality. During the construction phase, which is expected to last a maximum of 18 weeks (including Phase II work), there will be minimal short-term increases in dust and vehicle exhaust from earth moving activities (e.g.,

clearing, grubbing, soil and sediment transport, planting) and operation of construction equipment. No significant impacts to air quality are expected due to the relatively small amounts of excavation and the temporary nature of construction activities. Exhaust controls will be used on all construction equipment to minimize exhaust emissions. Dust will be controlled by watering down exposed earth. If there is off-site transport of any materials, haul trucks will be covered or have loads that are below sideboards to control blowing dust along the haul route. A grading permit, which includes dust control management, will be required from the City of Fife. No long-term impacts to air quality are expected to result from the project.

Economic Impacts. No significant impacts on neighborhoods or community cohesion will occur. The restoration project would improve vacant, disturbed land by restoring biological diversity and ecological functions and would increase community awareness about natural resources. The proposed project precludes future commercial or industrial development but such economic impacts would likely be offset by increasing community awareness about natural resources and improving the environmental quality of the area. Since current zoning designation for the site is for single-family residential use values of adjacent properties should not be adversely affected. No additional land acquisition or displacement would be required and housing would not be affected. No job losses would occur or be modified.

Energy and Natural Resources. There are no sources of energy or exploitable natural resources on-site to be affected by this proposed project; therefore, no impacts will result.

Environmental Health and Noise. Marginal risk of fire, explosions, or spill will be present during construction due to the use of fuel for the construction equipment (excavator or backhoe, etc.). No long-term risks to environmental health are expected to result from the project since no hazardous materials will be stored or created on-site. A health and safety plan will be in place to address any potential hazards during construction.

The project will result in short-term noise impacts from the use of heavy equipment during the construction phase of this project. Noise will be generated by clearing, grubbing, earth moving, dredging, sediment and soil storage and transport, digging, grading, burning, and planting. Trucks, graders, bulldozers and similar equipment can generate noise in the range of 67 to 98 dBA at 50 feet. All construction activities will be conducted in compliance with the City of Fife's noise regulations.

Floodplain and Flood Control. The project is not expected to create any flow restrictions or blockages that might negatively impact flood control. Although flood storage is not a project objective there will be a small net increase in flood storage from the project resulting in a minor beneficial impact.

Geological and Soil Resources. Over the short-term, construction may result in a temporary increase in erosion potential but implementation of erosion control practices would minimize the extent of these impacts. Slopes will be temporarily stripped of vegetation during the extensive removal of non-native and invasive plant species. However, over the long-term the restoration of a natural soil profile and vegetation community is expected to improve sediment and soil quality and return erosion potential to current conditions or better.

A temporary erosion and sediment control plan (TESCP) will be in place in accordance with the 1992 Stormwater Management Manual for the Puget Sound Basin (as required by the City) prior to construction along with best management practices (BMPs). These practices may include, but are not limited to, covering or stabilizing areas of exposed soil and use of silt curtains or other measures to control sedimentation and turbidity. The proposed TESCP, prepared in January 2004, is included in Appendix B of this EA.

Disposal of On-Site Soil and Wood Debris. Ridolfi performed a phase I environmental site assessment on the Jordan site and determined that the material to be excavated does not require disposal in a specialized landfill. If the wood debris can be removed separately from the overlying sand/gravel cover the soils will be suitable for composting in a soil manufacturing facility. Otherwise, the materials may be taken to a construction debris landfill or used as fill material for construction projects in the vicinity of the Jordan site. The City of Fife will be apprised of the removal and destination of any excavated materials from the site per the Shoreline Management/Critical Areas Permit (City of Fife, 2003)

Recreation and Education. There are no recreational or educational opportunities on-site nor will other land/shoreline uses be modified to create any adverse impacts from the proposed project. Once construction is completed, the site will provide recreational use in a stewardship and educational role. A nature trail and viewing platforms will be constructed and interpretive signs posted consistent with the property's permitted uses. Should Alternative 6b be implemented in the future, the nature trail and viewing platforms could be expanded and linked with the Milgard Mitigation Wetland trail. Thus, the project is expected to result in long-term beneficial impacts on recreation and education.

Land and Shoreline Use. The property is also in a shoreline area as defined in the Shoreline Management Act of 1971. The City of Fife issued a Shoreline Management Permit for the project, which was found to be consistent with the City's Shoreline Management Master Plan (City of Fife, 2003). The project is also consistent with the State of Washington's Shoreline Management Act, and is specifically exempt from needing a Substantial Development Permit because it is a project specifically designed to "improve fish or wildlife habitat or fish passage". The project has received a Hydraulic Project Approval (HPA) from WDFW. The proposed project will not result in negative impacts on land or shoreline use since no existing uses will be decreased or eliminated. The amount of construction effort for the trail and the viewing platform additions will be minimal but their presence is designed to direct any public use away from the majority of the site thereby increasing the overall benefit to the site's natural resources and their habitat.

Transportation, Utilities, and Public Services. No transportation impacts are anticipated beyond short-term construction traffic to local roadways for short periods. Staging areas will be located on-site to minimize disruption of traffic on adjacent roadways. Public use will be limited to pedestrian access via a nature trail after construction is completed. Because of the public parking associated with the adjacent mitigation site's nature trail, additional impacts to transportation over the long-term are expected to be negligible.

There will be limited impacts to public services or utilities during and after construction. The contractors may require temporary electricity and water connections during construction. Initial site maintenance may also require some minimal utilities and water for an irrigation system during a plant establishment period of two to three years.

The project is not expected to increase demand for public services and utilities over the long-term. Access to the project site will be limited and maintenance and monitoring activities are expected to require only marginal, if any, amounts of water or electricity. The City of Fife will be providing normal maintenance once the project is part of its park system. Due to public access, minimal amounts of waste collection will likely be needed.

Water Resources. During construction of the intertidal habitat at the project site, there may be minor short-term impacts to water quality resulting from increased turbidity. Overall, impacts are expected to be temporary and localized. Impacts would be greatest at high tide when the site experiences the greatest inundation. Several BMPs and other protective measures may be implemented during construction to minimize impacts, including:

- Avoidance of work in inundated areas during high tide,

- Use of silt fences or sediment curtains to contain suspended sediments,
- Use of cofferdams to contain construction area during tidal inundation,
- Avoidance of work during salmonid migration periods, and
- Avoidance of releases of gas, oil, and diesel from construction equipment into adjacent waters.

BMPs will be used to minimize the amount of sediment suspension in the water (see Appendix B). Construction will only occur during periods when it would not be detrimental to fisheries (see Table 2).

Over the long term, the project will benefit water quality by re-establishing intertidal vegetation communities. These communities will serve to trap sediments and filter water, which will benefit water quality both in Hylebos Creek and in Commencement Bay. Additionally, the slope angle on the bank of Hylebos Creek will be reduced where feasible to decrease its erosion potential.

4.3 Unique characteristics of the geographic area in which the projects are to be implemented [40 CFR 1508.27(b)(3)]

See the affected environment section (Section 2 and subsections) for additional descriptions of the unique geographic area in which this proposed project would be sited. It is because of the highly industrialized area around that the Bay that an NRDA restoration project would yield positive environmental impacts for the humans and the natural resources that use the Bay.

Wetlands. The project will result in minor short-term impacts to wetlands during construction because some grading may be needed in the existing wetland zone. However, because the project will result in a net increase in wetland area and in the enhancement of the quality of the wetlands, the project will then result in long-term beneficial impacts to wetlands and the natural resources utilizing those wetlands.

The Shoreline Management/Critical Areas Permit issued by the City of Fife in September 2003 specifies seven conditions (City of Fife, 2003):

1. The City of Fife is to be provided, for review and comment, a final planting design, including detail on plant species that will replace invasive vegetation.
2. The project should, to the extent possible, determine the delineation of historic wetlands, and consider such findings in subsequent design and construction.
3. Submittal and approval by the City of Fife of a site-specific Habitat Management Plan, detailing goals, objectives, and performance criteria for the project. Such plan should include detail about how the site is to be monitored and adaptively managed, as well as horizons for these project components.
4. Submittal of building plans for any proposed on-site structures is to be required for determination of applicability of city code requirements.
5. The city is to be apprised of the removal and destination of any excavated materials from the site.
6. Removal of any wooden wall and pilings within the western side of Hylebos Creek are to be conditional upon obtaining approval from the relevant property owner(s).

7. Paved parking for three vehicles to be provided (one of which is to be designated handicapped) at one of the locations deemed feasible.

4.4 Controversial aspects of the project or its likely effects on the human environment [40 CFR 1508.27(b)(4)]

The Trustees are unaware of any controversial aspect to implementation of this proposed project. No contaminated soils were identified during the site investigation. The designs have been presented in public meetings and the Trustees' quarterly briefings and the public has indicated that they are supportive of the preferred alternative and, if possible, the expanded alternative.

4.5 Degree to which possible effects of implementing the project are highly uncertain or involve unknown risks [40 CFR 1508.27(b)(5)]

The Trustees and their project partners are unaware of any uncertain or unknown risks related to implementation of this proposed project.

4.6 Precedential effect of the project on future actions that may significantly affect the human environment [40 CFR 1508.27(b)(6)]

The Trustees and their project partners believe that restoration projects such as this one and the other habitat enhancements being planned by the Trustees exert strong positive influences on the Bay and its residents and users. Enhancing and creating fish and wildlife habitat benefits the area's natural resources, helps to protect and improve water quality, bolsters native plant communities, enhances the visual quality of the area, and provides educational opportunities for the public.

4.7 Possible significance of cumulative impacts from implementing this and other similar projects; potential impacts on connected actions [40 CFR 1508.27(b)(7)]

The proposed restoration project is part of an overall Restoration Plan for Commencement Bay that is covered under a separate Programmatic EIS (Trustees, 1997). A number of other NRDA restoration projects have been implemented or are being planned and designed and will cumulatively contribute to improving Commencement Bay's overall environmental health, particularly in combination with other remediation and habitat enhancement projects in Commencement Bay. Salmon habitat will be improved, which is expected to have a positive cumulative impact not only to Commencement Bay salmon stocks but also to salmon stocks in Puget Sound. The project will provide functional connectivity with other restoration projects in Commencement Bay by maintaining, creating, or restoring a diversity of aquatic habitat used by juvenile salmonids for feeding, rearing, and outmigration.

Cumulative beneficial impacts will also result from an additional area for passive viewing of nature and the aesthetics/contemplative benefits of a nature trail. Secondary beneficial cumulative impacts may result for bird species, wildlife, and other natural resources, particularly for species which feed on fish. Restoration of this site will not adversely impact any of the adjacent properties and, when considered in conjunction with the adjacent mitigation project, will incrementally increase the beneficial and aesthetic impacts to the area.

Particular attention was paid to the impacts of this project to or from the adjacent Milgard Mitigation project during both design and construction phases of the project to ensure that both projects will beneficially rather than adversely impact each other.

4.8 Effects of the project on National Historic Places, or likely impacts to significant cultural, scientific or historic resources [40 CFR 1508.27(b)(8)]

Due to the extensively modified nature of the property and the presence of fill material (wood debris and gravelly sediment layers), encountering cultural or historic resources is unlikely. The historical and cultural resources assessment conducted for the project recommended that an archaeological monitor be present during the phase of construction when any intact sediments underlying the wood debris are excavated (HRA, 2003).

If any significant cultural materials are exposed or discovered during excavation or subsurface disturbance, operations will cease, the immediate area will be cordoned off to minimize any additional disturbance, and a qualified archaeologist contacted for further recommendations. The Puyallup Tribe of Indians and Muckleshoot Indian Tribe are cooperating agencies/tribes and part of the project consultation process. NOAA contacted the State Archaeologist at the Washington Office of Archaeology and Historic Preservation (OAHP) for review of the Cultural Resource Assessment Report prepared by HRA (2003). The OAHP review can be found at Appendix A and is part of the administrative record.

4.9 Degree to which the project may adversely affect endangered or threatened species or their critical habitat [40 CFR 1508.27(b)(9)]

Because the site provides salmonid habitat, including habitat for chinook salmon (a federally-listed threatened species), it is classified as a fish and wildlife habitat conservation area. Federal laws and City regulations pertaining to fish and wildlife and Essential Fish Habitat as well as the applicable consultation and regulatory terms and conditions will be followed to ensure that no long-term adverse impacts would result from the proposed alternative.

Endangered Species/Threatened Species. The proposed restoration project would provide additional intertidal and nearshore habitat for chinook salmon and may benefit other listed species in the area such as the bald eagle. During construction, short-term impacts to salmon habitat could occur from excavation and earth-moving activities resulting in increased turbidity and total suspended solids; flow would be maintained during all phases of the proposed activities. Through selective scheduling of the construction period to minimize impacts to salmonids (see Table 2) and implementation of methods to control erosion and in-water turbidity, short-term impacts to listed species would be relatively minor. No critical habitat designated under the ESA has been identified for any of the listed species present, therefore, no impacts on critical habitat will result from the proposed project. Section 7 ESA consultations with NMFS and USFWS are available in Appendix A.

State Listed Species. The site will be examined throughout construction activities and if any turtle specimens are found, they will be identified by a biologist to determine whether they are a protected or sensitive species, particularly western pond turtles. In the event of discovery of a western pond turtle on site, work will be immediately stopped until WDFW and USFWS can examine the site. As required by the *Washington State Recovery Plan for the Western Pond Turtle* (Hays et al., 1999), any captured specimens will be taken to the captive breeding program at the Woodland Park Zoo in Seattle. WDFW issued a Hydraulic Project Approval (HPA) for the project in June 2003.

Fish and Wildlife Impacts. Over the long-term, no fish or wildlife habitat would be adversely impacted by the proposed project. Soil excavation will only occur during designated periods to avoid salmonid migration periods. Minor disturbances to waterfowl and mammals may occur during the construction phase and may cause them to temporarily relocate but these impacts would be short-term in nature and displaced animals are expected to return to the site after restoration is completed. After construction, the proposed restoration project would improve fish and wildlife habitat structure and function. Juvenile anadromous salmonids will benefit from increased habitat quantity

and quality. The project will enhance resting areas for salmonid rearing and feeding, increase species on which salmon feed, and reduce environmental stresses from elevated water temperatures and suspended sediment loads.

Essential Fish Habitat. During construction, short-term impacts to salmon habitat, including designated EFH, could occur from excavation and earth-moving activities, resulting in increased turbidity and total suspended solids. However, through avoidance of construction during chinook migration periods and implementation of methods to control erosion and in-water turbidity, short-term impacts to federally listed or other special-status species are expected to be relatively minor. Long-term impacts to habitat, including EFH, would be beneficial. The programmatic Biological Opinion and agency consultations provide additional information (Appendix A).

Critical Areas. The site is designated by the City of Fife as a critical area (Boyle, 2003). According to Fife Municipal Code (FMC) Chapter 17.05.080, Critical Areas Review, a review of development activity is required for land use activities within critical areas, their buffers, or lands within 200 feet of a critical area. A critical areas permit request was presented to the City along with the Shoreline Permit request, and was granted in September 2003 (City of Fife, 2003).

4.10 Likely violations of environmental protection laws [40 CFR 1508.27(b)(10)]

The Trustees anticipate no violations of environmental protection laws.

4.11 Introduction of non-indigenous species [NAO 216-6 6.01(b)(11)]

No non-indigenous species will be introduced as part of the implementation of the restoration project. Existing invasive and non-native vegetative species will be replaced with native species.

5. COORDINATION AND CONSULTATION

This section presents a review of the potentially applicable laws and regulations that govern the Trustees' restoration projects. Many federal, state, tribal, and local laws and regulations need to be considered during the development of this project as well as several regulatory requirements that are typically evaluated during the federal and state permitting process. A brief review of potentially applicable laws and regulations that may pertain to this project is presented below and in the Commencement Bay Restoration Plan/Programmatic Environmental Impact Statement (Trustees, 1997). The project manager will ensure that there is coordination among these programs where possible and that project implementation and monitoring is in compliance with all applicable laws and regulations.

United States et al. v. Port of Tacoma, Civ. No. 93-5292 (W.D. Wash., Oct. 8, 1993). Under a Consent Decree in United States et al. v. Port of Tacoma, Civ. No. C93-5462B (W.D. Wash., October 8, 1993), the Port of Tacoma settled claims for natural resource damages in part by, among other things, agreeing to make periodic payments of funds into a Commencement Bay Restoration Account that is intended to be used to benefit the natural resources of Commencement Bay injured as a result of releases of hazardous substances or discharges of oil. Acquisition of habitat is one of the authorized activities under the Trustees' Restoration Plan. A Cooperative Agreement between the project partners and a Restrictive Covenant on the site was prepared.

Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA), 42 USC §§ 9601 et seq., and National Oil and Hazardous Substances Pollution Contingency Plan, 40 CFR 300. CERCLA, also known as Superfund, provides the basic legal framework for cleanup and restoration of the nation's hazardous substances sites. CERCLA establishes a hazard ranking system for assessing the nation's contaminated sites with the most contaminated sites being placed on the National Priorities List (NPL). A site investigation of the proposed restoration project has shown that the property is compliant with this Act (Ridolfi, 2003).

Model Toxics Control Act (MTCA), Ch. 70.105D RCW (1989) and Ch. 173-340 WAC (1992). MTCA, Washington's toxic cleanup law, is the state equivalent of the federal Superfund program and is managed by Ecology. The statewide regulations cleanup standards and requirements for managing contaminated sites. Ecology is a participant in this project so MTCA compliance will be inherent in the Trustees' decision-making process. A site investigation of the proposed restoration project has shown that the property is compliant with this Act (Ridolfi, 2003).

National Environmental Policy Act (NEPA), as amended, 42 U.S.C. §§ 4321 et seq.; 40 CFR Parts 1500-1508. NEPA was enacted in 1969 to establish a national policy for the protection of the environment. The Council on Environmental Quality (CEQ) was established to advise the President and to carry out certain other responsibilities relating to implementation of NEPA by federal agencies. Pursuant to Presidential Executive Order, federal agencies are obligated to comply with NEPA regulations adopted by the CEQ (40 CFR Parts 1500-1508). These regulations outline the responsibilities of federal agencies under NEPA and provide specific procedures for preparing environmental documentation to comply with NEPA. NEPA requires that an EA be prepared in order to determine whether the proposed action will have a significant effect on the quality of the human environment. The EA for this project will undergo a public review and comment period and then the lead federal agency will make a final recommendation. Depending on whether an impact is considered significant, an environmental impact statement (EIS) or a Finding of No Significant Impact (FONSI) will be made prior to implementation of the project. The EA, the appropriate regulatory documents, and the public comments will become a part of the administrative record for this project.

State Environmental Policy Act (SEPA), Chapter 43.21C RCW and Chapter 197-11 WAC. SEPA sets forth the state's policy for protection and preservation of the natural environment. Local jurisdictions must also implement the policies and procedures of SEPA. The project has undergone a public comment period under SEPA requirements and the SEPA checklist, applications for permits, permits, and the public comments will become a part of the administrative record for this project. The City of Fife, the SEPA lead agency, issued a Threshold Mitigated Determination of Nonsignificance for the project on June 10, 2003, and the Notice of Final Determination was issued on February 9, 2005.

Clean Water Act (CWA) (Federal Water Pollution Control Act), 33 USC §§ 1251 *et seq.* The CWA is the principal law governing pollution control and water quality of the nation's waterways. It requires the establishment of guidelines and standards to control the direct or indirect discharge of pollutants to waters of the United States. Discharges of material into navigable waters are regulated under Sections 401 and 404 of the CWA. The U.S. Army Corps of Engineers (USACE) has the primary responsibility for administering the Section 404 permit program. Under Section 401 of the CWA, projects that involve discharge or fill to wetlands or navigable waters must obtain certification of compliance with state water quality standards. The project is anticipated to require 404/401 permit and certification or be covered under a nationwide permit.

Rivers and Harbors Act, 33 USC §§ 401 *et seq.* This Act regulates development and use of the nation's navigable waterways. Section 10 of the Act prohibits unauthorized obstruction or alteration of navigable waters and vests USACE with authority to regulate discharges of fill and other materials into such waters. Actions that require Section 404 CWA permits are also likely to require permits under Section 10 of this Act. A single permit usually serves for both purposes so this project can potentially ensure compliance through this mechanism.

Endangered Species Act of 1973 (ESA), 16 USC 1531 §§ *et seq.*, 50 CFR Parts 17, 222, 224. The ESA directs all federal agencies to conserve endangered and threatened species and their habitats and encourages such agencies to utilize their authorities to further these purposes. Under the Act, NOAA-NMFS and DOI-USFWS publish lists of endangered and threatened species. Section 7 of the Act requires that federal agencies consult with these agencies to minimize the effects of federal actions on endangered and threatened species. The BA for this project, attached in Appendix A, provides additional information regarding the federal- and state-listed endangered and threatened species that either migrate or reside in Hylebos Creek. The regulatory permits and consultation conditions will set forth a number of operating measures designed to prevent or mitigate any such disturbances to these species.

Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA), 16 USC §§ 1801 *et seq.*, 50 CFR Part 600. In 1996, the Act was reauthorized and changed by amendments to require that fisheries be managed at maximum sustainable levels and that new approaches be taken in habitat conservation. EFH is defined broadly to include "those waters and substrate necessary to fish for spawning, breeding, feeding or growth to maturity" (62 Fed. Reg. 66551, § 600.10 Definitions). The Act requires consultation for all federal agency actions that may adversely affect EFH. Under Section 305(b)(4) of the Act, NMFS is required to provide advisory EFH conservation and enhancement recommendations to federal and state agencies for actions that adversely affect EFH. Where federal agency actions are subject to ESA Section 7 consultations, such consultations may be combined to accommodate the substantive requirements of both ESA and MSFCMA. During the permitting process, NMFS will be consulted regarding any MSFCMA-managed species residing or migrating through Hylebos Creek.

Fish and Wildlife Coordination Act (FWCA), 16 USC §§ 661 *et seq.*, Migratory Bird Treaty Act of 1918, 16 USC §§ 703 *et seq.* The FWCA requires that federal agencies consult with the USFWS, NMFS, and state wildlife agencies for activities that affect, control or modify waters of any stream or bodies of water, in order to minimize the

adverse impacts of such actions on fish and wildlife resources and habitat. Similarly, the Migratory Bird Treaty Act requires the protection of ecosystems of special importance to migratory birds against detrimental alteration, pollution, and other environmental degradation. These consultations are generally incorporated into Section 404 of the CWA, NEPA, or other federal permit, license or review requirements. As part of the permitting process, a request was made to WDFW for a Hydraulic Permit Approval and was granted.

Executive Order (EO) 12898: Environmental Justice, as amended. On February 11, 1994, President Clinton issued Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations. This EO requires each federal agency to identify and address, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies and activities on minority and low-income populations. EPA and CEQ have emphasized the importance of incorporating environmental justice review in the analyses conducted by federal agencies under NEPA and of developing mitigation measures that avoid disproportionate environmental effects on minority and low-income populations.

The Muckleshoot Indian Tribe and the Puyallup Tribe of Indians constitute distinct, separate communities of Native Americans who rely on Treaty-reserved fish and shellfish resources for subsistence, economic and spiritual purposes. Other members of low-income communities may rely on fishery resources for subsistence purposes. The Trustees have not identified any disproportionate, adverse impacts on human health or environmental effects on implementation of the preferred alternative on Native Americans or other minority or low-income populations, and believe that this project will be beneficial to these communities. The Tribes are participants in the project planning and their representation will be inherent in the Panel's decision-making process.

Information Quality Guidelines issued Pursuant to Public Law 106-554. Information disseminated by Federal agencies to the public after October 1, 2002, is subject to information quality guidelines developed by each agency pursuant to Section 515 of Public Law 106-554 that are intended to ensure and maximize the quality of such information (i.e., the objectivity, utility and integrity of such information). This EA is an information product covered by the information quality guidelines established by NOAA and the DOI for this purpose. The information collected herein complies with applicable guidelines.

Other potentially applicable federal, state, tribal, and local laws that are integrated into the regulatory process include:

- Archaeological Resources Protection Act, 16 USC §§ 470, *et seq.*
- Clean Air Act, as amended, 42 USC §§ 7401, *et seq.*
- Coastal Zone Management Act of 1982, as amended, 16 USC 1451 *et seq.*
- Marine Mammal Protection Act, 16 USC §§ 1361 *et seq.*
- National Historic Preservation Act, 16 USC §§ 470 *et seq.*
- Treaty of Medicine Creek, 1854
- Shoreline Management Act, Ch. 90.58 RCW and Ch. 173-14 WAC
- Historic Preservation Act, Ch. 27.34 RCW, Ch. 27.44 RCW, and Ch. 27.53 RCW

6. LIST OF AGENCIES AND PERSONS CONSULTED

- U.S. Department of Commerce, National Oceanic and Atmospheric Administration
 - NOAA – Habitat Division: Jennifer Steger
 - NOAA – General Counsel: Gail Siani, Robert Taylor
- U.S. Department of the Interior
 - U.S. Fish and Wildlife Service: Judy Lantor
- Muckleshoot Indian Tribe: Glen St. Amant
- Puyallup Tribe of Indians: Bill Sullivan
- Washington Department of Ecology: Craig Thompson
- Washington Department of Fish and Wildlife: John Carleton, David Molenaar, Travis Nelson
- Washington Department of Natural Resources: Tom Gibbons
- City of Fife: Steve Worthington, Michael Lafreniere, Beverly Boyle, Lynne Dumovich
- Pierce County
- U.S. Army Corps of Engineers: Ron Wilcox
- Washington Office of Archaeology and Historic Preservation: Dr. Robert Whitlam, State Archaeologist
- Citizens for a Healthy Bay
- Friends of the Hylebos Wetlands
- Milgard Manufacturing

7. REGULATORY DOCUMENTS

Programmatic Biological Opinion

Joint Aquatic Resources Permit application

Hydraulic Project Approval

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FIGURES

TABLES

Table 2: Life History of Puyallup Basin Chinook Salmon, Coho Salmon, and Bull Trout, and Project Timing

Month	J	F	M	A	M	J	J	A	S	O	N	D
Construction activity work window												
Adult migration – chinook					■	■	■	■	■			
Adult migration – coho								■	■	■		
Adult migration – bull trout								■	■	■		
Adult spawning – chinook									■			
Adult spawning – coho	■										■	■
Adult spawning – bull trout											■	■
Intragravel development – chinook	■	■							■	■	■	■
Intragravel development – coho	■	■	■	■							■	■
Intragravel development – bull trout	■	■	■								■	■
Rearing – chinook	■	■	■	■	■	■	■					
Rearing – coho	■	■	■	■	■	■	■	■	■	■	■	■
Rearing – bull trout	■	■	■	■	■	■	■	■	■	■	■	■
Smolting & migration – chinook				■	■	■	■					
Smolting & migration – coho				■	■	■	■					

Notes: Information in this graph is specific to Puyallup Basin chinook and coho stocks (WDFW, 1994). Information on bull trout is generic (Behnke, 2002; USFWS, 2003).

 Construction period
 Spawning period
 Other life history stages

APPENDIX A
Consultation Letters

APPENDIX B
Erosion Control Plan

APR 6 2005



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
PROGRAM PLANNING AND INTEGRATION
Silver Spring, Maryland 20910

To All Interested Government Agencies and Public Groups:

Under the National Environmental Policy Act, an environmental review has been performed on the following action.

TITLE: Environmental Assessment and Finding of No Significant Impact - Jordan Property/Hylebos Creek Off-Channel Restoration Project

LOCATION: The Jordan Property/Hylebos Creek Off-Channel Restoration Project at Commencement Bay; Fife, Washington

SUMMARY: The National Oceanic and Atmospheric Administration (NOAA) is the lead federal agency for National Environmental Policy Act (NEPA) compliance for the Jordan Property/Hylebos Creek Off-Channel Restoration Project, Commencement Bay, Fife, Washington. This project is sponsored by the Commencement Bay Natural Resource Trustees and designed to help restore natural resources injured by the releases of hazardous substances or discharges of oil in Commencement Bay, Tacoma, Washington.

NOAA prepared this Environmental Assessment (EA) to set forth: (1) its decision-making authority for this project, (2) its determination that an alternative (Alternative 6a, Meandering Creek Transition to Dendritic Marsh) other than the No Action Alternative or the more technical or intensive alternatives would be the most ecologically sound alternative, and (3) its determination that an environmental impact statement (EIS) will not need to be prepared for this project.

The Trustees determined that regrading six acres of property along Hylebos Creek to create channels, backwater pools, and saltwater marshes using locally appropriate native plant communities would serve as rearing and feeding habitat for fish and wildlife species in the area as well as for juvenile salmon outmigrating in the Creek, including chinook salmon (*Oncorhynchus tshawytscha*), a listed species under the Endangered Species Act (ESA; 50 CFR 223). The public and other interested parties have participated during public meetings in the evaluation of this site.

The project will be constructed in compliance with all permits required by the State and Federal regulatory agencies. The Biological Assessment for the project, and the informal consultations (National Marine Fisheries Service and the U.S. Fish and Wildlife Service addressing ESA and Essential Fish Habitat) for the Jordan Property/Hylebos Creek Off-Channel Restoration Project are part of the Administrative Record for this project. The proposed activities were evaluated under the goals and objectives and other evaluation criteria specified by the Commencement Bay NRDA Restoration Plan and with the evaluation factors under the National Environmental Policy Act (40 CFR 1508.27). Based on a review of all of these factors and the referenced documents, NOAA and the Trustees concur with the U.S. Army Corps of Engineers and the City of Tacoma



NOAA and the Trustees concur with the U.S. Army Corps of Engineers and the City of Tacoma that the proposed activities would not have a significant effect on the quality of the human environment.

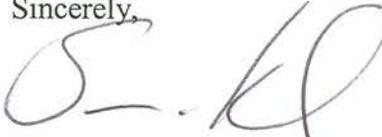
The environmental review process has led NOAA to conclude that this restoration action will not have a significant effect on the quality of the human environment, and NOAA is issuing a Finding of No Significant Impact (FONSI). Therefore, an environmental impact statement will not be prepared. A copy of the FONSI, including the EA, is available upon request to the Responsible Official listed below.

RESPONSIBLE

OFFICIAL: William T. Hogarth, Ph.D.
Assistant Administrator for Fisheries
NOAA's National Marine Fisheries Service
1315 East-West Highway
Silver Spring, MD 20910

We encourage electronic submission of your comments on this EA, but written comments are also acceptable. If you wish to submit comments, please send them either electronically by email to gail.e.siani@noaa.gov, or by U.S. mail to:

Gail Siani, Case Coordinator
NOAA GC-Natural Resources, NW
7600 Sand Point Way, NE
Seattle, WA 98115

Sincerely,

Susan A. Kennedy
Acting NEPA Coordinator

Enclosure

FINDING OF NO SIGNIFICANT IMPACT
ENVIRONMENTAL ASSESSMENT
FOR THE JORDAN PROPERTY/HYLEBOS CREEK OFF-CHANNEL
HABITAT RESTORATION PROJECT
COMMENCEMENT BAY, TACOMA, WASHINGTON

The National Oceanic and Atmospheric Administration (NOAA) is the lead federal agency for National Environmental Policy Act (NEPA) compliance for the Jordan Property/Hylebos Creek Off-Channel Habitat Restoration Project, Commencement Bay, Tacoma, Washington. This project is sponsored by the Commencement Bay Natural Resource Trustees and designed to help restore natural resources injured by the releases of hazardous substances or discharges of oil in Commencement Bay, Tacoma, Washington.

NOAA prepared this Environmental Assessment (EA) to set forth: (1) its decision-making authority for this project, (2) its determination that an alternative (Alternative 6a, Meandering Creek Transition to Dendritic Marsh) other than the No Action Alternative or the more technical or intensive alternatives would be the most ecologically sound alternative, and (3) its determination that an environmental impact statement (EIS) will not need to be prepared for this project.

The Trustees determined that regrading six acres of property along Hylebos Creek to create channels, backwater pools, and saltwater marshes using locally appropriate native plant communities would serve as rearing and feeding habitat for fish and wildlife species in the area as well as for juvenile salmon outmigrating in the Creek, including chinook salmon (*Onchorynchus tshawytscha*), a listed species under the Endangered Species Act (ESA; 50 CFR 223). The public and other interested parties have participated during public meetings in the evaluation of this site.

The project will be constructed in compliance with all permits required by the State and Federal regulatory agencies. The Biological Assessment for the project, and the informal consultations (National Marine Fisheries Service and the U.S. Fish and Wildlife Service addressing ESA and Essential Fish Habitat) for the Jordan Property/Hylebos Creek Off-Channel Restoration Project are part of the Administrative Record for this project. The proposed activities were evaluated under the goals and objectives and other evaluation criteria specified by the Commencement Bay NRDA Restoration Plan and with the evaluation factors under the National Environmental Policy Act (40 CFR 1508.27). Based on a review of all of these factors and the referenced documents, NOAA and the Trustees concur with the U.S. Army Corps of Engineers and the City of Tacoma that the proposed activities would not have a significant effect on the quality of the human environment. Therefore NOAA concludes that an EIS would not need to be prepared.

DETERMINATION:

Based upon an environmental review and evaluation of the Environmental Assessment for the Jordan Property/Hylebos Creek Off-Channel Restoration Project, I have determined that the proposed action does not constitute a major Federal action significantly affecting the quality of the human environment within the meaning of Section 102(2)(c) of the National Environmental

Policy Act of 1969, as amended. Accordingly, an environmental impact statement is not required for this project.

William T. Hogarth

William T. Hogarth, Ph.D.

Assistant Administrator for Fisheries

National Marine Fisheries Service

National Oceanic and Atmospheric Administration

3/28/05

Date



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
1315 East-West Highway
Silver Spring, Maryland 20910
THE DIRECTOR

MEMORANDUM FOR: Susan A. Kennedy
Deputy Director, Office of Policy and Strategic Planning

FROM: William T. Fogarth, Ph.D.
Assistant Administrator for Fisheries

SUBJECT: Environmental Assessment and Finding of No Significant Impact -
Jordan Property/Hylebos Creek Off-Channel Restoration Project

The National Oceanic and Atmospheric Administration (NOAA) is the lead federal agency for National Environmental Policy Act (NEPA) compliance for the Jordan Property/Hylebos Creek Off-Channel Restoration Project, Commencement Bay, Fife, Washington. This project is sponsored by the Commencement Bay Natural Resource Trustees and designed to help restore natural resources injured by the releases of hazardous substances or discharges of oil in Commencement Bay, Tacoma, Washington.

NOAA prepared this Environmental Assessment (EA) to set forth: (1) its decision-making authority for this project, (2) its determination that an alternative (Alternative 6a, Meandering Creek Transition to Dendritic Marsh) other than the No Action Alternative or the more technical or intensive alternatives would be the most ecologically sound alternative, and (3) its determination that an environmental impact statement (EIS) will not need to be prepared for this project.

The Trustees determined that regrading six acres of property along Hylebos Creek to create channels, backwater pools, and saltwater marshes using locally appropriate native plant communities would serve as rearing and feeding habitat for fish and wildlife species in the area as well as for juvenile salmon outmigrating in the Creek, including chinook salmon (*Onchorynchus tshawytscha*), a listed species under the Endangered Species Act (ESA; 50 CFR 223). The public and other interested parties have participated during public meetings in the evaluation of this site.

The project will be constructed in compliance with all permits required by the State and Federal regulatory agencies. The Biological Assessment for the project, and the informal consultations (National Marine Fisheries Service and the U.S. Fish and Wildlife Service addressing ESA and Essential Fish Habitat) for the Jordan Property/Hylebos Creek Off-Channel Restoration Project are part of the Administrative Record for this project. The proposed activities were evaluated under the goals and objectives and other evaluation criteria specified by the Commencement Bay NRDA Restoration Plan and with the evaluation factors under the National Environmental Policy Act (40 CFR 1508.27). Based on a review of all of these factors and the referenced documents, NOAA and the Trustees concur with the U.S. Army Corps of Engineers and the City of Tacoma that the proposed activities would not have a significant effect on the quality of the human environment.





UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Silver Spring, MD 20910

DATE: March 21, 2005

MEMORANDUM FOR: William T. Hogarth, Ph.D.
Assistant Administrator for Fisheries

FROM: *for* *Harry F. Mayer*
Rolland A. Schmitt
Director, Office of Habitat Conservation

SUBJECT: Jordan Property/Hylebos Creek Off-Channel Restoration Project -
Environmental Assessment and Finding of No Significant Impact

The National Oceanic and Atmospheric Administration (NOAA) is the lead federal agency for National Environmental Policy Act (NEPA) compliance for the Jordan Property/Hylebos Creek Off-Channel Restoration Project, Commencement Bay, Tacoma, Washington. This project is sponsored by the Commencement Bay Natural Resource Trustees and designed to help restore natural resources injured by the releases of hazardous substances or discharges of oil in Commencement Bay, Tacoma, Washington.

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The Trustees determined that regrading six acres of property along Hylebos Creek to create channels, backwater pools, and saltwater marshes using locally appropriate native plant communities would serve as rearing and feeding habitat for fish and wildlife species in the area as well as for juvenile salmon outmigrating in the Creek, including chinook salmon (*Oncorhynchus tshawytscha*), a listed species under the Endangered Species Act (ESA; 50 CFR 223). The public and other interested parties have participated during public meetings in the evaluation of this site.

The project will be constructed in compliance with all permits required by the State and Federal regulatory agencies. The Biological Assessment for the project, and the informal consultations (National Marine Fisheries Service and the U.S. Fish and Wildlife Service addressing ESA and Essential Fish Habitat) for the Jordan Property/Hylebos Creek Off-Channel Restoration Project are part of the Administrative Record for this project. The proposed activities were evaluated under the goals and objectives and other evaluation criteria specified by the Commencement Bay



NRDA Restoration Plan and with the evaluation factors under the National Environmental Policy Act (40 CFR 1508.27). Based on a review of all of these factors and the referenced documents, NOAA and the Trustees concur with the U.S. Army Corps of Engineers and the City of Tacoma that the proposed activities would not have a significant effect on the quality of the human environment.

The environmental review process has led NOAA to conclude that this restoration action will not have a significant effect on the quality of the human environment. Therefore, an environmental impact statement will not be prepared. A determination of a Finding of No Significant Impact (FONSI) is recommended. In accordance with NOAA Administrative Order 216-6, the EA and FONSI determination are attached for your environmental review, and the transmittal for concurrence by NOAA's Office of Policy and Strategic Planning.

Three (3) Attachments:

1. Environmental Assessment for Jordan Property/Hylebos Creek Off-Channel Restoration Project, Fife, Washington
2. Finding of No Significant Impact (FONSI)
3. Concurrence Memo for Office of Policy and Strategic Planning

Restoration Center
Office of Habitat Conservation
National Marine Fisheries Service

SECTION 515 PRE-DISSEMINATION REVIEW & DOCUMENTATION FORM

AUTHOR/RESPONSIBLE OFFICE: Jennifer Steger / NOAA Restoration Center

TITLE/DESCRIPTION: Environmental Assessment for the **Jordan Property/Hylebos Creek Off-Channel Restoration Project**, under the Commencement Bay Trustees

PRESENTATION/RELEASE DATE: March 21, 2005

MEDIUM: Print

PRE-DISSEMINATION REVIEW:

Name and Title of Reviewing Official: Chris Doley, Director NOAA Restoration Center

Pursuant to Section 515 of Public Law 106-554 (the Data Quality Act), this product has undergone a pre-dissemination review.

Signature Rebecca J Allen *fr* Date 3/21/05

SECTION 515 INFORMATION QUALITY DOCUMENTATION

I. Utility of Information Product

Explain how the information product meets the standards for **utility**:

A. *Is the information helpful, beneficial or serviceable to the intended user?*

This document is an Environmental Assessment (EA) prepared under the National Environmental Policy Act (NEPA), 42 U.S.C. Section 4321 *et seq.*, pursuant to the Oil Pollution Act of 1990 (33 U.S.C. § 2701, *et seq.*) (OPA). The EA addresses potential impacts of the preferred restoration actions on the quality of the physical, biological, and human environments. The content of the EA is intended to inform members of the public concerning a proposed restoration project called the Olympic View Triangle Restoration Project.

B. *Is the data or information product an improvement over previously available information? Is it more current or detailed? Is it more useful or accessible to the public? Has it been improved based on comments from or interactions with customers?*

This document is a current information product that was previously unavailable.

C. *What media are used in the dissemination of the information? Printed*

publications? CD-ROM? Internet? Is the product made available in a standard data format? Does it use consistent attribute naming and unit conventions to ensure that the information is accessible to a broad range of users with a variety of operating systems and data needs?

It is printed on standard paper, and will also be electronically available on the NOAA Damage Assessment and Restoration Program's internet site. The product is legally required to be maintained in an administrative record by NOAA, which will be available to the general public in either the printed or electronic format.

II. Integrity of Information Product

Explain how the information product meets the standards for **integrity**:

- (A)** *All electronic information disseminated by NOAA adheres to the standards set out in Appendix III, "Security of Automated Information Resources," OMB Circular A-130; the Computer Security Act; and the Government Information Security Reform Act.*

As with all electronic information disseminated by NOAA, the EA adheres to the above-referenced standards.

- B.** *If information is confidential, it is safeguarded pursuant to the Privacy Act and Titles 13, 15, and 22 of the U.S. Code (confidentiality of census, business and financial information).*

Not applicable – the information product does not contain census, business, or financial data collected by NOAA.

- C.** *Other/Discussion (e.g., Confidentiality of statistics of the Magnuson-Stevens Fishery Conservation and Management Act; NOAA Administrative Order 216-100 - Protection of Confidential Fisheries Statistics; 50 CFR 229.11; Confidentiality of information collected under the Marine Mammal Protection Act)*

Not applicable – the information product does not evaluate or discuss fisheries statistics or information collected under the Marine Mammal Protection Act.

III. Objectivity of Information Product

- A.** *Indicate which of the following categories of information products apply for this product:*

- Original Data
- Synthesized Products
- Interpreted Products
- Hydrometeorological, Hazardous Chemical Spill, and Space Weather Warnings, Forecasts, and Advisories
- Experimental Products
- Natural Resource Plans

- Corporate and General Information
- B. *Describe how this information product meets the applicable objectivity standards (see the DQA Documentation and Pre-Dissemination Review Guidelines for Natural resource Plans, and the appropriate documentation needed here).*
 1. *What published standard(s) governs the creation of the Natural Resource Plan? Does the Plan adhere to the published standards?*

All electronic information issued by NOAA adheres to the standards set out in Appendix III, "Security of Automated Information Resources," OMB Circular A-130; the Computer Security Act; and the Government Information Security Reform Act. The EA was also developed according to NEPA and applicable regulations.

2. *Was the Plan developed using the best information available? Please specify.*

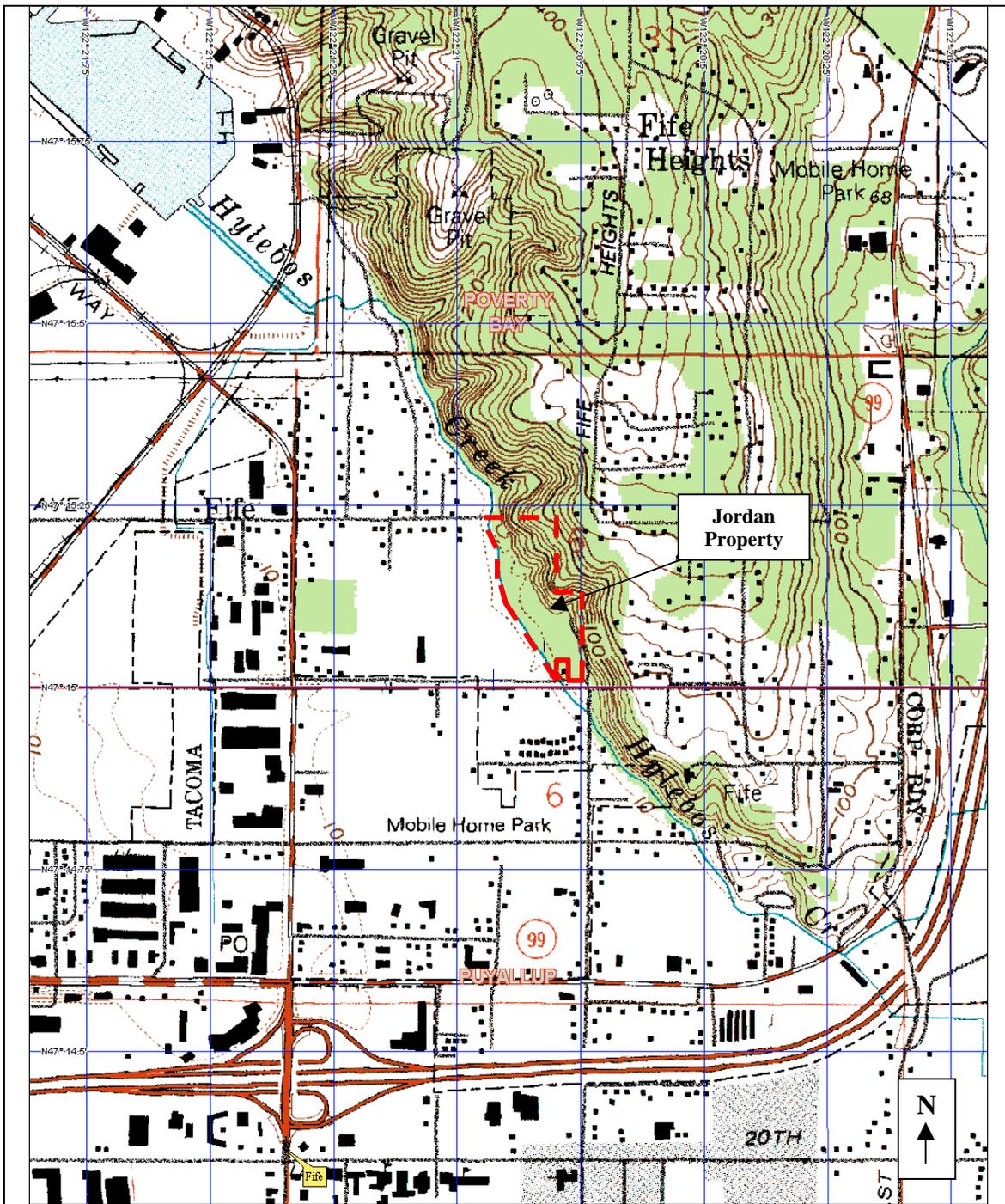
The EA is based on the best information available, and includes specific information related to NRDA and the affected environment in the main document and appendices.

3. *Have clear distinctions been drawn between policy choices and the supporting science upon which they are based? Have all supporting materials, information, data and analyses used within the Plan been properly referenced to ensure transparency?*

The EA is presented in an accurate, clear, complete and unbiased manner. The document is written in plain language for clarity in accordance with the NEPA regulations at 40 CFR 1502.8, and its supporting information is referenced in the main document and appendices.

4. *Describe the review process of the Plan by technically qualified individuals to ensure that the Plan is valid, complete, unbiased, objective and relevant. For example, internal review by staff who were not involved in the development of the Plan to formal, independent, external peer review. The level of review should be commensurate with the importance of the Plan and the constraints imposed by legally enforceable deadlines.*

The project has been reviewed, commented upon, and approved by the Commencement Bay Trustee Council and concerned citizens in the City of Tacoma. The EA has been reviewed internally by staff involved in NEPA compliance but not responsible for development of this EA. A codified process of review is imbedded in the NOAA policy for review of EAs that will require review and concurrence by NOAA Office of General Counsel, the NOAA Assistant Administrators Office, and the Office of Policy and Strategic Planning.

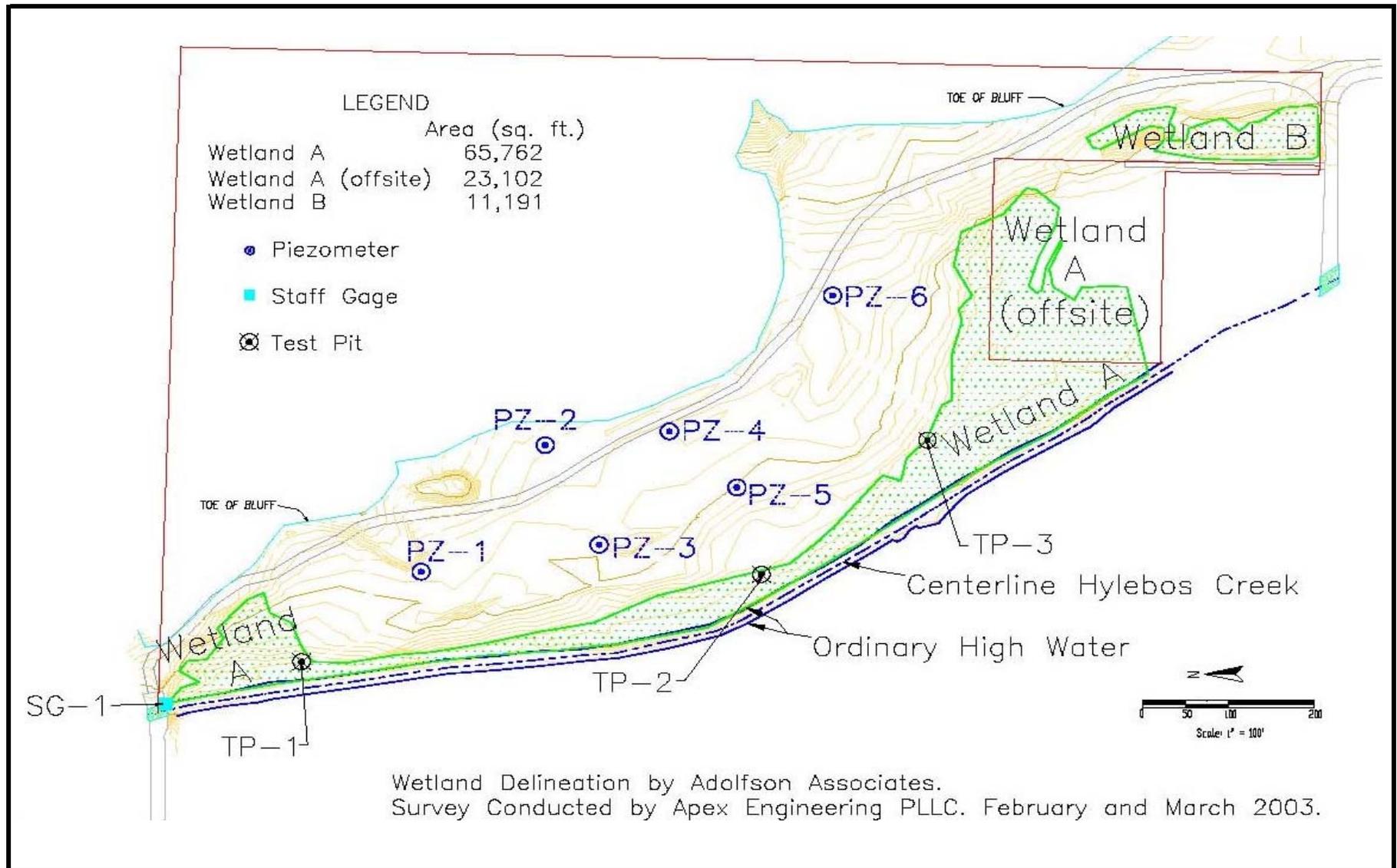


3-D TopoQuad Copyright © 1999 DeLorme Yarmouth, ME 04096 Source Data: USGS 1:350 ft Scale: 1:12,800 Detail: 14-0 Datum: NAD27

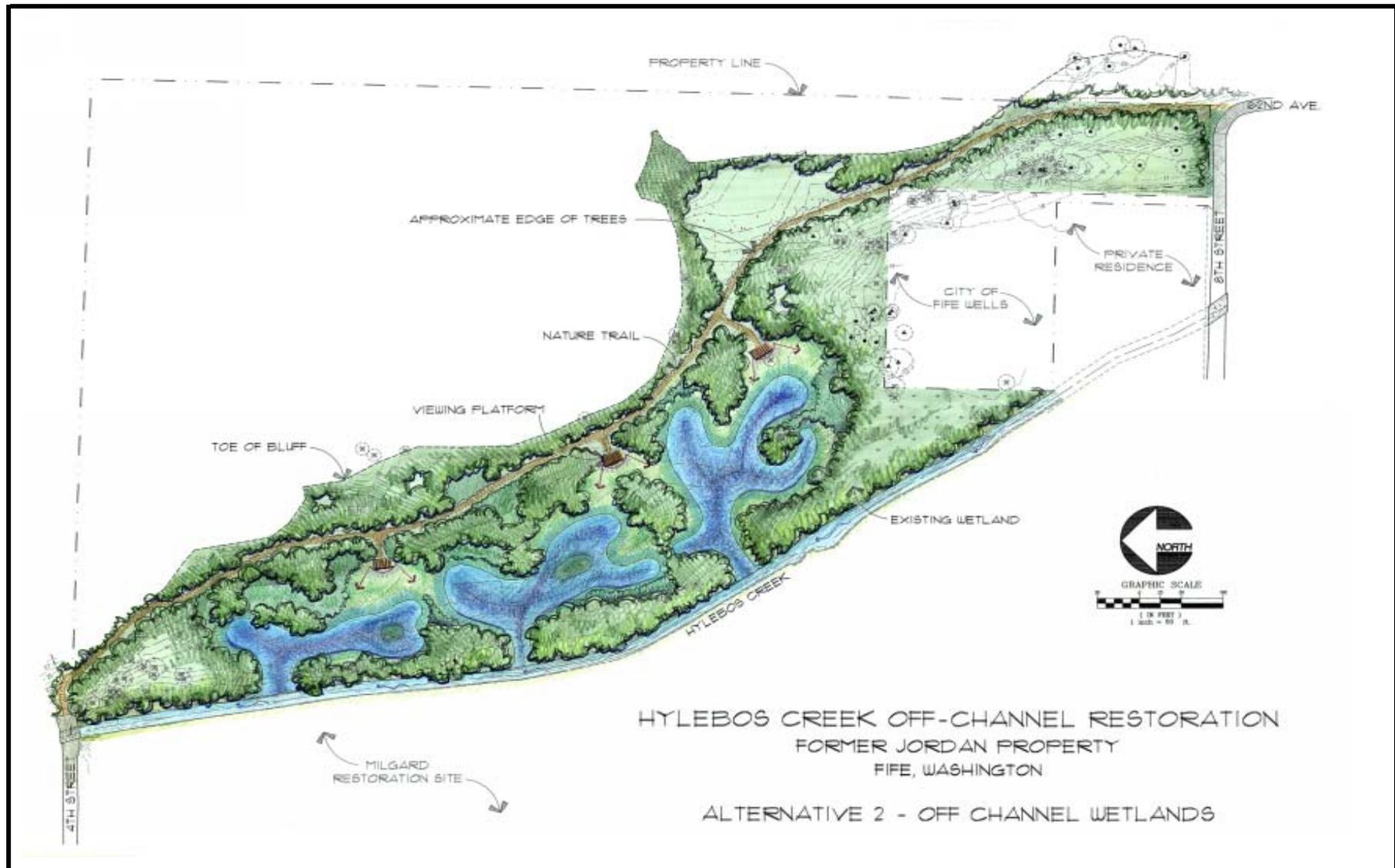


Hylebos Creek Off-Channel
Restoration Former Jordan
Property
Fife, WA

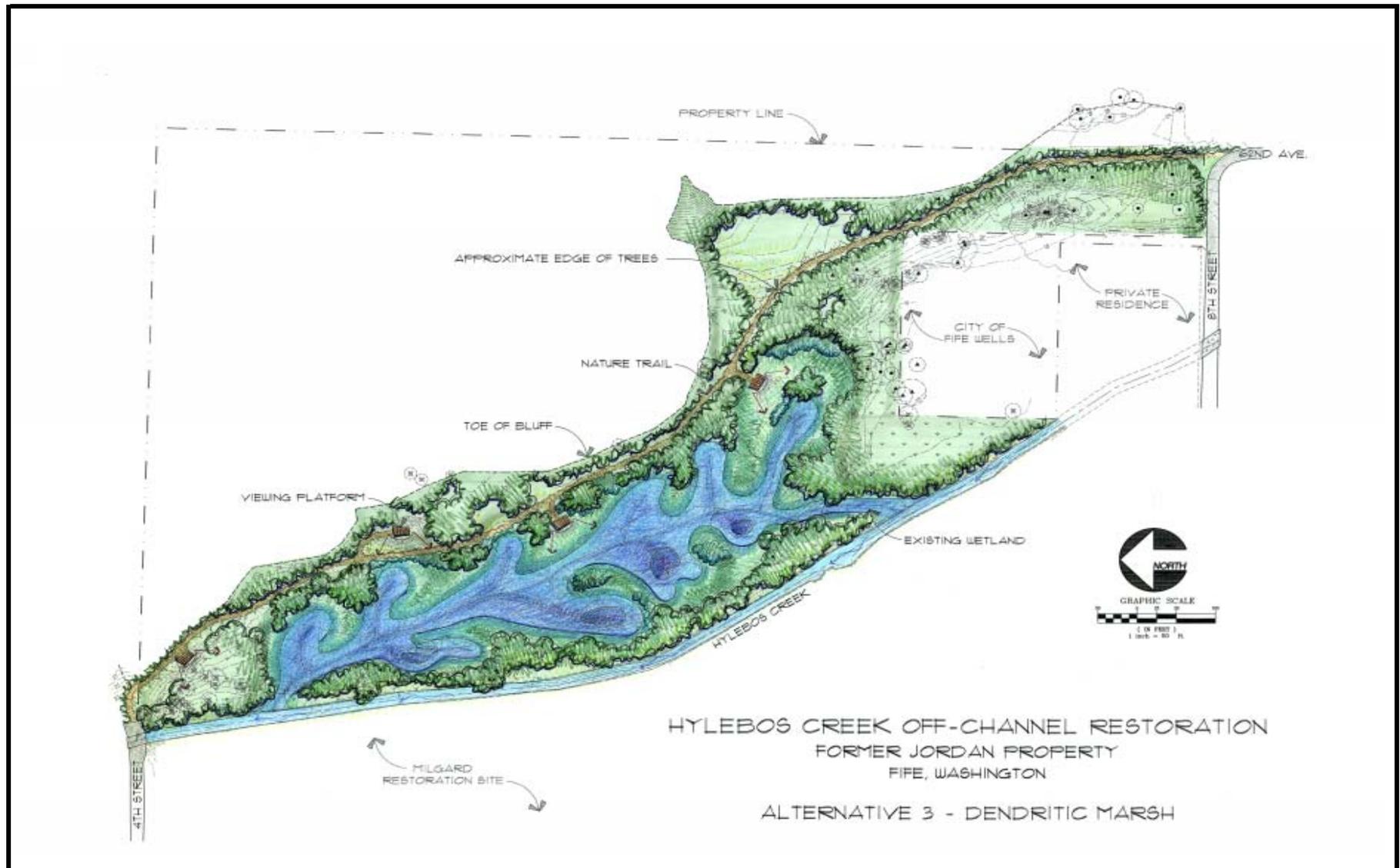
Figure 1
Site Location Map



 RIDOLFI Inc.	Hylebos Creek Off-Channel Restoration Former Jordan Property, Fife, WA	May 12, 2003	Figure 2
	Prepared for NOAA and Commencement Bay NRDA Trustees	Site Plan, Showing Wetland Delineation	



 RIDOLFI Inc.	Hylebos Creek Off-Channel Restoration Former Jordan Property, Fife, WA	May 12, 2003	Figure 4
	Prepared for NOAA and Commencement Bay NRDA Trustees	Schematic of the Off-Channel Wetland Alternative	



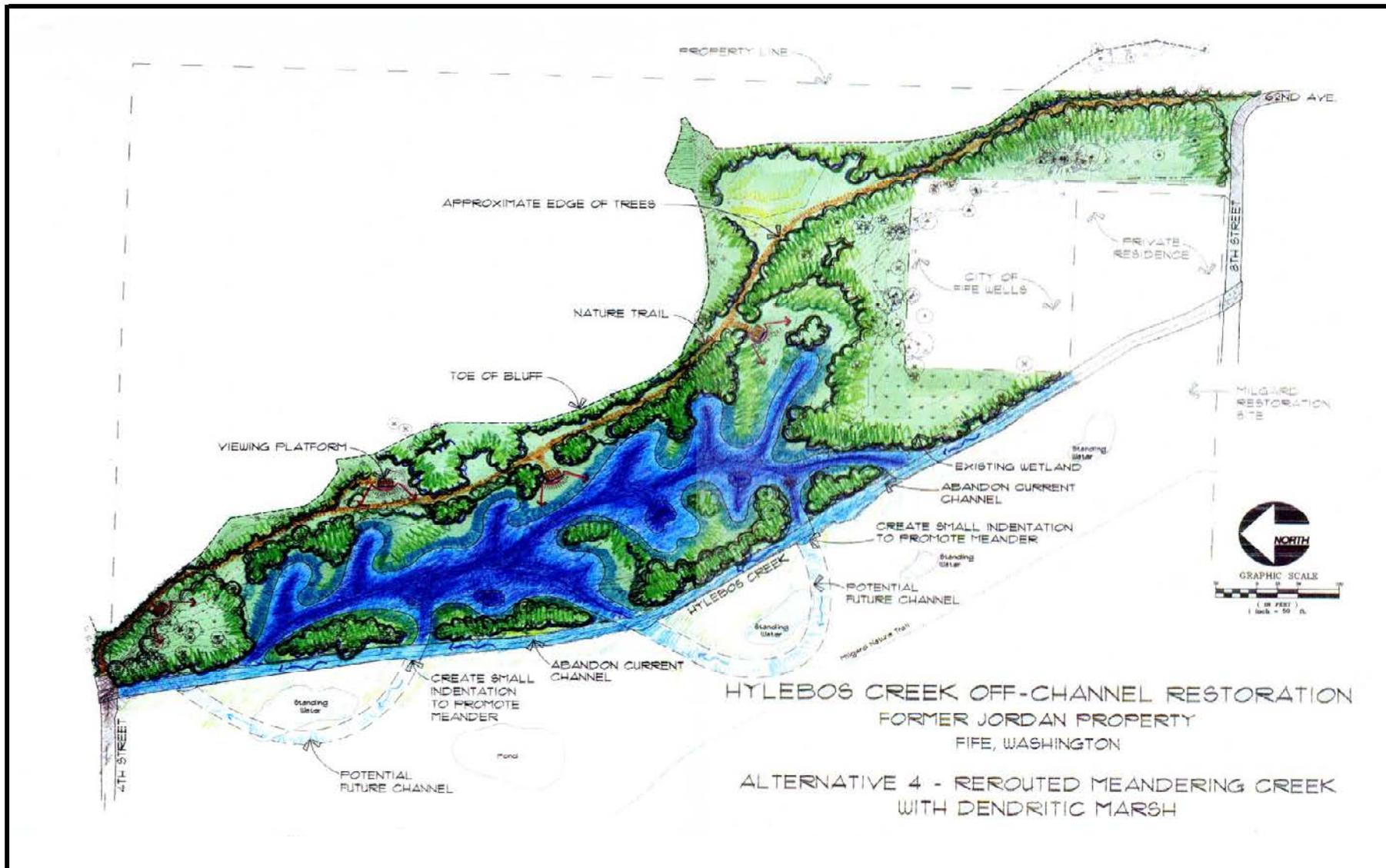
Hylebos Creek Off-Channel Restoration
Former Jordan Property, Fife, WA

Prepared for NOAA and
Commencement Bay NRDA Trustees

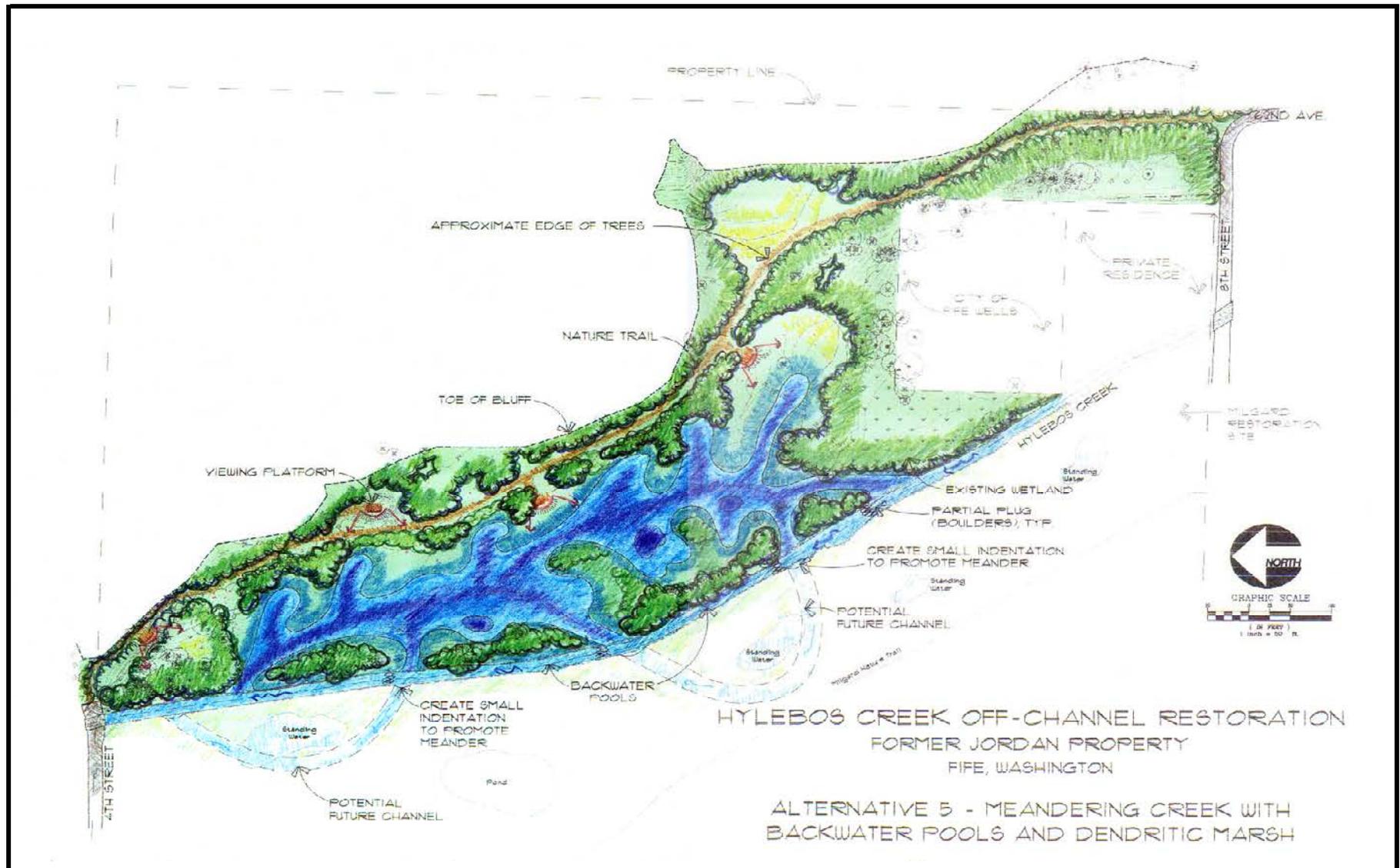
May 12, 2003

Figure 5

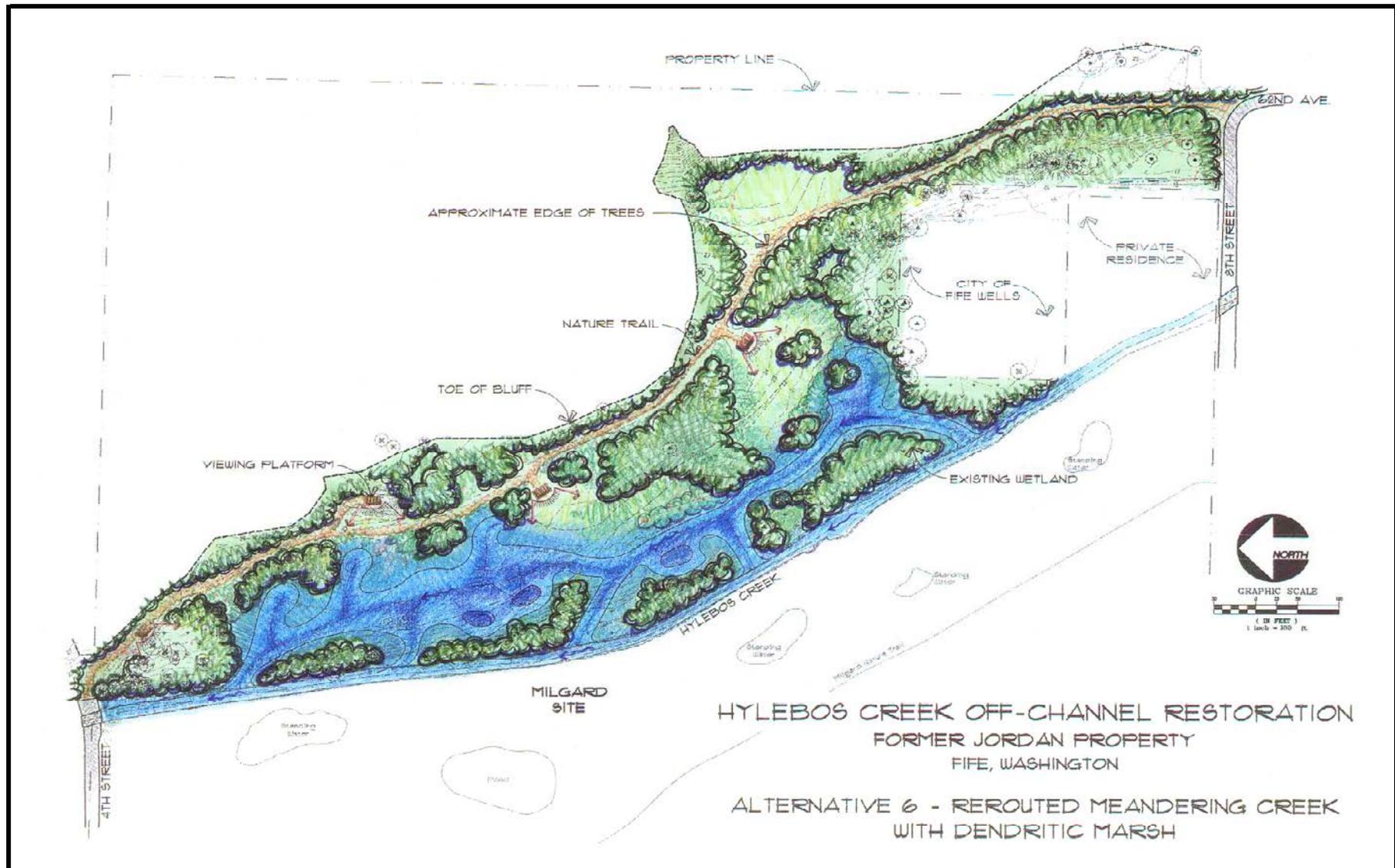
Schematic of the Dendritic Marsh Alternative



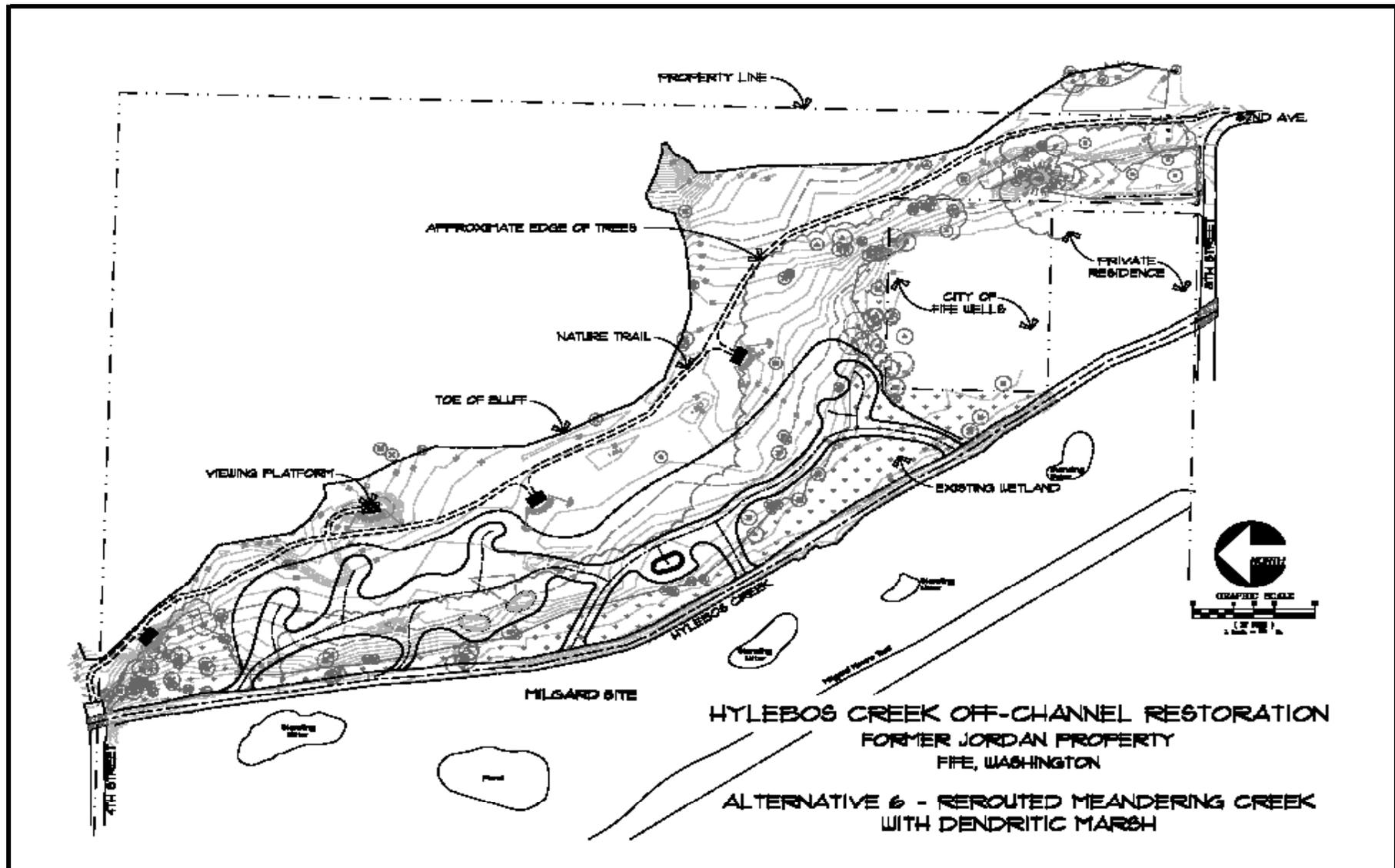
 RIDOLFI Inc.	Hylebos Creek Off-Channel Restoration Former Jordan Property, Fife, WA	May 12, 2003	Figure 6
	Prepared for NOAA and Commencement Bay NRDA Trustees	Schematic of the Rerouted Meandering Creek with Dendritic Marsh	



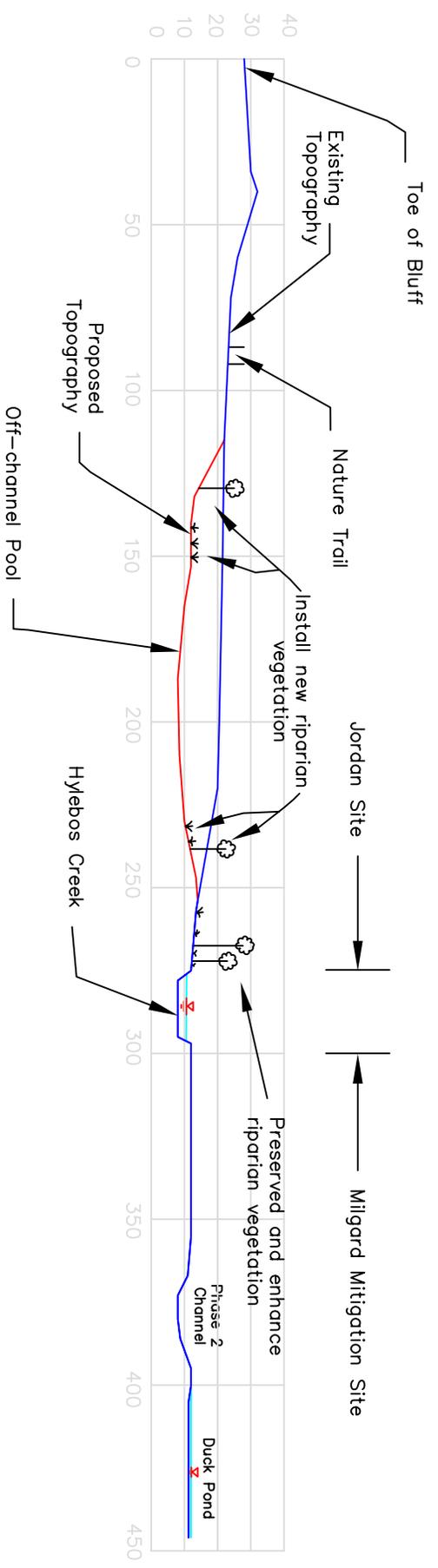
 RIDOLFI Inc.	Hylebos Creek Off-Channel Restoration Former Jordan Property, Fife, WA	May 12, 2003	Figure 7
	Prepared for NOAA and Commencement Bay NRDA Trustees	Schematic of the Meandering Creek with Backwater Pools and Dendritic Marsh	



 RIDOLFI Inc.	Hylebos Creek Off-Channel Restoration Former Jordan Property, Fife, WA	May 12, 2003	Figure 8
	Prepared for NOAA and Commencement Bay NRDA Trustees	Schematic of the Meandering Creek Transition to Dendritic Marsh	



 RIDOLFI Inc.	Hylebos Creek Off-Channel Restoration Former Jordan Property, Fife, WA	May 12, 2003	Figure 9
	Prepared for NOAA and Commencement Bay NRDA Trustees	Conceptual Grading Plan, Phase 1	



Horizontal Scale: 1" = 50'
 Vertical Scale: 1" = 50'
 Vertical Datum: Mean Lower Low Water



HYLEBOS CREEK DEF - CHANNEL RESTORATION
 FORMER JORDAN PROPERTY
 FIFE, WASHINGTON

Figure 10



Jennifer A. Steger
Damage Assessment & Restoration Center NW
7600 Sand Point Way NE, Building 1
Seattle, WA 98115
206-526-4363 VOICE, 206-526-6665 FAX
Jennifer.steger@noaa.gov

5 March 2005

Colin Wagoner
Ridolfi, Inc.
1411 Fourth Avenue, Suite 770
Seattle, WA 98101

RE: Jordan Site, Hylebos Creek Off-Channel Habitat Restoration Project

Dear Mr. Wagoner:

The NOAA Restoration Center (RC) is participating in implementation of your Jordan Site Restoration Project through the Damage Assessment and Restoration Program (DARP). This federal involvement constitutes a federal nexus under the Endangered Species Act (ESA). Under section 7 of the ESA, consultation with NOAA Fisheries is required for any federal action that could affect ESA-listed marine species or their habitats. In addition, consultation is required under the Magnuson-Stevens Fishery Conservation and Management Act (MSA) for any federal action that could affect designated Essential Fish Habitat (EFH) for coho, pink and chinook salmon, groundfish, and coastal pelagic species.

In July of 2004, a NOAA Restoration Center Northwest Programmatic Biological Opinion was issued by the Northwest Region of NOAA Fisheries. This Opinion concludes that the restoration activities most commonly implemented with RC funding are not likely to jeopardize ESA-listed salmonid species in the Pacific Northwest. The Opinion provides non-discretionary terms and conditions intended to minimize the potential for incidental take of listed species. The document also includes measures intended to avoid and minimize potential impacts on EFH, and satisfies the consultation requirement for eligible activities under the MSA. The document can be viewed in its entirety at: http://seahorse.nmfs.noaa.gov/pls/pcts-pub/sxn7.pcts_upload.download?p_file=F16708/200201967_restorationcenter_programmatic_07-12-2004.pdf.

Your project has been reviewed by RC staff, and we have determined that the proposed activities are eligible for inclusion under the Biological Opinion. This means that if you follow the terms and conditions and meet the requirements outlined in this letter, you will satisfy the ESA/EFH consultation obligation for the RC-funded portion of your project. Please note that ESA/EFH coverage under this Biological Opinion does not satisfy any other federal, state or local laws or permit requirements.

Your obligations under the programmatic Biological Opinion are as follows:

- 1) As the responsible project manager, you must ensure that the terms and conditions attached to this letter are followed, in their entirety, as applicable to your project. If you do not understand any of the terms and conditions, or believe that they cannot be implemented for any reason, you must contact RC staff immediately and obtain guidance.
- 2) If before or during project implementation you become aware of new information or unforeseen circumstances such that the project cannot be completed according to the scope of effects or the

terms and conditions in the Opinion, you must inform RC staff. You must stop all project operations, except for efforts to avoid or minimize resource damage, pending completion of an individual consultation on the project.

- 3) If at any time during or after project implementation you identify a sick, injured or dead specimen of a threatened or endangered species, you must notify the Vancouver Field Office of NOAA Fisheries Law Enforcement at (360) 418-4246. The finder must take care in handling of sick or injured specimens to ensure effective treatment, and in handling dead specimens to preserve biological material in the best possible condition for later analysis of cause of death. The finder also has the responsibility to carry out instructions provided by Law Enforcement to ensure that evidence intrinsic to the specimen is not disturbed unnecessarily.
- 4) Within 120 days of project completion, you must provide a project completion report that describes your success in meeting the conservation measures, reasonable and prudent measures, and associated terms and conditions of the Opinion. In addition, you must provide quantitative measures of the following indicators as applicable:
 - a) Linear feet of streambank disturbed by site preparation or construction;
 - b) Area (in square feet or acres) of instream structures constructed or removed below Ordinary High Water (OHW);
 - c) Area (in square feet or acres) of riparian vegetation cleared and planted.

The following conservation measures and terms and conditions are applicable to your project. These sections of the Biological Opinion are enclosed with this letter.

- Construction
- Streambank stabilization
- Stream/wetland/estuarine restoration
- Native plant protection/establishment

Once you have read, understood and made provisions to implement these measures, you are authorized to proceed with your project. If you have questions or need additional information, please contact me at the above telephone number.

Sincerely,



Jennifer A. Steger
Northwest Regional Supervisor

Exploration and Construction

Terms and Conditions:

1. Exclusions. Permits for the following types of exploration and construction actions are not authorized by this Opinion, unless otherwise approved in writing by NOAA Fisheries. Requests for approval should be submitted with the project notification. Exploration and construction actions, including release of construction discharge water, within 300 feet upstream of active spawning areas or areas with native submerged aquatic vegetation as determined by a preconstruction survey. Exploration actions in estuaries that cannot be conducted from an existing bridge, dock, or wharf.
2. Hydraulic surveys. Hydraulic measurements within the wetted channel must be completed outside of the spawning season, or must have a fisheries biologist verify that there are no redds present at the site. If dye is used, only non-toxic vegetable dyes are authorized; use of short pieces of plastic ribbon to determine flow patterns is not authorized by this Opinion.
3. Minimum area. Construction impacts must be confined to the minimum area necessary to complete the project.
4. Timing of in-water work. Work below OHW must be completed using the most recent ODFW, WDFW or the Corps' Seattle District preferred in-water work period (whichever is more restrictive), as appropriate for the project area, unless otherwise approved in writing by NOAA Fisheries. Requests for approval should be submitted with the project notification.
5. Cessation of work. Project operations must cease under high flow conditions that may result in inundation of the project area, except for efforts to avoid or minimize resource damage.
6. Surface water diversion. Surface water may be diverted to meet construction needs only if developed sources (e.g., municipal supplies, small ponds or reservoirs, trucks) are unavailable or inadequate.
 - a. When alternative surface sources are available, diversion shall be from the stream with the greatest flow.
 - b. No point of diversion may be within 300 feet upstream of active spawning or redds.
 - c. The rate and volume of pumping will not exceed 10% of the available flow.
 - d. For streams with less than 5 cfs, drafting will not exceed 18,000 gallons per day, and no more than one pump will be operated per site.
 - e. A fish screen must be installed, operated and maintained according to NOAA Fisheries' fish screen criteria on surface water diversion used to meet construction needs, including pumps used to isolate an in-water work area. Screens for water diversions or intakes that will be used for irrigation, municipal or industrial purposes, or any use besides project construction are not authorized by this Opinion.
7. Fish passage. Passage must be provided for any adult or juvenile salmonid species present in the project area during construction, unless passage did not previously exist, or as otherwise approved in writing by NOAA Fisheries. Requests for approval should be submitted with the project notification. After construction, adult and juvenile passage must be provided for the life of the project.
8. Pollution and erosion control plan. A pollution and erosion control plan must be prepared and carried out to prevent pollution caused by surveying or construction operations. Submit an electronic copy of this plan with the project notification.
 - a. Contents. The pollution and erosion control plan must contain the pertinent elements listed below, and meet requirements of all applicable laws and regulations.
 - 1) The name, address, and telephone number of the person responsible for accomplishment of the pollution and erosion control plan.
 - 2) Practices to prevent erosion and sedimentation associated with access roads, stream crossings, drilling sites, construction sites, borrow pit operations, haul roads, equipment and material storage sites, fueling operations, staging areas, and roads being decommissioned.
 - 3) Practices to confine, remove and dispose of excess concrete, cement, grout, and other mortars or bonding agents, including measures for washout facilities.
 - 4) A description of any regulated or hazardous products or materials that will be used for the project, including procedures for inventory, storage, handling, and monitoring.

- d. **Prefabrication and field preservative treatment.** Use prefabrication to the extent feasible to ensure that cutting, drilling, and field preservative treatment is minimized. When field fabrication is necessary, all cutting and drilling of treated wood, and field preservative treatment of wood exposed by cutting and drilling, will occur above ordinary high water to minimize discharge of sawdust, drill shavings, excess preservative other debris in riparian or aquatic habitats. Use tarps, plastic tubs or similar devices to contain the bulk of any fabrication debris, and wipe off any excess field preservative.
 - e. **Abrasion prevention.** All treated wood structures, including pilings, must have design features to avoid or minimize impacts and abrasion by livestock, pedestrians, vehicles, vessels, floats, *etc.*, to prevent the deposition of treated wood debris and dust in riparian or aquatic habitats.
 - f. **Waterproof coating.** Treated wood may be used to construct an over-water structure or an in-water structure, provided that all surfaces exposed to leaching by precipitation or overtopping waves are coated with a water-proof seal or barrier that will be maintained for the life of the project. Coatings and any paint-on field treatment must be carefully applied and contained to reduce contamination. Surfaces that are not exposed to precipitation or wave attack, such as parts of a timber bridge completely covered by the roadway wearing surface of the bridge deck, are exempt from this requirement.
 - g. **Debris Removal.** Projects that require removal of treated wood must use the following precautions. Ensure that, to the extent feasible, no treated wood debris falls into the water. If treated wood debris does fall into the water, remove it immediately.
 - 1) After removal, place treated wood debris in an appropriate dry storage site until it can be removed from the project area. Do not leave treated wood construction debris in the water or stacked on the stream bank.
 - 2) Evaluate treated wood construction debris removed during a project, including treated wood pilings, to ensure that debris is properly disposed of.
12. **Preconstruction activity.** The following actions must be completed before significant³ alteration of the project area.
- a. **Marking.** Flag the boundaries of clearing limits associated with site access and construction to prevent ground disturbance of critical riparian vegetation, wetlands and other sensitive sites beyond the flagged boundary.
 - b. **Emergency erosion controls.** Ensure that the following materials for emergency erosion control are onsite.
 - 1) A supply of sediment control materials (*e.g.*, silt fence, straw bales⁴)
 - 2) An oil-absorbing, floating boom whenever surface water is present.
 - c. **Temporary erosion controls.** All temporary erosion controls must be in-place and appropriately installed downslope of project activity until site restoration is complete.
13. **Temporary access roads and drilling pads.** All temporary access roads and drilling pads must be constructed as follows.
- a. **Steep slopes.** Temporary roads or drilling pads built mid-slope or on slopes steeper than 30% are not authorized by this Opinion.
 - b. **Existing ways.** Use existing roadways, travel paths, and drilling pads whenever possible, unless construction of a new way or drilling pad would result in less habitat take. When feasible, eliminate the need for an access road by walking a tracked drill or spider hoe to a survey site, or lower drilling equipment to a survey site using a crane.
 - c. **Soil disturbance and compaction.** Minimize soil disturbance and compaction whenever a new temporary road or drill pad is necessary within 150 feet⁵ of a stream, waterbody or wetland by clearing vegetation to ground level and placing clean gravel over geotextile fabric, unless otherwise approved in writing by NOAA Fisheries. Requests for approval should be submitted with the project notification.
 - d. **Temporary stream crossings.**
 - 1) Minimize the number of temporary stream crossings.
 - 2) Design temporary road crossings as follows.
 - i. Survey and map any potential spawning habitat within 300 feet upstream and 100 feet downstream of a proposed crossing.

- 2) A plan view of all isolation elements.
 - 3) A list of equipment and materials that are necessary and that will be available on site to provide appropriate redundancy of key plan functions (e.g., operational, properly-sized, back-up pumps and generators).
 - 4) The sequence and schedule of dewatering and rewatering activities.
17. **Capture and release.** Before and intermittently during pumping to isolate an in-water work area, fish trapped in the area must be captured using a trap, seine, electrofishing, or other methods as are prudent to minimize risk of injury, then released at a safe release site.
- a. The entire capture and release operation must be conducted or supervised by a fishery biologist experienced with work area isolation and competent to ensure the safe handling of all ESA-listed fish.
 - b. Do not use electrofishing if water temperatures exceed 18°C, unless no other method of capture is available.
 - c. If electrofishing equipment is used to capture fish, comply with NOAA Fisheries' electrofishing guidelines.⁷
 - d. Handle ESA-listed fish with extreme care, keeping fish in water to the maximum extent possible during seining and transfer procedures to prevent the added stress of out-of-water handling.
 - e. Ensure water quality conditions are adequate in buckets or tanks used to transport fish by providing circulation of clean, cold water, using aerators to provide dissolved oxygen, and minimizing holding times.
 - f. Release fish into a safe release site as quickly as possible, and as near as possible to capture sites.
 - g. Do not transfer ESA-listed fish to anyone except NOAA Fisheries personnel, unless otherwise approved in writing by NOAA Fisheries. Requests for approval should be submitted with the project notification.
 - h. Obtain all other Federal, state, and local permits necessary to conduct the capture and release activity.
 - i. Allow NOAA Fisheries or its designated representative to accompany the capture team during the capture and release activity, and to inspect the team's capture and release records and facilities.
 - j. Submit an electronic copy of the Salvage Report Form to NOAA Fisheries within 10 calendar days of completion of the salvage operation
18. **Earthwork.** Earthwork, including drilling, excavation, dredging, filling and compacting, must be completed as quickly as possible.
- a. **Site stabilization.** Stabilize all disturbed areas, including obliteration of temporary roads, following any break in work unless construction will resume within four days.
 - b. **Drilling and sampling.** If drilling, boring or jacking is used, the following conditions apply.
 - 1) Drilling or sampling in an EPA-designated Superfund Site, a state-designated clean-up area, or the likely impact zone of a significant contaminant source, as identified by historical information or the NOAA RC's best professional judgment are not authorized by this Opinion.
 - 2) Isolate drilling operations in wetted stream channels using a steel pile, sleeve or other appropriate isolation method to prevent drilling fluids from contacting water.
 - 3) If it is necessary to drill through a bridge deck, use containment measures to prevent drilling debris from entering the channel.
 - 4) If directional drilling is used, the drill, bore or jack hole must span the channel migration zone and any associated wetland.
 - 5) Sampling and directional drill recovery/recycling pits, and any associated waste or spoils must be completely isolated from surface waters, off-channel habitats and wetlands. All waste or spoils must be covered if precipitation is falling or imminent. All drilling fluids and waste must be recovered and recycled or disposed to prevent entry into flowing water.
 - 6) If a drill boring conductor breaks and drilling fluid or waste is visible in water or a wetland, all drilling activity must cease pending written approval from NOAA Fisheries to resume drilling.
19. **Site restoration plan.** A site restoration plan must be prepared and carried out to ensure that all streambanks, soils and vegetation disturbed by the project are cleaned up and restored as follows. Submit an electronic copy of this plan with the project notification.
- a. **General considerations.**
 - 1) **Restoration goal.** The goal of site restoration is renewal of habitat access, water quality,

- c. Restoration methods, timing, and sequence.
- d. Geomorphology and habitat features of stream or other open water.
- e. Site management and maintenance requirements, including a plan to control exotic invasive vegetation.
- f. Elevation and slope of the restoration area to ensure they conform with required elevation and hydrologic requirements of target plant species.
- g. Woody native vegetation appropriate to the restoration site.⁸ This must be a diverse assemblage of species that are native to the project area or region, including grasses, forbs, shrubs and trees. This may include allowances for natural regeneration from an existing seed bank or planting.

22. Five-year monitoring and maintenance plan.

- a. A schedule to visit the restoration site annually for 5 years or longer as necessary to confirm that the performance standards are achieved. Despite the initial 5-year planning period, site visits and monitoring must continue from year-to-year until NOAA Fisheries certifies that site restoration performance standards have been met.
- b. During each visit, inspect for and correct any factors that may prevent attainment of performance standards (e.g., low plant survival, invasive species, wildlife damage, drought).
- c. Keep a written record to document the date of each visit, site conditions and any corrective actions taken.

¹ 'Working adequately' means that upland work is not contributing visible sediment to water, and in-water work does not increase ambient stream turbidity by more than 10% above background 100-feet below the discharge, when measured relative to a control point immediately upstream of the turbidity causing activity.

² Letter from Steve Morris, National Marine Fisheries Service, to W.B. Paynter, Portland District, U.S. Army Corps of Engineers (December 9, 1998) (transmitting a document titled Position Document for the Use of Treated Wood in Areas within Oregon Occupied by Endangered Species Act Proposed and Listed Anadromous Fish Species, National Marine Fisheries Service, December 1998).

³ 'Significant' means an effect can be meaningfully measured, detected or evaluated.

⁴ When available, certified weed-free straw or hay bales must be used to prevent introduction of noxious weeds.

⁵ Distances from a freshwater stream or waterbody are measured horizontally from, and perpendicular to, the bankfull elevation, the edge of the channel migration zone, or the edge of any associated wetland, whichever is greater. 'Bankfull elevation' means the bank height inundated by a 1.5 to 2-year average recurrence interval and may be estimated by morphological features such as average bank height, scour lines and vegetation limits. 'Channel migration zone' means the area defined by the lateral extent of likely movement along a stream reach as shown by evidence of active stream channel movement over the past 100 years (e.g., alluvial fans or floodplains formed where the channel gradient decreases, the valley abruptly widens, or at the confluence of larger streams). Distances in estuarine and saltwater areas are measured horizontally from, and perpendicular to, the mean lower low water tidal datum.

⁶ 'Large wood' means a tree, log, or rootwad big enough to dissipate stream energy associated with high flows, capture bedload, stabilize streambanks, influence channel characteristics, and otherwise support aquatic habitat function, given the slope and bankfull channel width of the stream in which the wood occurs. See, Oregon Department of Forestry and Oregon Department of Fish and Wildlife, A Guide to Placing Large Wood in Streams, May 1995

(www.odf.state.or.us/FP/RefLibrary/LargeWoodPlacemntGuide5-95.doc).

⁷ National Marine Fisheries Service, Backpack Electrofishing Guidelines (December 1998)

(<http://www.nwr.noaa.gov/1salmon/salmesa/pubs/electrog.pdf>).

⁸ Use references sites to select vegetation for the mitigation site whenever feasible. Historic reconstruction, vegetation models, or other ecologically-based methods may also be used as appropriate.

Streambank Stabilization

Terms and Conditions:

1. Exclusions. Dikes, groins, buried groins, drop structures, porous weirs, weirs, riprap, rock toes, and similar structures are not authorized by this Opinion.
 - a. Applicable terms and conditions. Any streambank stabilization project authorized by this Opinion must be consistent with all applicable terms and conditions of this incidental take statement, including, but not limited to, those that are relevant to monitoring and construction (e.g., project notification, project completion report, minimum area, timing of in-water work, pollution and erosion control, temporary access roads, work area isolation, site restoration).
 - b. Streambank stabilization goal. The goal of streambank stabilization¹ authorized by this Opinion is to avoid and minimize adverse affects to natural stream and floodplain function by limiting actions to those that are not expected to have long-term adverse effects on aquatic habitats. Whether these actions will also be adequate to meet other streambank stabilization objectives depends on the mechanisms of streambank failure operating at site- and reach-scale.² Other than woody and herbaceous plantings, streambank stabilization projects should be designed by a qualified engineer.
 - c. Large wood and rock.
 - 1) Large wood must be used as an integral component of all streambank stabilization treatments.³
 - 2) Large wood must be intact, hard, and undecayed to partly decaying with untrimmed root wads to provide functional refugia habitat for fish. Use of decayed or fragmented wood found laying on the ground or partially sunken in the ground is not acceptable.
 - 3) Avoid or minimize the use of rock, stone and similar materials.
 - 4) Rock may be used instead of wood for the following purposes and structures. Whenever feasible, the rock placed below OHW must be class 350 metric (700 pound), or larger, but may not impair natural streamflows into or out of secondary channels or riparian wetlands.
 - As ballast to anchor or stabilize large wood components of an approved bank treatment.
 - To fill scour holes, as necessary to protect the integrity of the project, if the rock is limited to the depth of the scour hole and does not extend above the channel bed.
 - To construct a footing, facing, head wall, or other protection necessary to prevent scouring or downcutting of, or fill slope erosion or failure at, an existing boat ramp, bridge support, flow control structure (e.g., a culvert, water intake), or utility line, provided the amount of rock used is limited to that necessary to support the slope. Include soil and woody vegetation as a covering and, whenever feasible, throughout the structure.
 - To construct a barb, as described below.
 - d. Streambank stabilization methods authorized by this Opinion. The following streambank stabilization methods may be used individually or in combination, and are the only ones authorized by this Opinion:
 - 1) Woody plantings and variations (e.g., live stakes, brush layering, facines, brush mattresses).
 - 2) Herbaceous cover, where analysis of available records (e.g., historical accounts and photographs) shows that trees or shrubs did not exist on the site within historic times, primarily for use on small streams or adjacent wetlands.
 - 3) Deformable soil reinforcement, consisting of soil layers or lifts strengthened with fabric and vegetation that are mobile ('deformable') at approximately 2- to 5-year recurrence flows.
 - 4) Coir logs (long bundles of coconut fiber), straw bales and straw logs used individually or in stacks to trap sediment and provide growth medium for riparian plants.
 - 5) Bank reshaping and slope grading, when used to reduce a bank slope angle without changing the location of its toe, increase roughness and cross-section, and provide more favorable planting surfaces.
 - 6) Floodplain flow spreaders, consisting of one or more rows of trees and accumulated debris used to spread flow across the floodplain.
 - 7) Floodplain roughness, e.g., floodplain tree and large woody debris rows live siltation fences, brush traverses, brush rows and live brush sills; used to reduce the likelihood of avulsion in areas

Riparian, Stream, Wetland and Estuarine Restoration

Terms and Conditions:

1. Applicable terms and conditions. Any riparian, stream, wetland or estuarine restoration project¹ authorized by this Opinion must be consistent with all applicable terms and conditions of this incidental take statement, including, but not limited to, those that are relevant to monitoring and construction (e.g., project notification, project completion report, minimum area, timing of in-water work, pollution and erosion control, fish passage, temporary access roads, work area isolation, site restoration).
2. Riparian, stream, wetland and estuarine restoration methods authorized by this Opinion. The following restoration methods are approved for use individually or in combination:
 - a. Road decommissioning.
 - b. Set-back levees, dikes and berms.
 - c. Remove levees, dikes, berms, weirs or other water control structures.
 - d. Remove trash and other artificial debris dams that block fish passage.
 - e. Streambank stabilization, culvert removal and replacement and bridge replacement, as authorized by this Opinion, when completed for a restoration purpose.
 - f. Remove sediment bars or terraces that block fish passage within 50 feet of a tributary mouth. No more than 25 cubic yards of sediment may be removed from within 25 feet of the mouth of the stream. Streambed grading could occur within 50 feet of the mouth of a stream. Adequate precautions will be taken to prevent post-construction stranding of juvenile or adult fish.
 - g. Place large wood within the channel or riparian area.
 - 1) Wood placement projects should rely on the size of the wood for stability and may not use permanent anchoring. Rock may be used as ballast to anchor or stabilize large wood. Use of permanent anchoring, including rebar or cabling, is not authorized by this Opinion, except as described below for estuarine areas.
 - 2) Wood length should be at least two times the bankfull stream width, or 1.5 times the bankfull width for wood with rootwad attached. Wood diameter should be at least one half of the average bankfull depth. If a rootwad or mat is attached, the diameter of the root mat should be at least two times the average bankfull depth.
 - 3) Large wood must be intact, hard, and undecayed to partly decaying. Use of decayed or fragmented wood found lying on the ground or partially sunken in the ground is not acceptable.
 - 4) Wood placement must be associated with an intact, well-vegetated riparian area which is not yet mature enough to provide large wood to the stream system, or must be accompanied by a riparian vegetation project adjacent or upstream that will provide large wood when mature.
 - 5) In deeper estuarine and marine areas that act as navigational corridors, structures that rely on buried tree trunks with root wads exposed will be given preference when evaluating design alternatives for restoration projects. However, the use of cables or anchors may be permitted where floating wood would create a navigational or public safety hazard, or when the structure is required to be anchored through a permit from the Corps. Anchoring will not be used below mean lower low tide.
 - 6) Use of heavy equipment within the stream for placement of large wood is not permitted. For use of heavy equipment in the riparian area, the relevant conservation measures for construction will be used.
 - Excavate and remove artificial fill materials from former wetlands.
 - Remove structural bank protections and other engineered or created structures that do not meet the description and conservation measures under the Streambank Stabilization section.
 - Recontour off stream areas that have been leveled.
 - Reintroduce beavers in areas where they have been removed.

¹ 'Restoration project' means a habitat restoration activity whose primary purpose is to restore natural aquatic or riparian habitat process or conditions and that would not be started but for its restoration purpose.

Native Plant Community Protection and Establishment

Terms and Conditions:

1. Applicable terms and conditions. Any native plant community protection and establishment activity authorized by this Opinion must be consistent with all applicable terms and conditions of this incidental take statement, including, but not limited to, those that are relevant to monitoring and construction (*e.g.*, project notification, project completion report, pollution and erosion control, temporary access roads).
2. Native plant community activities authorized by this Opinion. The following methods are approved for use individually or in combination:
 - a. Vegetation planting
 - 1) Vegetation plans will be prepared that: (1) Require the use of native species; (2) specify seed/plant source, seed/plant mixes, soil preparation, *etc.*; include vegetation management strategies that are consistent with local native succession and disturbance regimes; (4) address the abiotic factors contributing to the sites' succession, *i.e.*, weather and disturbance patterns, nutrient cycling, and hydrologic condition; and (5) specify only certified noxious weed-free seed, hay, straw, mulch, or other vegetation material for site stability and revegetation projects.
 - b. Vegetation management by physical control.
 - 1) For mechanical control that will disturb the soil, an untreated or modified treatment area will be maintained within the immediate riparian buffer area to prevent any potential adverse effects to stream channel or water quality conditions. The width of the untreated riparian buffer area will vary depending on site-specific conditions and type of treatment.
 - 2) Ground-disturbing mechanical activity will be restricted in established buffer zones beside streams, lakes, ponds, wetlands and other identified sensitive habitats based on percent slope. For slopes less than 20%, a buffer width of 35 feet will be used. For slopes over 20% no ground-disturbing mechanical equipment will be used.
 - 3) When possible, manual control (*e.g.*, hand pulling, grubbing, cutting) will be used in sensitive areas to avoid adverse effects to listed species or water quality.
 - 4) All noxious weed material will be disposed of in a manner that will prevent its spread. Noxious weeds that have developed seeds will be bagged and burned.

INTRA-SERVICE SECTION 7 BIOLOGICAL EVALUATION FORM

FWS Reference: 1-3-05-xxxxxxxxx

Originating Person: Judy Lantor

Telephone Number: (360) 753-6056

Date: January 3, 2005

- I. Region: Region 1
- II. Service Activity (Program): Contaminants;
Natural Resource Damage Assessment (NRDA),
Jordan Property
Hylebos Creek, Off-channel habitat restoration
- III. A. Listed species and/or their designated critical habitat within the action area:
1. Within the action area that will or may be affected:
- Species: Bull trout (*Salvelinus confluentus*)
Puget Sound, distinct population segment
- Species: Bald eagle (*Haliaeetus leucocephalus*)
Habitat: Riparian Area
- B. Proposed species and/or proposed critical habitat within the action area:
- Critical habitat for the bull trout (Coastal-Puget Sound distinct population segment) occurs in the vicinity of the project.
- C. Candidate species within the action area: none
- IV. Geographic area or station name and action:
- Commencement Bay, Tacoma, Washington, Hylebos Creek

Through the NRDA program, the U.S. Fish and Wildlife Service is cooperating with the other Commencement Bay Natural Resource Trustees including, the National Oceanic and Atmospheric Administration, State of Washington Departments of Ecology, Natural Resources and Fish & Wildlife, the Puyallup Tribe of Indians, and the Muckleshoot Indian Tribe (Trustees) to implement habitat restoration for Commencement Bay injured natural resources. The City of Fife and the Trustees have jointly purchased the Jordan parcel. The Trustees, under a cooperative agreement with the City of Fife, will be conducting restoration actions on the site.

V. Location (attach map):

- A. County and State: Pierce, Washington
- B. Section, township, and range (or latitude and longitude):
T20N, R04E, S06
- C. Distance (miles) and direction to nearest town:
Within the City of Fife
NW corner of 8th Street East & 62nd Avenue East
- D. Include species/habitat occurrence on a map, if possible.

VI. Description of proposed action (attach additional pages as needed):

The general location of the Site is depicted on Figure 1: Site Location Map. The project is intended to create off-channel habitat for juvenile salmonids adjacent to the Hylebos Creek.

The site is an irregularly shaped 15.30-acre parcel (see Figure 1). According to the 1961 (revised 1994) United States Geological Survey (USGS) Poverty Bay, Washington Quadrangle 7.5 Minute Series topographic map, the site is at an elevation of between 10 and 160 feet above mean sea level (MSL). The eastern portion of the site slopes steeply down towards the west. The central and western portions of the site are relatively flat with a slight slope towards the west. Hylebos Creek runs along the western boundary of the site and flows towards the northwest. The centerline of Hylebos Creek defines the western property line. Hylebos Creek drains into the Hylebos Waterway, which is located 3,600 feet northeast of the site. Hylebos Creek is tidally influenced in the project reach.

A steep bluff runs along the entire length of the eastern portion of the site. The bluff ranges between 100 to 200 feet in height and is nearly vertical in some areas near the southern portion of the site. Exposed soil along the bluff was observed during site visits and appeared to consist of gravelly sand. The ground surface is covered with thick low-lying vegetation in most of the flat area below the bluff (Ridolfi, 2003).

In February 2003, a site cleanup was conducted at the time of the site annexation by the City of Fife; various debris and mechanical parts, observed in earlier visits (Ridolfi, 2001) were hauled off-site.

The reach of Hylebos Creek encompassing the site is characterized by low gradients (0.2%) and is highly channelized. Man-made structures are present in Hylebos Creek in the project reach. These include a wood plank wall that runs for approximately 1000 ft along the western bank, and wooden pilings aligned in two rows parallel to the creek banks. In one location, erosion behind the wooden wall has allowed the stream to carve a notch between the bank and the wall (Ridolfi, 2003).

USGS modeling was available for Hylebos Creek at the 8th Street Bridge (upstream boundary of the site). Based on this information, summer baseflows are estimated around 6 to 7 cubic feet per second (cfs), mean annual discharge is estimated at 21 cfs, bankfull flow (one-day, two-year flow) is about 117 cfs, and the 100-year discharge is estimated at 455 cfs (Kresch and Prych, 1989).

To obtain site-specific data, a transducer was installed under the 4th St. bridge at the downstream edge of the site in November 2002. The transducer was a multi-parameter Troll, capable of measuring water temperature, pH, dissolved oxygen, conductivity, and pressure, with the pressure data correlated to stream elevation readings from a staff gauge. Information was gathered under the 4th St. Bridge from November 5, 2002, through March 4, 2003. The transducer was then moved to the upstream end of the site and installed under the 8th St. bridge (Ridolfi, 2003).

Analysis of the 4th St. bridge data, and comparison to tide data obtained from the NOAA Center for Operational Oceanographic Products and Services (CO-OPS) Web site for Tacoma station 9446484 for the same period (NOAA, 2003), revealed that Hylebos Creek was tidally influenced at the downstream end of the Jordan site. Salinity in Hylebos Creek at that location reaches almost undiluted seawater levels at high tide, then returns to freshwater levels at low tide. Temperature is more influenced by tide than by diel (daily) cycles (Ridolfi, 2003).

At the 8th St. bridge (upstream end of the site), data collected indicate that the creek is also tidally influenced but salinity remains in the freshwater range and temperature is more influenced by diel cycles than by tide. The differences between these limited upstream and downstream data sets suggest that the project reach is one of transition between two sets of aquatic habitat conditions (Ridolfi, 2003).

Although the parcel on which the project is to be constructed covers approximately 15.3 acres, the area that can be enhanced, the portion below the bluff, covers roughly 7 acres. The reach of Hylebos Creek that can be modified, between the City of Fife drinking water wells and the 4th St. bridge, is approximately 1,300 ft long (see Figure 2).

The proposed action entails regrading a portion of the site along Hylebos Creek to increase habitat complexity and diversity, create rearing and feeding habitat (channels and pools) adjacent to Hylebos Creek for out-migrating juvenile salmon, enhance existing wetlands, and enhance existing vegetation to create wildlife habitat for birds and small mammals in buffer areas.

The project is designed to create meandering side channels that are connected to the main channel in several locations and are constructed so that they drain to avoid stranding fish at low tide. The project also creates side pools which take advantage of the salinity gradient along the reach to provide habitat suitable for different plant, invertebrate, and aquatic communities. Deeper areas of the pools remain permanently flooded, while the

rest drain at lower flows.

A conceptual grading plan (Figure 2) and typical cross-sections (Figure 3) were developed. The excavation volumes are estimated at 30,000 cubic yards. Approximately 0.2 acres of existing wetlands will be affected by construction, but the project will result in a net wetland increase of approximately one acre. 1.8 acres of new side-channel aquatic habitat will also become available. Approximately 1,700 feet of nature trail and three viewing platforms will be constructed.

Detailed engineering drawings will be provided prior to site construction. Specific construction elements will include: excavation of existing wetland and upland areas at the upstream end of the site to form meandering side-channels; excavation of existing wetland and upland areas at the downstream end of the site to form a dendritic marsh; excavation of some deeper pool areas, placement of boulders and large woody debris to provide cover, increase habitat complexity, and direct flow; grading to prevent stranding in pools and meanders at low water levels; preservation of as many existing trees as possible; and revegetation using native emergent marsh plants, herbaceous plants, shrubs, and trees.

VII. Determination of effects:

A. Explanation of effects of the action on species:

The Puyallup River system contains the southernmost population of bull trout in the Puget Sound Management Unit. The Puyallup core area is critical to maintaining the overall distribution of migratory bull trout within the management unit, since it is the only anadromous bull trout population in south Puget Sound. The Puyallup core area includes several major watersheds that drain the north and west sides of Mount Rainier. This glacial source significantly influences both water and substrate conditions in the mainstem reaches of the watershed. Both anadromous and fluvial/resident bull trout local populations have been identified in the Puyallup and White River systems, which converge in the lower basin at river mile 10.4 of the Puyallup River. Limited information is available regarding the distribution and abundance of bull trout in the core area. Observations of bull trout have generally been incidental to other fish surveys. Glacial turbidity creates limited opportunities and sites to survey for bull trout in this system (USFWS 2004).

Bull trout exhibit resident and migratory life history strategies through much of their current range. Migratory bull trout spawn in tributary streams where juvenile fish rear from one to four years before migrating to either a lake, river, or in certain coastal areas, to saltwater, where maturity is reached in one of the three habitats. Bull trout are opportunistic feeders. Food habits are primarily a function of size and life history strategy. Migratory bull trout prey on terrestrial and aquatic insects, amphipods, mysids, crayfish and small fish. Adult migratory bull trout are primarily piscivorous, feeding on various trout, salmon, whitefish, yellow perch and sculpin. (USFWS, 1999).

The Puyallup Tribal fisheries in the lower Puyallup River and the U.S. Army Corps of Engineers trap at Buckley commonly intercept large migratory bull trout, indicating that an anadromous life

history form of bull trout is present in the system (Hunter, *in litt.*2001, in USFWS 2004). Bull trout have been confirmed in tidewater areas of the lower Puyallup River (Baker and Moran 2002; Puyallup Tribe *in litt.*2001 in USFWS 2004). Primary foraging, migration, and overwintering habitat for migratory bull trout within the core area is believed to be the mainstem reaches of the White, Carbon and Puyallup Rivers. The anadromous life history form is believed to use Commencement Bay and likely other marine nearshore habitats along Puget Sound (USFWS 2004).

The project site is adjacent to the tidally influenced reach of Hylebos Creek, which flows into the Hylebos Waterway (3,600 feet northeast of the site). No known observations of bull trout have been made in the immediate vicinity of the project area. The level of use by bull trout within the Jordan project areas is expected to be minimal to none. No bull trout spawning or rearing is known to occur within Hylebos Creek. Bull trout use, if any, within the habitat restoration area during construction is expected to be limited to foraging anadromous bull trout adults from other drainages or basins, particularly at high tide.

Project construction may result in short term increases in turbidity. Potential impacts to bull trout will be limited to high tide periods immediately following debris removal or log placement. Heavy equipment will be used during construction, which will generate noise for a period of a few weeks. The total construction period is planned for 10 to 12 weeks, including activities which do not generate high levels of noise, such as planting. There is a potential for water quality impacts associated with construction activities, but Best Management Practices (BMPs) will be used to avoid or minimize these impacts.

The increases in sedimentation should be within the levels currently found in the estuary. The Puyallup River enters the bay approximately 2.5 miles to the south, carrying significant amounts of glacial flour. The plume of the river moves to the northwest towards the Brown's Point shoreline. Suspended clay particles are deposited quickly as they interact with saline waters. Due to the fact that bull trout have not been observed in the area, the project site is only accessible during high tide events, the site is located at the head of Hylebos waterway removed from more natural nearshore areas around Commencement Bay, and the potential increase in turbidity is within the limits currently found in the area, the conclusion reached is bull trout may be affected, but they are not likely to be adversely affected.

It is expected that anadromous adult bull trout, if present, would be unlikely to use the waters of Hylebos Creek during construction, and would not be directly harmed by this habitat rehabilitation project. The potential to take adult bull trout because of the work at Hylebos Creek is expected to be discountable.

The proposed project will improve off-channel habitat, and marsh and riparian vegetation. These improvements will have beneficial effects not only to Commencement Bay salmon stocks in particular, but also to other Puget Sound anadromous fish stocks, which may have a beneficial effect for the listed bird species.

A "may affect, not likely to adversely affect" determination is warranted for bull trout because:

•No bull trout spawning or rearing is known to occur within Hylebos Creek. Bull trout use, if any, within Hylebos Creek during construction is expected to be limited to foraging anadromous adults.

•Adult anadromous bull trout will not be adversely affected, as they will likely avoid the site during construction. Project construction will occur during the fish window, from July 16 through February 15, when bull trout are less likely to be in the area, and when water temperatures are elevated, during the early part of the fish window.

•No bull trout mortality is expected as a result of the proposed habitat rehabilitation.

The project occurs within proposed bull trout critical habitat. Since the project will occur during low tides, turbidity will be minimal. The project will enhance bull trout habitat. This project will not destroy or adversely modify proposed critical habitat for bull trout.

B. Explanation of actions to be implemented to avoid, minimize, or reduce adverse effects:

While clearing riparian vegetation and the potential to temporarily increase sedimentation in Hylebos Creek are likely adverse effects to aquatic species, the relationship of incidental take to these two effects is currently unknown. On a qualitative level, the potential direct effect of clearing and grading on the aquatic environment is expected to be minimized by the proposed conservation measures. Similarly, the proposed conservation measures are anticipated to reduce potential effects to bull trout in Hylebos Creek to negligible levels.

Conservation Measures:

1. To avoid potential direct impacts to bull trout, as well as other aquatic species, construction will only occur within the work-window specified for the project. This will limit the sedimentation in Hylebos Creek to summer months.
2. The contractor will implement the Temporary Erosion and Sedimentation Control Plan (TESCP) as shown in the contract documents and construction drawings. The TESCP will be implemented before the start of any ground disturbing activities. The TESCP will be based on current Best Management Practices (BMPs) and will include measures such as silt fences, straw bale dikes, and dewatering to allow excavation to proceed in unsaturated conditions.
3. To minimize the potential for direct impacts to listed and candidate aquatic species, no hazardous materials or toxic materials will be transferred or stored within 50 feet of the MHHW of Hylebos Creek.
4. No equipment will be refueled or maintained within 50 feet of the MHHW of Hylebos Creek. Equipment will be serviced or maintained in designated areas where stormwater runoff can be prevented from directly entering the water.
5. An emergency spill kit will be stored at the work site and construction crews trained in their proper use.
6. All conditions of the Hydraulic Project Approval will be followed.

A. Explanation of effects of the action on species:

Bald eagles are known to forage in the vicinity of the project area. They are commonly seen at the mouth of the Puyallup River, approximately 2.5 miles to the south. The closest known nest sites are approximately 4 miles to the northwest, at Point Defiance. Bald eagles occupy large feeding territories and it is doubtful that they use Commencement Bay exclusively over other feeding areas.

Heavy equipment (backhoe, loaders, dump trucks) will be employed during project construction. However, the project site is located in a busy industrial area with ongoing lumber mill, ship yard, oil refining and other industrial activities. Therefore, project construction activities are not expected to be more disturbing than ambient conditions. Given the small size of the site and the temporary nature of construction disturbances, the project is not expected to impair foraging opportunities for eagles.

The potential of the project to directly affect bald eagles is expected to be negligible. Hylebos Waterway and Hylebos Creek provide foraging habitat for both nesting and wintering bald eagles, though sightings are uncommon. There are almost no large trees at the Jordan Site save for one 44-in. Western red cedar, nor stands of mature trees in the immediate area, although the nearby Milgard Mitigation site includes bird perches intended to simulate snags. There are no eagle nest sites, perches, or roosts known to occur within one mile of the project (Ridolfi, 2003). Transient bald eagles may occur within the vicinity of the Hylebos Waterway during project construction, but eagle use in the project area is unlikely.

Adverse effects to bald eagles due to construction and temporary increases in noise levels are not anticipated due to limited potential for use of the project area, and the existing level of ambient industrial-based noise.

A “may affect, not likely to adversely affect” determination is warranted for bald eagles because:

- Bald eagles have been documented in the area.
- There is no bald eagle nesting habitat identified within one mile of the project area.
- No potential nesting, roosting, or perching habitat trees will be impacted by the project.
- Bald eagles are not likely to forage along the lower Hylebos Creek due to extensive industrial activity. Any foraging activity is expected during the fall when mature salmon return to Hylebos Creek. The project will be completed before the peak return spawning period for salmon in October. Eagles, however, are not precluded from the project area during the construction window for this project.
- Impacts to the eagles prey base are expected to be negligible.

The proposed project will improve off-channel habitat, and marsh and riparian vegetation. These improvements will have beneficial effects not only to Commencement Bay salmon stocks in particular, but also to other Puget Sound anadromous fish stocks, which may have a beneficial effect for the listed bird species.

B. Explanation of actions to be implemented to avoid, minimize, or reduce adverse

NO EFFECT

(species: _____)

____ *Concurrence

(critical habitat: _____)

____ *Concurrence

IS NOT LIKELY TO JEOPARDIZE PROPOSED SPECIES

(species: _____)

____ *Conference

IS NOT LIKELY TO ADVERSELY MODIFY PROPOSED CRITICAL HABITAT

(critical habitat: _____)

____ *Conference

IS LIKELY TO JEOPARDIZE PROPOSED SPECIES

(species: _____)

____ Conference

IS LIKELY TO ADVERSELY MODIFY PROPOSED CRITICAL HABITAT

(critical habitat: _____)

____ Conference

C. Candidate species:

Determination

Response requested

NO EFFECT

(species: _____)

____ *Concurrence

IS NOT LIKELY TO JEOPARDIZE

(species: _____)

____ *Concurrence

IS LIKELY TO JEOPARDIZE

(species: _____)

____ Conference

IX. Signature Page

Initiating Officer _____ Date _____

_____ Concur

_____ Do Not Concur

Comments:

Consultation and Technical Assistance Supervisor _____

Date _____

_____ Concur

_____ Do Not Concur

Comments:

REFERENCES:

Commencement Bay Natural Resource Trustees. 1997. Commencement Bay Natural Resource Damage Assessment Restoration Plan and Final Programmatic Environmental Impact Statement. Prepared by the U.S. Fish and Wildlife Service and National Oceanic and Atmospheric Administration for the Commencement Bay Natural Resource Trustees and Cooperating Agencies.

Kresch, D. L., and E. A. Prych. 1989. Streamflow Statistics for Streams on the Puyallup Indian Reservation, Washington. U.S. Geological Survey, Water-Resources Investigation Report 87-4228.

National Oceanic and Atmospheric Administration (NOAA). 2003. Center for Operational Oceanographic Products and Services (CO-OPS): Preliminary (Tides) Water Level Data. Available: <http://co-ops.nos.noaa.gov/data_retrieve.shtml?input_code=101011111pwl>.

Ridolfi Engineers Inc. 2001. Phase I Environmental Site Assessment: Jordan Property, Northwest Corner of 8th Street East and 62nd Avenue East, Pierce County, Washington. Prepared for the Commencement Bay Natural Resource Damage Assessment and Restoration Trustees. December.

Ridolfi Engineers Inc. 2003. Draft Biological Assessment for the Jordan Site: Hylebos Creek Off-channel Habitat Restoration Project. Prepared for the Commencement Bay Natural Resource Damage Assessment and Restoration Trustees.

U.S. Fish and Wildlife Service. 1999. Programmatic Biological Assessment for U.S. Fish and Wildlife Service Habitat Restoration Activities of the Western Washington Office, Upper Columbia River Basin Office, Moses Lake Fish and Wildlife Office and Mid-Columbia River Basin Fisheries Resource Office.

U.S. Fish and Wildlife Service. 2004. Draft Recovery Plan for the Coastal-Puget Sound Distinct Population Segment of Bull Trout (*Salvelinus confluentus*). Volume I (of II): Puget Sound Management Unit. Portland, Oregon. 389+xvii pp.



**UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration**

NATIONAL MARINE FISHERIES SERVICE
Northwest Region
7600 Sand Point Way N.E., Bldg. 1
Seattle, WA 98115

July 17, 2003

Jennifer Steger
NOAA Restoration Center Northwest
7600 Sand Point Way N.E.
Seattle Washington 98115-0070

Re: Endangered Species Act Section 7 Informal Consultation and Magnuson-Stevens Fishery Conservation and Management Act Essential Fish Habitat Consultation for the Hylebos Creek - Jordan Off-Channel Habitat Restoration Project, City of Fife in Pierce County, Washington (NMFS Tracking No.: 2003/00727) (WRIA10).

Dear Ms. Steger:

This correspondence is in response to your request for consultation under the Endangered Species Act (ESA). Additionally, this letter serves to meet the requirements for consultation under the Magnuson Stevens Fishery Conservation and Management Act (MSA).

Endangered Species Act

NOAA's National Marine Fisheries Service (NOAA Fisheries) has reviewed your June 9, 2003 request for concurrence with your findings of "may affect, not likely to adversely affect" for the above referenced project, supported by a draft Biological Assessment (BA) prepared by Ridolfi, Inc. for the NOAA Restoration Center Northwest (RC/NW). Your findings were in regard to the listing of Puget Sound chinook salmon (*Oncorhynchus tshawytscha*) as Threatened under the ESA. This consultation with RC/NW is conducted under section 7(a)(2) of the ESA, and its implementing regulations, 50 CFR Part 402.

The proposed action will remove anthropogenic fill and restore salmonid rearing functions to the lower flood plain of Hylebos Creek approximately 3,600 feet upstream from the Hylebos Waterway at the extreme upstream extent of salt water. The offchannel objectives are to increase habitat complexity and diversity, create rearing and feeding habitat in the form of channels and pools, and enhance existing wetlands and riparian vegetation. The Jordan property project site parallels the Milgard Manufacturing Inc.'s mitigation wetland on the opposite bank of Hylebos Creek and this consultation would allow for future habitat expansions into the adjacent property when that owner's permission is obtained.



NOAA Fisheries concurs with your findings of “may affect, not likely to adversely affect,” to the species, because of the reasons provided in the BA: 1) the work will be done during a time of the year when few chinook salmon are present (July 15 - August 31); 2) heavy equipment will be excluded from the stream; 3) large woody debris will be added to the stream to increase diversity and shading in hopes of reducing summertime stream temperatures; 4) invasive plants will be replaced by native tree and shrub species in the riparian of the off-channel portion of the site; 5) Best Management Practices, such as silt curtains to reduce turbidity and fish exclusion devices will be deployed around the construction site, where applicable; and 6) the project will meet all conditions of a Washington Department of Fish and Wildlife Hydraulic Project Approval.

This concludes informal consultation on these actions in accordance with 50 CFR 402.14(b)(1). The RC/NW must reinitiate this ESA consultation if: 1) new information reveals effects of the action that may affect listed species in a way not previously considered; 2) the action is modified in a manner that causes an effect to the listed species that was not previously considered; or 3) a new species is listed, or critical habitat designated, that may be affected by the identified action.

Magnuson-Stevens Fishery Conservation and Management Act

Federal agencies are required, under §305(b)(2) of the MSA and its implementing regulations (50 CFR 600 Subpart K), to consult with NOAA Fisheries regarding actions that are authorized, funded, or undertaken by that agency that may adversely affect Essential Fish Habitat (EFH). The MSA (§3) defines EFH as “those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity.” If an action would adversely affect EFH, NOAA Fisheries is required to provide the Federal action agency with EFH conservation recommendations (MSA §305(b)(4)(A)). This consultation is based, in part, on information provided by the Federal agency and descriptions of EFH for Pacific coast groundfish, coastal pelagic species, and Pacific salmon contained in Fishery Management Plans developed by the Pacific Fishery Management Council and approved by the Secretary of Commerce.

The proposed action and action area are described in the BA. The action area is within the estuarine portion of Hylebos Creek, a tributary of the Commencement Bay, and includes habitat which has been designated as EFH for various life stages of 17 species of groundfish, four coastal pelagic species, and two species of Pacific salmon (Table 1).



STATE OF WASHINGTON

OFFICE OF COMMUNITY DEVELOPMENT

Office of Archaeology and Historic Preservation

1063 S. Capitol Way, Suite 106 • PO Box 48343 • Olympia, Washington 98504-8343 • (360) 586-3065
Fax Number (360) 586-3067 • <http://www.oahp.wa.gov>

June 3, 2003

Ms. Jennifer Steger
NOAA/NMFS Restoration Center
7600 Sand Point Way NE
Seattle, Washington 98115-0070

Re: Habitat Restoration at the Jordan Site
Log No: 060303-05-NOAA

Dear Ms. Steger:

Thank you for providing a copy of the cultural resources assessment by Historical Research Associates, Inc. for the proposed Habitat Restoration Project at the Jordan Site in Fife, Pierce County. We concur with their professional recommendations and your finding of No Historic Properties Affected. We also concur with the proposed monitoring and would appreciate receiving a copy of the monitoring report when available.

We would appreciate receiving any correspondence or comments from concerned tribes or other parties that you receive as you consult under the requirements of 36CFR800.4(a)(4).

These comments are based on the information available at the time of this review and on the behalf of the State Historic Preservation Officer in conformance with Section 106 of the National Historic Preservation Act and its implementing regulations 36CFR800. Should additional information become available, our assessment may be revised.

In the event that archaeological or historic materials are discovered during project activities, work in the immediate vicinity should be discontinued, the area secured, and the concerned tribes and this office notified. Thank you for the opportunity to comment and a copy of these comments should be included in subsequent environmental documents.

Sincerely,

Robert G. Whitlam, Ph.D.
State Archaeologist
(360) 586-3080
email: robw@cted.wa.gov

cc: J. Wright



U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration

Contact: Jennifer Steger
Damage Assessment and Restoration Center NW
7600 Sand Point Way NE Seattle, WA 98115-0070
Phone: 206/526-4363 Fax: 206/526-6665
website: <http://www.darcnw.noaa.gov> email: jennifer.steger@noaa.gov

May 30, 2003

Dr. Robert Whitlam, State Archaeologist
Office of Archaeology and Historic Preservation
P.O. Box 48343
Olympia, WA 98594-8343

Subject: Request for Review of Cultural Resource Assessment Report for the Proposed
Habitat Restoration Project at the Jordan Site in Fife, Pierce County, Washington

Dear Dr. Whitlam:

The National Oceanic and Atmospheric Administration (NOAA) plans to conduct a Habitat Restoration Project, which would be funded by the Commencement Bay Natural Resource and Damage Assessment Trustees, at the Jordan Site. The property consists of just over 15 acres located along the Hylebos Creek in Fife. Ridolfi Inc., which is conducting the restoration planning and design activities, contracted with Historical Research Associates, Inc. (HRA) to perform the cultural resource assessment. The enclosed report discusses the methods and results of the assessment, which revealed no cultural resources that would be affected by the rehabilitation project. NOAA also sent the report to the Puyallup Tribe of Indians, which is one of the Trustees for Commencement Bay, for review but has received no comments yet. If any become available, we will forward them to OAHP.

We would appreciate your review of the enclosed report by June 30, 2003. Please contact me at (206) 526-4363, or Colin Wagoner of Ridolfi, Inc. (206) 682-7294, if you have questions or need more information. Thank you for your assistance in this matter.

Sincerely,

Jennifer Steger
Ecologist / Restoration Case Manager
NOAA/NMFS Restoration Center

Attachment

**Cultural Resource Assessment for the
Proposed Habitat Restoration Project at the Jordan Site
Fife, Pierce County, Washington**

Prepared For:

Ridolfi Inc.
1411 Fourth Avenue
Suite 770
Seattle, WA 98101

Prepared By:

Tom Becker
Gail Thompson, Ph. D.



Historical Research Associates
119 Pine Street
Suite 301
Seattle, WA
98101

May 2, 2003

Introduction

This report discusses the methods and results of the cultural resource assessment for the Proposed Habitat Restoration Project at the Jordan Site. The habitat restoration is being funded by the Commencement Bay Natural Resource and Damage Assessment Trustees (Trustees). Ridolfi Inc., which is contracted with the Trustees to conduct restoration planning and design activities, subcontracted with Historical Research Associates, Inc. (HRA) in March 2003 to perform the cultural resource assessment on the former Jordan property, located in the SE1/4 of Section 6, Township 20 North, Range 4 East in Fife, Washington. The site includes 15.3 acres and is bounded on the west and southwest by Hylebos Creek, on the south by private property and 8th Street, on the east by a bluff, and on the north by the property line extending east from the end of 4th Street (Figure 1). The site is currently partially forested with a wetland area bordering Hylebos creek, and an access road running north/south between the creek and the bluff.

Research and Survey Methods

HRA's background research included an examination of the cultural resource records and reports on file at the Washington Office of Archaeology and Historic Preservation (OAHP) in Olympia. Site forms, historic property inventory forms, survey reports, and the listings of National Register of Historic Places (NRHP) were investigated. This information assisted HRA research staff in understanding the cultural history of the Project area, and facilitated the identification of potentially culturally-sensitive areas within the Project land. Such areas include regional landforms and vegetation community types where prehistoric, ethnohistoric, or historic-period resources have been observed, such as the wetland area along Hylebos Creek.

The Washington OAHP marks archaeological site locations on USGS 7.5-minute topographic quadrangle maps. The corresponding site forms are available for review and describe the cultural materials present at the site. An examination of these maps revealed two previously recorded archaeological sites within two miles of the Project area. Site 45PI488 is located along Hylebos Creek, approximately 0.4 mile (0.6 kilometer) south of the Project area. A series of shovel probes revealed a subsurface assemblage of fire-modified rock, lithic debitage, and a single unifacial scraper. A charcoal sample associated with the assemblage provided a date of 920 ± 50 B.P (Luttrell 2001a). Site 45PI490 is located near Wapato Creek, approximately 1.8 miles (2.9 kilometers) southeast of the Project area. This site is a buried pit feature, filled with historic period debris that has been tentatively dated to the 1920's (Luttrell 2001b).

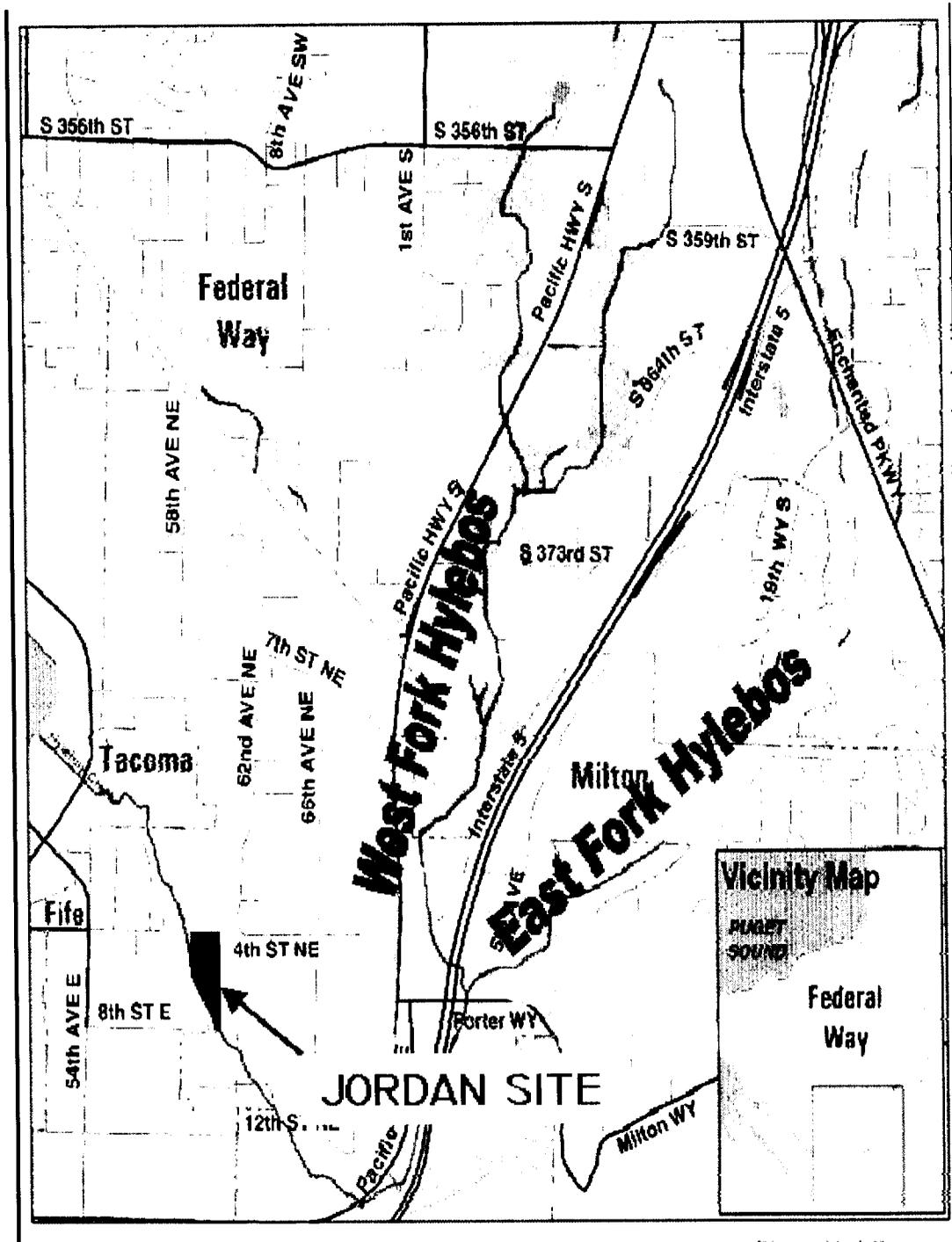


Figure 1. Location of Jordan Site.

A historic-period isolated find was discovered in 1999 by HRA during a cultural resources assessment for the CMC Fife Planned Residential Development, approximately 1.8 miles (2.9 kilometers) south of the Project area. The find consisted of two fragments of blue and white decorated ceramics, four pieces of glass, and two pieces of whiteware. The ceramics were examined in the lab and dated to 1929-1931 (DeBoer and Thompson 1999)

The OAHP file search revealed no previous cultural resource surveys for the Project area. Previous surveys have occurred to the north (Lewarch and Larson 1991) and south (Forsman et al. 1998) of the Project area, although neither of these surveys identified any cultural resources.

Historic Property inventories and NRHP nominations for historic-period resources such as buildings, bridges, tunnels, and other structures are archived separately from archaeological site forms. HRA reviewed the Historic Property and NRHP files for properties listed near the Project area in Pierce County. The Historic Property inventory contained forms for five houses that were within a half-mile of the Project area. However, since the goal of the Project is to restore the area to its natural setting, there should be no negative impacts upon any historical buildings or structures properties.

On April 2, 2003, an HRA archaeologist and one crewmember conducted a survey of the Project area, along with monitoring a backhoe excavate 13 geological test pits (Figure 2). During previous construction activities at the Project area for the installation of groundwater monitoring wells, the presence of woody debris in the sediment suggested that the area had a thick layer of fill atop the natural sediment. The excavation of the 13 dispersed geological test pits confirmed that woody debris was mixed with the sediment over most of the Project area.

Results

The Puyallup River valley, including Hylebos Creek, formed part of the aboriginal territory of the Puyallup Indian Tribe. The Puyallup occupied villages and special use sites in the area, where they hunted, gathered, and fished. According to early General Land Office maps, the Project area was part of the original Puyallup Indian Reservation, but eventually became private property. Puyallup Indian names for nearby places include "XaxtL!", which translates to "brushy" and is their name for Hylebos Creek, and "Kalka'laq", which is translated as "place around which the water passes", and refers to the flats between Wapato and Hylebos Creeks (Waterman 1920).

The Jordan site is currently a forested area that appears to have experienced significant ground disturbances, evidenced by mounds of sediments, slash piles, and modern trash strewn throughout the area, including cans, bottles, clothing, tires, and assorted plastic items. An access road runs north/south through the area, between the creek and the bluff, with smaller access roads extending towards the bluff, and several areas that have been cleared, possibly for parking heavy equipment. The bluff shows signs of having been quarried for the thick deposits of embedded gravels, a practice that

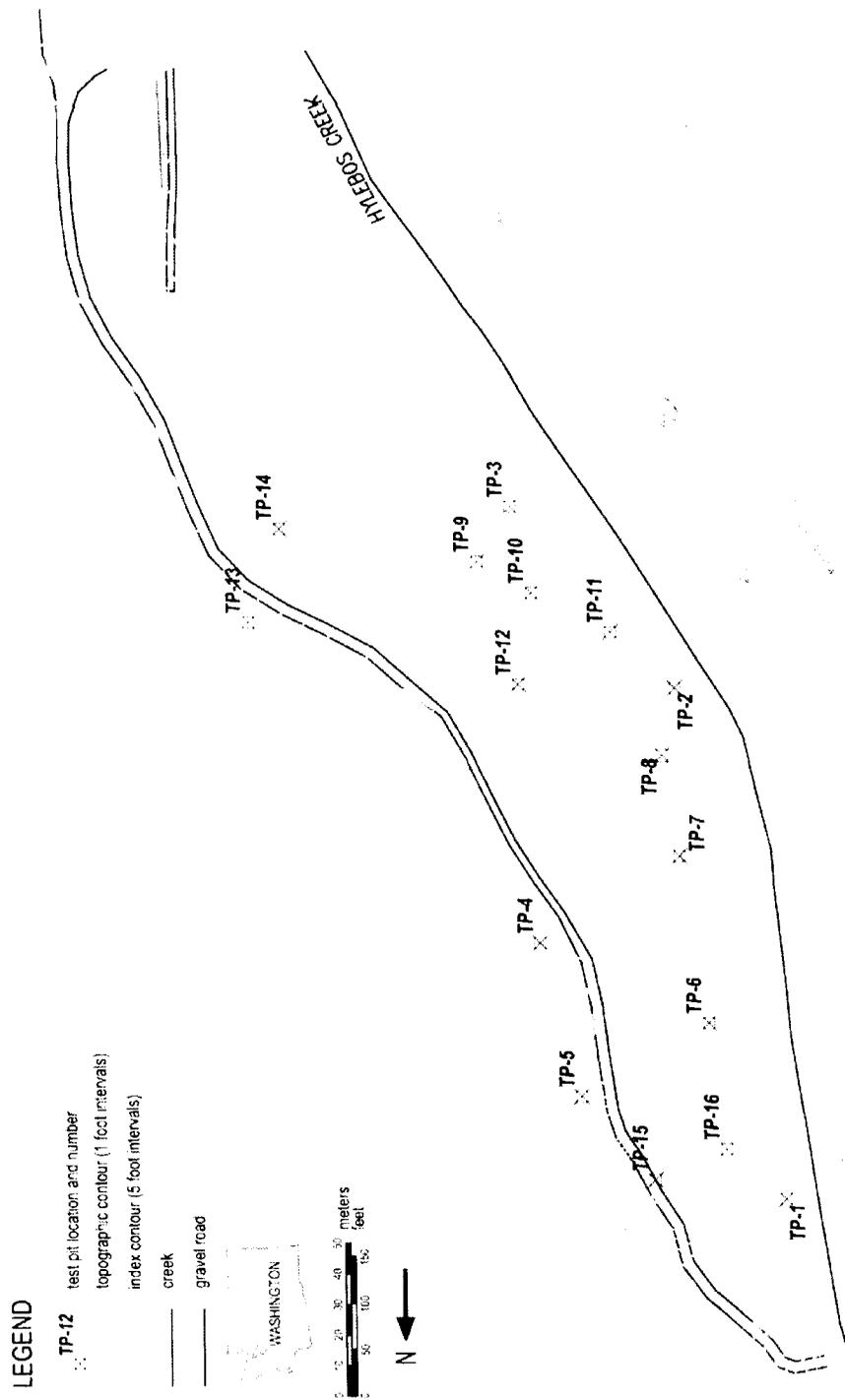


Figure 2. Location of Geologic Test Pits at Jordan Site.

continues along the bluff to the north, near Marine View Drive. The on-site vegetation consists mainly of blackberries and grasses, although along the west side of the Project area, near Hylebos Creek, the vegetation is thicker and the ground gradually becomes a marshy wetland. Near the wetland, vegetation includes cottonwood, alder, and elderberry.

During the surface survey, HRA archaeologists found no prehistoric or historic-period archaeological sites or structures, although visibility was limited near Hylebos Creek, where the vegetation was too thick to allow the visual inspection of the ground surface.

The geological test pits provided the best views of the site stratigraphy. Throughout most of the site, about 2 feet (.61 meters) of gravelly sediment overlay 6-8 feet (1.83-2.44 meters) of sediment containing large amounts of woody debris. The woody debris appeared to consist mainly of bark and other remnants of milling lumber, but there was also an occasional piece of cut lumber, stump, or small log. This layer also contained some pieces of plastic debris as well as the metal straps used for banding plywood or cut lumber. Underneath the layer of woody debris was either a layer of grayish sand or a bluish/gray sandy clay, indicative of sediment that is inundated with water. In many cases, a layer of grass lay atop the clay, most likely indicating the original surface. Water often settled on top of this clay and flowed into the test pits after their excavation. The geological test pits generally stopped upon encountering the water table or intact sediments, providing few opportunities to examine the intact sediments for cultural resources.

Recommendations/Conclusions

The Project area appears to have been heavily disturbed by years of commercial use. The original wetland habitat was likely covered by several feet of woody debris from nearby lumber mills (the nearest of which is a few blocks away at the intersection of Marine View Dr. and Taylor Way), then covered by a couple feet of gravelly sediment, perhaps pushed from the nearby bluff. Because the bluff clearly has been mined for gravel over the years, a practice that is continuing along the bluff to the north, it is likely that the wetlands were covered with debris to create a surface for trucks and other equipment to access the gravels.

Because the majority of the current surface of the Project area is imported fill, there is minimal chance of finding cultural resources. Intact sediments below the fill, however, will be impacted by Project activities. HRA recommends that a professional archaeologist work with the construction crew to determine which portions of the Project will require archaeological monitoring. As demonstrated by the location of 45PI488 and the ethnographic observations of Waterman (1920), the areas along creeks and wetlands were utilized by the Puyallup for hunting, fishing, and gathering. The area along Hylebos Creek should be considered a high sensitivity area for cultural resources, particularly prehistoric archaeological sites.

If construction does encounter potential prehistoric or historic archeological materials or human remains, work in the immediate area should stop and the construction supervisor should contact Dr. Robert Whitlam, the State Archaeologist (360-586-3080), to determine the appropriate course of action.

References Cited

- DeBoer, Trent, and Gail Thompson
1999 Results of Background Research and Cultural Resources Assessment for the Proposed CMC Fife Planned Residential Development, Pierce County, Washington.
- Forsman, Leonard A., Jeff Robbins, and Lynn L. Larson
Proposed RTA Corridor Puyallup Burlington Northern Third Track Resource Assessment. Larson Anthropological/Archaeological Services, Seattle.
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Cultural Resource Assessment of the Proposed PI Tacoma-Fife Project, Pierce County, Washington. LAAS Technical Report #91-3. Larson Anthropological/Archaeological Services, Seattle.
- Luttrell, Charles T
2001a Washington Archaeological Site Inventory Form for 45PI488. On file at the Office of Archaeology and Historic Preservation, Olympia, WA.
2001b Washington Archaeological Site Inventory Form for 45PI490. On file at the Office of Archaeology and Historic Preservation, Olympia, WA.
- Waterman, T.T.
1920 Puget Sound Geography. Edited with additional material from Vi Hilbert, Jay Miller, and Zalmi Zahir. Zahir Consulting Services, Federal Way, WA.

Concurrence by the Washington State Office of Archaeology and Historic Preservation

The above letter report documenting the results of a cultural resource assessment of the Jordan Site, Fife, Washington, meets generally accepted professional standards. The Washington State Office of Archaeology and Historic Preservation concurs with the findings and recommendations of the report. Construction at the site should not adversely affect significant cultural resources.

Date

Robert G. Whitlam, Ph.D.
State Archaeologist



United States Department of the Interior

FISH AND WILDLIFE SERVICE



Western Washington Fish and Wildlife Office
510 Desmond Dr. SE, Suite 102
Lacey, Washington 98503

In Reply Refer To:
1-3-05-FWI-0171

MAR 24 2005

Memorandum

To: Manager, Division of Environmental Assessment and Restoration
Western Washington Fish and Wildlife Office
Lacey, Washington

From:  Manager, Division of Consultation and Technical Assistance 
Western Washington Fish and Wildlife Office
Lacey, Washington

Subject: Informal Consultation on the proposed Natural Resource Damage Assessment project, Jordan Property, Hylebos Creek off-channel habitat restoration

This is in response to your letter dated December 7, 2004, and attached Intra-Service Section 7 Form and Environmental Assessment. Your letter requests our concurrence with your finding that the proposed restoration project on the Jordan Property "may affect, but is not likely to adversely affect" bull trout (*Salvelinus confluentus*) and bald eagles (*Haliaeetus leucocephalus*), and conference on "no destruction or adverse modification" of proposed bull trout critical habitat. This request is being submitted in accordance with section 7(a)(2) of the Endangered Species Act of 1973, as amended (16 U.S.C.1531 *et seq.*).

The purpose of the proposed action is to restore off-channel habitat in Hylebos Creek, which is tidally influenced. The proposed action entails regrading a portion of the site along Hylebos Creek to increase habitat complexity and diversity, creating rearing and feeding habitat adjacent to Hylebos Creek for out-migrating juvenile salmon, enhancing existing wetlands, and enhancing existing vegetation to create wildlife habitat for birds and small mammals in the buffer areas.

Based on the information and conservation measures provided in the Biological Assessment, we concur with your effect determinations. The signed section 7 evaluation form is attached. Our concurrence is based on:

Bull Trout

- No known observations of bull trout have been made in the immediate vicinity of the project area. The level of use by bull trout within the proposed project area is expected to be minimal to none. No known bull trout spawning or rearing activities occur in Hylebos Creek. It is expected that anadromous bull trout, if present, would be unlikely to use Hylebos Creek during construction. Therefore, impacts to bull trout are discountable.

Bull Trout Critical Habitat

- The project occurs within proposed bull trout critical habitat. Since the project will occur during low tides, turbidity will be minimal and effects to primary constituent elements, water quality and quantity will be insignificant. In the long-term, the project will enhance bull trout habitat. Therefore, this project is will not destroy or adversely modify proposed critical habitat for bull trout.

Bald Eagle

- The project area provides foraging habitat for nesting and wintering bald eagles. There is only one large tree (44-inch diameter Western red cedar (*Thuja plicata*)) at the project site. There are no known bald eagle nests, perches, or roosts within 1 mile of the project area. No potential nesting, roosting, or perching habitat trees will be impacted by the project. Therefore, the project effects to nesting bald eagles would be discountable.
- Heavy equipment will be used during project restoration. However, since the project is located in a busy industrial area with a lumber mill, shipyard, and oil refining activities, project activities are not expected to be more disturbing than ambient conditions. Therefore, disturbance to perching or foraging bald eagles would be insignificant.

This concludes informal consultation pursuant to the regulations implementing the Endangered Species Act (50 CFR 402.10 and 402.13). This project should be reanalyzed if new information reveals effects of the action that may affect listed species or critical habitat in a manner, or to an extent, not considered in this consultation. The project should also be reanalyzed if the action is subsequently modified in a manner that causes an effect to a listed species or critical habitat that was not considered in this consultation, and/or a new species is listed or critical habitat is designated that may be affected by this project.

If you have any questions, please contact Liane Wedemeyer at (360) 753-9536 or John Grettenberger at (360) 753-6044, of my staff.

Attachment

INTRA-SERVICE SECTION 7 BIOLOGICAL EVALUATION FORM

FWS Reference: 1-3-05-xxxxxxxxx

Originating Person: Judy LantorTelephone Number: (360) 753-6056Date: January 3, 2005

- I. Region: Region 1
- II. Service Activity (Program): Contaminants;
Natural Resource Damage Assessment (NRDA),
Jordan Property
Hylebos Creek, Off-channel habitat restoration
- III. A. Listed species and/or their designated critical habitat within the action area:
1. Within the action area that will or may be affected:
- Species: Bull trout (*Salvelinus confluentus*)
Puget Sound, distinct population segment
- Species: Bald eagle (*Haliaeetus leucocephalus*)
Habitat: Riparian Area
- B. Proposed species and/or proposed critical habitat within the action area:
- Critical habitat for the bull trout (Coastal-Puget Sound distinct population segment) occurs in the vicinity of the project.
- C. Candidate species within the action area: none
- IV. Geographic area or station name and action:
- Commencement Bay, Tacoma, Washington, Hylebos Creek

Through the NRDA program, the U.S. Fish and Wildlife Service is cooperating with the other Commencement Bay Natural Resource Trustees including, the National Oceanic and Atmospheric Administration, State of Washington Departments of Ecology, Natural Resources and Fish & Wildlife, the Puyallup Tribe of Indians, and the Muckleshoot Indian Tribe (Trustees) to implement habitat restoration for Commencement Bay injured natural resources. The City of Fife and the Trustees have jointly purchased the Jordan parcel. The Trustees, under a cooperative agreement with the City of Fife, will be conducting restoration actions on the site.

V. Location (attach map):

- A. County and State: Pierce, Washington
- B. Section, township, and range (or latitude and longitude):
T20N, R04E, S06
- C. Distance (miles) and direction to nearest town:
Within the City of Fife
NW corner of 8th Street East & 62nd Avenue East
- D. Include species/habitat occurrence on a map, if possible.

VI. Description of proposed action (attach additional pages as needed):

The general location of the Site is depicted on Figure 1: Site Location Map. The project is intended to create off-channel habitat for juvenile salmonids adjacent to the Hylebos Creek.

The site is an irregularly shaped 15.30-acre parcel (see Figure 1). According to the 1961 (revised 1994) United States Geological Survey (USGS) Poverty Bay, Washington Quadrangle 7.5 Minute Series topographic map, the site is at an elevation of between 10 and 160 feet above mean sea level (MSL). The eastern portion of the site slopes steeply down towards the west. The central and western portions of the site are relatively flat with a slight slope towards the west. Hylebos Creek runs along the western boundary of the site and flows towards the northwest. The centerline of Hylebos Creek defines the western property line. Hylebos Creek drains into the Hylebos Waterway, which is located 3,600 feet northeast of the site. Hylebos Creek is tidally influenced in the project reach.

A steep bluff runs along the entire length of the eastern portion of the site. The bluff ranges between 100 to 200 feet in height and is nearly vertical in some areas near the southern portion of the site. Exposed soil along the bluff was observed during site visits and appeared to consist of gravelly sand. The ground surface is covered with thick low-lying vegetation in most of the flat area below the bluff (Ridolfi, 2003).

In February 2003, a site cleanup was conducted at the time of the site annexation by the City of Fife; various debris and mechanical parts, observed in earlier visits (Ridolfi, 2001) were hauled off-site.

The reach of Hylebos Creek encompassing the site is characterized by low gradients (0.2%) and is highly channelized. Man-made structures are present in Hylebos Creek in the project reach. These include a wood plank wall that runs for approximately 1000 ft along the western bank, and wooden pilings aligned in two rows parallel to the creek banks. In one location, erosion behind the wooden wall has allowed the stream to carve a notch between the bank and the wall (Ridolfi, 2003).

USGS modeling was available for Hylebos Creek at the 8th Street Bridge (upstream boundary of the site). Based on this information, summer baseflows are estimated around 6 to 7 cubic feet per second (cfs), mean annual discharge is estimated at 21 cfs, bankfull flow (one-day, two-year flow) is about 117 cfs, and the 100-year discharge is estimated at 455 cfs (Kresch and Prych, 1989).

To obtain site-specific data, a transducer was installed under the 4th St. bridge at the downstream edge of the site in November 2002. The transducer was a multi-parameter Troll, capable of measuring water temperature, pH, dissolved oxygen, conductivity, and pressure, with the pressure data correlated to stream elevation readings from a staff gauge. Information was gathered under the 4th St. Bridge from November 5, 2002, through March 4, 2003. The transducer was then moved to the upstream end of the site and installed under the 8th St. bridge (Ridolfi, 2003).

Analysis of the 4th St. bridge data, and comparison to tide data obtained from the NOAA Center for Operational Oceanographic Products and Services (CO-OPS) Web site for Tacoma station 9446484 for the same period (NOAA, 2003), revealed that Hylebos Creek was tidally influenced at the downstream end of the Jordan site. Salinity in Hylebos Creek at that location reaches almost undiluted seawater levels at high tide, then returns to freshwater levels at low tide. Temperature is more influenced by tide than by diel (daily) cycles (Ridolfi, 2003).

At the 8th St. bridge (upstream end of the site), data collected indicate that the creek is also tidally influenced but salinity remains in the freshwater range and temperature is more influenced by diel cycles than by tide. The differences between these limited upstream and downstream data sets suggest that the project reach is one of transition between two sets of aquatic habitat conditions (Ridolfi, 2003).

Although the parcel on which the project is to be constructed covers approximately 15.3 acres, the area that can be enhanced, the portion below the bluff, covers roughly 7 acres. The reach of Hylebos Creek that can be modified, between the City of Fife drinking water wells and the 4th St. bridge, is approximately 1,300 ft long (see Figure 2).

The proposed action entails regrading a portion of the site along Hylebos Creek to increase habitat complexity and diversity, create rearing and feeding habitat (channels and pools) adjacent to Hylebos Creek for out-migrating juvenile salmon, enhance existing wetlands, and enhance existing vegetation to create wildlife habitat for birds and small mammals in buffer areas.

The project is designed to create meandering side channels that are connected to the main channel in several locations and are constructed so that they drain to avoid stranding fish at low tide. The project also creates side pools which take advantage of the salinity gradient along the reach to provide habitat suitable for different plant, invertebrate, and aquatic communities. Deeper areas of the pools remain permanently flooded, while the

rest drain at lower flows.

A conceptual grading plan (Figure 2) and typical cross-sections (Figure 3) were developed. The excavation volumes are estimated at 30,000 cubic yards. Approximately 0.2 acres of existing wetlands will be affected by construction, but the project will result in a net wetland increase of approximately one acre. 1.8 acres of new side-channel aquatic habitat will also become available. Approximately 1,700 feet of nature trail and three viewing platforms will be constructed.

Detailed engineering drawings will be provided prior to site construction. Specific construction elements will include: excavation of existing wetland and upland areas at the upstream end of the site to form meandering side-channels; excavation of existing wetland and upland areas at the downstream end of the site to form a dendritic marsh; excavation of some deeper pool areas, placement of boulders and large woody debris to provide cover, increase habitat complexity, and direct flow; grading to prevent stranding in pools and meanders at low water levels; preservation of as many existing trees as possible; and revegetation using native emergent marsh plants, herbaceous plants, shrubs, and trees.

VII. Determination of effects:

A. Explanation of effects of the action on species:

The Puyallup River system contains the southernmost population of bull trout in the Puget Sound Management Unit. The Puyallup core area is critical to maintaining the overall distribution of migratory bull trout within the management unit, since it is the only anadromous bull trout population in south Puget Sound. The Puyallup core area includes several major watersheds that drain the north and west sides of Mount Rainier. This glacial source significantly influences both water and substrate conditions in the mainstem reaches of the watershed. Both anadromous and fluvial/resident bull trout local populations have been identified in the Puyallup and White River systems, which converge in the lower basin at river mile 10.4 of the Puyallup River. Limited information is available regarding the distribution and abundance of bull trout in the core area. Observations of bull trout have generally been incidental to other fish surveys. Glacial turbidity creates limited opportunities and sites to survey for bull trout in this system (USFWS 2004).

Bull trout exhibit resident and migratory life history strategies through much of their current range. Migratory bull trout spawn in tributary streams where juvenile fish rear from one to four years before migrating to either a lake, river, or in certain coastal areas, to saltwater, where maturity is reached in one of the three habitats. Bull trout are opportunistic feeders. Food habits are primarily a function of size and life history strategy. Migratory bull trout prey on terrestrial and aquatic insects, amphipods, mysids, crayfish and small fish. Adult migratory bull trout are primarily piscivorous, feeding on various trout, salmon, whitefish, yellow perch and sculpin. (USFWS, 1999).

The Puyallup Tribal fisheries in the lower Puyallup River and the U.S. Army Corps of Engineers

trap at Buckley commonly intercept large migratory bull trout, indicating that an anadromous life history form of bull trout is present in the system (Hunter, *in litt.*2001, **in** USFWS 2004). Bull trout have been confirmed in tidewater areas of the lower Puyallup River (Baker and Moran 2002; Puyallup Tribe *in litt.*2001 **in** USFWS 2004). Primary foraging, migration, and overwintering habitat for migratory bull trout within the core area is believed to be the mainstem reaches of the White, Carbon and Puyallup Rivers. The anadromous life history form is believed to use Commencement Bay and likely other marine nearshore habitats along Puget Sound (USFWS 2004).

The project site is adjacent to the tidally influenced reach of Hylebos Creek, which flows into the Hylebos Waterway (3,600 feet northeast of the site). No known observations of bull trout have been made in the immediate vicinity of the project area. The level of use by bull trout within the Jordan project areas is expected to be minimal to none. No bull trout spawning or rearing is known to occur within Hylebos Creek. Bull trout use, if any, within the habitat restoration area during construction is expected to be limited to foraging anadromous bull trout adults from other drainages or basins, particularly at high tide.

Project construction may result in short term increases in turbidity. Potential impacts to bull trout will be limited to high tide periods immediately following debris removal or log placement. Heavy equipment will be used during construction, which will generate noise for a period of a few weeks. The total construction period is planned for 10 to 12 weeks, including activities which do not generate high levels of noise, such as planting. There is a potential for water quality impacts associated with construction activities, but Best Management Practices (BMPs) will be used to avoid or minimize these impacts.

The increases in sedimentation should be within the levels currently found in the estuary. The Puyallup River enters the bay approximately 2.5 miles to the south, carrying significant amounts of glacial flour. The plume of the river moves to the northwest towards the Brown's Point shoreline. Suspended clay particles are deposited quickly as they interact with saline waters. Due to the fact that bull trout have not been observed in the area, the project site is only accessible during high tide events, the site is located at the head of Hylebos waterway removed from more natural nearshore areas around Commencement Bay, and the potential increase in turbidity is within the limits currently found in the area, the conclusion reached is bull trout may be affected, but they are not likely to be adversely affected.

It is expected that anadromous adult bull trout, if present, would be unlikely to use the waters of Hylebos Creek during construction, and would not be directly harmed by this habitat rehabilitation project. The potential to take adult bull trout because of the work at Hylebos Creek is expected to be discountable.

The proposed project will improve off-channel habitat, and marsh and riparian vegetation. These improvements will have beneficial effects not only to Commencement Bay salmon stocks in particular, but also to other Puget Sound anadromous fish stocks, which may have a beneficial effect for the listed bird species.

A “may affect, not likely to adversely affect” determination is warranted for bull trout because:

- No bull trout spawning or rearing is known to occur within Hylebos Creek. Bull trout use, if any, within Hylebos Creek during construction is expected to be limited to foraging anadromous adults.

- Adult anadromous bull trout will not be adversely affected, as they will likely avoid the site during construction. Project construction will occur during the fish window, from July 16 through February 15, when bull trout are less likely to be in the area, and when water temperatures are elevated, during the early part of the fish window.

- No bull trout mortality is expected as a result of the proposed habitat rehabilitation.

The project occurs within proposed bull trout critical habitat. Since the project will occur during low tides, turbidity will be minimal. The project will enhance bull trout habitat. This project will not destroy or adversely modify proposed critical habitat for bull trout.

B. Explanation of actions to be implemented to avoid, minimize, or reduce adverse effects:

While clearing riparian vegetation and the potential to temporarily increase sedimentation in Hylebos Creek are likely adverse effects to aquatic species, the relationship of incidental take to these two effects is currently unknown. On a qualitative level, the potential direct effect of clearing and grading on the aquatic environment is expected to be minimized by the proposed conservation measures. Similarly, the proposed conservation measures are anticipated to reduce potential effects to bull trout in Hylebos Creek to negligible levels.

Conservation Measures:

1. To avoid potential direct impacts to bull trout, as well as other aquatic species, construction will only occur within the work-window specified for the project. This will limit the sedimentation in Hylebos Creek to summer months.
2. The contractor will implement the Temporary Erosion and Sedimentation Control Plan (TESCP) as shown in the contract documents and construction drawings. The TESCP will be implemented before the start of any ground disturbing activities. The TESCP will be based on current Best Management Practices (BMPs) and will include measures such as silt fences, straw bale dikes, and dewatering to allow excavation to proceed in unsaturated conditions.
3. To minimize the potential for direct impacts to listed and candidate aquatic species, no hazardous materials or toxic materials will be transferred or stored within 50 feet of the MHHW of Hylebos Creek.
4. No equipment will be refueled or maintained within 50 feet of the MHHW of Hylebos Creek. Equipment will be serviced or maintained in designated areas where stormwater runoff can be prevented from directly entering the water.
5. An emergency spill kit will be stored at the work site and construction crews trained in their proper use.
6. All conditions of the Hydraulic Project Approval will be followed.

A. Explanation of effects of the action on species:

Bald eagles are known to forage in the vicinity of the project area. They are commonly seen at the mouth of the Puyallup River, approximately 2.5 miles to the south. The closest known nest sites are approximately 4 miles to the northwest, at Point Defiance. Bald eagles occupy large feeding territories and it is doubtful that they use Commencement Bay exclusively over other feeding areas.

Heavy equipment (backhoe, loaders, dump trucks) will be employed during project construction. However, the project site is located in a busy industrial area with ongoing lumber mill, ship yard, oil refining and other industrial activities. Therefore, project construction activities are not expected to be more disturbing than ambient conditions. Given the small size of the site and the temporary nature of construction disturbances, the project is not expected to impair foraging opportunities for eagles.

The potential of the project to directly affect bald eagles is expected to be negligible. Hylebos Waterway and Hylebos Creek provide foraging habitat for both nesting and wintering bald eagles, though sightings are uncommon. There are almost no large trees at the Jordan Site save for one 44-in. Western red cedar, nor stands of mature trees in the immediate area, although the nearby Milgard Mitigation site includes bird perches intended to simulate snags. There are no eagle nest sites, perches, or roosts known to occur within one mile of the project (Ridolfi, 2003). Transient bald eagles may occur within the vicinity of the Hylebos Waterway during project construction, but eagle use in the project area is unlikely.

Adverse effects to bald eagles due to construction and temporary increases in noise levels are not anticipated due to limited potential for use of the project area, and the existing level of ambient industrial-based noise.

A “may affect, not likely to adversely affect” determination is warranted for bald eagles because:

- Bald eagles have been documented in the area.
- There is no bald eagle nesting habitat identified within one mile of the project area.
- No potential nesting, roosting, or perching habitat trees will be impacted by the project.
- Bald eagles are not likely to forage along the lower Hylebos Creek due to extensive industrial activity. Any foraging activity is expected during the fall when mature salmon return to Hylebos Creek. The project will be completed before the peak return spawning period for salmon in October. Eagles, however, are not precluded from the project area during the construction window for this project.
- Impacts to the eagles prey base are expected to be negligible.

The proposed project will improve off-channel habitat, and marsh and riparian vegetation. These improvements will have beneficial effects not only to Commencement Bay salmon stocks in particular, but also to other Puget Sound anadromous fish stocks, which may have a beneficial effect for the listed bird species.

B. Explanation of actions to be implemented to avoid, minimize, or reduce adverse effects:

The potential for the incidental take of bald eagles is expected to be negligible. Adverse effects to bald eagles due to construction and temporary increases in noise levels are not anticipated due to limited potential for use of the project area, and the existing level of ambient industrial-based noise.

VIII. Effect determination(s) and response(s) requested: [*optional]

A. Listed species/designated critical habitat:

Determination

Response requested

NO EFFECT

(species: _____)
(critical habitat: _____)

___ *Concurrence
___ *Concurrence

IS NOT LIKELY TO ADVERSELY AFFECT

(species: _Bull trout (*Salvelinus confluentus*)
(critical habitat: _____)

__X_ Concurrence
___ *Formal Consultation
___ Concurrence
___ *Formal Consultation

(species: ___Bald eagle (*Haliaeetus leucocephalus*)
(critical habitat: _____)

__X_ *Concurrence
___ *Concurrence

IS LIKELY TO ADVERSELY AFFECT

(species: _____)
(critical habitat: _____)

___ Formal Consultation
___ Formal Consultation

B. Proposed species/proposed critical habitat:

Determination

Response requested

NO EFFECT

(species: _____)

___ *Concurrence

(critical habitat: _____)

___ *Concurrence

IS NOT LIKELY TO JEOPARDIZE PROPOSED SPECIES

(species: _____)

___ *Conference

IS NOT LIKELY TO ADVERSELY MODIFY PROPOSED CRITICAL HABITAT

(critical habitat: _____)

___ *Conference

IS LIKELY TO JEOPARDIZE PROPOSED SPECIES

(species: _____)

___ Conference

IS LIKELY TO ADVERSELY MODIFY PROPOSED CRITICAL HABITAT

(critical habitat: _____)

___ Conference

C. Candidate species:

Determination

Response requested

NO EFFECT

(species: _____)

___ *Concurrence

IS NOT LIKELY TO JEOPARDIZE

(species: _____)

___ *Concurrence

IS LIKELY TO JEOPARDIZE

(species: _____)

___ Conference

IX. Signature Page

Initiating Officer Mary A. Mahaffey Date 1/12/05

Concur Do Not Concur

Comments:

Consultation and Technical Assistance Supervisor John G. Harkins, Acting
Date 2/10/05

Concur Do Not Concur

Comments:

REFERENCES:

Commencement Bay Natural Resource Trustees. 1997. Commencement Bay Natural Resource Damage Assessment Restoration Plan and Final Programmatic Environmental Impact Statement. Prepared by the U.S. Fish and Wildlife Service and National Oceanic and Atmospheric Administration for the Commencement Bay Natural Resource Trustees and Cooperating Agencies.

Kresch, D. L., and E. A. Prych. 1989. Streamflow Statistics for Streams on the Puyallup Indian Reservation, Washington. U.S. Geological Survey, Water-Resources Investigation Report 87-4228.

National Oceanic and Atmospheric Administration (NOAA). 2003. Center for Operational Oceanographic Products and Services (CO-OPS): Preliminary (Tides) Water Level Data. Available: <http://co-ops.nos.noaa.gov/data_retrieve.shtml?input_code=101011111pw1>.

Ridolfi Engineers Inc. 2001. Phase I Environmental Site Assessment: Jordan Property, Northwest Corner of 8th Street East and 62nd Avenue East, Pierce County, Washington. Prepared for the Commencement Bay Natural Resource Damage Assessment and Restoration Trustees. December.

Ridolfi Engineers Inc. 2003. Draft Biological Assessment for the Jordan Site: Hylebos Creek Off-channel Habitat Restoration Project. Prepared for the Commencement Bay Natural Resource Damage Assessment and Restoration Trustees.

U.S. Fish and Wildlife Service. 1999. Programmatic Biological Assessment for U.S. Fish and Wildlife Service Habitat Restoration Activities of the Western Washington Office, Upper Columbia River Basin Office, Moses Lake Fish and Wildlife Office and Mid-Columbia River Basin Fisheries Resource Office.

U.S. Fish and Wildlife Service. 2004. Draft Recovery Plan for the Coastal-Puget Sound Distinct Population Segment of Bull Trout (*Salvelinus confluentus*). Volume I (of II): Puget Sound Management Unit. Portland, Oregon. 389+xvii pp.

APR 6 2005



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
PROGRAM PLANNING AND INTEGRATION
Silver Spring, Maryland 20910

To All Interested Government Agencies and Public Groups:

Under the National Environmental Policy Act, an environmental review has been performed on the following action.

TITLE: Environmental Assessment and Finding of No Significant Impact - Jordan Property/Hylebos Creek Off-Channel Restoration Project

LOCATION: The Jordan Property/Hylebos Creek Off-Channel Restoration Project at Commencement Bay; Fife, Washington

SUMMARY: The National Oceanic and Atmospheric Administration (NOAA) is the lead federal agency for National Environmental Policy Act (NEPA) compliance for the Jordan Property/Hylebos Creek Off-Channel Restoration Project, Commencement Bay, Fife, Washington. This project is sponsored by the Commencement Bay Natural Resource Trustees and designed to help restore natural resources injured by the releases of hazardous substances or discharges of oil in Commencement Bay, Tacoma, Washington.

NOAA prepared this Environmental Assessment (EA) to set forth: (1) its decision-making authority for this project, (2) its determination that an alternative (Alternative 6a, Meandering Creek Transition to Dendritic Marsh) other than the No Action Alternative or the more technical or intensive alternatives would be the most ecologically sound alternative, and (3) its determination that an environmental impact statement (EIS) will not need to be prepared for this project.

The Trustees determined that regrading six acres of property along Hylebos Creek to create channels, backwater pools, and saltwater marshes using locally appropriate native plant communities would serve as rearing and feeding habitat for fish and wildlife species in the area as well as for juvenile salmon outmigrating in the Creek, including chinook salmon (*Oncorhynchus tshawytscha*), a listed species under the Endangered Species Act (ESA; 50 CFR 223). The public and other interested parties have participated during public meetings in the evaluation of this site.

The project will be constructed in compliance with all permits required by the State and Federal regulatory agencies. The Biological Assessment for the project, and the informal consultations (National Marine Fisheries Service and the U.S. Fish and Wildlife Service addressing ESA and Essential Fish Habitat) for the Jordan Property/Hylebos Creek Off-Channel Restoration Project are part of the Administrative Record for this project. The proposed activities were evaluated under the goals and objectives and other evaluation criteria specified by the Commencement Bay NRDA Restoration Plan and with the evaluation factors under the National Environmental Policy Act (40 CFR 1508.27). Based on a review of all of these factors and the referenced documents, NOAA and the Trustees concur with the U.S. Army Corps of Engineers and the City of Tacoma



NOAA and the Trustees concur with the U.S. Army Corps of Engineers and the City of Tacoma that the proposed activities would not have a significant effect on the quality of the human environment.

The environmental review process has led NOAA to conclude that this restoration action will not have a significant effect on the quality of the human environment, and NOAA is issuing a Finding of No Significant Impact (FONSI). Therefore, an environmental impact statement will not be prepared. A copy of the FONSI, including the EA, is available upon request to the Responsible Official listed below.

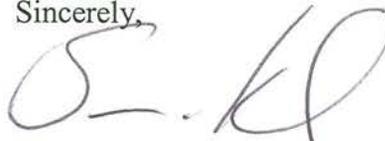
RESPONSIBLE

OFFICIAL: William T. Hogarth, Ph.D.
Assistant Administrator for Fisheries
NOAA's National Marine Fisheries Service
1315 East-West Highway
Silver Spring, MD 20910

We encourage electronic submission of your comments on this EA, but written comments are also acceptable. If you wish to submit comments, please send them either electronically by email to gail.e.siani@noaa.gov, or by U.S. mail to:

Gail Siani, Case Coordinator
NOAA GC-Natural Resources, NW
7600 Sand Point Way, NE
Seattle, WA 98115

Sincerely,



Susan A. Kennedy
Acting NEPA Coordinator

Enclosure

FINDING OF NO SIGNIFICANT IMPACT
ENVIRONMENTAL ASSESSMENT
FOR THE JORDAN PROPERTY/HYLEBOS CREEK OFF-CHANNEL
HABITAT RESTORATION PROJECT
COMMENCEMENT BAY, TACOMA, WASHINGTON

The National Oceanic and Atmospheric Administration (NOAA) is the lead federal agency for National Environmental Policy Act (NEPA) compliance for the Jordan Property/Hylebos Creek Off-Channel Habitat Restoration Project, Commencement Bay, Tacoma, Washington. This project is sponsored by the Commencement Bay Natural Resource Trustees and designed to help restore natural resources injured by the releases of hazardous substances or discharges of oil in Commencement Bay, Tacoma, Washington.

NOAA prepared this Environmental Assessment (EA) to set forth: (1) its decision-making authority for this project, (2) its determination that an alternative (Alternative 6a, Meandering Creek Transition to Dendritic Marsh) other than the No Action Alternative or the more technical or intensive alternatives would be the most ecologically sound alternative, and (3) its determination that an environmental impact statement (EIS) will not need to be prepared for this project.

The Trustees determined that regrading six acres of property along Hylebos Creek to create channels, backwater pools, and saltwater marshes using locally appropriate native plant communities would serve as rearing and feeding habitat for fish and wildlife species in the area as well as for juvenile salmon outmigrating in the Creek, including chinook salmon (*Onchorynchus tshawytscha*), a listed species under the Endangered Species Act (ESA; 50 CFR 223). The public and other interested parties have participated during public meetings in the evaluation of this site.

The project will be constructed in compliance with all permits required by the State and Federal regulatory agencies. The Biological Assessment for the project, and the informal consultations (National Marine Fisheries Service and the U.S. Fish and Wildlife Service addressing ESA and Essential Fish Habitat) for the Jordan Property/Hylebos Creek Off-Channel Restoration Project are part of the Administrative Record for this project. The proposed activities were evaluated under the goals and objectives and other evaluation criteria specified by the Commencement Bay NRDA Restoration Plan and with the evaluation factors under the National Environmental Policy Act (40 CFR 1508.27). Based on a review of all of these factors and the referenced documents, NOAA and the Trustees concur with the U.S. Army Corps of Engineers and the City of Tacoma that the proposed activities would not have a significant effect on the quality of the human environment. Therefore NOAA concludes that an EIS would not need to be prepared.

DETERMINATION:

Based upon an environmental review and evaluation of the Environmental Assessment for the Jordan Property/Hylebos Creek Off-Channel Restoration Project, I have determined that the proposed action does not constitute a major Federal action significantly affecting the quality of the human environment within the meaning of Section 102(2)(c) of the National Environmental

Policy Act of 1969, as amended. Accordingly, an environmental impact statement is not required for this project.

William T. Hogarth

William T. Hogarth, Ph.D.

Assistant Administrator for Fisheries

National Marine Fisheries Service

National Oceanic and Atmospheric Administration

3/28/05

Date

May 9, 2003

City of Fife
Fife City Hall
5411, 23rd Street East
Fife, WA 98424

Attention: Steve Worthington, Community Development Director

Object: Letter of request, master permit application for Jordan Site Habitat Restoration Project: Shoreline Management permit, Critical Areas permit, SEPA checklist, grading permit, proposed significant tree removal and replacement

Dear Sir,

The Commencement Bay Natural Resource Damage Assessment and Restoration Trustees (Trustees) are planning a habitat restoration project at a site in Fife, Washington, known as the Jordan site. The property was annexed by the City of Fife in February 2003, with the intention of promoting this effort and participating actively. The Trustees propose to create new habitat and enhance existing habitat along Hylebos Creek for a variety of plants and animals, providing particular benefit for juvenile salmonids.

This letter constitutes a master permit application to request the following permits and approvals from the City of Fife: a Shoreline Management permit, a Critical Areas permit, and an approval for proposed significant tree removal and replacement. In addition, an application for a grading permit will be submitted in a separate package within a few weeks.

This letter contains a project description, a description of permits required by the City and by other agencies, and an explanation of accompanying supporting documentation.

PROJECT DESCRIPTION

The Trustees, in consultation with Pierce County and the City of Fife, are responsible for designing, developing, implementing, and constructing the restoration project for the Jordan Site, as well as for any related project maintenance and adaptive management activities, while the City is responsible for ordinary upkeep and maintenance of the Site. The National Oceanic and Atmospheric Administration (NOAA) is the lead agency of the Trustees and is responsible for managing the restoration projects in Commencement Bay and watersheds draining into Commencement Bay. NOAA hired Ridolfi Inc. to design the project.

The Jordan Site is adjacent to a tidally influenced reach of Hylebos Creek, and has served in the past for gravel mining operations, dairy farming, and storage of truck parts and metal scrap. The Site is characterized as moderately disturbed and generally does not provide optimum habitat for aquatic or terrestrial species.

The purpose of the project is to create off-channel habitat for juvenile salmonids and native plant revegetation. This will be accomplished by regrading a portion of the site along Hylebos Creek to increase habitat complexity and diversity, create rearing and feeding habitat (channels and pools) adjacent

to Hylebos Creek for juvenile salmon out-migrating in the Hylebos Creek, enhance existing wetlands, and enhance existing vegetation to create wildlife habitat for birds and small mammals in buffer areas. The project will provide approximately six acres of streamside wetland and riparian habitat by regrading the site to create permanently flooded backwater pools and salt water marshes. Native vegetation will be planted on gently sloping surfaces and on the upland portions of the site.

Several alternatives, including the no-action alternative and six action alternatives, were considered for the Site. The Trustees and the City have used an iterative method to develop the alternatives for consideration for this Site that incorporated public input. They selected a Meandering Creek Transition to Dendritic Marsh.

Phase 1 of the Habitat Restoration Project is proposed for construction during the 2003 construction season. It comprises:

- Removal of the wall and pilings from within Hylebos Creek
- Excavation of existing wetland and upland areas at the upstream end of the Site to form meandering side-channels
- Excavation of existing wetland and upland areas at the downstream end of the Site to form a dendritic marsh
- Excavation of some deeper pool areas
- Placement of boulders and large woody debris to provide cover, increase habitat complexity, and direct flow
- Grading to prevent stranding of pools and meanders at low water levels
- Preservation of as many existing trees as possible
- Revegetation using native emergent marsh plants, herbaceous plants, shrubs, and trees
- Conversion of an existing dirt road into a nature trail
- Construction of nature viewing platforms
- Posting of interpretive signs

Except for the removal of the in-stream wall and pilings, all the work will take place on the Jordan Site itself.

A conceptual grading plan and typical cross-sections were developed, and are attached to this request. The excavation volumes were estimated at 30,000 cubic yards. Approximately 0.2 acres of existing wetlands will be affected by the changes in geometry, but the project will result in a net wetland increase of approximately one acre. Some 1.8 acres of new side-channel aquatic habitat will also become available. Approximately 1,700 feet of nature trail and three viewing platforms will be constructed.

The optional Phase 2 of the project, currently under consideration, has only been advanced to the conceptual stage. There are on-going discussions with the property owner and the U.S. Army Corps of Engineers to clarify the extent of permit modifications that would be needed, and to identify monitoring requirements. Phase 2 would likely include the following elements:

- Excavation on the Milgard Mitigation Wetland Site to form counter-meanders and additional side-channels
- Placement of boulders and large woody debris to provide cover, increase habitat complexity, and direct flow
- Grading to prevent stranding of pools and meanders at low water levels
- Revegetation using native emergent marsh plants, herbaceous plants, shrubs, and trees at the Milgard Mitigation Wetland Site, compatible with previous planting, to increasing shade along the riparian corridor

PERMITS REQUIRED FROM THE CITY

The City of Fife is the lead agency for the State Environmental Protection Act (SEPA). A SEPA checklist was prepared and is submitted in appendix to this request. In addition, the City requires the following permits for the project:

- Shoreline Management Permit
- Critical Areas Permit
- Grading Permit

The present letter of request serves as master permit application to request the first two permits from the City of Fife. An application for a grading permit will be submitted in a separate package within the next few weeks.

The current Shoreline Fife Master Program designation of the site is “Type I”. The site is designated as a “Priority Habitat” area by WDFW. The proposed work at the site will require regrading of riparian and wetland areas that would normally be part of the required buffers.

The City also requires approval by the Community Development Director, under FMC 19.64.140, for the removal of deciduous trees over 6 inches in diameter and subsequent replacement with planted trees selected from suitable native species. The trees to be removed and replaced are shown in a table below. The trees to be removed are alders, cottonwoods, and maples. The replacement trees will be selected from native species, and will include many conifer species (see proposed planting list, in appendix).

Table 1: Significant Tree Removal and Proposed Replacement Ratio

Type	Class Size	Species	Number	Proposed Replacement Ratio
Deciduous	6 – 11 inches	Alder, cottonwoods, and maples	Estimated 25 to 40	5 two-inch caliper trees, min. 6 feet tall
Deciduous	12 inches	Alder	2	5 two-inch caliper trees, min. 6 feet tall
Deciduous	14 inches	Alder	1	7 two-inch caliper trees, min. 6 feet tall
Deciduous	18 inches	Alder	1	7 two-inch caliper trees, min. 6 feet tall

Note that the proposed replacement ratios are equal to or higher than those required in the City of Fife's regulations (FMC 19.64.140).

PERMITS REQUIRED BY OTHER AGENCIES

Permits required by other agencies include:

- U.S. Army Corps of Engineers, Section 404 (Clean Water Act) permit
- 401 Water Quality Certification, Washington Department of Ecology
- Hydraulic Project Approval, Washington Department of Fish and Wildlife (WDFW)
- Compliance with Section 7 of the Endangered Species Act
- Compliance with Essential Fish Habitat provisions of the Magnuson-Stevens Fisheries Management Conservation Act
- National Environmental Policy Act (NEPA) process

A Joint Aquatic Resources Permit Application Form (JARPA) was prepared to comply with the first three items. A biological assessment (BA) has been prepared, and consultation with the U.S. Fish and Wildlife Service and the National Marine Fisheries Service is under way to comply with the next two items. An Environmental Assessment (EA) was prepared to comply with the requirements of NEPA.

The EA will be used as supporting documentation for the Shoreline Management Permit and the Critical Areas Permit, and will be submitted in a separate package within the next few weeks.

If you have any questions or comments, please don't hesitate to call me at (206) 526-6343, or Colin Wagoner at (206) 682-7294.

Sincerely,

Jennifer Steger
Restoration Case Manager

Attachment: SEPA checklist and appendices

cc: Colin Wagoner

City of Fife

Environmental Checklist

A. **BACKGROUND**

1. Name of proposed project, if applicable:

Jordan Site Habitat Restoration Project

2. Name of applicant:

National Oceanic and Atmospheric Administration (NOAA).

3. Address, phone number and name of contact person:

Jennifer Steger, project manager
NOAA Damage Assessment and Restoration Center NW
7600 Sand Point Way NE, Building 1
Seattle, WA 98115
Phone: (206) 526-4363
Fax: (206) 526-6665

4. Date checklist prepared:

May 5, 2003.

5. Agency requesting checklist:

City of Fife.

6. Proposed timing or schedule (include phasing if applicable):

(See attached schedule.)

7. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.

There are no plans to expand this project.

8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this project.

- Environmental Assessment, as required under the National Environmental Policy Act (NEPA).
 - Biological Assessment, as requested under the Endangered Species Act (ESA), for ESA consultation.
 - Joint Aquatic Resources Permit Application Form (JARPA)
9. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, describe.

No other known proposals directly affecting the property covered by this proposal.

10. List any government approvals or permits that will be needed for your proposal, if known.
- NOAA – Finding Of No Significant Impact (FONSI)
 - ESA Section 7 – ESA consultation with National Marine Fisheries Service (NMFS), U.S. Fish and Wildlife Service (USFWS), and Washington Department of Fish and Wildlife (WDFW)
 - WDFW – Hydraulic Project Approval (HPA)
 - Washington Department of Ecology (Ecology) – Section 401 Water Quality Certification
 - U.S. Army Corps of Engineers (USACE) – Section 404 permit
 - City of Fife – Shoreline Management Permit, Critical Areas Permit, and grading permit
11. Give brief, complete description of your proposal, including the proposed uses and the size of the project site. There are several questions later in this checklist that ask you to describe certain aspects of you proposal. You do not need to repeat those answers on this page.

The Jordan Site has been acquired and annexed by the City of Fife, in cooperation with the Commencement Bay Natural Resources Trustees. The Trustees will be responsible for the design, construction, and adaptive management of a stream restoration project, which will include a nature trail. The City of Fife will operate and maintain the site after completion of the project. The project is intended to create off-channel habitat for juvenile salmonids adjacent to the Hylebos Creek.

Although the site covers approximately 15.3 acres, the usable area of the site for this project is the flatter portion encompassing a section of Hylebos Creek, and covers approximately 7 acres. Of this area, approximately 1.5 acres are comprised of Category II wetlands (as described in the attached wetland delineation report). Approximately 15% of the wetland

area will be regraded as part of the project, to create side channels and deeper pools, and to maximize the area and complexity of available habitat for various fish, plant, and invertebrate communities by adjusting gradients and geometry. A nature trail, viewing platforms, and interpretive signs will be added to provide public access and educational opportunities, and the completed site will be part of the City of Fife's park system.

The project is currently being designed, on a fast-track schedule. Current plans are for construction to begin at the end of summer 2003. A second phase of the construction, including channel excavation on the adjacent Milgard Mitigation Wetland Site, is being considered. Phase 2 will be implemented, if agreeable to the property owner and if permitting and monitoring conditions can be negotiated.

12. Location of the proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist.

Northwest corner of 8th Street East and 62nd Avenue East, City of Fife, Pierce County, Washington, Section 6, Township 20 North, Range 4 East. The parcel number is R0420062208, and the legal description obtained from Pierce County reads:

That portion of southeast of northwest lying easterly of Hylebos Creek, except north 500 feet of east 200 feet thereof, except the following: commencing at southwest corner of southeast of northwest, thence south 89 degrees 04 minutes east along centerline Blue County Road, a distance of 1127 feet to point of beginning, thence north 00 degrees 56 minutes east 395 feet to northeast corner of property to Town of Fife # 1891890, thence north 89 degrees 04 minutes west a distance of 232 feet more or less, to northwest corner said property, thence south 00 degrees 56 minutes west a distance of 200 feet to left bank Hylebos Creek, thence southerly along left bank of Hylebos Creek to centerline of Blue County Road, thence south 89 degrees 04 minutes east along said centerline to pint of beginning, except south 15 feet for County Road segregation G 1698.

B. ENVIRONMENTAL ELEMENTS

1. EARTH

- a. General description of the site (circle or highlight one):

flat rolling steep slopes **other**

If other, describe.

The Site is an irregularly shaped 15.30-acre parcel, at an elevation of between 10 and 160 ft MSL. The eastern portion of the Site slopes steeply down towards the west. The central and western portions of the Site are relatively flat with a slight slope towards the west. Hylebos Creek runs along the western boundary of the Site and flows towards the northwest. Ditches and pools on the eastern side of the road at the toe of slope collect and convey seasonal ground water. A steep bluff runs along the entire length of the eastern portion of the Site. The bluff ranges between 100 to 200 feet in height and is nearly vertical in some areas near the southern portion of the Site. The ground surface is covered with thick low-lying vegetation in most of the flat area below the bluff.

b. What is the steepest slope on the site (approximate percent slope)?

The bluff slope is greater than 45%. However, no work is proposed for this area; all proposed work is for the flatter area to the southwest, along Hylebos Creek. All slopes in the proposed project area are less than 15%.

c. What general types of soils are found on the site (for example, clay, sand, gravel, peat, mulch)? If you know the classification of agricultural soils, specify them and note any prime farmland.

Exposed soil along the bluff consists of gravelly sand. Boreholes and test pits were dug in March and April 2003 in the flat area of the site, where the project is proposed. These showed a 2-ft thick layer brown moist sandy gravel fill, overlying a 5 to 9-ft thick layer of moist, brown and red fibrous wood debris mixed with traces of sand and gravel. Under these two layers of fill was a medium dense silty fine gray sand, moist to wet, with occasional traces of clay and organic materials. In a few locations, a 1-ft thick layer of gray silty clay with organics was present immediately below the wood debris.

d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.

The bluff is very steep and would likely constitute a sensitive area. However, no work is proposed in any areas that might exhibit stability issues, such as the bluff and toe area.

e. Describe the purpose, type, and approximate quantities of any filling or grading proposed. Indicate source of fill.

Grading is proposed in the area between the current dirt road and Hylebos Creek. The reshaping of the site geometry will provide gradual changes in elevation and inundation along the creek, creating backwater pools and increasing habitat complexity and diversity.

Excavated materials are intended for on-site reuse as feasible. Topsoil or soil amendments may be imported and placed to encourage planting growth in riparian areas. Approximately 30,000 cubic yards of material will be excavated to create aquatic and riparian habitat areas.

Samples from the wood debris layer are currently being evaluated to determine their suitability to support native plants. If found unsuitable for on-site use, excavated wood debris may require off-site disposal.

- f. Could erosion occur as a result of clearing, construction or use? If so, generally describe.

Over the short-term, construction would result in a temporary increase in erosion potential, but implementation of erosion control practices would minimize the extent of these impacts. Slopes will be temporarily stripped of vegetation; the site will require extensive removal of non-native and invasive plant species. Over the long-term, restoration of a natural soil profile and vegetation community is expected to improve sediment and soil quality, and return erosion potential to current conditions or better.

- g. Approximately what percentage of the site will be covered with impervious surfaces after project construction (for example, asphalt, buildings)?

No paving is proposed. A nature viewing trail constructed over the existing dirt access road and some viewing points are the only structures proposed, and will likely be built of wood. One to four unpaved parking spots may be created at the 8th Street access, on areas that are currently part of the dirt road.

- h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any.

A temporary erosion and sediment control plan (TESCP) will be in place in accordance with the 1992 Stormwater Management Manual for the Puget Sound Basin (as required by the City) prior to construction, along with best management practices (BMPs). These practices may include, but are not limited to, construction staging to minimize exposure of bare soil, covering or stabilizing areas of exposed soil, and use of silt fences or other measures to control sedimentation and turbidity.

2. *AIR*

- a. What types of emissions to the air would result from the proposal (i.e. dust, automobile, odors, industrial wood smoke) during construction and when the project is completed? If any, generally describe and give approximate quantities if known.

During the construction phase, there will be minimal short-term increases in dust and vehicle exhaust from earth moving activities (e.g. clearing, grubbing, soil and sediment transport, planting) and operation of construction equipment. Construction is expected to last approximately 10 to 12 weeks for Phase 1, and 4 to 6 weeks for Phase 2. No significant impacts are expected due to the relatively small amounts of excavation and the temporary nature of construction activities. No long-term impacts are expected to result from the project.

- b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe.

There are no known off-site sources of emissions or odors that may affect the proposal.

- c. Proposed measures to reduce or control emissions or other impacts to the air, if any.

Exhaust controls will be used on all construction equipment to minimize exhaust emissions. Dust will be controlled as necessary by watering down exposed earth. If there is off-site transport of any materials, haul trucks will be covered or have loads that are below sideboards to control blowing dust along the haul route. A grading permit will be required from the City of Fife, which will require implementation dust control practices.

3. ***WATER***

- a. Surface Water:

1. Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, described type and provide names. If appropriate, state what stream or river it flows into.

Hylebos Creek runs along the western boundary of the Site and flows towards the northwest. The centerline of Hylebos Creek defines the western property line. Hylebos Creek drains into the Hylebos Waterway, which is located 3,600 feet northeast of the Site. Hylebos Creek is tidally influenced at the project site.

The reach of Hylebos Creek encompassing the site is characterized by low gradients (0.2%) and is highly channelized. Summer baseflows are around 6 to 7 cubic feet per second (cfs), bankfull flow is about 117 cfs, and the 100-year discharge is estimated at 455 cfs.

In the area of the site, a man-made structure was observed in-stream. A wood plank wall runs for approximately 1000 ft along the western bank of Hylebos Creek, along the edge of the Milgard Mitigation Wetland Site. Additionally, two lines of wooden pilings are in the

creek bed adjacent to each bank. Its original purpose has not been ascertained. In one location, erosion behind the wooden wall has allowed the stream to carve a notch between the bank and the wall.

According to the City of Fife's Sensitive Area Code, Hylebos Creek is considered a Category 3 stream, requiring a 150-ft buffer.

Two wetland areas were identified on site during a delineation conducted in February 2003. Wetland A is a forested/emergent wetland located along the east side of Hylebos Creek. The on-site portion represents 65,800 square feet (1.51 acres). This wetland also continues off-site to the south, onto the lot owned by City of Fife where the backup water supply wells are located, for another 23,100 sq. ft (0.53 acres). Wetland B is a palustrine wetland located to the southeast of Wetland A, near the site access gate, covering 11,200 sq. ft (0.26 acres).

According to FMC 17.17.020.D, the City has adopted the Puget Sound region wetland rating system developed by the Department of Ecology to determine wetland category for regulatory purposes. Based on this rating system, Wetland A would be considered a Category II wetland, requiring a 100-ft buffer, since it is contiguous with a salmonid fish-bearing water body. Wetland B would be considered a Category III wetland, requiring a 50-ft buffer.

2. Will the project require any work over, in, or adjacent to (within 200 feet) the described waters? If yes, please describe and attach available plans.

Yes. A major purpose of the project is to create off-channel habitat creation for juvenile salmonids, adjacent to the Hylebos Creek. This will be accomplished by regrading a portion of the site along Hylebos Creek to increase habitat complexity and diversity, create rearing and feeding habitat (channels and pools) adjacent to Hylebos Creek for juvenile salmon out-migrating in the Hylebos Creek, enhance existing wetlands, and enhance existing vegetation to create wildlife habitat for birds and small mammals in buffer areas. (See attached drawings.) The wooden wall and pilings will also be removed from the stream.

3. Estimate the amount of fill and dredge material that would be placed in or removed from surface or wetlands and indicate the area of the site that would be affected. Indicate the sources of fill material.

An estimated 0.75 to 1.5 acres of wetlands would be disturbed by the project construction. Approximately 30,000 cubic yards of materials would be excavated. To the extent possible, materials excavated will be reused on site. Approximately 10 cubic yards of fill would be placed in-stream. This in-stream fill would consist of boulders and large woody debris that would provide beneficial habitat in Hylebos Creek and the new off-channel areas.

4. Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known.

The new off-channel habitat areas will be connected to the main channel of Hylebos Creek in several locations (see attached drawings). A few deep pools will remain flooded at low flow, but the new side-channel sections will drain towards the creek at this time. Flow will be redistributed within the bounds of the project reach, but no net withdrawal or diversion of water out of the stream will result. The flow rates at the upstream and downstream boundaries of the site are not expected to change as a result of the project.

5. Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.

Pierce County flood hazard maps indicate that part of the Site is situated in the 100-year floodplain, "Special Flood Hazard Area", as established in the Flood Insurance Rate Maps prepared by the Federal Emergency Management Agency (FEMA).

6. Does the proposal involve any discharge of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.

The project will include no discharge of waste materials to surface waters.

b. Ground Water:

1. Will ground water be withdrawn, or will water be discharged to ground water? Give general description, purpose, and approximate quantities if known.

No ground water springs have been identified on site although some circumstantial evidence exists for seepage from the toe of the bluff to the wetlands in their widest portion near the southwest corner of the site. If such a spring is found, the water may be used to adjust salinity and/or enhance wetland areas. No extraction of ground water from wells is planned for this project, nor any discharge to ground water.

2. Describe waste materials that will be discharged into the ground from septic tanks or other sources, if any (for example: Domestic sewage; industrial containing the following chemicals...., agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.

The project includes no waste materials that will be discharged into the ground.

c. Water Runoff (including storm water)

1. Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.

Runoff may result from precipitation or from ground water seepage from the bottom of excavations during construction. Areas designed to act as permanently flooded pools once in service may be used as temporary sedimentation basins during construction. After site revegetation, runoff production is expected to return to present conditions.

2. Could waste materials enter ground or surface waters? If so, generally describe.

No waste materials are expected to enter ground or surface waters as a result of this project.

- d. Proposed measures to reduce or control surface, ground, and runoff water impacts, if any:

During construction of the intertidal habitat, there would potentially be minor short-term impacts to water quality resulting from increased turbidity. Overall, impacts are expected to be temporary and localized. Impacts would be greatest at high tide, when the site experiences the greatest inundation. Several measures may be implemented during construction to minimize impacts, including:

- Avoidance of work in inundated areas during high tide;
- Use of sediment curtains and silt fences to contain suspended sediments;
- Use of cofferdams to contain construction area during tidal inundation;
- Avoidance of work during salmonid migration periods; and
- Avoidance of releases of gas, oil, and diesel from construction equipment into waters adjacent to the site.

Over the long-term, the project would benefit water quality by re-establishing intertidal vegetation communities. These communities would serve to trap sediments and filter water, which would benefit water quality both in Hylebos Creek and in Commencement Bay. Additionally, slopes adjacent to Hylebos Creek and off-channel pools will be formed at low angles to reduce the potential for slumping. No long-term increase in runoff water quantities or decrease in runoff water quality is expected to result from this project.

4. ***PLANTS***

a. Circle or highlight types of vegetation found on the site:

Deciduous tree:

Alder

Maple

Aspen

Other: Black cottonwood (*Populus balsamifera*), willow (*Salix* spp.)

Evergreen tree:

Fir

Cedar (one, 44")

Pine

Other: _____

Shrubs

Grass

Pasture

Crop or grain

Wet soil plants:

Cattail

Buttercup

Bulrush

Skunk Cabbage

Other: _____

Cattail (*Typha latifolia*), red-osier dogwood (*Cornus stolonifera*), willows (*Salix* spp.), irises (*Iris* spp.), rushes (*Juncus* spp.)

Water plants:

Water lily

Celgrass

Milfoil

Other types of vegetation:

Non-native or invasive species: Himalayan blackberry (*Rubus discolor*), reed canary-grass (*Phalaris arundinacea*), knotweed (*Polygonum* spp.), creeping buttercup (*Ranunculus repens*).

b. List threatened or endangered species known to be on or near the site.

No threatened or endangered plant species were identified on or near the site, either during the site visits and the wetland delineation or from the WDFW Habitats and Species information.

c. What kind and amount of vegetation will be removed or altered?

Non-native and invasive vegetation will be removed (e.g., Himalayan blackberry, knotweed, reed canary-grass). Larger trees and trees of significance will be preserved to the extent possible, in conformance with the City of Fife's regulations (Fife Municipal Code, section 19.64.140).

- d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any:

Site revegetation will use native plants, for both upland and wetland communities. A preliminary list of plants that may be used for upland and marsh planting at the Jordan site has been prepared (see attached).

5. **ANIMALS**

- a. Circle or highlight any birds and animals which have been observed on or near the site or are known to be on or near the site:

Birds: Hawk Heron Songbird Eagle
Other: _____

Swallows, songbirds, and passerine birds have been observed in the area. Canada geese and mallard ducks have been spotted nearby using the open water areas at the Milgard wetland mitigation site across Hylebos Creek.

Mammals: Deer Bear Elk Beaver
Other: Small mammals (e.g., squirrels and muskrats)

Other small mammal and amphibian species are expected to use the habitats available on site.

Fish: Bass Salmon Herring Trout
Shellfish Other: _____

A fall run of chinook salmon, which is listed as a threatened species under the federal Endangered Species Act, historically uses the Hylebos Creek system and its tributaries during its life cycle. Currently, such usage is rare.

- b. List any threatened or endangered species known to be on or near the site.

In addition to the Puget Sound Evolutionarily Significant Unit (ESU) chinook salmon (*Oncorhynchus tshawytscha*) fall run mentioned above, listed by the NMFS, there are two threatened species listed by the USFWS which may occur in the project area: bald eagle (*Haliaeetus leucocephalus*) and coastal bull trout (*Salvelinus confluentus*); and one NMFS candidate species, Puget Sound/Strait of Georgia ESU coho salmon (*Oncorhynchus kisutch*). There is also a State-listed endangered species which may occur in or near the project area: western pond turtle (*Clemmys marmorata*), which is also listed as a federal species of concern.

However, the USFWS has not established or identified any critical habitat for bald eagle or coastal bull trout. There are no eagle nest sites, perches, or roosts known to occur within one

mile of the project. Bull trout is not known to inhabit the Hylebos watershed, where the waters are too warm for its spawning requirements; bull trout is typically found high in the upper reaches of a watershed. No critical habitat has been proposed for Puget Sound/Straight of Georgia ESU coho salmon. Hylebos Creek upstream of the SR-509 (Marine View Drive) bridge provides coho salmon rearing habitat, though the project reach provides only limited cover or other suitable habitat. Potential western pond turtle habitat, such as basking sites, refugia, and backwater pools, is very marginal at the site.

The reach encompassing the Jordan site is identified by WDFW for “Priority Anadromous Fish Presence” and “Other Fish Presence”. The WDFW Priority Anadromous Fish Presence Report records observations of chum salmon (*Oncorhynchus keta*), coho salmon, searun cutthroat (*Oncorhynchus clarki*), and winter steelhead (*Oncorhynchus mykiss*) in Hylebos Creek.

- c. Is the site part of a migration route? If so, explain.

The site is on the path of the Pacific flyway for migrating birds.

- d. Proposed measures to preserve or enhance wildlife, if any.

The purpose of the project is to construct and restore the quality of habitat at the site, with the intent of enhancing the breeding, resting, feeding and refuge opportunities for fish, birds, and mammals. During construction, short-term impacts to salmon habitat could occur from excavation and earth-moving activities, resulting in increased turbidity and total suspended solids. However, through avoidance of construction during chinook migration periods and implementation of methods to control erosion and in-water turbidity, short-term impacts to listed species are expected to be relatively minor. Informal Section 7 ESA consultation with the NMFS and the USFWS is in progress, and the Biological Assessment and the consultation letters will be part of the Administrative Record.

6. ***ENERGY AND NATURAL RESOURCES***

- a. What kind of energy (electrical, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc.

During the construction phase of the project, construction equipment will use fossil fuels for energy. Energy use will be temporary. Energy needs for the completed project are expected to be minimal.

- b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.

The project is not expected to affect the potential use of solar energy by adjacent properties.

- c. What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any:

No specific energy conservation features are included in the project because energy use is minimal.

7. ***ENVIRONMENTAL HEALTH***

- a. Are there any environmental hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste, that could occur as a result of this proposal? If so, describe.

Marginal risk of fire, explosions, or spill will be present during construction, due to the use of fuel for the construction equipment (excavator or backhoe, etc.). No long-term risks to environmental health are expected to result from the project, since no sources of hazards will be stored or created on site.

1. Describe special emergency services that might be required.

No special emergency services would be required for the project.

2. Proposed measures to reduce or control environmental health hazards, if any:

A site-specific health and safety plan will be in place for the construction phase and will apply to all personnel on site, including contractors, subcontractors, and consultants. Because of the limited quantities that will be available, any fuel spills can be handled with a portable spill kit.

- b. Noise

1. What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)?

The Site is located in proximity to light traffic and commercial activities, which generate limited amounts of ambient noise.

2. What types and levels of noise would be created by or associated with the project on a short-term or long-term basis (for example:

traffic, construction, operation, other)? Indicate what hours noise would come from the site.

The project will result in short-term noise impacts from the use of heavy equipment. Noise will be generated by clearing, grubbing, earth moving, dredging, sediment and soil storage and transport, digging, grading, burning, and planting. Trucks, graders, bulldozers and similar equipment can generate noise in the range of 67 to 98 dBA at 50 feet. No long-term noise impacts are expected to result from the project.

3. Proposed measures to reduce or control noise impacts, if any:

All construction activities will be conducted in compliance with the City of Fife's noise regulations. The contractor will be required to maintain all mechanized equipment in good working order, verifying that mufflers are functioning properly and the equipment is not producing abnormal levels of noise.

8. ***LAND AND SHORELINE USE***

a. What is the current use of the site and adjacent properties?

The site is currently vacant. It was used by Western Equipment for storage of mechanical equipment and parts, until its recent purchase by the City of Fife. Two City of Fife backup water supply wells are located adjacent to the southwest corner of the property. Private residences exist on adjacent properties to the northwest and the south.

b. Has the site been used for agriculture? If so, describe.

According to the previous owner, the site was used as a dairy farm during some of the period from 1940 to 1995.

c. Describe any structures on the site.

There are no structures on site.

d. Will any structures be destroyed? If so, what?

No structures will be destroyed or altered since there are no structures on site.

e. What is the current zoning classification of the site?

Current zoning designation is for single-family residential use.

- f. If applicable, what is the current shoreline master program designation of the site?

The current shoreline master program designation is Category II for the "Wetland A" area, as delimited in March-April 2003.

- g. What is the current comprehensive plan designation of the site?

Current comprehensive plan designation for the site is single-family residential use.

- h. Has any part of the site been classified as an "environmentally sensitive" area? If so, specify.

The site is designated as a "Priority Habitat" area by WDFW. However, the site is not situated in any "environmentally sensitive area" as designated under FMC 17.04.240.

- i. Approximately how many people would reside or work in the completed project?

No one would reside or have their normal place of work at the site in the completed project. Scientists will spend a few hours a month on site, monitoring site conditions in habitat areas.

- j. Approximately how many people would the completed project displace?

No one would be displaced in order to complete the project.

- k. Proposed measure to avoid or reduce displacement impacts, if any?

Since no displacement impacts are expected, no mitigation measures are proposed for such impacts.

- l. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any:

Since the goal of the project is to enhance existing habitat and create new habitat, it is compatible with existing and projected land uses and plans.

9. ***HOUSING***

- a. Approximately how many units would be provided, if any? Indicate whether high, middle or low income housing.

No housing units will be created for or by this project.

- b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle or low income housing.

No housing units will be eliminated for or by this project.

- c. Proposed measures to reduce or control housing impacts, if any:

Since no housing impacts are expected, no mitigation measures are proposed for such impacts.

10. *AESTHETICS*

- a. What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed?

The only proposed structures on site are viewing platforms and a nature trail. These will be designed and constructed to blend with the natural setting, and are not anticipated to be more than a few feet tall.

- b. What views in the immediate vicinity would be altered or obstructed?

No views are expected to be obstructed for this project. The view onto the Jordan site from 4th Street, 8th Street, and 62nd Avenue, and from the Milgard site will be modified as the project is constructed. Because the completed project will be open to the public and become part of the City of Fife's park system, aesthetic considerations will be incorporated into the design. Minor temporary negative aesthetic impacts may occur during construction and during the initial phase of vegetation establishment. Long-term beneficial impacts are expected to result from this project.

- c. Proposed measures to reduce or control aesthetic impacts, if any?

Because the temporary negative impacts to aesthetics are minor and short-lived, and the long-term impacts are expected to be beneficial, no mitigations are proposed for aesthetic impacts.

11. ***LIGHT AND GLARE***

- a. What type of light and glare will the proposal produce? What time of day would it mainly occur?

As it is planned as a day-use park, no light or glare is expected to result from the project.

- b. Could light or glare from the finished project be a safety hazard or interfere with views?

The project will not result in light or glare safety hazard or interference.

- c. What existing off-site sources of light or glare may effect your proposal?

No significant sources of light or glare have been noted in the project area.

- d. Proposed measures to reduce or control light or glare impacts, if any:

Since no light or glare impacts are expected, no mitigation measures are proposed for such impacts.

12. ***RECREATION***

- a. What designated and informal recreation opportunities are in the immediate vicinity?

The proposed project is located within a developed mixed light industrial and residential area. The Jordan Site does not presently provide public access, and it is not a recreational area. A recreational trail crosses the Milgard mitigation wetland site, across Hylebos Creek from the Jordan Site. The 15-acre natural area, owned by Milgard Manufacturing Co., is open to the public.

- b. Would the proposed project displace any existing recreational uses? If so, describe.

Because the Site currently offers no recreational or educational opportunities, no adverse impacts to recreation are expected. Once construction is completed, the Site will provide recreational use in a stewardship and educational role. A nature trail and viewing platforms will be constructed, and interpretive signs posted. Thus, the project is expected to result in long-term beneficial impacts on recreation and education.

- c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:

Since no impacts to recreation are expected, no mitigation measures are proposed for such impacts.

13. HISTORICAL AND CULTURAL PRESERVATION

- a. Are there any places or objects listed on or proposed for, national, state or local preservation registers known to be on or next to the site? If so, generally describe.

A historical and cultural resources survey was conducted for the Site by Historical Research Associates, Inc.

- b. Generally describe any landmarks or evidence of historic, archaeological, scientific, or cultural importance known to be on or next to the site.

No known landmarks or evidence of historic, archaeological, scientific, or cultural importance have been found at the site. A historical and cultural resources assessment, conducted in April 2003, found no prehistoric or historic-period archaeological sites or structures. However, the assessment points out that prior to development by settlers, the areas along creeks and wetlands were utilized by the Puyallup Tribe for hunting, fishing, and gathering. The area along Hylebos Creek should be considered a high sensitivity area for cultural resources, particularly prehistoric archaeological sites.

- c. Proposed measures to reduce or control impacts, if any?

An archaeological monitor will be present during the phase of construction when the intact sediments underlying the wood debris layer are excavated. If any significant cultural materials are exposed or discovered during excavation or subsurface disturbance, operations will cease and a qualified archaeologist contacted for further recommendations. The Washington Office of Archaeology and Historic Preservation (OAHP) and the Puyallup Tribe will be contacted. Significant cultural resources may include but are not limited to: aboriginal human remains, chipped stone, groundstone, shell and bone artifacts; concentrations of fire cracked rock, ash and charcoal, shell, or bone; and historic features such as building foundations.

14. TRANSPORTATION

- a. Identify public streets and highways serving the site, and describe proposed access to the existing street system. Show on site plans, if any.

The site is reached from 4th Street at the north end, and from 8th Street at the south end (see attached vicinity map). Fourth Street dead-ends at the site, while 8th Street connects with 62nd Avenue.

- b. Is the site currently served by public transit? If not, what is the approximate distance to the nearest transit stop?

The site is not currently served by public transit. It is roughly equidistant from Pierce Transit routes 500 on Pacific Highway, and 61 on North Point Way NE/SR509, about 0.75 to one mile.

- c. How many parking spaces would the completed project have? How many would the project eliminate?

One to four unpaved parking spots may be created at the 8th Street access, on areas that are currently part of the dirt road. No existing parking spots will be eliminated by the project.

- d. Will the proposal require any new roads or streets, or improvements to existing road or streets, not including driveways? If so, generally describe (indicate whether public or private).

No improvements to existing public roads or streets are required by the project. The access dirt road existing on site will be transformed into a nature viewing trail.

- e. Will the project use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.

The project will not use water, rail, or air transportation, nor will it be close to a transportation nexus.

- f. How many vehicular trips per day would be generated by the completed project?

The completed project is not expected to generate significant traffic. It may increase bicycle traffic, as the combination of the new nature trail with the existing Fife facilities (including the one on the Milgard wetland mitigation site across Hylebos Creek from the project site) may attract riders.

- g. What peak hour traffic is generated by the proposed project?

No specific peak hour is predicted for the extremely limited traffic expected to result from the completed project.

- h. The directional movements the traffic shall take and the peak hour distribution.

Any motorized traffic to the site is expected to be on 8th Street or 62nd Avenue, since the public access gate will be situated at the south end of the site. Foot or bicycle traffic may also use the 4th Street dead-end. No systematic peak is expected.

- i. The traffic influence at the two (2) closest intersections to the proposed project.

The two closest intersections are 4th Street/58th Avenue, both of which dead-end within a few hundred feet, and 8th Street/62nd Avenue, an L-shaped intersection where traffic is not restricted by a yield or stop sign or by a light. Traffic is expected to be minimally impacted at these locations. It may be advisable to post a warning sign near the site entrance to warn automobilists of pedestrians and cyclists.

- j. Proposed measures to reduce or control transportation impacts, if any.

No significant transportation impacts are anticipated. The project will add small amounts of construction traffic to local roadways for short periods, but impacts will be negligible. During construction, staging areas will be located to minimize disruption of traffic on adjacent roadways. Since public use will be limited after construction is completed, there will be no impacts to transportation over the long term.

15. ***PUBLIC SERVICES***

- a. Would the project result in an increased need for public services (for example: fire protection, police protection, health care, schools, other)? If so, generally describe.

The project is not expected to significantly increase demand for public services over the short- or long-term. The City of Fife will be providing normal maintenance once the project is part of its park system. Due to public access, waste collection will likely be needed but should represent only minimal amounts of refuse.

- b. Proposed measures to reduce or control direct impacts on public services, if any.

After completion, access to the park after hours will be controlled by locked gates, and City personnel will periodically inspect the site. No mitigation measures are proposed because the impacts to public services are expected to be minimal.

16. UTILITIES

a. Circle or highlight utilities currently available at the site:

electricity	natural gas	water
telephone	refuse service	sanitary sewer
septic system	cable television	
other:	_____	

No utilities are currently available at the site, which is vacant. However, all utilities exist in the immediate area and could be extended to the site if needed.

b. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed.

There will be limited impacts to utilities during or after construction. The contractors may require temporary electricity and water connections during construction. Initial adaptive management and maintenance may also require electricity and water, particularly to water planted and seeded vegetation. The project is not expected to significantly increase demand for utilities over the long-term. Access to the Site will be limited, and maintenance and monitoring activities are expected to require only limited amounts of water or electricity, if any.

C. SIGNATURE

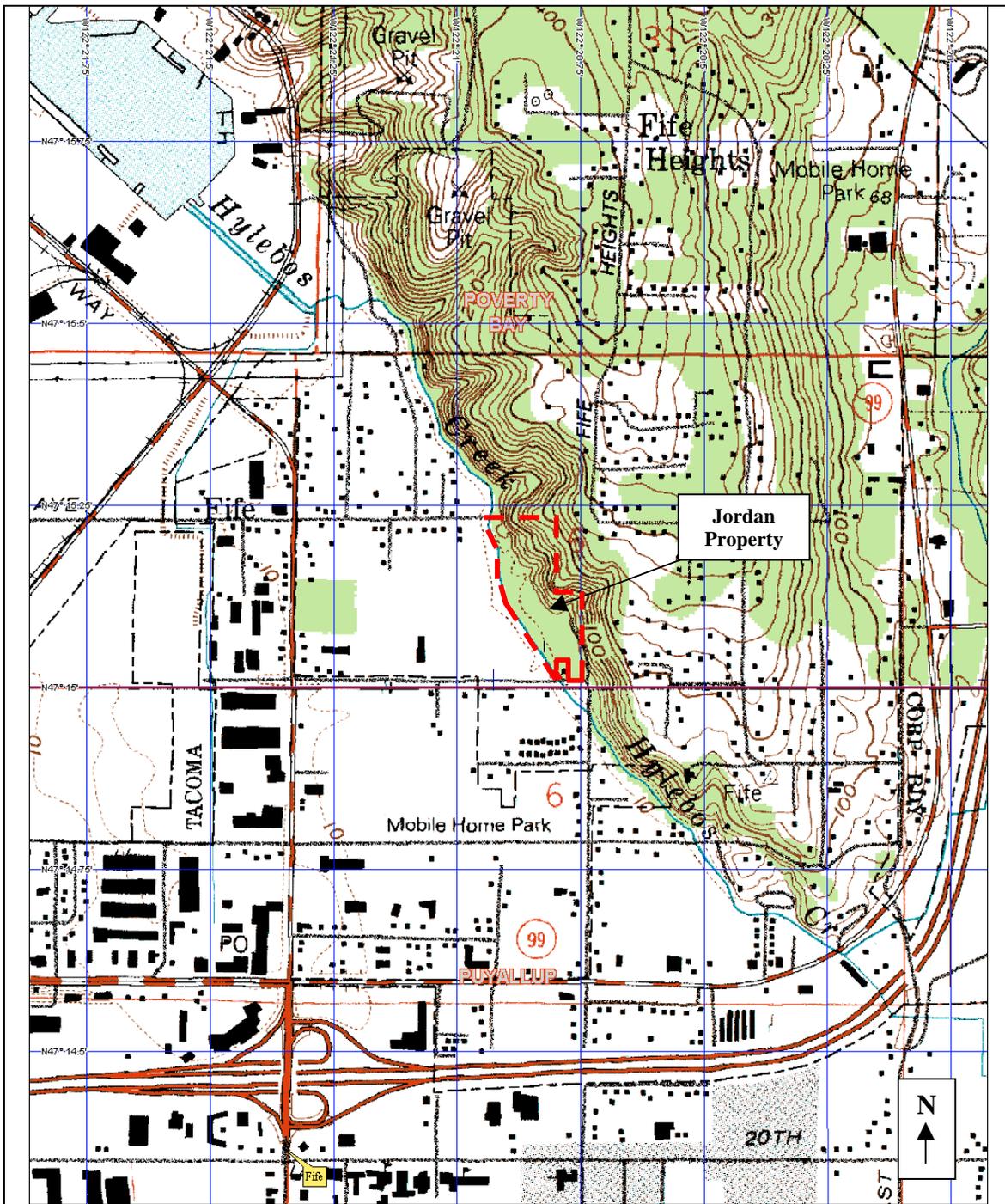
The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

Signature: _____

Date Submitted: _____

Attachments:

1. Vicinity map
2. Proposed project, plan view
3. Proposed project, typical cross-section
4. Site plan showing wetland delineation
5. Project schedule
6. Description of proposed alternative
7. Preliminary planting list

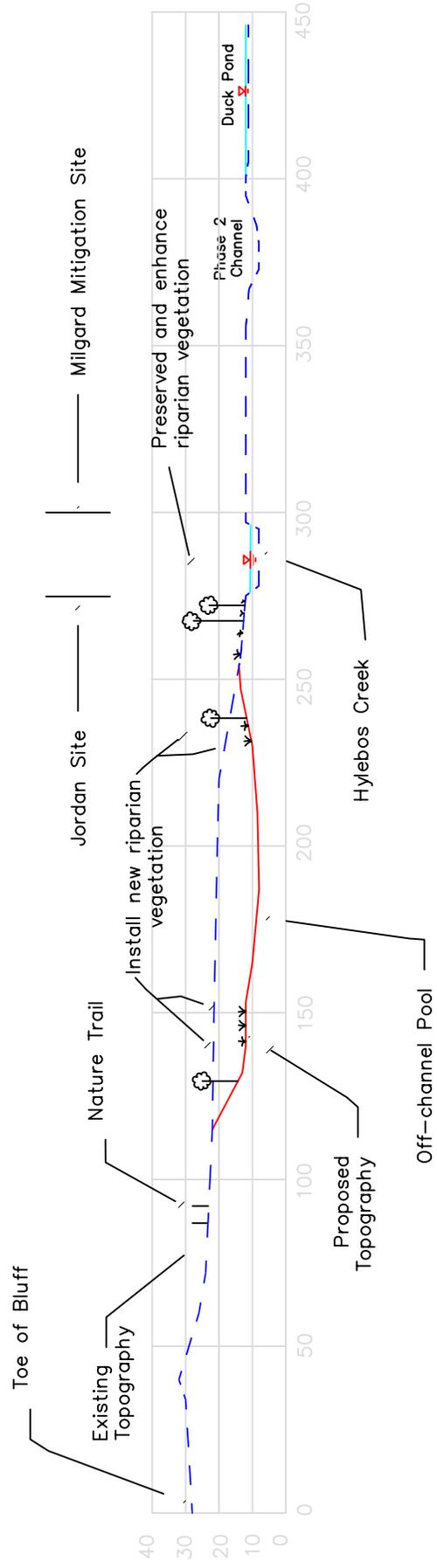


3-D TopoQuad Copyright © 1999 DeLorme Yarmouth, ME 04096 Source Data: USGS 1:350 ft Scale: 1:12,800 Detail: 14-0 Datum: NAD27



Hylebos Creek Off-Channel
Restoration Former Jordan
Property
Fife, WA

Figure 1
Site Location Map



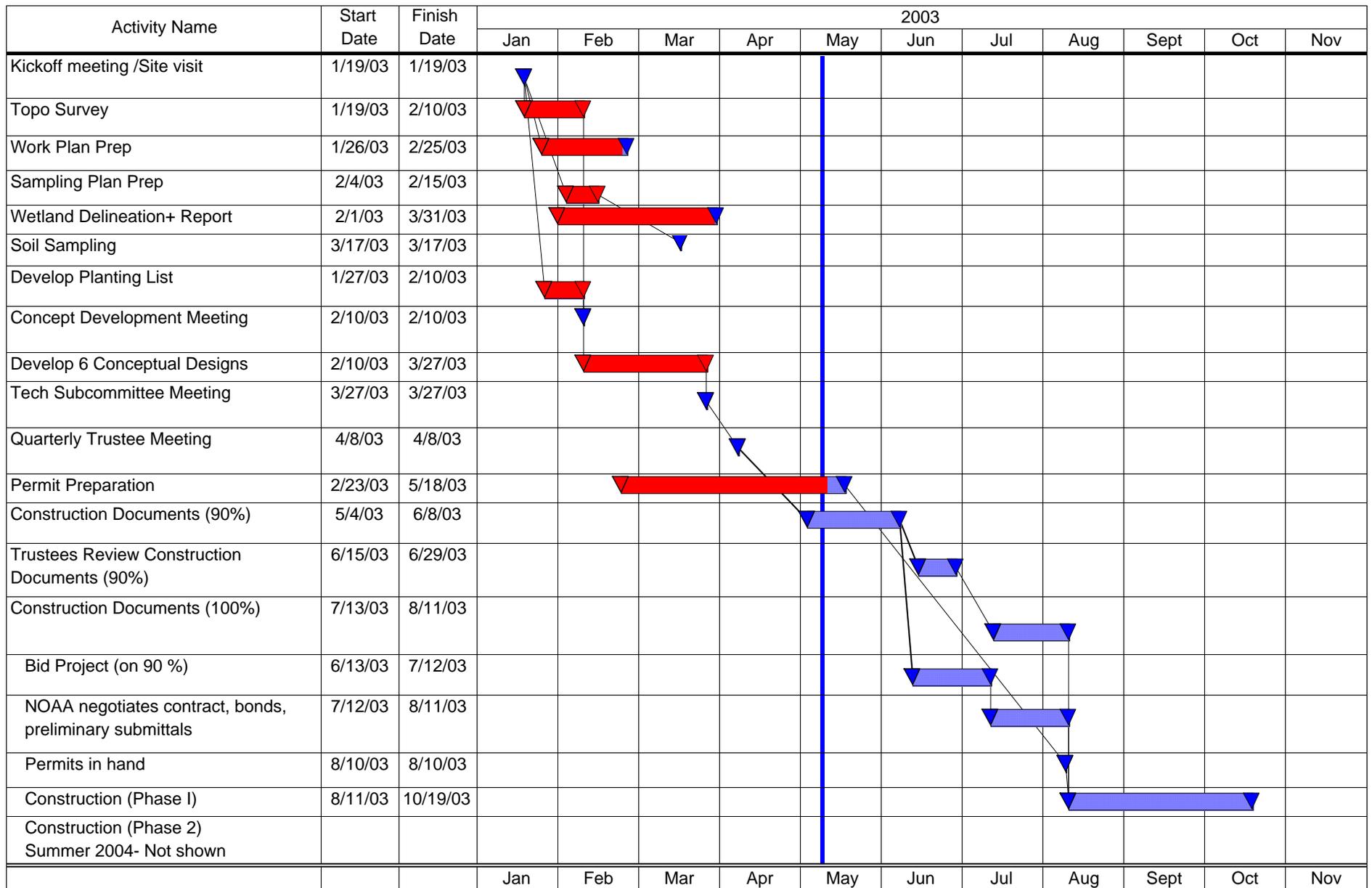
Horizontal Scale: 1" = 50'
 Vertical Scale: 1" = 50'
 Vertical Datum: Mean Lower Low Water



HYLEBOS CREEK OFF - CHANNEL RESTORATION
 FORMER JORDAN PROPERTY
 FIFE, WASHINGTON

Figure 3

Jordan Property Hylebos Creek Off-Channel Restoration Schedule



Notes/Assumptions:

- 1) A conceptual design is adequate for permitting
- 2) Permits can be obtained in three months
- 3) Project can be bid on 90% design
- 4) Procurement and submittal in 2 months
- 5) Phase 1 construction can be completed in 3 months

Jordan Site: Hylebos Creek Off-Channel Habitat Restoration Project: Description of Proposed Alternative

Several alternatives, including the no-action alternative and six action alternatives, were considered for the Site. The Commencement Bay Natural Resource Damage Assessment and Restoration Trustees and the City of Fife have used an iterative method to develop the alternatives for consideration for this Site that incorporated public input. They selected a Meandering Creek Transition to Dendritic Marsh.

Phase 1 of the Habitat Restoration Project is proposed for construction during the 2003 construction season. It comprises:

- Removal of the wall and pilings from within Hylebos Creek
- Excavation of existing wetland and upland areas at the upstream end of the Site to form meandering side-channels
- Excavation of existing wetland and upland areas at the downstream end of the Site to form a dendritic marsh
- Excavation of some deeper pool areas
- Placement of boulders and large woody debris to provide cover, increase habitat complexity, and direct flow
- Grading to prevent stranding of pools and meanders at low water levels
- Preservation of as many existing trees as possible
- Revegetation using native emergent marsh plants, herbaceous plants, shrubs, and trees
- Conversion of an existing dirt road into a nature trail
- Construction of nature viewing platforms
- Posting of interpretive signs

Except for the removal of the in-stream wall and pilings, all the work will take place on the Jordan Site itself.

A conceptual grading plan and typical cross-sections were developed, and are attached to this request. The excavation volumes were estimated at 30,000 cubic yards. Approximately 0.2 acres of existing wetlands will be affected by the changes in geometry, but the project will result in a net wetland increase of approximately one acre. Some 1.8 acres of new side-channel aquatic habitat will also become available. Approximately 1,700 feet of nature trail and three viewing platforms will be constructed.

The optional Phase 2 of the project, currently under consideration, has only been advanced to the conceptual stage. There are on-going discussions with the property owner and the U.S. Army Corps of Engineers to clarify the extent of permit modifications that would be needed, and to identify monitoring requirements. Phase 2 would likely include the following elements:

- Excavation on the Milgard Mitigation Wetland Site to form counter-meanders and additional side-channels
- Placement of boulders and large woody debris to provide cover, increase habitat complexity, and direct flow

- Grading to prevent stranding of pools and meanders at low water levels
- Revegetation using native emergent marsh plants, herbaceous plants, shrubs, and trees at the Milgard Mitigation Wetland Site, compatible with previous planting, to increasing shade along the riparian corridor

JORDAN SITE POTENTIAL PLANT SPECIES LIST

TREES

Big-leaf Maple	Cascara
Black Cottonwood	Douglas Fir
Oregon Ash	Western Red Cedar
Western Crabapple	Western Hemlock
Quaking Aspen	Sitka Spruce
Black Hawthorne	

SHRUBS

Vine Maple	Stink Currant
Western Hazelnut	Black Swamp Gooseberry
Ocean-spray	Thimbleberry
Willows	Snowberry
Red-osier Dogwood	Nootka Rose
Pacific Ninebark	Baldhip Rose
Red Elderberry	Red Huckleberry
Indian Plum	Salal
Black Twinberry	Low Oregon Grape
Salmonberry	Trailing Blackberry
Red-flowering Currant	Sword Fern

HERBACEOUS PLANTS

Lady Fern	False Lily-of-the-Valley
Pig-a-back Plant	Creeping Buttercup
Bleeding Heart	

EMERGENT PLANTS

Slough Sedge	Dagger Leafed Rush
Dewey's Sedge	Slender Rush
Sawbeak Sedge	Spike Rush
Lyngby's Sedge	Skunk Cabbage
Small-fruited Bulrush	Mannagrass
Hardstem Bulrush	



HYDRAULIC PROJECT APPROVAL
 RCW 77.55.100(3) - appeal pursuant to Chapter 34.05 RCW

State of Washington
 Department of Fish and Wildlife
 Habitat Program
 600 Capitol Way North, MS 3155
 Olympia, Washington 98501-1091

DATE OF ISSUE: June 24, 2003

LOG NUMBER: EX-F4081-02

<u>PERMITTEE</u>	<u>AUTHORIZED AGENT OR CONTRACTOR</u>
NOAA Fisheries ATTENTION: Jennifer Steger 7600 Sand Point Way NE Seattle, WA 98115 206-526-4363 Fax: 206-526-6665	Ridolfi Inc. ATTENTION: Colin Wagoner 1411 Fourth Ave., Suite 770 Seattle, WA 98101 206-682-7294 Fax: 206-682-5008

PROJECT DESCRIPTION: Restore Permanent Freshwater Off-channel In-stream and Riparian Habitat

PROJECT LOCATION: Near Intersection of 8th Street East and 62nd Avenue East - Fife
 LAT N47.25824° / LONG W122.35313°

<u>#</u>	<u>WRIA</u>	<u>WATER BODY</u>	<u>TRIBUTARY TO</u>	<u>1/4 SEC.</u>	<u>SEC.</u>	<u>TOWNSHIP</u>	<u>RANGE</u>	<u>COUNTY</u>
1	10.0006	Hylebos Creek	Commencement Bay	SE	05	20 North	04 East	Pierce

PROVISIONS

1. **TIMING LIMITATIONS:** The project may begin **immediately** and shall be completed by **September 30, 2005**, provided:
 - a. Work below the ordinary high water line shall only occur between **June 15** and **September 30**.
2. **NOTIFICATION REQUIREMENT:** The permittee or contractor shall notify the Area Habitat Biologist (AHB) listed below of the project start date. Notification shall be received by the AHB at least three working days prior to the start of construction activities. The notification shall include the permittee's name, project location, starting date for work, and the control number for this Hydraulic Project Approval.
3. Work shall be accomplished per plans and specifications entitled, Hylebos Creek Off-Channel Restoration Former Jordan Property - Fife, Washington, received June 20th by the Washington Department of Fish and Wildlife, except as modified by this Hydraulic Project Approval. These plans reflect design criteria per Chapter 220-110 WAC. These plans reflect mitigation procedures to significantly reduce or eliminate impacts to fish resources. A copy of these plans shall be available on site during construction.

VEGETATION

4. Alteration or disturbance of the bank and bank vegetation shall be limited to that necessary to construct the project. Within seven calendar days of project completion, all disturbed areas shall be protected from erosion using vegetation or other means. Within one year of project completion, the banks, including riprap areas, shall be revegetated with native or other approved woody species. Vegetative cuttings shall be planted at a maximum interval of three feet (on center) and maintained as necessary for three years to ensure 80 percent survival.



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600 Capitol Way North, MS 3155
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recommend a decision to the Director or its designee. If you are not satisfied with the results of this informal appeal, a formal appeal may be filed.

B. FORMAL APPEALS (WAC 220-110-350) OF DEPARTMENT ACTIONS TAKEN PURSUANT TO RCW 77.55.100 OR 77.55.140:

A person who is aggrieved or adversely affected by the following Department actions may request an formal review of:

- (A) The denial or issuance of a HPA, or the conditions or provisions made part of a HPA;
- (B) An order imposing civil penalties; or
- (C) Any other "agency action" for which an adjudicative proceeding is required under the Administrative Procedure Act, Chapter 34.05 RCW.

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D. FAILURE TO APPEAL WITHIN THE REQUIRED TIME PERIODS RESULTS IN FORFEITURE OF ALL APPEAL RIGHTS. IF THERE IS NO TIMELY REQUEST FOR AN APPEAL, THE DEPARTMENT ACTION SHALL BE FINAL AND UNAPPEALABLE.0



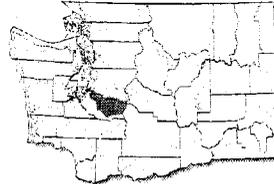
STATE OF WASHINGTON

DEPARTMENT OF ECOLOGY

P.O. Box 47775 • Olympia, Washington 98504-7775 • (360) 407-6300

June 25, 2003

Mr. Steve Worthington
City of Fife/City Hall
5411 23rd Street East
Fife, WA 98424



Your address
is in the
**Puyallup-
White**
watershed

Dear Mr. Worthington:

Thank you for the opportunity to comment on the optional determination of nonsignificance/notice of application for the Jordan Site Habitat Restoration Project (SEP03-00008) located on 15.30 acres at the northwest corner of 8th Street East and 62nd Avenue East as proposed by Jennifer Steger, National Oceanic and Atmospheric Administration (NOAA). We reviewed the environmental checklist and although these comments arrived after the review period, please consider them as you proceed through the permit process to help ensure environmental protection:

Water Quality:

Erosion control measures must be in place prior to any clearing, grading, or construction. These control measures must be effective to prevent soil from being carried into surface water by stormwater runoff. Sand, silt, and soil will damage aquatic habitat and are considered pollutants.

Any discharge of sediment-laden runoff or other pollutants to waters of the state is in violation of Chapter 90.48, Water Pollution Control, and WAC 173-201A, Water Quality Standards for Surface Waters of the State of Washington, and is subject to enforcement action.

During construction, all releases of oils, hydraulic fluids, fuels, other petroleum products, paints, solvents, and other deleterious materials must be contained and removed in a manner that will prevent their discharge to waters and soils of the state. The cleanup of spills should take precedence over other work on the site.

Coverage under the General Baseline Stormwater Water Permit is required for construction sites greater than five acres.

Federal Permit Coordinator:

We are currently working with the agents on the 401 certificate for this project.





HYDRAULIC PROJECT APPROVAL
RCW 77.55.100(3) - appeal pursuant to Chapter 34.05 RCW

State of Washington
Department of Fish and Wildlife
Habitat Program
600 Capitol Way North, MS 3155
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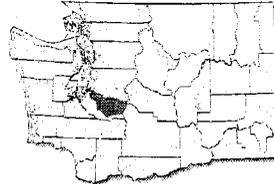
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