

Restoration Plan and Environmental
Assessment
for the
Wyckoff/Eagle Harbor Site
Bainbridge Island, Washington

**Prepared by the
Elliott Bay Trustee Council**

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Final

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| <i>Project Locations:</i> | Bainbridge Island, Kitsap County, Washington |
| <i>Lead federal agencies for the Restoration Plan:</i> | The National Oceanic and Atmospheric Administration (NOAA) and the U.S. Department of the Interior, Fish and Wildlife Service (DOI,FWS) |
| <i>Lead Administrative Trustee:</i> | NOAA Damage Assessment and Restoration Center NW Attn: John Kern 206-526-6029 John.kern@noaa.gov |
| <i>Cooperating agencies and tribes:</i> | Washington Department of Ecology (WDEC, as lead state Trustee) and Washington Department of Fish and Wildlife (WDFW), Suquamish Tribe, Muckleshoot Indian Tribe, and the City of Bainbridge Island |
| <i>Comments/Contact Person:</i> | John Kern, NOAA NOAA Damage Assessment and Restoration Center NW 7600 Sand Point Way NE, Building 1 Seattle, WA 98115 Email: john.kern@noaa.gov |
| <i>Administrative Record:</i> | The Restoration Plan and its supporting documentation may be reviewed by contacting the case records manager John Kern at 206-526-6029 or john.kern@noaa.gov . |

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EXECUTIVE SUMMARY

As a result of a settlement with Pacific Sound Resources (*United States et al. v. Pacific Sound Resources et al.*, Civ. No. C94-687 (W.D. Wash., Aug. 29, 1994)), and the Memorandum of Agreement for Elliott Bay, the Duwamish River, and Eagle Harbor (effective date 1/19/06), the Elliott Bay Trustee Council (Trustees) received funds to restore natural resources injured by hazardous substances from the Wyckoff facility in Eagle Harbor, Bainbridge Island, Washington. This document addresses the purpose and need for the restoration actions and discusses the general restoration alternatives considered and identifies the Preferred Alternative, and the potential impact of restoration actions under these alternatives on the quality of the physical, biological, and cultural environment. It discusses the various restoration projects that have been identified to date that are consistent with the proposed Preferred Alternative, presents the Trustees' current evaluation of the various potential restoration projects that have been identified as well as those that, based on currently available information, are proposed for implementation following screening using NRDA restoration selection criteria. It also describes the process for submission of further project proposals for screening and possible selection for implementation.

Natural Resource Trustees are responsible for evaluating potential injuries to natural resources and resource service losses resulting from releases of hazardous substances pursuant to Section 107(f) of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), the Federal Water Pollution Control Act, 33 U.S.C. Section 1251 et seq., (also known as the Clean Water Act or CWA) and other applicable Federal or State law, including Subpart G of the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), 40 C.F.R. Sections 300.600 - 300.615, and regulations at 43 C.F.R. Part 11 which are applicable to natural resource damage assessments (NRDA) under CERCLA. The goal of the NRDA process is to compensate for natural resource injuries and service losses resulting from the hazardous substance releases by restoring, replacing or acquiring natural resources or services equivalent to those lost [42 U.S.C. 9607(f)(1)]. The Trustees propose an integrated approach for restoring the natural resources that were injured by the hazardous substance releases from the Wyckoff facility. This approach involves the construction of several habitat restoration projects of key habitat types (marsh, eelgrass, intertidal mudflats, and beach suitable for forage fish spawning) as the Preferred Alternative to address the natural resource injuries due to releases of hazardous substances from the Wyckoff facility in Eagle Harbor. These types of projects, if implemented, will provide benefits to the types of natural resources that were injured by contamination from the Wyckoff facility, consistent with the NRDA CERCLA requirements. Five restoration project proposals, identified as being consistent with the Preferred Alternative, are currently identified as the top candidates for construction. These are the Strawberry Plant Park Restoration Project, the Pritchard Park West Shoreline Restoration Project, the Milwaukee Dock Eelgrass Restoration Project, the Pritchard Park East Bluff Restoration Project, and the Blakely Harbor Park Restoration Project. The Trustees involved in this restoration planning process 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 (DOI), represented by the Fish and Wildlife Service (FWS); the Washington State Departments of Ecology (WDEC, as lead state Trustee) and Fish and Wildlife (WDFW, as state co-Trustee); the Suquamish Tribe and the Muckleshoot Indian Tribe.

After a public comment period on the draft plan that proposed the Integrated Habitat Restoration Alternative as the Preferred Alternative, and consideration of the comments received, the Trustees have selected the Integrated Habitat Restoration Alternative as the approach for restoring natural resources that were injured by the hazardous substance releases from the Wyckoff facility.

1.0 PURPOSE AND NEED FOR RESTORATION

This chapter provides an overview of the history of Eagle Harbor including information about the Wyckoff facility and the release history of the site, and describes the legal authority under which Natural Resource Trustees act on behalf of the public. It also provides information concerning public involvement in the restoration process.

1.1 OVERVIEW

Eagle Harbor is a small embayment located on the eastern side of Bainbridge Island, Kitsap County, Washington, in central Puget Sound (Figure 1). The bay is about two square kilometers in area. Small marinas occupy the inner bay. The central and outer portions of the harbor are surrounded by residences, the Washington State Department of Transportation (WSDOT) ferry terminal and ferry maintenance facility, a marina repair facility, and the former Wyckoff Company wood treatment facility. The village of Winslow is located immediately north of the harbor, has a population of 2,822, and is the principal center of population and commerce on the island. Since March 1991, the whole island of Bainbridge has been incorporated and is now the “City of Bainbridge Island” (COBI). Winslow is now considered as a village within Bainbridge Island. The current population of the island is approximately 15,000. Winslow maintains a public park and a pier west of an area called “The Ravine” by local people.

The Suquamish Indian Tribe occupied villages and camps along the shoreline of Eagle Harbor site over the last 5,000 years. Euro-Americans first settled Eagle Harbor area in the 1870’s, when there were still two large Suquamish Indian encampments on the north shore of the harbor.

Archaeologists have recorded four archaeological sites on the shoreline of Eagle Harbor, and a total of 13 archaeological sites on Bainbridge Island. Other upland areas of Eagle Harbor may also have archaeological evidence of seasonal camps and multi-season villages, as well as areas with human remains. Boat building began at that time, and in the early 1900’s a large shipyard was started by the Hall brothers in the area now occupied by the Eagle Harbor Condominiums, Bainbridge Marine Services, and the ferry maintenance facility. At that time this shipyard was the largest ship-building facility on the West Coast. A brick yard was established in the late 1800’s at the present Wyckoff site. The first wood treating facility began before 1910.

The largest industry on Bainbridge Island was the Wyckoff Company wood-treating plant on the south shore at the entrance to Eagle Harbor, which began operations in 1903. Wood treatment operations ceased at Wyckoff in 1988, and the site is currently not used. The only activities that have occurred in the recent past are related to site cleanup. These activities included the extraction of oil and contaminated ground water (with treatment of ground water), buried sludge removal, placement of a sheet pile wall, and the placement of additional wells. Other commercial facilities around the harbor include marinas, which provide boat fuel and sewage disposal, boat repair companies, the ferry terminal, and an auto repair/wrecking yard.

Previous investigations by the National Oceanic and Atmospheric Administration (NOAA), Washington State Department of Ecology (WDEC), and the United States Environmental Protection Agency (EPA) have shown that sediments and clams in Eagle Harbor are contaminated with poly-nuclear aromatic hydrocarbons (PAHs) and heavy metals. PAHs are a component of fuel oil and creosote, which is used for wood treatment. Heavy metals were deposited into the harbor from sandblasting paint from boats and ships. A mercury contamination “hot spot” was discovered nearby during a Remedial Investigation/Feasibility Study (RI/FS). NOAA also found PAH accumulation and lesions in the liver tissue of English Sole, a bottom fish commonly found in Eagle Harbor (Myers et al., 2005). In 1985, the Bremerton-Kitsap County Health District (BKCHD) issued a health advisory against eating shellfish from Eagle Harbor because of chemical and bacterial contamination (ASTDR, 1994). The Wyckoff facility and approximately 500 acres in Eagle Harbor

was proposed as a Superfund site in 1985 and was listed on the National Priority List (NPL) in 1987. The Wyckoff/Eagle Harbor Superfund site is divided into three Operable Units (OUs): 1) East Harbor OU-1, 2) Wyckoff facility OU-2, and 3) West Harbor OU-3. A summary of information related to the contamination in Eagle Harbor is given in:

http://www.atsdr.cdc.gov/HAC/pha/wyckoff/wyc_p1.html

EPA and the Trustees entered into a Memorandum of Agreement, in which the Trustees were to develop restoration goals (NOAA, 2001) for the site. If the goals were not met by remedial actions, the Trustees would receive funds in order to undertake restoration for injured natural resources and services. The goals developed by the Trustees were not met, so funds were provided to the Trustees to conduct restoration actions on Bainbridge Island, including the nearshore areas.

1.2 PURPOSE AND NEED

The purpose of this proposed action is to restore critical habitats in Eagle Harbor by building restoration projects in order to compensate the public and environment for injuries resulting from the release of hazardous substances into Eagle Harbor, Kitsap County, WA. This is needed because under the CERCLA NRDA process, Trustees are required to implement restoration actions intended to make the public and environment whole for injuries resulting from the release of hazardous substances. In general, restoration actions for natural resource injuries and service losses under CERCLA can be termed as primary or compensatory. Primary restoration is any action taken to enhance the return of injured natural resources and services to their baseline condition, i.e., the condition or level that would have existed had the hazardous substance releases not occurred. Compensatory restoration actions compensate for resource injuries and service losses during the interim period, until recovery to baseline occurs. For Eagle Harbor, the Trustees are relying on the remedial actions by EPA to establish the conditions necessary for recovery to baseline within a reasonable time as the primary restoration, and the Trustees will not implement any primary restoration actions. Support for this position is provided by a significant reduction in the exposure of English sole to PAHs after contaminated sediments in Eagle Harbor were capped (Myers et al., 2005). Our restoration efforts are therefore focused on obtaining compensatory restoration.

The Trustees hope to construct one or more projects in 2009, with additional projects constructed in later years, depending on the cost of the then-remaining (currently known and those identified in the future) highly-ranked projects and the amount of settlement funds remaining after the implementation of the first set of projects. The Trustees, working with partners or alone, will design, develop, implement, and construct the proposed restoration projects and will plan the related project maintenance and adaptive management activities. The Trustees will work with partners when possible to maximize the amount of restoration that can be accomplished. Each of the restoration projects will be monitored to gauge their performance and assess the need for adaptive management.

1.3 NEPA COMPLIANCE

The decision-making process for conducting restoration of natural resources under CERCLA must comply with the NEPA (40 CFR Section 1500, et seq.) and the Council on Environmental Quality (CEQ) regulations implementing NEPA. In compliance with NEPA and the CEQ regulations this Restoration Plan/Environmental Assessment (RP/EA) summarizes the current environmental setting, describes the purpose and need for action, identifies alternative actions, assesses their applicability and environmental consequences, and summarizes opportunities for public participation in the decision process. This information was used to make a threshold determination that the preparation of an Environmental Impact Statement (EIS) is not required prior to the selection of the final restoration action (i.e., the proposed action is not a major federal action that

may significantly affect the quality of the human environment).

1.4 PUBLIC PARTICIPATION

The Trustees have sought public input in the development of the public review Draft RP/EA, through discussions with local public officials and at a public meeting. The Trustees met with the planning staff for the COBI on several occasions to discuss potential restoration projects. The Trustees also met with the Mayor of the COBI and the Bainbridge Island Park District (Park District) to discuss restoration options on February 12, 2007. A public meeting was held on May 1, 2008 at the Bainbridge Island City Hall to explain the need for restoration, the general restoration approach that the Trustees propose to use (the Preferred Alternative), the NRDA restoration selection criteria used to evaluate project ideas, and the role that the public can play in the restoration process. Four projects that scored well in the Trustees' initial project evaluation using the restoration selection criteria were discussed as potential restoration projects that fit within the restoration approach preferred by the Trustees. Additional project ideas were received since that meeting from the public and the COBI, and one of these was also identified for potential implementation under the Preferred Alternative. The Trustees welcome additional restoration project suggestions from the public that are consistent with the restoration goals and restoration criteria discussed in Section 3. New project ideas will be evaluated for potential implementation until all the settlement funds are spent. Public opportunities to comment on the scope and design of each of the projects ultimately selected for implementation will also be available through Supplemental Environmental Assessments and the federal, state, and local permitting processes.

Public review of the Draft RP/EA is an integral component of the restoration planning process and is consistent with all state and federal laws and regulations that apply to the natural resource damage assessment process, including the DOI regulations, NEPA, and the regulations implementing NEPA at 40 C.F.R. Part 1500, et seq.. Through the public review process, the Trustees sought public comment on the approach proposed to restore injured natural resources or replace lost resource services. The Draft RP/EA provided the public with current information about the nature of the natural resource injuries identified and restoration alternatives evaluated.

The Draft RP/EA was officially released for public comment on October 4, 2008, and the public comment period ended on November 3, 2008. Four comments were received during this period. No comments objected to the Integrated Habitat Restoration Alternative that was identified in the Draft RP/EA as the preferred restoration approach to restore resources injured by releases of hazardous substances into Eagle Harbor from the Wyckoff facility. Therefore the Integrated Habitat Restoration Alternative is selected as the restoration approach for use in restoring natural resources injured by releases of hazardous substances into Eagle Harbor from the Wyckoff Facility. Nor were there any objections to the Milwaukee Dock Eelgrass Restoration Project or the impacts analysis for that project. The comments received and the Trustees' responses are included in Chapter 8, at the end of this document.

1.5 ADMINISTRATIVE RECORD

This Restoration Plan references a number of resource documents prepared by and for the Trustees and through the restoration planning process. These documents, incorporated by reference into this Restoration Plan, are part of the administrative record on file for these projects with the lead Administrative Trustee and may be viewed by contacting John Kern at 206-526-6029 or via email at john.kern@noaa.gov.

2.0 ENVIRONMENTAL SETTING/AFFECTED ENVIRONMENT

The following is summarized from a variety of sources describing environmental conditions on Bainbridge Island/Eagle Harbor. Many of the sources are available at:

http://www.ci.bainbridge-isl.wa.us/nearshore_assessment.aspx

Additional information comes from the following link:

<http://www.bicomnet.com/marine/EH-outline-03-18-012.htm>

2.1 SITE DESCRIPTION

2.1.1 Physical Features

Eagle Harbor is a bay of approximately 0.8 square miles on the eastern side of Bainbridge Island, Kitsap County, Washington, in Central Puget Sound. Eagle Harbor is a narrow east-west oriented bay, approximately 2.2 miles long and 0.4 miles wide near its mouth. The maximum depth of -50 ft Mean Lower Low Water (MLLW) occurs in the eastern portion of the harbor. About a quarter of the harbor consists of scattered areas of tidal flat and an extensive shoal area, which extends in a southeast direction from Wing Point at the harbor entrance. The extreme western end of the harbor consists entirely of tidal flats fully exposed daily during moderately low tides. This area has been officially designated by the COBI as an Aquatic Conservancy Zone.

Salinity in Eagle Harbor is similar to levels in Puget Sound, at approximately 27.5-28.5 parts per thousand. Measurements of piezometric heads and salinity of the interstitial water in the near surface sub-tidal sediments indicate that fresh water discharges into the harbor exist in several sub-tidal and inter-tidal areas near Bill Point and the main harbor area. However, fresh water inflow is minimal and as such does not substantially affect salinity in the harbor.

Two types of intertidal environments exist in the Eagle Harbor area. The first are the beach areas along Bill Point and directly across the harbor at Wing Point. Both of these areas are exposed to waves from the sound. These beaches are generally sand-starved and consist mostly of gravel and cobble because of the relatively high long-shore transport rates and lack of available sediments. The second type of environment is the inter-tidal area within the harbor itself. These areas are in a lower energy regime and are primarily influenced by tidal cycles rather than waves. The sediments in these areas generally are fine sands and silts.

The distribution of sediments in the sub-tidal portion of Eagle Harbor reflects the general pattern of water movement there. Fine-grained material occurs primarily in the inner harbor of the harbor because of the generally weaker currents there and the relatively larger input of fine-grained material from the intermittent streams that empty into it. In contrast, the entrance of the harbor contains mostly coarser sediments such as sands. The main harbor is primarily mud bottom.

Nine streams flow into the Harbor, six on the north side, and three on the south side. Three of them are type Four (perennial non-fish bearing stream > 2 ft wide) and one is type Five (seasonal or perennial non-fish bearing stream < 2 ft wide). The others are intermittent streams [based on the Washington Department of Natural Resource WDNR) Land Use map].

There are very few records to reconstruct the biological and physical conditions of Eagle Harbor prior to Euro-American settlement of Bainbridge Island. However, it is reasonable to assume that Eagle Harbor was typical of bays within Puget Sound. Like other relatively enclosed bays, Eagle Harbor likely supported a varied near-shore environment of mudflats, sandflats, cobble/gravel

beaches, eelgrass, and emergent marshes, largely depending on exposure to wave energy. There are no major freshwater rivers entering the bay and delivering large amounts of sediments that would support the expansive areas of salt marsh typically associated with the large river systems (e.g., Duwamish, Puyallup). The western apex of the bay still supports a large mudflat with fringing marshes, which is likely not much different from historic conditions. The adjacent upland areas supported typical lowland Puget Sound forest communities, dominated by Douglas Fir, western hemlock and western red cedar.

The existing shoreline is almost entirely armored and there is evidence of past fill events along much of the shoreline. Filling, dredging and armoring have diminished the historical extent as well as the function of intertidal habitats around the area. The most impacted reaches on Bainbridge Island, as defined in the Bainbridge Island Nearshore Assessment (Williams et al., 2004), are in Eagle Harbor, and these reaches were “characterized by exceptional amounts of fill and armoring, most of which encroached into the intertidal zone...” The same is true of Bainbridge Island shorelines in general, since over 50% of the shoreline has some form of armoring or other modifications (Williams et al., 2003). The areas of habitat remaining throughout the bay are isolated by development between the habitat patches. Most of the marinas on Bainbridge Island are located in Eagle Harbor, resulting in a high water traffic area with a variety of commercial and recreational overwater structures. WDFW has mapped surf-smelt spawning beaches along the northern and southern Eagle Harbor shorelines and south of Bill Point on the Puget Sound shoreline as well as sand lance spawning on the southern Eagle Harbor shoreline and on the Pritchard Park West Beach area. Large eelgrass beds still exist on the Puget Sound side of Bill and Wing Point. One report indicates that patchy eelgrass beds exist along the northern and southern shores in the inner harbor.

There are large amounts of green algae (*Ulva* sp.) in the harbor, which has the effect of smothering out eelgrass. The green algae is evidence of high nutrients from typical nonpoint sources such as failing septic systems, boats, creeks, storm water carrying fertilizers from landscaped yards. It also leads to other water quality problems. When algae die, its decomposition deprives other creatures of oxygen and can eventually lead to a decrease in fish/invertebrates.

The Bainbridge Island nearshore environment as a whole was characterized in the Bainbridge Island Nearshore Assessment (Williams et al., 2004) and more detailed information is available in this document as well as other documents available at:

http://www.ci.bainbridge-isl.wa.us/nearshore_assessment.aspx

2.1.2 Biological Features

Eagle Harbor provides nursery and adult habitat for a variety of marine fish and invertebrate species. Important fish and invertebrates include several flatfish species, scorpaenids (rockfish), surf perch (pile perch), gaddids (cod), hexagrammids (lingcod and greenlings), cancrinid crabs, sea cucumbers, squid, and pandalid shrimp. Several shellfish species are present in the intertidal and subtidal areas. Several shoreline areas are also used by forage fish (e.g., surf smelt, sand lance, and herring) for spawning. Listed species under the Endangered Species Act (ESA) documented within Eagle Harbor and the nearshore waters around Bainbridge Island include Puget Sound Chinook salmon and Puget Sound steelhead. Other ESA-listed species potentially present in Eagle Harbor and the nearshore waters surrounding Bainbridge Island include bull trout, Stellar sea lion, humpback whale, leatherback sea turtle, marbled murrelet, and Southern Resident killer whale. Of these latter species, only Southern Resident killer whale is likely to be present in the nearshore or estuarine waters of Bainbridge Island. The nearshore and estuarine waters of Bainbridge Island are critical habitat for Puget Sound Chinook salmon, the nearshore waters (as shallow as 20 ft

relative to extreme high water) are critical habitat for Southern Resident killer whale, but no critical habitat has been designated for Puget Sound Steelhead. It is believed that there was a historic chum salmon run in Taylor Creek on the south side of Eagle Harbor. Restoration efforts have been made, but there have been no recent sightings of chum in Taylor Creek. Lower intertidal areas near the mouth of this stream have also been identified as an important producer of marine benthic prey organisms for juvenile salmonids. A local conservation group has been restocking salmon to a feeder stream in "The Ravine" which empties into the harbor between the city park and Eagle Harbor Boatyard. Local citizens report that Cutthroat trout are known to be caught by sport fishermen and to use feeder streams for spawning.

The Eagle Harbor aquatic habitats supported a variety of resident and migratory fish and wildlife species. The small streams very likely supported spawning salmonid populations (coho, chum and coastal cutthroat trout). Although there are no records of use, coho and cutthroat trout have been observed at a small creek entering the head of Eagle Harbor. Whether they spawned successfully is not known. In a study of Blakely Harbor, researchers found that all species of salmon including cutthroat trout were in the harbor, usually during the peak of juvenile migration and usually in significant numbers. Sampling of fish in Eagle Harbor using beach seines has shown similar presence of juvenile salmon as well as forage fish. The study in Blakely Harbor noted that the juvenile fish were more likely to be found in the shallower reaches of the inner harbor, but juveniles were found both in the inner harbor and the outer harbor. As such, it is reasonable to assume that juveniles also currently use Eagle Harbor for feeding and refugia and very likely did so in the past.

The Puget Sound Environmental Atlas indicates that sea cucumbers and urchins are found within Eagle Harbor and along the adjacent Puget Sound shoreline. Various clam species are present within Eagle Harbor and have been collected as part of the EPA CERCLA response actions. The Port Blakely and the Tyee Shoal geoduck tracts are located in waters between -18 to -70 ft MLLW near the mouth of Eagle Harbor and the Prichard Park East Beach. Waterfowl species that are likely to be found in Eagle Harbor include greater scaups, lesser scaups, ring-necked ducks, surf scoters, white-winged scoters, American widgeons, great blue heron, Canada geese, mallards, common goldeneye, mergansers and bufflehead. Other species that may occur include western grebe, double-crested cormorants, Pacific loons, American coots, and pigeon guillemots.

Although several species of gulls occur in and around the bays of Bainbridge Island and the Kitsap peninsula, glaucous-winged gulls are the most commonly observed during the Kitsap Audubon Bird count and are abundant along the water front areas. Shorebirds include sandpipers, dunlins, and snipe. The wading birds are generally present along the sandy shorelines. Migratory birds that are known to be present in the action area include red-breasted nuthatches, song sparrows, downy woodpeckers, dark-eyed juncos and chickadees, among others.

3.0 RESTORATION GOALS AND ALTERNATIVES

The basic goal of NRDA restoration under CERCLA is to make the public and environment whole for injuries caused by releases of hazardous substances. Numerous different natural resources and resource services were impacted by the releases of hazardous substances from the Wyckoff facility. This includes resources that were directly exposed to the contaminants in Eagle Harbor and injured as a result of that exposure, but also resources that were indirectly impacted because of things like the reduction in the amount of prey biomass. To the maximum extent practicable, given the funds available, the Trustees' goal is to undertake restoration actions that will benefit the suite of resources affected by the Wyckoff releases both directly and indirectly.

3.1 RESTORATION ALTERNATIVES ANALYSIS

Restoration alternatives must be appropriate for NRDA restoration under CERCLA as an initial

evaluation, and, then must be analyzed for Direct, Indirect, or Cumulative impacts under NEPA. Three restoration alternatives were evaluated. The process used in this analysis was to first evaluate how well the alternative meets the Trustees' mandate for restoration under CERCLA. Alternative 1 was determined to be inconsistent with the Trustees' obligation under CERCLA to restore natural resources and resource services that were injured or lost as a result of releases of hazardous substances. The remaining two alternatives would be consistent with CERCLA restoration goals, but Alternative 3 was judged to be more appropriate as a restoration approach than Alternative 2.

3.1.1 Alternative 1: No Action

The No-Action Alternative would result in the Trustees not working to restore natural resources and services that were lost as a result of the release of hazardous substances from the Wyckoff facility into Eagle Harbor. While there would presumably be an eventual recovery of affected resources to or near to the baseline condition that would exist if these releases had not occurred, there would be no restoration actions taken to compensate for interim losses that occurred in the past and will continue to do so until the complete recovery to baseline. If this alternative were selected, the Trustees would not undertake any NRDA restoration projects in Eagle Harbor or elsewhere on Bainbridge Island. Any restoration actions in Eagle Harbor or Bainbridge Island would take place under current programs and regulations pursued by tribes, federal and state agencies, and other entities outside the NRDA process.

Alternative 1 should have no direct adverse impacts, since no new actions are implemented under this alternative to improve water or sediment quality, habitat conditions, and fish and wildlife including threatened and endangered species. The No Action Alternative is by far the least costly and could easily be implemented immediately without any direct adverse effects to the environment. However, the No-Action Alternative is not consistent with the goal under CERCLA to restore natural resources and services that were injured or lost as a result of the release of hazardous substances. Because interim losses of natural resources and services have occurred and continue to occur during the period of recovery, and technically feasible alternatives exist to compensate for these losses, the Trustees determined that compensatory restoration is required, and the No-Action Alternative is not selected as the Preferred Alternative.

3.1.2 Alternative 2: Species-Specific Restoration

Alternative 2 would consist of planning and implementing individual NRDA restoration projects to benefit specific species or small groups of species. Under this alternative, Trustees would evaluate potential restoration projects for the benefits provided to a specific species or group of species, without the organizational framework provided by the preferred Integrated Habitat Restoration Alternative (Alternative 3). Under the Species-Specific Restoration Alternative, Trustees would decide what species or group of species would be targeted to benefit from a restoration action at a given time. Because there are a large number of species that the Trustees believe were injured as a result of exposure to hazardous substances, the species targeted for restoration actions could be subject to change over time in order to get restoration for more of the injured natural resources. Potential projects would be evaluated based on the benefits provided to the then-targeted species, not on benefits to a broader range of species. Under this approach, there would be more flexibility in locating restoration projects, because some of the species affected could benefit from projects outside the Eagle Harbor/Bainbridge Island system. The variety of possible projects would also be greater under the species-specific approach, because non-habitat projects such as artificial propagation could be selected, in addition to habitat projects. Typical restoration actions under this alternative could include restoring critical habitat for a given species; constructing net pens, hatcheries, or artificial incubators; seeding flats with clams; creating artificial reefs; erecting nest boxes or perches, and creating or enhancing nesting, loafing, feeding and rearing habitats for birds.

The Species-Specific Restoration Alternative has a moderate potential for short-term impacts to water and sediment quality, habitat conditions, and fish and wildlife species. The nature and type of impacts from habitat creation projects designed to benefit target species would be similar to those for the Integrated Habitat Restoration Alternative. But other kinds of impacts could result from non-habitat restoration projects. For example, longer-term adverse impacts to water and sediment quality could result from construction of new hatcheries, net pens, or aquaculture facilities. Release of hatchery or net pen fish could increase competition, predation, and genetic interactions with wild anadromous and resident fish species. The Species-Specific Restoration Alternative was also evaluated under the Programmatic Environmental Impact Statement (PEIS) for Commencement Bay, and the detailed impacts analysis of this alternative in the Commencement Bay PEIS is incorporated in this RP/EA by reference. Because there are a large number of different types of projects that could be done under this alternative, detailed analysis for each type of project that could be implemented under the alternative is not practical in this document. Instead, detailed analysis would be done for each project type proposed for implementation under the alternative in a Supplemental Environmental Assessment had this alternative been preferred. However, this Alternative was eliminated from further consideration based on NRDA considerations as discussed below.

From a NRDA perspective, a species-specific restoration approach would be most appropriate if one or a few species were predominantly injured by the hazardous substance releases, because projects could be designed to precisely address injuries to the most affected species. However, when there are a broad range of species affected with a number of different life-histories, trophic levels, etc., as is the case for Eagle Harbor, a species-specific restoration approach poses several problems. Targeting restoration for one or a few species runs the risk of having non-targeted species getting little or no restoration benefits to address their injuries. It is likely that the process of restoration project selection would take longer and be less efficient than for the Integrated Habitat Restoration Alternative, because of the additional time required to assess the multitude of different types of projects and project locations, resulting in delayed restoration and higher planning costs. This alternative would result in less predictability, because a large number of different types of restoration could be considered at a number of different locations. For these reasons, this alternative is not preferred.

3.1.3 Alternative 3: Integrated Habitat Restoration

This alternative involves actions designed primarily to restore certain types of key nearshore and shoreline habitats that support a range of species that have been impacted by releases from the Wyckoff facility. Under this alternative, the Trustees would focus on habitat projects that benefit a suite of different species, using important surrogate species/groups to evaluate the benefits of potential habitat projects to injured resources. Under this approach, projects that provide benefits to a large number of potentially injured species would have greater value compared to projects that would tend to largely benefit one species or a small group of species. These projects would create habitats that provide food, foraging and resting areas for juvenile salmonids and other fish, shore birds and other wildlife. Since loss of nearshore habitats has been identified as a contributing factor in the population declines of a number of species (Gelfenbaum et al., 2006), the restoration of these habitats would directly benefit those species and assist in recovery of their populations.

For this alternative, the Trustees considered a number of factors in determining what habitat types would be most beneficial in restoring all the natural resources injured as a result of releases of hazardous substances into Eagle Harbor from the Wyckoff facility. Creating/enhancing vegetated habitats should provide the highest functional value to the variety of aquatic and avian resources in the area. It reflects the influence of primary and secondary productivity on epibenthic and benthic community structure and abundance, the value as refuge and reproductive habitat, and the

contribution of organic matter to nearshore and deep water food webs. In Eagle Harbor (and on Bainbridge Island) two vegetated habitat types would be targeted for restoration under this alternative: 1) fringing marshes and 2) eelgrass meadows. These habitats have also been lost to a great extent in Eagle Harbor because of development and related effects. Other important habitats that are included in this alternative include intertidal flats and forage fish (surf smelt and Pacific sand lance) spawning beaches. A good summary of the value of these habitats is provided in the Bainbridge Island Nearshore Assessment: Summary of Best Available Science (Williams et al., 2003).

In this alternative, the Trustees have focused on projects that are integrated into the adjacent landscape, and are naturally sustainable. In order to maximize the benefits of a marsh restoration project, for example, a riparian buffer and mudflat would be present in addition to the marsh itself. Emphasis is on larger projects, located in areas where they are sheltered from wave energy and boat wakes. Larger, integrated projects are likely to support a more diverse ecosystem, similar to the historical landscape, and are more likely to persist over time in the absence of active maintenance.

The Integrated Habitat Restoration Alternative should result in net improvement in water and sediment quality over the long-term. Some habitat restoration actions would result in short-term impacts, but these impacts can typically be avoided or minimized. Adverse impacts may include temporary increases in erosion associated with land disturbance, temporary increases in turbidity, temporary increases in noise from construction activities, and increases in air pollution from construction equipment.

This alternative is selected as preferred because it is the most suited of the alternatives to fulfill the goal of NRDA under CERCLA to restore injured natural resources and services. It is specifically designed to improve habitats that function in support of multiple fish and wildlife resources, as well the prey items of these species that reside in those habitats. Habitat restoration in Eagle Harbor or elsewhere on Bainbridge Island would also provide indirect benefits to organisms such as Orcas that do not utilize habitats in Eagle Harbor themselves, but feed on organisms that do utilize these habitats, because of increased biomass of prey items. In fact, habitat restoration for salmon and other prey of Orcas is part of the recovery plan for Southern Resident Orcas (NMFS, 2008). The Trustees recognize the success of similar habitat restoration projects elsewhere in Puget Sound, whether done in a NRDA-context or not, and this alternative would build on those efforts. The potential impacts of this alternative are discussed in greater length below.

3.2 DIRECT, INDIRECT, OR CUMULATIVE IMPACTS OF THE NO-ACTION AND PREFERRED ALTERNATIVES

The No-Action Alternative and Integrated Habitat Restoration Alternative were evaluated based on specific NEPA factors identified below to determine the significance of the impacts. As mentioned above, the evaluation of the Species-Specific Restoration Alternative in the Commencement Bay PEIS is incorporated by reference into this document. Because NEPA requires consideration of context and intensity (40 CFR 1508.27), the impacts of the proposed alternatives 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 under 40 CFR 1508.27(b) is 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 against those specific factors [40 CFR 1508.27(b)] in order to determine whether or not the alternatives would have a significant effect on the quality of the human environment. In addition, the potential impacts of the alternatives were examined in light

of NOAA Administrative Order (NAO) Series 216-6, *Environmental Review Procedures for Implementing the National Environmental Policy Act* (NAO 216-6).

The Trustees concluded overall that any potential adverse environmental impacts from Alternative 3 would be short-term and construction-related, while beneficial environmental impacts would result in long-term benefits to the area's natural resources and the aesthetic pleasures for humans. In contrast, there would largely be no impacts from the No-Action Alternative, either adverse or beneficial.

3.2.1 Likely impacts of the alternatives [40 CFR 1508.27(b)(1)]

Adverse environmental impacts expected from restoration projects under the Integrated Habitat Restoration Alternative would all be short-term and construction-related impacts. The magnitude of environmental impacts would generally be a function of the extent and duration of construction. Mitigation measures (i.e., use of Best Management Practices- "BMPs") will be included to minimize these short-term impacts. The long-term impacts will be beneficial to the area's natural resources by, for example, providing additional fish habitat, protecting and improving water quality, and increasing aesthetics in the area. Projects implemented under Alternative 3 will be developed to comply with all applicable local, state, tribal, and federal permits and approvals.

There are a number of 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 projects under this Alternative 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 these projects is presented below in Section 4.0. The project manager would 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. This would minimize potential adverse impacts from implementation of this alternative. The Trustees anticipate that there would be no violations of environmental protection laws associated with projects under the Integrated Habitat Restoration Alternative.

Little environmental impact, adverse or beneficial, would result from the No-Action Alternative. Any restoration would be done under other authorities and mechanisms. There would be no ecological benefits provided under this alternative, nor would there be any direct adverse impacts. However, there would not be any additional critical habitat for Puget Sound Chinook salmon or essential fish habitat, in contrast to what would occur under the Integrated Habitat Restoration Alternative.

3.2.1.1 Aesthetics, light, and glare

Under the Integrated Habitat Restoration Alternative, the project sites would have poor aesthetics from disturbed soils, piles of debris, and other construction-related untidiness during the construction phase of a project. It is possible that lights would be used if some of the construction work is done during nighttime (for example, to work when there are good tides). There would be some glare off of machinery used in the construction. However the duration of the construction phase would be relatively short- a few weeks to a few months- for projects under this alternative. Following construction, project sites are likely to have much better aesthetics than were present prior to the restoration action, if for example rip-rap or other shoreline armoring is replaced with marsh and riparian vegetation.

Under the No-Action Alternative, there would be no construction, and so no construction-related impacts such as would exist under Alternative 3. There would also be no change in aesthetics in the project areas under the Integrated Habitat Restoration Alternative.

3.2.1.2 Economic impacts

No significant economic impacts on neighborhoods would occur under the Integrated Habitat Restoration Alternative. The restoration projects implemented under this alternative would not result in a significant conversion of commercial property to habitat that could lead to job losses or decreases in income for the jurisdictions in which these projects would occur. There will be short-term economic benefits to local businesses in the general area in which habitat projects will be located from spending by construction workers. Over the long-term there should be no economic impacts from the implementation of this alternative.

The No-Action Alternative would also not have any long-term economic impacts, but neither would it have any short-term beneficial impacts to local businesses because there would be no additional spending by construction workers.

3.2.1.3 Energy and natural resources

There are no sources of energy or exploitable natural resources on-site of any of the currently identified potential projects under the Integrated Habitat Restoration Alternative to be affected; therefore, no impacts will result. There would also be no impacts from the No-Action Alternative.

3.2.1.4 Geological and soil resources

There are no known mineral or oil deposits in the areas where projects will be located under the Integrated Habitat Restoration Alternative and many of the project sites will be developed or disturbed/filled-in areas, and construction of habitat will therefore provide a slight increase in the quality of soils and sediments. There would be no changes to any areas as a result of the No-Action Alternative, so no impacts would result.

3.2.1.5 Recreation and education

Projects implemented under the Integrated Habitat Restoration Alternative would increase the aesthetics of the shoreline in Eagle Harbor or other areas of Bainbridge Island, replacing hard armoring or fill with vegetated shorelines. This will create a more aesthetic appearance for recreational boaters and kayakers. Some proposed project locations are on public land and could have passive recreational use and possibly displays that could provide environmental education to visitors. For projects located on city property, there will be active efforts to engage citizens in stewardship and educational activities.

There would be no changes in recreation or education as a result of the No-Action Alternative. Any changes that would occur would be the result of other programs.

3.2.1.6 Land and shoreline use

The Integrated Habitat Alternative will not result in negative impacts on land or shoreline use since no existing approved uses are anticipated to be decreased or eliminated. The same is true of the No-Action Alternative.

3.2.1.7 Transportation, utilities, and public services

There might be temporary impacts to transportation or utilities during construction of individual projects under the Integrated Habitat Restoration Alternative, although they should be limited to small areas for short time periods. Overall, implementation of this alternative would not be expected to increase demand for public services and utilities. No impacts to transportation, public services, or utilities, temporary or otherwise, would result from the No-Action Alternative.

3.2.1.8 Water resources

During construction of projects under the Integrated Habitat Restoration Alternative, there could be minor short-term impacts to water quality resulting from increased turbidity for some of the potential projects. This could potentially affect aquatic vegetation and fauna. Overall, however, impacts would be expected to be temporary and localized. BMPs would be used to minimize the amount of sediment suspension in the water. Construction would only occur during periods when it would not be detrimental to fisheries in compliance with applicable permits and consultation terms and conditions. Over the long term, some projects would benefit water quality by re-establishing marsh or eelgrass which will serve to trap sediments and filter water. There would also be an increase in the amount of vegetated aquatic habitat, which should support greater biomass of fauna utilizing these habitats.

There would be no increases in turbidity or other impacts to water resources from the No-Action Alternative beyond that that would otherwise occur from other causes.

3.2.1.9 Wetlands

The shoreline along much of Eagle Harbor and Bainbridge Island is armored, and many former wetlands have been filled, so relatively little wetland habitat remains. Implementation of the Integrated Habitat Restoration Alternative will increase and/or enhance the amount of wetlands in Eagle Harbor and Bainbridge Island by several acres in total, to the benefit of the environment in general and the organisms that depend, directly or indirectly on wetland habitat.

In contrast, there would be no increase in wetlands under the No-Action Alternative. Any changes in wetlands would be the result of on-going actions under other programs.

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

Neither the No-Action nor the Integrated Habitat Restoration Alternatives would be expected to have any significant effects on public health or safety. The adverse effects from the implementation of the Integrated Habitat Restoration Alternative, such as loud noise and exhaust from machinery, would all short-term and construction-related impacts and thereafter the overall effects can be considered beneficial to the areas' humans and natural resources. The No-Action Alternative would not have any construction-related impacts in the short-term, but would also not have the beneficial impacts that would result from Alternative 3.

3.2.2.1 Environmental Health and Noise

No long-term risks to environmental health are expected to result from projects under the Integrated Habitat Restoration Alternative 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. Project implementation under this alternative will result in short-term noise impacts in a small area around each project location from the use of heavy equipment during the construction phase of the projects. Outside of the immediate project area the increase in noise should be minimal.

The No-Action Alternative would not result in any additional noise than would otherwise occur, because no heavy equipment would be used. No hazardous materials would be used or created, so there would be no risk of exposure to humans to these substances.

3.2.2.2 Air Quality

During the construction phase for projects under the Integrated Habitat Restoration Alternative there would be minimal short-term increases in exhaust and dust from use of construction

equipment. No significant or long-term impacts to air quality would be expected to result from the implementation of projects under this alternative. For projects in which vegetated habitat will replace rip-rap or structures, a slight improvement in air quality should result. There would be no changes in air quality under the No-Action Alternative beyond those that would otherwise occur.

3.2.2.3 Floodplain and Flood Control

Projects under the Integrated Habitat Restoration Alternative would not be expected to have any significant impacts on flood control. The types of project likely to be implemented under this alternative would not affect the floodplain to any significant degree. There might be some slight increase in floodplain capacity, depending on the type and location of a given project, but this effect would be minimal. The status quo for floodplain capacity and flood control would exist under the No-Action Alternative.

3.2.3 Unique Characteristics of the Geographic Area in which the Alternatives would be Implemented [40 CFR 1508.27(b)(3)]

In general the action area, Bainbridge Island, is similar in many respects to other islands and coastal areas in Puget Sound. It includes some habitats, such as eelgrass, marsh, stream mouths, and mudflats that are critical habitat for a number of different species. However, a large portion of the shoreline has been modified, eliminating or diminishing the ecological services provided by these nearshore and shoreline habitats. The restoration projects currently proposed under the Integrated Habitat Restoration Alternative would recreate natural habitat in areas that have been highly modified or degraded, and in which little natural shoreline habitats remain. Implementation of NRDA restoration projects would yield positive environmental impacts for the humans and the natural resources that use the Bainbridge Island environment, by increasing the amount of natural habitat for use by fish and wildlife and increase the enjoyment of passive recreational activities such as wildlife viewing. In contrast, the No-Action Alternative would leave the modified and degraded areas as they are, except as they might be modified under other programs.

Similar to other shoreline areas in Puget Sound, there are a number of important native American cultural sites as well as historic places within the action area. The No-Action Alternative would not have any impacts on such places. The Integrated Habitat Restoration Alternative has the potential to affect such places, although projects would be designed to minimize or mitigate any impacts, and appropriate consultations will be conducted on each project.

3.2.4 Controversial Aspects of the Alternatives or their Likely Effects on the Human Environment [40 CFR 1508.27(b)(4)]

Restoring lost habitat in Eagle Harbor or elsewhere on Bainbridge Island is generally non-controversial. A large number of different planning efforts and non-governmental organizations have supported doing such habitat restoration in the Bainbridge Island and Puget Sound environment. There is a demand from some members of the public for actions that would make up for the impacts caused by the releases of hazardous substances from the Wyckoff facility. Under the No-Action alternative, these members of the public could feel slighted or disappointed.

3.2.5 Degree to Which Possible Effects of Implementing the Alternatives are Highly Uncertain or Involve Unknown Risks [40 CFR 1508.27(b)(5)]

There are risks associated with any restoration effort, especially in a relatively developed area like the shoreline of Bainbridge Island. Because the Bainbridge Island shoreline is generally modified at potential project sites under Alternative 3, there is some uncertainty about what would be found at a given site, because a variety of materials could have been used as fill. There is also some uncertainty at a given location about potential contamination that may be present. Prior to implementing any restoration project under the Integrated Habitat Restoration Alternative, site

investigations would be conducted to minimize the risk of running into problems during construction, and a project could be redesigned or abandoned if significant problems are found. A number of different restoration projects have been completed in Puget Sound, and Trustees are aware of the types of problems that can arise and have been able to find solutions that have enabled prior restoration projects to move forward. The Trustees would try to similarly overcome any obstacles found in the restoration efforts under Alternative 3.

There are no unknown risks or uncertainty associated with the No-Action Alternative, because no projects would be implemented under this Alternative.

3.2.6 Precedential Effect of the Alternatives on Future Actions that may Significantly Affect the Human Environment [40 CFR 1508.27(b)(6)]

The Trustees believe that restoration projects such as those anticipated in Eagle Harbor and elsewhere on Bainbridge Island under the Integrated Habitat Restoration Alternative and the other habitat enhancements being planned by other groups would exert strong positive influences on resources utilizing the Bainbridge Island intertidal and nearshore environments. 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. No significant precedential effects are anticipated from the Eagle Harbor/Bainbridge Island restoration effort. This alternative is consistent with the requirements under CERCLA that injured natural resources be restored.

Under the No-Action Alternative, there is a risk that a precedent of not restoring injuries resulting from releases of hazardous substances under CERCLA when funds are, or could be made available, could be set. There would also be an issue related to not conducting restoration as is required under the Consent Decree for the Wyckoff site. These potential effects could make it more difficult for Trustees to carry out their responsibilities to seek compensation for injuries to natural resources related to releases of hazardous substances from Potentially Responsible Parties elsewhere, since the No-Action Alternative would be an example of Trustees receiving settlement funds but not using them to conduct restoration as is required under CERCLA.

3.2.7 Possible Significance of Cumulative Impacts from Restoration under these Alternatives and Similar Projects from other Mechanisms; Potential Impacts on Connected Actions [40 CFR 1508.27(b)(7)]

The cumulative effects analysis in this EA is commensurate with the degree of direct and indirect effects posed by the proposed Federal action or alternatives considered. Restoration projects considered in accordance with an overall CERCLA action are intended to mitigate or compensate for prior injury to natural resources under NOAA's jurisdiction, and therefore typically have predominantly beneficial impacts toward redressing impacts to those resources. In the case of the Wyckoff/Eagle Harbor proposed restoration effort, it is one component of the overall CERCLA remediation and restoration for the Wyckoff/Eagle Harbor site, therefore the potential for cumulative impacts is considered in the context of that overall project site. Although impacts to natural resources under NOAA's jurisdiction, and in general, may occur in the larger regional vicinity of Puget Sound, the potential for the proposed action to incrementally contribute to those effects does not warrant consideration here, as the goal of the effort is to increase available habitat for those resources. Therefore, the cumulative impacts analysis for this restoration action appropriately focuses on the incremental effects of the action in the context of other Wyckoff/Eagle Harbor ongoing actions under CERCLA.

The resources that may be temporarily impacted during construction actions are air quality (by increased dust, noise, and exhaust fumes from construction equipment), disturbance of soils and

sediments (largely currently degraded and disturbed), and water (from increased turbidity). Some slight and temporary impacts to marine fauna and flora could occur, but impacts to these and other resources would be minimized by use of BMPs. Other projects that may occur in the vicinity at the same time would similarly incorporate required BMPs, such as dust control and soil and erosion best management practices. Additionally, the overall footprint of projects that would be built under the Integrated Habitat Restoration Alternative would be relatively small. Consequently, the minor and temporary impacts of the action on air quality, soils and sediments, and water quality has a low potential to result in cumulatively significant impacts to these resources.

An important consideration for Trustees conduct of restoration actions is the timing and location of restoration projects relative to the overall CERCLA action. Specifically, it is important that habitat restorations occur on sites where contamination either did not occur or has been successfully remediated to appropriate standards, and that habitats or living marine resources not be restored in an area where they may be impacted by other impacts associated with the larger remediation or restoration action. In the case of the proposed restoration in and around the Wyckoff/Eagle Harbor Superfund Site, completion of the anticipated restoration projects would result in additional and/or improved marsh, mudflat, eelgrass, spawning beach, and/or riparian habitat which would be more ecologically productive and support the types of natural resources, such as English sole, salmonids, crabs, etc., that were injured by releases from the Wyckoff facility. As described in detail in the September 2007 Second 5-year review report, which is incorporated into this cumulative impacts section by reference (and is available at: <http://yosemite.epa.gov/r10/cleanup.nsf/b0067394308bf1a2882568ab007ca6d7/bbda6f55e18fbb9e882570dd005a0fa9!OpenDocument>), the other operational units in the vicinity of the Wyckoff Facility have succeeded in controlling releases and remediating the environment such that restored natural resources would not be introduced to an environment where they may cumulatively be exposed to prior site contaminants at injurious levels. Therefore, with respect to natural resources, over the mid and long-term (i.e., after completion of the restoration actions) restoration under the Integrated Habitat Restoration Alternative will be wholly beneficial with no potential for incremental contribution to significant impacts related to contaminant exposure in the marine environment.

There would be no cumulative impacts under the No-Action Alternative. Restoration efforts would only occur from other programs, and there would be no additional habitat created beyond that which would otherwise occur.

3.2.8 Effects of the Alternatives on National Historic Places, or Likely Impacts to Significant Cultural, Scientific or Historic Resources [40 CFR 1508.27(b)(8)]

Prior to conducting restoration at a given location under Alternative 3, the Trustees would consult with the Suquamish Tribe and the Washington Department of Archaeology and Historic Preservation and would conduct investigations to identify cultural and historical resources. Projects would be designed to avoid impacts to these resources if they are in the project area. For projects that would occur on property owned by the COBI or Park District, decisions about how to address historic features would initially be done through the public planning process that they have for such properties. The Trustees would provide input in that planning process. The Trustees would only be able to provide funding for habitat restoration work in areas designated for habitat in accordance to these plans. However it is possible- albeit unlikely- that the Trustees could decide not to fund certain aspects of a planned habitat project on a given COBI and/or Park District property should they independently determine that impacts to historic resources from these aspects of a project would be significant. In that event, funding for those aspects of the project would need to be obtained from other sources.

Under the No-Action Alternative, there would be no impacts to historic places and resources except those that would otherwise occur through other mechanisms or programs.

3.2.9 Degree to which the Alternatives may Adversely Affect Endangered or Threatened Species or their Critical Habitat [40 CFR 1508.27(b)(9)]

Restoration projects implemented under the Integrated Habitat Restoration Alternative would provide additional critical habitat for threatened Puget Sound Chinook salmon and additional habitat for Puget Sound steelhead, and may benefit other listed species in the surrounding area (such as bull trout and Southern Resident killer whale) indirectly through increases in prey biomass resulting from increased habitat. Through selective scheduling of the construction period to minimize impacts to salmonids and implementation of methods to minimize in-water turbidity, short-term impacts to listed species would be relatively minor. Federal laws and regulations pertaining to fish and wildlife as well as applicable consultation and regulatory terms and conditions would be followed to ensure that no long-term adverse impacts would result from this alternative. Following construction, restoration projects under this alternative would improve fish habitat structure and function. Juvenile anadromous salmonids will benefit from increased habitat quantity and quality. The No-Action Alternative would likely have no direct impacts, positive or negative, on endangered or threatened species or critical habitat. However, by not conducting restoration actions that would increase critical habitat, the No-Action Alternative would not help the recovery of threatened and endangered species as would be the case under the Integrated Habitat Restoration Alternative.

3.2.10 Introduction of Non-Indigenous Species [NAO 216-6 6.01(b)(11)]

No non-indigenous species would be introduced as part of the implementation of either the Integrated Habitat Restoration or No-Action Alternatives. However, existing invasive and non-native plant species would be replaced with native species in accordance with the monitoring program and site specific vegetation plans for restoration projects. There would be no reduction in the area inhabited by non-indigenous species under the No-Action Alternative.

3.3 EFFECTS OF CLIMATE CHANGE ON THE NO-ACTION AND INTEGRATED HABITAT RESTORATION ALTERNATIVES

The effect of climate change that is most relevant to nearshore and shoreline restoration projects on Bainbridge Island is sea level rise (SLR). Other anticipated effects of climate change, such as increased rainfall and reduced snowpack leading to higher peak flows, will have more impact on freshwater stream habitats rather than estuarine habitats. There is a wide range in the predictions of how much SLR will occur in Puget Sound, one of the higher estimates is that it could be 40 inches or more by year 2100 (Bauman et al., 2006). Trustees can take SLR into account when building habitat restoration projects by setting target elevations toward the middle or upper end of the range for desired vegetation, such as marsh vegetation, or at a relatively high elevation within the intertidal for mudflats, rather than at a lower elevation. By doing this, the desired type of habitat will still be functional even if the higher predictions of SLR prove accurate. Another approach is to build restoration projects in depth- that is, design projects so that vegetation would be able to shift upward along with the rise in sea level. Trustees would use one or both of these methods when building restoration projects on Bainbridge Island.

One effect of SLR in general will be to reduce estuarine habitat in Puget Sound (Puget Sound Partnership, 2008). Thus, implementing the preferred alternative would help to offset this loss of estuarine habitat. Under the No-Action Alternative, there would be no additional estuarine habitat to partially offset losses of habitat that are predicted to occur as a result of SLR.

3.4 PROJECT EVALUATION FOR THE INTEGRATED HABITAT RESTORATION ALTERNATIVE

The Trustees evaluated the types of resources that were likely injured by releases of hazardous substances from the Wyckoff facility, and, as mentioned above, determined that the greatest

benefit to these resources would be the restoration of vegetated intertidal (marsh) and subtidal (eelgrass) habitat, intertidal flats, and forage fish spawning beaches. During discussions with the COBI and others, and examination of potential projects identified for use as contingent habitat mitigation for the Washington State Department of Transportation (Herrera Environmental Consultants, Inc., 2001), a number of potential habitat restoration projects of these types, were identified. The Trustees did an initial evaluation of projects then known by the Trustees, and with sufficient information for the evaluation, on November 28, 2007 using a screening process that utilized the following NRDA restoration selection criteria:

- Location of the project with respect to the location of injuries;
- The extent to which the project would benefit natural resources and resource services affected by the releases of hazardous substances;
- The cost effectiveness of implementing the project;
- The likelihood of success of the project;
- The potential to cause collateral injury as a result of implementing the project;
- The extent to which the project benefits more than one natural resource or service
- The effect of the project on public health and safety; and
- The length of time needed prior to being able to implement the project.

Each project got from one (low) to three (high) points for each criterion. Tentative scores were given for some criteria on projects if there was insufficient information for the Trustees to be confident about the score at this time. Two additional project suggestions have been received since that analysis, and they were evaluated on June 5, 2008 using these same criteria, along with a review of the scoring performed on November 28, 2007.

The Trustees are interested in constructing a number of restoration projects with the settlement funds and are interested in receiving information on additional potential projects. Project concepts that are sufficiently detailed to do an initial screening should be submitted to the project contact identified at the beginning of this document. These projects will undergo the same evaluation and screening process as was done to the projects already identified. If any of these projects rank sufficiently high, they may be implemented by the Trustees provided that there are sufficient funds at that time and no problems are identified during the full evaluation process. Additionally, as new information is received about projects that have already been evaluated, they will be rescreened and given revised scores, if applicable.

3.4.1 Project Screening

Each of the currently proposed projects is described briefly below and the results of the NRDA criteria screening on those received prior to June 5, 2008 are presented in Table 1. Projects that had low scores in the NRDA criteria screening are not considered further at this time. However, if the Trustees receive additional information about one of these projects, it will be re-evaluated for potential selection, depending on whether remaining funds would be sufficient to potentially implement the project alone or in conjunction with outside funding.

It is important to recognize that a project may have a high score on many of the criteria, but still not be chosen as a project under the Preferred Alternative. For example if a project costs more than the remaining settlement funds it could not be implemented by the Trustees regardless of the overall score. Or if a project could not be implemented for many years, it might not be selected even if it has high scores on other criteria. Additionally, the Trustees are interested in maximizing the amount of restoration that can be accomplished with the given funds, and how a given project's cost and benefits will fit in with that overall objective will be an important factor in considering it for implementation.

TABLE 1 Project Screening Conducted on June 5, 2008

| Score | Projects | (goals) | | (bang for \$) | (likelihood of) | (avoids collateral) | (provides multiple) | (health/safety) | (implementation) |
|-------|------------------------------------|----------|-----------|---------------|-----------------|---------------------|---------------------|-----------------|------------------|
| | | Location | Inj. Res. | Costs | Success | Injury | Benefits | Public | Timing |
| 24 | Strawberry Plant | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| 23 | Pritchard Park West | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 2 |
| 22 | Milwaukee Dock | 3 | 3 | 2 | 3 | 2 | 3 | 3 | 3 |
| 22 | Blakely Harbor Park (remove jetty) | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 2 |
| 21 | Blakely Harbor Park (keep jetty) | 2 | 3 | 2 | 3 | 3 | 3 | 3 | 2 |
| 21 | Pritchard Park East Bluff | 3 | 2 | 3 | 3 | 3 | 2 | 3 | 2 |
| 20 | Eagle Harbor Head of Bay | 3 | 3 | 1 | 3 | 3 | 3 | 3 | 1 |
| 20 | Ferry Terminal Area Shoreline | 3 | 2 | 3 | 3 | 3 | 2 | 3 | 1 |
| 18 | Manitou Beach Drive | 2 | 3 | 1 | 2 | 3 | 3 | 3 | 1 |
| 15 | Schel-Chelb Estuary | 1 | 2 | 1 | 3 | 2 | 2 | 3 | 1 |
| 13 | Manitou Beach Marsh | 2 | 2 | 1 | 2 | 2 | 2 | 1 | 1 |

1 = Low, 2 = Medium, 3 = High
 1,2,3 = needs more information

| Selection Criteria for Restoration Alternatives | |
|--|--|
| Goals: | The extent to which each alternative is expected to meet the trustees' goals and objectives in returning the injured natural resources and services to baseline and/or compensating for interim losses (nexus: resources and location) |
| Cost: | The cost to carry out the alternative (cost effectiveness) |
| Success: | The likelihood of success of each alternative |
| Injury: | The extent to which each alternative will prevent future injury as a result of the incident, and avoid collateral injury as a result of implementing the alternative (risk of causing harm) |
| Benefits: | The extent to which each alternative benefits more than one natural resource and/or service |
| Public: | The effect of each alternative on public health and safety |
| Timing: | How long until the proposed alternative is ready for implementation |
| Public: | The effect of each alternative on public health and safety |
| Timing: | How long until the proposed alternative is ready for implementation |

3.5 CURRENTLY IDENTIFIED PROJECT ALTERNATIVES

The projects discussed below are consistent with the Integrated Habitat Restoration Alternative. Some of them have a strong potential to be ultimately chosen for implementation (these are identified in section 3.6), although other potential projects, including ones that may be received in the future, could be selected after additional evaluations are completed.

3.5.1 Strawberry Plant Park Shoreline Restoration Project

This project is located in the back reaches of Eagle Harbor, and has a salmon stream adjacent to the property. The property had a commercial-use building on a pier, which burned down and has

not been rebuilt. The COBI acquired the property with the intent of building a habitat restoration project and a park. The city and Park District have not yet finalized plans for the park, so the specific details about restoration at the site are tentative at this point. However, based on the April 2007 concept, the project would remove 250 ft of shoreline armoring and fill material on approximately 0.5 acres to recreate estuarine marsh and mudflat habitat. Additionally, debris in the intertidal zone and a float that grounds at low tide would be removed, restoring full function of that area from its current degraded state. Approximately 0.5 acres of an existing parking lot would be removed, the area graded, and vegetation planted to create riparian habitat. The integrated complex of riparian, marsh, and mudflat habitats at this site would maximize ecological service provision to salmon, other fish, and bird species directly. Debris in the mouth of the stream would also be removed. (Approximately 100 existing creosote pilings may be removed under the 2007 concept, but this is likely to be done under a program of the WDNR by the city without any NRDA funding or Trustee involvement). The park would also likely have some passive recreational use, which would be designed to minimally impact habitat ecological services. There would likely be some recreational amenities installed by the city as part of the current concept for the park, but they would not be funded with NRDA settlement funds and would be placed so as to minimize any impact on habitat services. Habitat areas funded by NRDA settlement funds would be required to be maintained as habitat.

The Strawberry Plant project had the highest possible score in the NRDA restoration criteria screening (24 points). The integrated habitat complex of riparian, marsh, and mudflat would greatly benefit the types of resources impacted by the contaminants, and provide benefits to many other species. The cost of the project would be relatively low because the city owns the property, and SRFB funding has been received by the city to help fund aspects of the project. There is a lot of knowledge about how to build projects such as this, so the project is likely to be successful and able to be implemented with little collateral injury. It would not affect public health and safety and the project could be completed in 2009. The anticipated impacts for this project are consistent with the impact analysis of Alternative 3 (Section 3.2) in all respects, based on the current conceptual plan. The Trustees would prepare a Supplemental EA (SEA) to do further NEPA analysis on this project once project details are better known.

3.5.2 Pritchard Park West Beach Restoration Project

The project is located along the west beach of Pritchard Park on the southern shoreline of Eagle Harbor. This project would complete the shoreline restoration of the west beach at Pritchard Park. In 2001, approximately 1800 ft of the shoreline adjacent to the project site was restored, and monitoring done by the COBI has shown that the area is utilized as a spawning beach by forage fish such as surf smelt and Pacific sand lance, which are important salmonid prey items. This project would restore another 415 ft of shoreline by removal of rip-rap and concrete armoring. It would create approximately 0.3 acres of additional spawning habitat for forage fish by removal of intertidal fill and intertidal debris (including toxic creosote-treated wood, potentially by the WDNR program). Riparian vegetation would be planted and the narrow backshore habitat would be restored with LDW added. The project would serve as a demonstration project for private landowners who have hardened shoreline property currently, but who might be willing to modify their property to provide a more natural shoreline habitat.

The project scored high in the NRDA restoration criteria screening (23 points). The project is located within Eagle Harbor and is expected to provide benefits to many of the species affected by the hazardous substances released from the Wyckoff facility. The adjacent restored beach is used by surf smelt and sand lance for spawning, and it is likely that the restored beach would similarly be used for spawning. There would not be any land acquisition costs since the area is publically owned, and the project would be relatively cost effective. The project has a high likelihood of success, based on the previous success of similar restoration efforts along the west beach. The

project can be constructed with little or no collateral injury, and would not affect public health or safety. However there is a known shell midden located on the property, and the final project design would need to accommodate this feature and potentially other significant cultural/historical features that might be located at the project location. The anticipated impacts for this project are consistent with the impacts analysis for Alternative 3 (Section 3.2), based on the current conceptual plan. A Supplemental Environmental Assessment (SEA) would be prepared if, after further investigation, the Trustees decide to proceed with funding this project.

3.5.3 Milwaukee Dock Eelgrass Restoration Project

This project would restore eelgrass habitat by filling (to a depth appropriate for eelgrass growth and survival) the remnants of a dredged navigation channel that had been used to access the Milwaukee Dock, on the eastern shore of Bainbridge Island, near the mouth of Eagle Harbor. The shoreline near the project is now part of the Pritchard Park West property that is owned by the COBI. The channel was dredged through existing eelgrass, and a recent survey of the site indicates that eelgrass still exists in the area surrounding the remnants of the channel (USACE, 2007). The dock was removed prior to 1991 (Herrera, 2001), and the project had previously been considered as a mitigation project. A dive survey conducted on September 6, 2007 found that there were two large depressions remaining. Eelgrass surrounds the two depressions, and extends down into the depressions to approximately -14 ft MLLW. The depressions are depositional sites, with the material on the surface within the depressions consisting of fine decaying organic particulate matter rather than the coarse sand present outside the depressions. The amount of fill that would be placed if this project were to be implemented has not yet been determined. Some transplanting of eelgrass is planned, although natural colonization of the area is expected to occur as well to supplement the plantings.

This project scored high with the NRDA restoration selection criteria (22 out of a total of 24 potential points). It is located close to the mouth of Eagle Harbor, off the shoreline of the Wyckoff Operable Unit, and it would create habitat that would provide strong benefits to the type of resources injured by the releases of hazardous substances into Eagle Harbor. The cost is moderate, because no land would need to be acquired, and the amount of fill required is relatively small. The existence of eelgrass around the depressions suggests that the project is likely to be successful. Material would be placed into the depression through submerged discharge of the fill material, which would minimize impacts to adjacent eelgrass. Eelgrass habitat provides multiple benefits, including production of detritus, nursery habitat for some species, and provision of structure/complexity to the area. It would not impact public health or safety. The Trustees are currently seeking additional sources of funding/ support in order to maximize the size of the project, and conserve settlement funds.

The impact analysis for this project is consistent with the impact analysis of Alternative 3 (Section 3.2) in all respects. Consultations under Section 7 of the Endangered Species Act are completed and consultations under Section 106 of the National Historic Preservation Act (NHPA) have been initiated. A detailed impact analysis for this project is given below in Section 5. No further NEPA analysis would be undertaken for this project following finalization of this RP/EA.

3.5.4 Blakely Harbor Park Shoreline Restoration Project

Blakely Harbor is an embayment located south of Eagle Harbor on the eastern side of Bainbridge Island, and the project location is at the head of the bay. Although historically it was the site of a large saw mill, it is currently the least developed bay of Bainbridge Island. It is owned by the Bainbridge Island Metropolitan Parks and Recreation District, who intend the park to be available for passive recreational use as well as for habitat restoration. Currently there are two large jetties that were constructed to create a log pond (dam doors no longer exist), a sill between the jetties that restricts fish access, and the remnants of a powerhouse remaining from the former saw mill

facility. Wood waste, bricks, metal slag “balls”, and other debris are currently spread over several acres of intertidal and shallow subtidal zones around the area formerly occupied by the mill, but there is also some existing marsh, functional mudflat, and riparian forest.

The scope of the project has not yet been determined, but potential components of the project could include removal of debris and wood waste to restore acres of subtidal and intertidal habitat to full function, removal of approximately 150 ft of rip-rap, removal of the low tide fish passage barrier between the jetties and perhaps the jetties themselves, and removal of the powerhouse building. Marsh and beach habitat suitable for forage fish spawning could be restored. Decisions about whether to remove the jetties and/or other structures would be made by the Bainbridge Island Park District, not the Trustees. Once those decisions are made, the potential restoration possibilities would then be evaluated. Any habitat areas funded by NRDA settlement funds would be required to be maintained as habitat.

This project was given two scores, one with the jetties left in place (21 points) and another with removal of the jetties (22 points). The project scored high for benefits to injured resources, likelihood of success, avoiding collateral injury from implementation, and lack of public health or safety issues, but got a moderate score for location under both restoration scenarios. With the jetties left in place, the project got a moderate score for the degree of benefits to multiple resources and cost-effectiveness relative to the benefits, but got a high score for timing of implementation. With the jetties removed, the project got high scores for benefitting multiple resources and cost-effectiveness. However, it is likely that the project would take more time to begin implementation because of the additional time it would take for the Parks District to reach a decision to remove the jetties based on concerns about the historic value of the jetties themselves and the additional planning required to address these issues. Although removal of the jetties provided the highest score, even with the jetties left in place the project scored relatively high. If the final project design is deemed by the Trustees to be worthwhile as a NRDA restoration project, the Trustees would prepare a SEA to do further NEPA analysis.

3.5.5 Pritchard Park East Bluff Shoreline Restoration Project

This project is located at the east end of Pritchard Park, adjacent to the Wyckoff facility. The project would involve removing approximately 475 ft of wood bulkhead. A small pocket beach would be created, and a buffer planted. The project is located within a documented surf smelt spawning beach at Pritchard Park, and would be anticipated to provide additional spawning habitat. The COBI needs to decommission a road and move it to another location, regardless of whether NRDA restoration is implemented on the site, but this would not be funded through the settlement funds if the project is adopted as a NRDA project. Habitat areas funded by NRDA settlement funds would be required to be maintained as habitat.

Based on the currently available information, this project received a moderately high score in the NRDA screening (21 points). There may not be any land acquisition costs since most of the area is publicly owned, and the project would be relatively cost effective. Since the COBI already has much of the funds that are anticipated to be needed for the project, the amount of NRDA funds needed to complete the project would be relatively small. The project has a high likelihood of success, based on the previous success of similar restoration efforts along the west beach. The anticipated impacts for this project are consistent with the impact analysis of Alternative 3 (Section 3.2) in all respects, based on the current conceptual plan. If the final project design is deemed by the Trustees to be worthwhile as a NRDA restoration project, the Trustees would prepare a SEA to do further NEPA analysis.

3.5.6 Shoreline Restoration between Ferry Terminal and Maintenance Yard

The project is located near the town of Winslow, adjacent to the ferry terminal. The project would

minimally consist of the removal of creosote stumps, shipyard residue, and other debris on the beach and intertidal along an 800 ft or more stretch of shoreline. Additional potential restoration actions could include removal of a bulkhead, extending the beach backward, placement of LWD, and planting. Spawning beaches are nearby, and it is possible that the project could increase the amount of spawning habitat available for forage fish. The intertidal area may be an important foraging location for some salmonids. It has the potential to provide good ecological benefits to species injured by releases of hazardous substances from the Wyckoff facility.

This project is not well defined at this point, and therefore the initial screening score of 20 should be regarded as very preliminary. A large portion of the shoreline and tidelands are owned by the Eagle Harbor Condo Association, and their agreement to protect the restored habitat in perpetuity, through a conservation easement or some other mechanism, would be required if NRDA settlement funds are to be used. Although the project cost is likely to be low it might not be possible for early selection and implementation because of a lack of a concrete project concept at this time and a need to reach agreement with the Condo Association. However, there might be sufficient funds remaining and available for the project once these issues are addressed, provided that it scores high enough on the other criteria. If so, a SEA would be prepared. Therefore, pending additional information, this project is not currently considered part of the Preferred Alternative.

3.5.7 Head of Bay/Eagle Harbor Drive Restoration Project

The project is located in Eagle Harbor, at the head of the bay by an automobile repair shop, and other private property with existing structures, and a road with a culvert on a stream that restricts fish access. The project would restore intertidal mudflat, marsh, riparian habitat and improve fish access by replacing the culvert. It would also involve moving a road and the associated fill material, but this would not be done with NRDA funds. Habitat areas funded by NRDA settlement funds would be required to be maintained as habitat.

The project had a moderate score in the NRDA criteria screening (20 points). The project would greatly benefit the types of resources impacted by the hazardous substance releases from the Wyckoff facility, is likely to be successful, and would benefit a multitude of resources. However it would likely be very expensive because it would require the acquisition of private property and moving an existing road. The Trustees also believe that the project could not be implemented within the next couple of years because of the need to acquire property and the process of planning for moving the road. This project will be reconsidered if other funds are available to pay for the road realignment, if the COBI was able to purchase or otherwise obtain the needed properties, and if settlement funds remain after implementation of other projects identified in this document. If so, a SEA would be prepared. At this time, this project is not considered as part of the Preferred Alternative.

3.5.8 Manitou Beach Drive Restoration Project

This project is located in the embayment north of Eagle Harbor on the eastern side of Bainbridge Island, adjacent to the Manitou Beach Marsh project. The project would involve moving a road, removing up to 3,200 ft of bulkhead and fill to restore upper intertidal and backshore habitat. Habitat areas funded by NRDA settlement funds would be required to be maintained as habitat.

The project did not very score high in the evaluation (18 points) largely because of its location, high cost, and the likelihood that it would take longer than some of the higher scored projects to start construction. This project will be reconsidered if other funds are available to pay for the road work and if settlement funds remain after implementation of the preferred projects at that time. If so, a SEA would be prepared. At this time, the project is not considered as part of the Preferred Alternative.

3.5.9 Schel-Cheb Estuary Restoration Project

This project is located near Rich Passage on the western side of Bainbridge Island. It is adjacent to a restored estuarine area with a new stream channel that now supports a coho run. The project would consist of converting four to five acres of existing freshwater wetland and upland to tidal wetlands. The property is privately owned, and the land has been permitted for two residential lots. Habitat areas funded by NRDA settlement funds would be required to be maintained as habitat.

The project scored relatively low (15 points) because of its location on the other side from Eagle Harbor, and on costs relative to the benefits because acquiring the property would likely require more funds than were received in the settlement. Furthermore, the conversion of existing, functional freshwater wetlands to estuarine wetlands would not provide a large increase in overall benefits. Although the project received high scores on some other criteria, the cost of property acquisition alone is sufficient for the Trustees to screen this project out for further consideration. It is therefore not included as part of the Preferred Alternative at this time. This project will be reconsidered if the property were to be donated or a conservation easement put on the property for habitat restoration purposes and settlement funds remain after implementation of the preferred projects. If it is selected for further consideration as a NRDA restoration project, a SEA would be prepared. At this time, this project is not considered as part of the Preferred Alternative.

3.5.10 Manitou Beach Marsh Restoration Project

This project is located in the embayment north of Eagle Harbor on the eastern side of Bainbridge Island. The project would remove approximately 0.75 acres of intertidal fill to restore an historic salt marsh, and connect it with existing marsh and a stream. A culvert would be replaced, and a dike or tide gate would need to be installed to avoid residential flooding. Habitat areas funded by NRDA settlement funds would be required to be maintained as habitat.

The project had a low score (13 points) in the NRDA screening based largely on its' location, the potential for impacting human health and safety (by potentially increasing the risk of residential flooding), the likely high cost of addressing the flooding issues, and the long time it would likely take for planning the project given the flooding potential. At this time, the project is not considered as part of the Preferred Alternative. If the Trustees receive additional information that leads to the project being proposed as part of the Preferred Alternative, a SEA would be prepared.

3.6 CURRENTLY PROPOSED PROJECTS UNDER THE PREFERRED ALTERNATIVE

The Trustees are proposing five of the currently identified projects as project candidates under the Preferred Alternative. These are the Milwaukee Dock Eelgrass Restoration, Strawberry Plant Park Shoreline Restoration, Pritchard Park West Beach Restoration, Pritchard Park East Bluff Restoration, and the Blakely Harbor Park Shoreline Restoration projects. The Milwaukee Dock Eelgrass Restoration Project details have been worked out sufficiently that no further NEPA analysis is required beyond that provided below in Section 5. It is possible that the Strawberry Plant Park Shoreline Restoration project could be constructed in 2009 assuming the SEA for the project is finalized and the Trustees officially adopt the project. The same is possible for the Pritchard Park West Shoreline Restoration Project and the Pritchard Park East Bluff Restoration Project. The timing of possible implementation of the Blakely Harbor Park project is less clear, and a long planning process is anticipated, in part due to the historical nature of the site. Other restoration projects, including future proposed projects, will be evaluated and additional projects would be constructed in the future as funding permits. A SEA would be prepared for any other restoration projects that might be proposed as part of the Preferred Alternative.

4.0 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 projects 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 these projects is presented below. The project manager for each project 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.

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). The Wyckoff Property, including adjacent waters in Eagle Harbor, is an NPL site, and the settlement is intended to fund restoration of the injured natural resources.

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.

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 draft EA for this project will be made available to interested parties who request a copy. All comments received will be considered when the lead federal agency makes 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 this Alternative. 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 of Washington's policy for protection and preservation of the natural environment. Local jurisdictions must also implement the policies and procedures of SEPA. Projects will undergo a public comment period under SEPA requirements and the SEPA checklist, in conjunction with the NEPA process.

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 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.

Oil Pollution Act of 1990 (OPA), 33 USC §§ 2701 et seq. OPA, provides for the prevention of, liability for, removal of and compensation for the discharge, of the substantial threat of discharge, of oil into or upon the navigable waters of the United States, adjoining shorelines, or the Exclusive Economic Zone. Section 1006(e) requires the President, acting through the Under Secretary of Commerce for Oceans and Atmosphere, to develop regulations establishing procedures for natural resource trustees in the assessment of damages for injury to, destruction of, loss of, or loss of use of natural resources covered by OPA. Section 1006(b) provides for the designation of Federal, State, Indian tribal and foreign natural resource trustees to determine resource injuries, assess natural resource damages (including the reasonable costs of assessing damages), present a claim, recover damages and develop and implement a plan for the restoration, rehabilitation, replacement, or acquisition of the equivalent of the natural resources under their trusteeship.

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, NMFS and 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. All appropriate consultations under Section 7 will be conducted for each individual restoration project. Information about this consultation process for the Milwaukee Dock project is available from john.kern@noaa.gov.

Magnuson-Stevens Act (MSA) (formerly 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. NMFS has been consulted regarding any MSFCMA-managed species residing or migrating through the proposed project location for the Milwaukee Dock Eelgrass restoration project. Consultations will be conducted for all other projects under this Alternative.

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.

Executive Order 11988: Floodplain Management. On May 24, 1977, President Carter issued Executive Order 11988, Floodplain Management. This Executive Order requires each federal agency to provide opportunity for early public review of any plans or proposals for actions in floodplains, in accordance with Section 2(b) of Executive Order 11514, as amended, including the development of procedures to accomplish this objective.

Executive Order 11990: Protection of Wetlands. On May 24, 1977, President Carter issued Executive Order 11990, Protection of Wetlands. This Executive Order requires each agency to provide opportunity for early public review of any plans or proposals for new construction in wetlands, in accordance with Section 2(b) of Executive Order 11514, as amended, including the development of procedures to accomplish this objective.

Executive Order 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 Executive Order 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 Suquamish Tribe constitutes a distinct, separate community of Native Americans who rely on Treaty-reserved fish and shellfish resources for subsistence, economic and spiritual purposes. Members of low-income communities may also 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 Tribe is a participant in the restoration planning and their representation will be inherent in the Trustee Council'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 and has undergone Section 515 pre-dissemination review. The information collected herein complies with applicable guidelines.

Executive Order 11514 (35 Fed. Reg. 4247): Protection and Enhancement of Environmental Quality. This Executive Order directs federal agencies to monitor, evaluate, and control their activities in order to protect and enhance the quality of the nation's environment, to inform and seek the views of the public about these activities, to share data gathered on existing or potential environmental problems or control methods, and cooperate with other governmental agencies. The proposed plan and projects and the release of this Draft DARP/EA are consistent with the goals of this Order. The proposed plan is the product of inter-governmental cooperation and will protect

and enhance the environment. The restoration planning process has and continues to provide the public with information about the restoration effort.

Executive Order 13007 – Indian Sacred Sites; and Executive Order 13175: Consultation and Coordination with Indian Tribal Governments. Executive Order 13007 describes federal policy for accommodating sacred Indian sites. This Executive Order requires federal agencies with statutory or administrative responsibility for managing federal lands to: 1) accommodate access to and ceremonial use of Indian sacred sites by Indian religions practitioners; 2) avoid adversely affecting the physical integrity of such sacred sites and; where appropriate; and 3) maintain the confidentiality of these sacred sites.

Executive Order 13175 exists to: 1) promote regular and meaningful consultation and collaboration with tribal officials in the development of federal policies that have tribal implications; 2) strengthen the United States government-to-government relationships with Indian tribes; and 3) reduce the imposition of unfounded mandates upon Indian tribes.

The Suquamish Tribe is an active participant in the Trustee Council and is fully involved in the planning and decision-making process using the settlement funds to restore natural resources injured by releases of hazardous substances from the Wyckoff Facility in Eagle Harbor. As such, their concerns concerning sacred sites, cultural resources and other issues will be fully addressed when projects under this plan are implemented.

Executive Order 12962 (60 Fed. Reg. 30,769): Recreational Fisheries. This Executive Order directs federal agencies to, among other things, foster and promote restoration that benefits and supports viable, healthy, and sustainable recreational fisheries. The habitat restored under this plan will support recreationally-important fish species.

Executive Order 13112 (64 Fed. Reg. 6,183): Invasive Species. The purpose of Executive Order 13112 is to prevent the introduction of invasive species and provide for their control, and to minimize the economic, ecological, and human health impacts that invasive species cause. No invasive species will be introduced at any project sites and existing invasive species will be removed. A program for maintaining the projects, including continued removal of invasive species will be developed as part of the restoration effort.

Section 508 of the Rehabilitation Act, 29 U.S.C. 794D. Under Section 508 of the Rehabilitation Act, all Federal agencies must take steps to afford persons with disabilities, including members of the public, access to information that is comparable to the access available to others. Section 508 was enacted in part to eliminate access barriers associated with information technology. For web accessibility under Section 508, documents posted must make text equivalents available for any non-text elements (including images, navigation arrows, multimedia objects (with audio or video), logos, photographs, or artwork) to enable users with disabilities access to all important (as opposed to purely decorative) content. Compliance also extends to making accessible other multimedia and outreach materials and platforms, acquisition of equipment and other assistive technologies, and computer software compliance. To provide for access to this document by disabled persons who use special assistive technology type devices and services, an electronic version of this draft RP/EA incorporating electronically readable text equivalents for all non-text elements has been created and is available at <http://bwww.darrp.noaa.gov/northwest/eagle/>. This website is regularly reviewed for Section-508 compliance. Disabled persons experiencing any difficulty accessing this document on this web site should contact the DARRP Program webmaster at darrp.webmaster@noaa.gov for further technical assistance or to request an alternative means of access to the referenced information and data.

1855 Treaty of Point Elliott.

The 1855 Treaty of Point Elliott sets forth articles of agreement between the United States and the Suquamish Tribe, the Muckleshoot Indian Tribe, and other federally-recognized tribes within the Puget Sound area. Under the Supremacy Clause of the United States Constitution, treaties are superior to any conflicting state laws or constitutional provisions.

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

- Archaeological Resources Protection Act, 16 USC §§ 469, *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.*
- 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
- Washington State Hydraulic Code, Ch. 77.55 RCW and Ch. 220-110 WAC

5.0 MILWAUKEE DOCK EELGRASS RESTORATION PROJECT IMPACT ANALYSIS

This section presents the specific impact analysis for the Milwaukee Dock Eelgrass restoration project.

5.1 PROJECT LOCATION AND DESCRIPTION

The Milwaukee Dock Restoration site is situated to the east of the Wyckoff Superfund site approximately 200 ft off the shore of Bainbridge Island in central Puget Sound, Washington (Figure 2).

The site is a former navigation channel historically dredged to provide access to the Milwaukee Dock. The Milwaukee Dock structure was removed more than 10 years ago. The remnants of the dredged channel is approximately 5 acres in size (Figure 3), and has two large depressions left with a depth of approximately -25 ft MLLW (Figures 4 and 5).

The potential restoration action at this site consists of filling deep subtidal remnants of a former navigation channel with clean sandy material (similar in grain size to existing sediment surrounding the depressions to be filled), to a level where eelgrass is thriving. We would consult with experts, reviewing survey and other information, and considering the cost of obtaining and placing fill in order to determine the target elevation for the project. Based on current understanding, we might fill to an elevation as shallow as -8 ft MLLW, which would require approximately 32,000 yd³ of fill. The project could be done on a smaller scale (either fill one depression to an ideal elevation or both to deeper elevations) depending on construction costs and whether supplemental sources of funding/support can be obtained. Clean sediment dredged from a variety of other WSDOT or US Army Corps of Engineers maintenance or development projects in central Puget Sound would be utilized for fill materials, if clean material of an appropriate grain-size is available. Otherwise material of the appropriate grain size would be obtained from an upland quarry.

Restoration of the eelgrass meadow would be expedited through salvaging of plants that would be impacted from material placement prior to filling and transplanting after filling. Natural expansion of eelgrass into the filled area from the surrounding eelgrass meadow would also be expected to occur. To the maximum extent reasonable, eelgrass in the footprint of the area to be filled would be removed and propagated in the laboratory before the filling operations and then re-planted in the

filled area after a suitable period for settling and build up of organic material. Monitoring would be conducted to look at the success of the planting and to assess the need for additional actions to help ensure project success.

5.2 ENVIRONMENTAL CONSEQUENCES OF THE MILWAUKEE DOCK EELGRASS PROJECT

The Trustees compared the proposed project activities and then evaluated that information against the environmental settings described in Section 2 of this RP/EA 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 under 40 CFR 1508.27(b) is 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 of the RP/EA) against those specific factors [40 CFR 1508.27(b)] in order to determine whether or not the proposed project 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 (NAO) 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.

5.2.1 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. Mitigation measures- use of BMPs- have been included to minimize these short-term impacts. The long-term impacts are beneficial to the area's natural resources by, for example, providing additional fish habitat, protecting and improving water quality, and increasing aesthetics in the area. The project would be developed to comply with all applicable local, state, tribal, and federal permits and approvals. Monitoring will begin prior to the placement of material and shortly after placement of material to look for impacts to existing eelgrass. Contingency measures will be undertaken should impacts to eelgrass be observed.

Aesthetics, Light, and Glare. The site is located in deep subtidal marine waters and after the restoration project will remain subtidal. Therefore, there would be no change in aesthetics, light or glare.

Economic Impacts. No significant impacts on neighborhoods or community cohesion would occur because of the offshore project location. 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 would result.

Geological and Soil Resources. The fill material would be of a similar grain-size as the surrounding area, and is not expected to negatively impact geological resources.

Recreation and Education. The proposed project is located in deep subtidal marine waters off shore of Bainbridge island. There is no public access to the property and it is not designated nor used as a recreational area. However, it is possible that it could be used as a location for recreational snorkeling or diving, but otherwise is not expected to impact recreation or education.

Land and Shoreline Use. The proposed project would not result in negative impacts on land or shoreline use since no existing uses will be decreased or eliminated.

Transportation, Utilities, and Public Services. No transportation impacts are anticipated because the work would be done from a barge in subtidal waters, outside of widely used navigation areas. The project is not expected to increase demand for public services and utilities.

Water Resources. During placement of fill at the project site, there may be minor short-term impacts to water quality resulting from increased turbidity. BMPs would be used to minimize the amount of sediment suspension in the water and the amount that may be deposited on existing eelgrass. Construction would only occur during periods when it would not be detrimental to fisheries in compliance with applicable permits and consultation terms and conditions. Over the long term, the project would benefit water quality by re-establishing eelgrass which will serve to trap sediments and filter water. Overall, impacts are expected to be temporary and localized.

Wetlands. The site is offshore of Bainbridge island, near the mouth of Eagle Harbor in deep subtidal marine waters. Therefore, no wetlands are associated with the site.

5.2.2 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 the areas humans and natural resources.

Air Quality. During the construction phase, which is expected to require two to four weeks, there would be minimal short-term increases in exhaust from the tug and minimal dust from the fill material on the barge. No significant or long-term impacts to air quality are expected to result from the project.

Environmental Health and Noise. No long-term risks to environmental health are expected to result from the project since no hazardous materials would be stored or created on-site. A health and safety plan would be in place to address any potential hazards during construction.

The project would result in short-term noise impacts in a small, remote area from the use of heavy equipment during the construction phase of this project.

Floodplain and Flood Control. The project would not be expected to have any impacts on flood control or affect the floodplain.

5.2.3 Unique characteristics of the geographic area in which the project is 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 manipulated nature of Eagle Harbor that a NRDA restoration project would yield positive environmental impacts for the humans and the natural resources that use the Harbor.

5.2.4 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. No known adverse impacts as a result of the proposed construction have been identified.

5.2.5 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. Monitoring would occur during the construction as well as after the project is completed to look for impacts to existing eelgrass, as well as colonization/survival of eelgrass in the filled channel.

5.2.6 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 other groups exert strong positive influences on Eagle Harbor and might possibly encourage other restoration efforts. 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.

5.2.7 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 and other restoration projects to be implemented in the future would, on a cumulative basis, contribute to the overall environmental health of the area, by recreating a more natural environment that supports greater diversity and complexity. It would supplement the enhancement projects and parks in the adjacent areas.

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

The site is a dredged channel that is no longer being used because the dock that it serviced was removed ten years ago. The site is also in deep sub tidal marine waters over 200 ft from the shoreline and has been during recorded history. A search of the DAHP database showed no historic or cultural resources present in the area and the Suquamish Tribe is a Trustee and has reviewed the project and concluded that it should not adversely affect archaeological resources. The Washington Department of Archaeology & Historic Preservation concurred with the determination of No Historic Property Affected. Therefore no impacts to historic properties are anticipated.

5.2.9 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 and Puget Sound Steelhead (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 would be followed to ensure that no long-term adverse impacts would result from the proposed alternative.

The proposed restoration project would provide additional habitat for Chinook salmon and Puget Sound steelhead and may benefit other listed species in the area. During construction, short-term impacts to salmonid habitat could occur from the deposition of clean sand into the existing

navigation channel resulting in increased turbidity and total suspended solids. Through selective scheduling of the construction period to minimize impacts to salmonids and implementation of methods to minimize in-water turbidity and deposition of material on existing eelgrass, short-term impacts to listed species would be relatively minor. Section 7 ESA consultations with NMFS and USFWS have been completed, and documentation of this is available from john.kern@noaa.gov.

Over the long-term, no fish or wildlife habitat would be adversely impacted by the proposed project. Construction would only occur during designated periods to avoid salmonid migration periods. Minor disturbances to fish and benthic species may occur during the construction phase and may cause them to avoid the area 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 habitat structure and function. Juvenile anadromous salmonids would benefit from increased habitat quantity and quality.

During construction, short-term impacts to salmonid habitat, including critical habitat for Puget Sound Chinook salmon and Southern Resident killer whale, could occur from the placement of clean sand, resulting in increased turbidity and total suspended solids. However, by avoiding construction during Chinook salmon and Puget Sound steelhead migration periods and implementing measures to control in-water turbidity (use of BMPs), 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. Federal laws pertaining to fish and wildlife and EFH would be followed to ensure that no long-term adverse impacts would result from any selected alternative. The BA and agency consultations provide additional information and can be obtained from john.kern@noaa.gov.

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

There are a number of 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.. 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.

The Trustees anticipate that there would be no violations of environmental protection laws associated with the project.

5.2.11 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 plant species will be replaced with native species in accordance with the monitoring program and site specific vegetation plan.

5.3 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. 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.

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). The Wyckoff Property was an NPL site, and the various settlements were intended to fund restoration of the injured natural resources.

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.

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 Washington 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.

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 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.

Oil Pollution Act of 1990 (OPA), 33 USC §§ 2701 et seq. OPA, provides for the prevention of, liability for, removal of and compensation for the discharge, of the substantial threat of discharge, of oil into or upon the navigable waters of the United States, adjoining shorelines, or the

Exclusive Economic Zone. Section 1006(e) requires the President, acting through the Under Secretary of Commerce for Oceans and Atmosphere, to develop regulations establishing procedures for natural resource trustees in the assessment of damages for injury to, destruction of, loss of, or loss of use of natural resources covered by OPA. Section 1006(b) provides for the designation of Federal, State, Indian tribal and foreign natural resource trustees to determine resource injuries, assess natural resource damages (including the reasonable costs of assessing damages), present a claim, recover damages and develop and implement a plan for the restoration, rehabilitation, replacement, or acquisition of the equivalent of the natural resources under their trusteeship.

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, NMFS and 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 provides additional information regarding the federally- listed species that either migrate or reside in the Bainbridge Island area. The regulatory permits and consultation conditions set forth a number of operating measures designed to prevent or mitigate any such disturbances to these species.

Magnuson-Stevens Act (MSA) (formerly 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. NMFS has been consulted regarding any MSFCMA-managed species residing or migrating through Bainbridge Island nearshore waters and Eagle Harbor.

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.

Executive Order 11988: Floodplain Management. On May 24, 1977, President Carter issued Executive Order 11988, Floodplain Management. This Executive Order requires each federal

agency to provide opportunity for early public review of any plans or proposals for actions in floodplains, in accordance with Section 2(b) of Executive Order 11514, as amended, including the development of procedures to accomplish this objective.

Executive Order 11990: Protection of Wetlands. On May 24, 1977, President Carter issued Executive Order 11990, Protection of Wetlands. This Executive Order requires each agency to provide opportunity for early public review of any plans or proposals for new construction in wetlands, in accordance with Section 2(b) of Executive Order 11514, as amended, including the development of procedures to accomplish this objective.

Executive Order 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 Executive Order 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 Suquamish Tribe constitutes 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 Tribe is a participant in the project planning and their representation will be inherent in the Trustee Counsel'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 has undergone Section 515 pre-dissemination review and complies with applicable guidelines.

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- Marine Mammal Protection Act, 16 USC §§ 1361 *et seq.*
- National Historic Preservation Act, 16 USC §§ 470 *et seq.*
- 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

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7.0 LIST OF PREPARERS:

The following Trustees participated in the development of this RP/EA:

Rich Brooks, Suquamish Tribe
Randy Carman, WDFW
John Kern, NOAA
Jeff Krausmann, USFWS
Jason Lehto, NOAA
Glen St. Amant, Muckleshoot Indian Tribe

8.0 PUBLIC COMMENTS AND RESPONSE

Four official comments were received during the public review period on the public review Draft RP/EA, one of which raised several issues.

8.1 SUMMARY AND RESPONSE TO COMMENTS

None of the comments received objected to the Trustees' preferred Integrated Habitat Restoration Alternative as the restoration approach to restore injured resources resulting from releases from the Wyckoff facility. One of the comments specifically supported lack of further consideration of the Species Specific-Alternative. This comment letter also supported the five individual projects identified in the plan as being currently proposed for implementation under the Preferred Alternative and urged their timely implementation.

Two of those providing comments objected to the Strawberry Plant Park Shoreline Restoration Project as a component of the Preferred Alternative. One of the objections stated that the changing of the shoreline would be a waste of money that could be better used elsewhere and the other indicated that the site did not pose any significant threat to the environment and was an asset as currently constituted. Excepting the presence of derelict creosote pilings that are leaching hazardous substances (PAHs) into Eagle Harbor (and which will be removed under a WDNR program without Trustee funding or involvement), the Trustees agree that the site does not pose a significant threat to the environment based on our current understanding. However, removal of the artificial fill and bulkheads that are currently present on the site would restore highly productive intertidal beach, marsh, and backshore habitat, to the benefit of numerous species that were injured from Wyckoff facility releases. Habitat projects such as this that take degraded areas and recreate natural habitat are commonly used throughout the nation as NRDA restoration projects, and the Strawberry Plant Park Shoreline Restoration Project is very cost-effective compared to many other habitat projects in Puget Sound. The settlement funds can only be spent on restoration of injured resources, so contributing NRDA settlement funds toward the construction of habitat at this site would be a very effective use of limited resources. The importance of habitat restoration projects such as that proposed for the Strawberry Plant Park Shoreline Restoration Project is highlighted in the recently released *Draft 2020 Action Agenda for Puget Sound* which notes that approximately 75% of salt marsh habitat in Puget Sound has been lost in the last 50 years (Puget Sound Partnership, 2008b). The COBI has received some Salmon Recovery Funding Board funds for the project, which is further support for the ecological importance of this project. The Trustees note that the COBI and Park District are involved in a public park planning process that will consider public uses of the site as well as its' habitat value. A more detailed evaluation of the potential impacts of this project would be presented in a draft supplemental environmental assessment should the Trustees decide to pursue this project after site assessment studies are completed and the park planning process continues. Public comment would be sought on this project at that time.

There were two comments concerning the Blakely Harbor Park Shoreline Restoration Project. Each expressed concern about historic resources that are present at the site. One also expressed concern that the project ranking criteria did not specifically mention archaeological, historical, and cultural resources and that the project ratings were arbitrary. The criteria used in the evaluation of the potential projects are those provided in the NRDA regulations and the Trustees are required to use these criteria to identify projects that are appropriate under the regulations to restore injured natural resources and services. The projects were evaluated using best professional judgment of the Trustees who collectively have many years of experience with NRDA restoration in general and restoration in the Pacific Northwest in particular. Once a project is judged appropriate under the required NRDA criteria, it is then evaluated for potential impacts, including to historical and cultural

resources. This is the normal NRDA restoration planning process that is followed nationwide.

As discussed in Section 3.2.8, initial decisions concerning the design of the park will be made by the COBI and Park District through their public planning process, and then the Trustees will evaluate potential impacts to historical and cultural resources envisioned in the park design through the Section 106 process, and both of the parties who submitted these comments are consulting parties in this process. The Trustees could choose not to fund the habitat work as designed in the COBI and Park District planning process or work with the COBI and Park District to modify the design to minimize or avoid impacts to historical or cultural resources, should it be determined by the Trustees that implementing the project as designed could cause significant impacts to such resources. Consultations with the Suquamish Tribe and the Washington Department of Archaeology & Historic Preservation under the Section 106 process have already been initiated for this project, and will continue as the project design is developed.

There are acres of wood waste that cover intertidal and subtidal areas within Blakely Harbor. Wood waste has been documented to impact the benthic organisms that serve as important prey items for salmonids (e.g., SAIC, 1999). Therefore simply removing wood waste from several acres of the intertidal in Blakely Harbor would allow natural benthic communities and ecological services to be re-established. A more detailed evaluation of the potential impacts of this project (including to archaeological and historic resources) would be presented in a draft supplemental environmental assessment should the Trustees decide to pursue this project after site assessment studies are completed and as the park planning process continues. This draft supplemental assessment would be made available for public review and comment at that time.

One comment mentioned that the tidelands between the Washington State Ferries (Ferries) terminal and maintenance yard have contamination issues from stormwater runoff. However Ferries is required to have a Stormwater Pollution Prevention Plan for the site and has been conducting monitoring which had shown benchmark exceedances for zinc, but not other contaminants, in the past, but which has not exceeded this benchmark in recent samples (USEPA, 2007). Based on the information contained in the Second Five-Year Review Report for the Wyckoff/Eagle Harbor Superfund Site the Trustees do not feel that it makes sense at this time to consider further sediment cleanup (as primary restoration) as part of the restoration actions utilizing Wyckoff settlement funds. The Trustees are continuing to evaluate whether additional restoration actions are appropriate for injuries resulting from releases of hazardous substances unrelated to the Wyckoff facility, and could consider sediment cleanup as part of those actions.

8.2 COMMENTS RECEIVED

Subject: Strawberry Plant
From: LEONARD D BEIL <lenbeil3@msn.com>
Date: Sun, 19 Oct 2008 00:36:43 -0700
To: John.Kern@noaa.gov
CC: len Beil <lenbeil3@msn.com>

Dear John,

I am a Shore Steward and Beach Naturalist on Bainbridge Island. I do not support the destruction of the present shoreline at Strawberry Plant on Bainbridge Island. I think this is a wonderful location that has wonderful park opportunities, but I think the destruction and changing the shoreline would be a waste of money that could much better be used by the parks and other shoreline efforts. I would be happy to talk with you further about this matter. Please feel free to call me at 206-780-2111 or e-mail me. Thank you.

Sincerely,

Len Beil
3858 Rockaway Beach Rd
Bainbridge Island, Wa 98110

Comment from People From Gerald Elfendahl

Subject: Re: Fwd: Public Notice: Draft Restoration Plan/Environmental Assessment for Eagle Harbor
From: Gerald Elfendahl <gelfenda@earthlink.net>
Date: Thu, 30 Oct 2008 07:25:12 -0800
To: John Kern <John.Kern@noaa.gov>

Dear John,

I have briefly looked through your draft document and I am appalled at the lack of mention of archaeological, historical and cultural resources. While i see you briefly mention (section 3.2.8) that all projects will have to pass the federal HPA section 106 muster, none of your project criteria mention this in your arbitrary ratings!

We have had fisheries experts (Mahnken, Daley), historians, old timers who've lived the history (especially Japanese American community members who lived the strawberry cannery history), geomorphologists (Myers) architects, designers and historians looking at the Blakely Harbor park and Strawberry Cannery park sites and do not agree that the sites pose any significant threat to the environment and that in fact may be an asset as they are constituted for various reasons.

Having been familiar with Eagle Harbor tidal current studies, a 20 year resident of the harbor and a 35 year oyster grower on the harbor, I am aware that waters of Creosote / Bill Point have little or no impacts inside Hornbeck Sandspit a half mile to seaward of the cannery site (ADA Engineering study, ca. 1977).

I am sure the waters of wood preservation industry also had no impact upon Blakely Harbor where other important historic resources are located and you seem to jeopardize. I have not had time yet to look at proposed project descriptions there.

On the contrary, the tidelands which are publicly owned between and including the WA State Ferries terminal and the WA State Ferries maintenance yard including the Eagle Harbour Codominiums (their beach is public) have continuing contamination issues from parking holding area and highway runoff and the projects at Pritchard Park are directly related to wood preservation industry impacts and should, as all three of the above mentioned, are within the Superfund area of Eagle Harbor.

Please make sure that I receive a final report by mail and notice of any public presentations of it to elected officials or governmental agencies.

Please also describe for me your understanding of when and how HPA section 106 reviews of your suggestions would kick in.

All best, respectfully,

Jerry
Gerald Elfendahl
7823 Westerly Lane NE
B. Is., WA 98110
(206) 842-4164

Comment from Bainbridge Island Historical Society

Subject: Public Comments for Restoration Plan and Environmental Assessment (Wyckoff/Eagle Harbor/Blakey Harbor)

From: Lorraine Scott <curator@bainbridgehistory.org>

Date: Mon, 03 Nov 2008 15:24:42 -0800

To: John.Kem@noaa.gov

Dear Mr. Kern,

Comments submitted by the Bainbridge Island Historical Society:

In response to section 3.5.4 of the "Restoration Plan and Environmental Assessment for the Wyckoff/Eagle Harbor Site, Bainbridge Island, Washington" pertaining to proposed action at Blakely Harbor: the Bainbridge Island Historical Society points out there are significant cultural resources still in existence at Blakely Harbor and that restoration efforts should not jeopardize these existing culturally significant structures.

As mentioned in section 3.5.4, two extant jetties on the east side of the historic Port Blakely Mill Company's log pond and the concrete powerhouse structure (part of the third Port Blakely Mill) just northeast of the jetties are historic in nature and are, significantly, the only extant remains of an industry and community that hold a significant place in Bainbridge Island history. It is the hope of the Bainbridge Island Historical Society that care and thought will be given to the ways these visual connections to our past can be retained.

Additionally, all steps should be taken to ensure the archaeological resources in Blakely Harbor are not detrimentally disturbed. The Harbor was historically utilized by Native Americans well before American industry and towns were established.

The Bainbridge Island Historical Society looks forward to being a part of the Historic Preservation Act's Section 106 process for Blakely Harbor.

Thank you,

Lorraine V. Scott, Curator
Bainbridge Island Historical Museum
215 Ericksen Avenue NE
Bainbridge Island, WA 98110
(1-206-842-277)
www.bainbridgehistory.org

Comment from People From Puget Sound

November 3, 2008

John Kern, NOAA

NOAA Damage Assessment and Restoration Center NW

7600 Sand Point Way NE, Building 1

Seattle, WA 98115

Via Email: john.kern@noaa.gov

RE: Restoration Plan and Environmental Assessment for the Wyckoff/Eagle Harbor Site Bainbridge Island, Washington

To Mr. Kern,

We are writing to comment on *Restoration Plan and Environmental Assessment for the Wyckoff/Eagle Harbor Site Bainbridge Island, Washington (Public Review Draft)*, dated October 4, 2008, prepared by the Eagle Harbor Natural Resource Trustees.

People For Puget Sound is a nonprofit, citizens' organization whose mission is to protect and restore Puget Sound and the Northwest Straits.

Our comments follow:

1. **Alternative 2 (Species-oriented).** We support the lack of further consideration of Alternative 2 because we are not in favor of new hatcheries or net pens facilities due to potential pollution or other adverse impacts.

2. **Criteria and selection.** People For Puget Sound has no comment on any specific project. The projects look good and we hope that they will all get funded eventually. Our one suggestion is that the Puget Sound Partnership Action Agenda (which will be released December 1) be considered in the determination of project selection/sequencing.

3. **Timing.** We would like to see projects completed as soon as possible. We hope that you will expedite the NRDA process to get things started on-the-ground without delay. Thank you for the opportunity to comment on the draft document. Please contact me with questions at (206) 382-7007 X215.

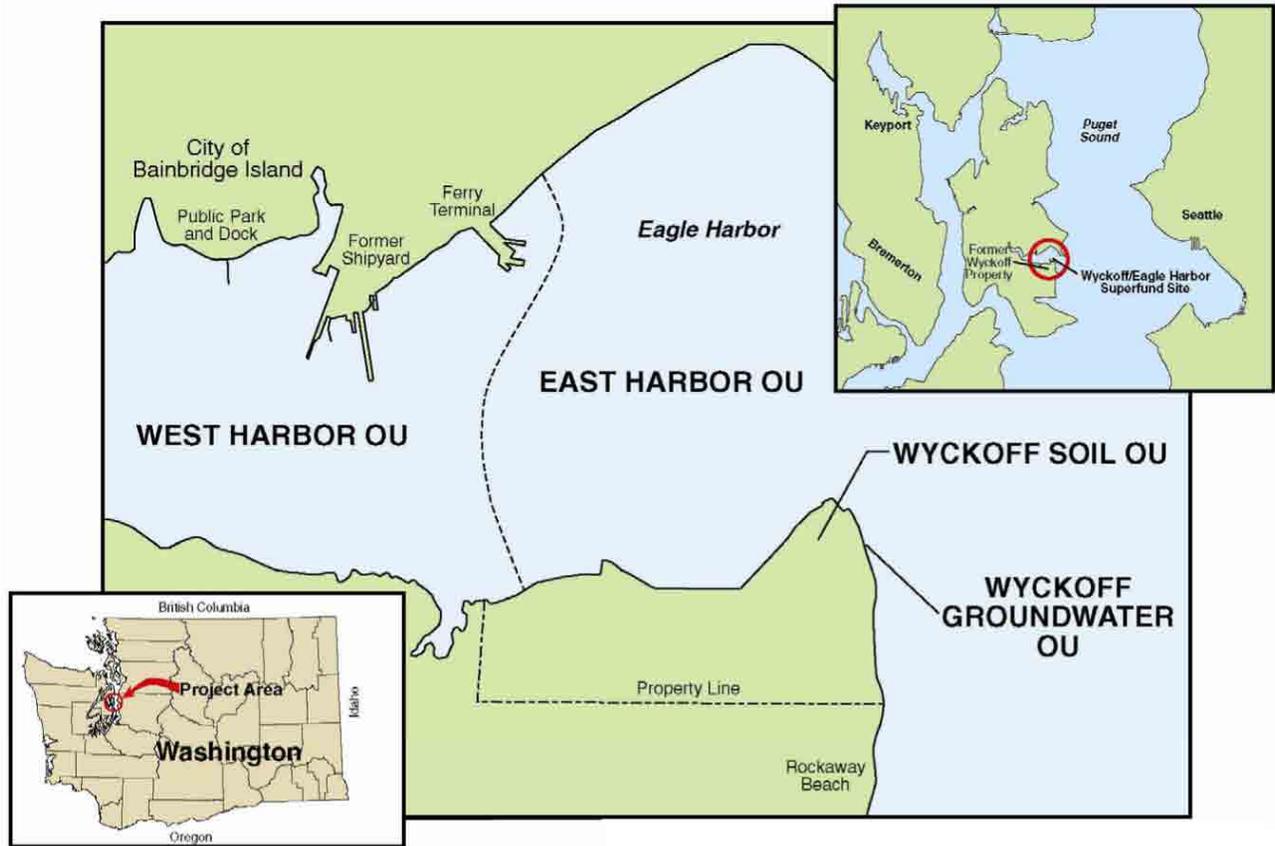
Sincerely,

Heather Trim

Urban Bays and Toxics Program Manager

9.0 FIGURES

Figure 1. Map of Bainbridge Island and Wyckoff Superfund Site



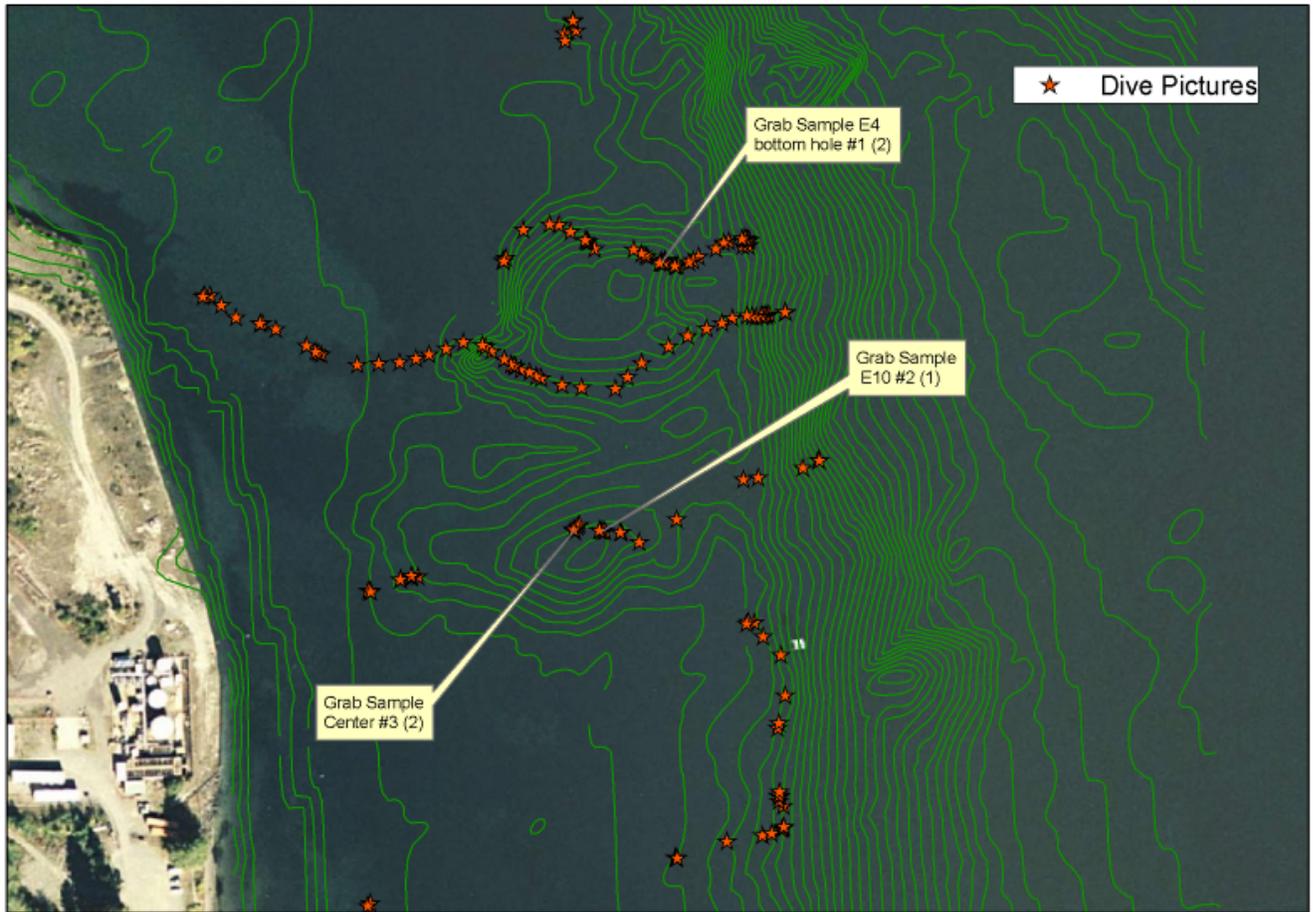
(Source: September 26, 2007, U.S. EPA Second Five-Year Review Report for the Wyckoff/Eagle Harbor Superfund Site)

Figure 2: Milwaukee Dock Project Location



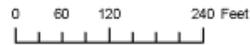
(Source: City of Bainbridge Island)

Figure 3: Topography of Project Location



The U.S. Environmental Protection Agency (EPA) has compiled this computer-generated topographic map and information sources that may not have been verified by the EPA. This data is offered here as a general representation only, and is not to be used without verification by an independent professional qualified to verify such data or information. The EPA does not guarantee the accuracy, completeness, or timeliness of the information shown, and shall not be liable for any loss or injury resulting from reliance upon the information shown.

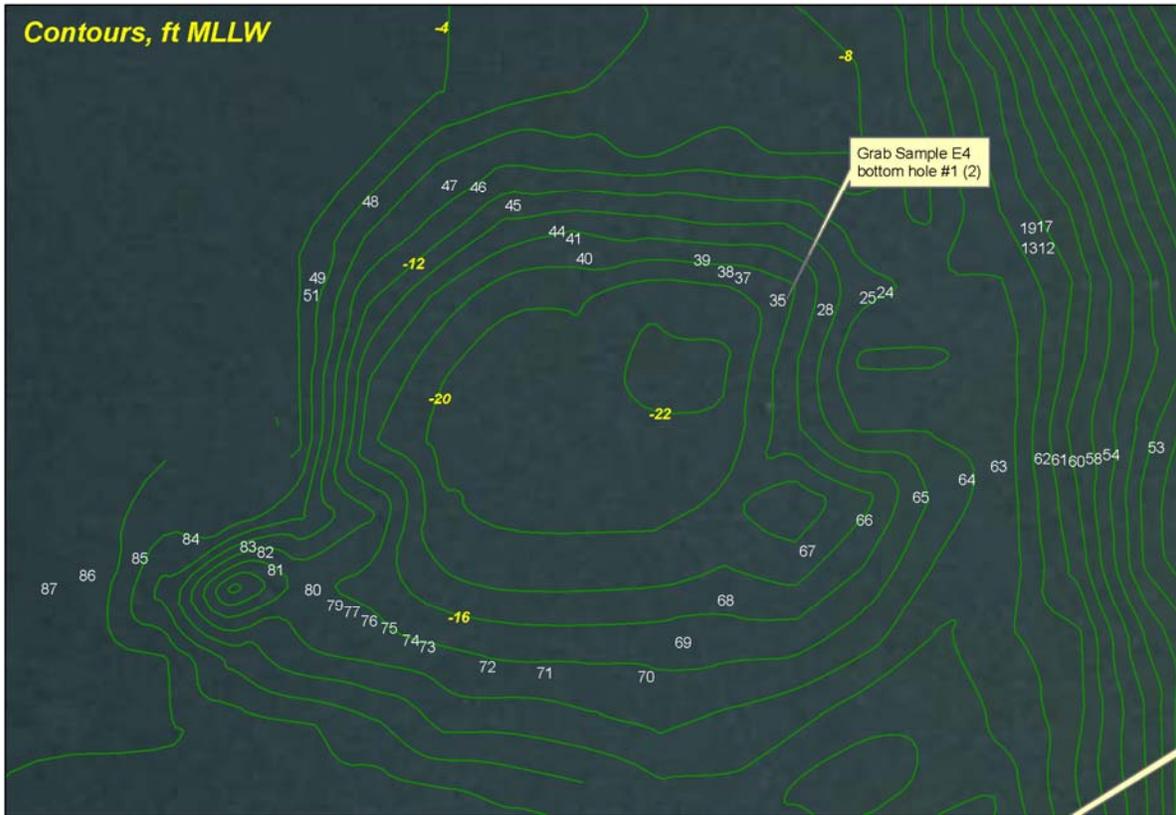
Wyckoff Eelgrass Survey Sept 6th 2007
US ACE / US EPA



TS, September 6th 2007

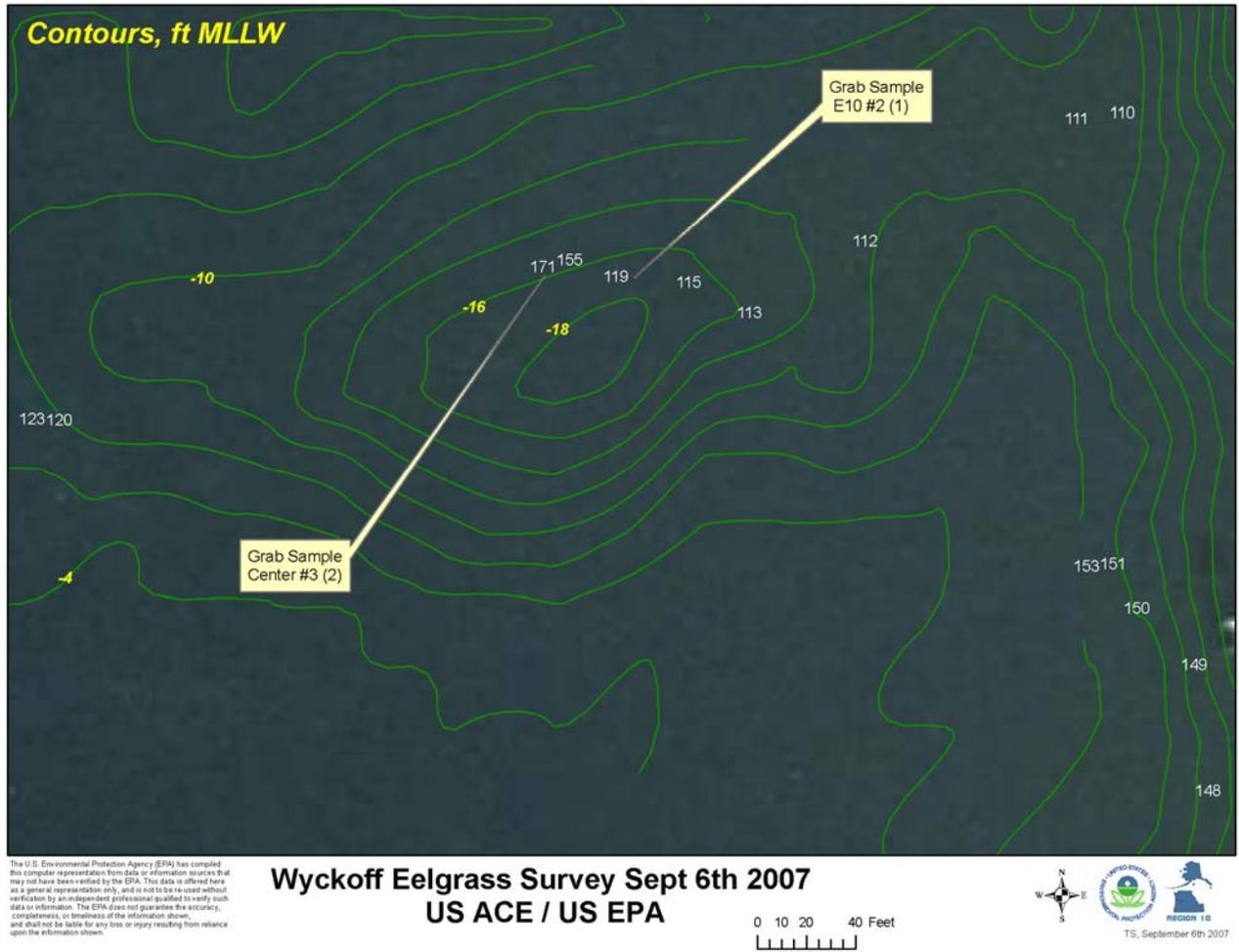
(Source: USACE and USEPA)

Figure 4: Details of Depression 1



(Source: USACE and USEPA)

Figure 5: Details of Depression 2



(Source: USACE and USEPA)