

**Environmental Assessment
for the
Bluefield Holdings, Inc. Site 2
Shoreline Restoration Project
Credits Purchase**

Tiered from the
Lower Duwamish River NRDA Restoration
Plan and Programmatic Environmental
Impact Statement

Prepared by
The National Oceanic and Atmospheric
Administration

November 25, 2016

<i>Project Location:</i>	Harbor Island, Seattle, King County, Washington
<i>Lead federal agency for the Restoration Plan:</i>	The National Oceanic and Atmospheric Administration (NOAA)
<i>Lead Administrative Trustee:</i>	NOAA Damage Assessment and Restoration Center NW Attn: Rebecca Hoff 206-526-6276 Rebecca.Hoff@noaa.gov
<i>Cooperating agencies and tribes:</i>	U.S. Department of the Interior, Fish and Wildlife Service (DOI,FWS), Washington Department of Ecology (WDEC, as lead state Trustee) and Washington Department of Fish and Wildlife (WDFW), Suquamish Tribe, and the Muckleshoot Indian Tribe.
<i>Comments/Contact Person:</i>	Rebecca Hoff, NOAA NOAA Damage Assessment and Restoration Center NW 7600 Sand Point Way NE, Building 1 Seattle, WA 98115 Email: Rebecca.Hoff@noaa.gov
<i>Administrative Record:</i>	Supporting documentation for this Supplemental Environmental Assessment may be reviewed by contacting the case records manager Rebecca Hoff at 206-526-6276 or Rebecca.Hoff@noaa.gov .

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1. INTRODUCTION

The Lower Duwamish River (LDR) drains into Elliott Bay, Washington within the City of Seattle (Figure 1). The LDR is highly altered by extensive development and hydraulic modifications, and its sediments have high levels of contamination from manufacturing, shipbuilding, shipping, and other activities over many decades. The National Oceanic and Atmospheric Administration (NOAA), along with the members of the Elliott Bay Trustee Council (hereafter, Trustees)¹ are engaged in a Natural Resource Damage Assessment (NRDA) to determine the extent of injuries to natural resources, such as fish, shellfish, wildlife, sediments, and water quality, and the services they provide in the LDR. The LDR NRDA is being conducted pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), the Oil Pollution Act of 1990 (OPA), the Clean Water Act (CWA), and other applicable laws. Concurrent with the damage assessment process, the Trustees are conducting restoration planning to support the goal under NRDA laws and regulations to restore, rehabilitate, replace, and acquire the equivalent of the natural resources and their associated services injured by releases of hazardous substances in the LDR. NOAA, in cooperation with the Trustees, developed the Lower Duwamish River NRDA Programmatic Restoration Plan and Environmental Impact Statement (LDR RP/PEIS)² that identifies an integrated habitat approach as the preferred alternative to restore injured resources in the LDR (NOAA, 2013).

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 Jan. 19, 2006), NOAA and the Trustees received funds to restore natural resources injured by hazardous substances released from the Pacific Sound Resources facility at the mouth of the Duwamish River, Seattle, Washington. The Trustees have evaluated different restoration alternatives for expenditure of these settlement funds, and have selected a preferred alternative. This Environmental Assessment (EA) is being prepared as provided in Council on Environmental Quality regulations at 40 C.F.R. § 1508.28 to “tier” off the LDR RP/PEIS in order to evaluate the potential environmental impacts of these site-specific alternatives, identified since release of the LDR RP/PEIS, and to involve the public in the decision-making process for these projects.

1.1 Proposed Action

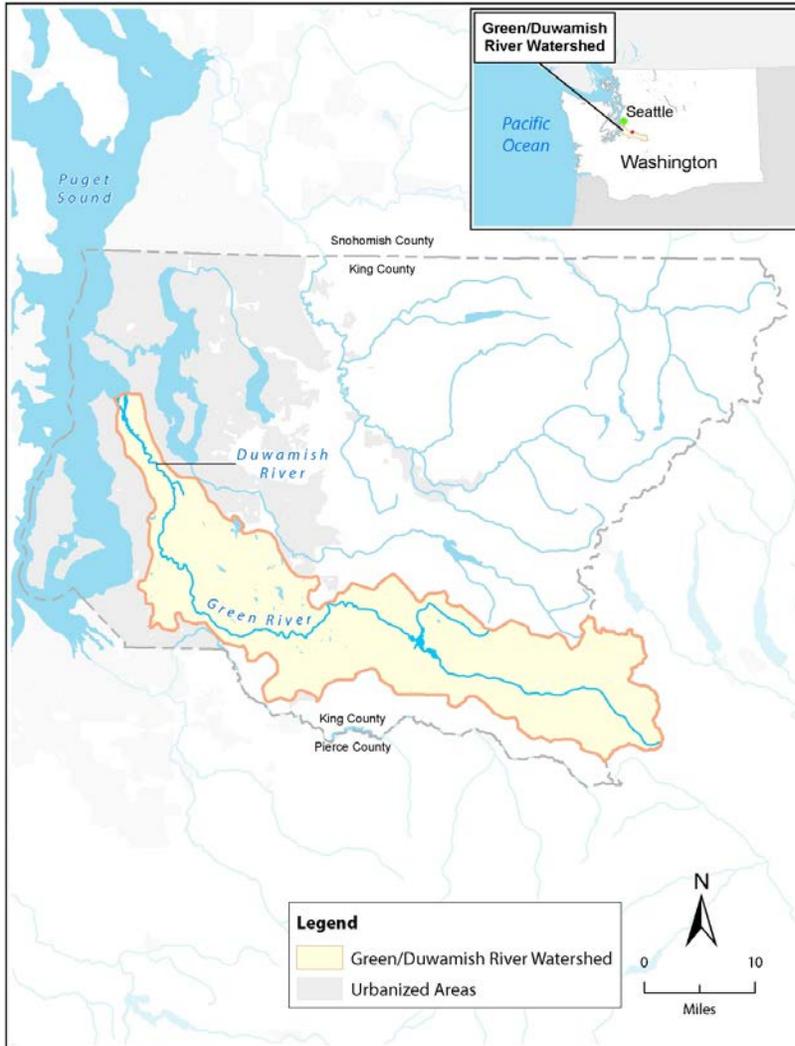
Releases of hazardous substances, occurring over many decades, has injured natural resources in the LDR³. CERCLA authorizes natural resource trustees to evaluate potential injury to natural resources caused by releases of hazardous substances and, if warranted, to take actions that restore, replace, rehabilitate, and/or acquire the equivalent of the injured natural resources and their services. The LDR RP/PEIS describes the contamination of the LDR caused by releases of

¹ The other Trustees involved in this LDR restoration planning process consist of the following agencies and Native American tribes: 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.

² The LDR RP/PEIS is incorporated by reference into this document to provide the background and detailed analysis related to the programmatic aspects of the Trustees’ deliberations. This EA addresses the site-specific elements related to the proposed action. The LDR RP/PEIS is available at: <https://casedocuments.darrp.noaa.gov/northwest/lowerduwamishriver/pdf/Final%20Duwamish%20River%20NRDA%20PEIS%20and%20Restoration%20Plan.pdf>

³ The Elliott Bay Trustee Council considers the LDR to include the portion of the Duwamish River between its mouth at Elliott Bay and the natural rock formation (North Winds Weir) approximately 7 miles upstream.

Figure 1. Map showing Duwamish/Green River Lower watershed.



hazardous substances, discusses likely impacts on natural resources that result from exposure to hazardous substances, and concludes that those impacts to natural resources require restoration actions to recover the injured natural resources and lost resource services. After completing the LDR RP/PEIS analysis of alternatives to restore injured resources in the LDR, the preferred restoration approach identified by the Trustees in the LDR RP/PEIS is to create integrated habitat complexes. The full LDR habitat complex consists of shallow subtidal habitat bordered by intertidal mudflat, bordered by intertidal marsh, with a riparian buffer (NOAA, 2013). These types of habitats are extremely limited in the LDR and support resources injured by hazardous substance releases in the LDR. A detailed discussion of the value of these habitats in recovering injured natural resources is in Appendix D of the LDR RP/PEIS. Individual restoration projects under this alternative do not need to contain all of these habitat components in order to fit within the LDR RP/PEIS, but projects incorporating more of these habitat elements are generally preferred over projects with fewer of these habitat types.

NOAA and the Trustees are proposing to provide partial funding for the Site 2 habitat project (Site 2) in an amount sufficient to enable the project proponent, Bluefield Holdings, Inc. (hereafter, Bluefield), to obtain remaining funds necessary to construct and maintain the project. The proposed action of providing partial funding for Site 2 is consistent with the Integrated Habitat

Restoration Alternative identified in the LDR RP/PEIS. Additionally, it was the only project proposal received in response to the Trustees request for restoration project proposals that was determined to be appropriate under the screening process developed by NOAA and the Trustees to evaluate these project proposals for consistency with requirements described in the LDR RP/PEIS. The Site 2 project should be implementable within 3 years, which the Trustees identified in the Request for Proposals (RFP) as a reasonable length of time for the construction of a restoration project. Appendix A contains the RFP that the Trustees used to solicit project proposals. Appendix B contains a description of the screening process conducted by the Trustees that resulted in the proposed action of providing funding toward the construction of Site 2.

1.2 Purpose and Need

Purpose: The purpose of restoration projects is to compensation the public for injuries to natural resources resulting from releases of hazardous substances to the LDR (described and evaluated in the above-referenced LDR RP/PEIS). The Trustees provide this compensation by restoring, rehabilitating, replacing, or acquiring the equivalent of injured natural resources and the loss in services they provide, consistent with CERCLA requirements. This purpose is consistent with the Purpose and Need established in the LDR RP/PEIS.

Need: In order to achieve this purpose, NOAA and the Trustees need to identify site-specific alternatives for restoration in the LDR, consisted with the Integrated Habitat Complex Alternative. Implementation of these types of projects will benefit the suite of species injured by hazardous substance releases, and therefore compensate the public for these injuries.

1.3 Public Participation

The Trustees received public input in the development of the LDR RP/PEIS, through discussions with local public officials, public meetings, and public review and comment on both the initial Draft LDR RP/PEIS and on the subsequent Supplement to the Draft LDR RP/PEIS. NOAA and the Trustees solicited restoration project proposals to receive NRDA settlement funding for project implementation (described in Appendix A), resulting in the selection of Site 2 for proposed funding (see Appendix B). This draft EA for will be available for a 30-day public comment period. A summary of comments received and the Trustees' responses thereto will be included in the final document.

Additionally, Bluefield held a public meeting about the Site 2 project on June 11, 2015. Bluefield described the concept and design of Site 2, and listened to public comments on the project. Bluefield then modified the design for the public access portion of Site 2⁴ because of comments received at this meeting. There will also be a formal comment period conducted by the U.S. Army Corps of Engineers during the Site 2 permitting process.

1.4 Scope of the NEPA Analysis

The decision-making process for conducting natural resource restoration under CERCLA must comply with the National Environmental Policy Act (NEPA), 42 U.S.C § 4321, et seq., and the Council on Environmental Quality (CEQ) regulations implementing NEPA 40 C.F.R. § 1500, et seq. In compliance with NEPA and the CEQ regulations, this 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 EA describes the potential impacts of the proposed Site

⁴ Bluefield's Master Lease with the City of Seattle requires that a portion of sites Bluefield develops as NRDA restoration projects also include some degree of public access. Only habitat acreage counts towards NRDA restoration credits if a project contains areas for both public access and habitat.

2 habitat restoration project, as well as the No Action alternative. In particular, the EA analyzes the potential direct, indirect, and cumulative ecological, social, and economic impacts associated with two alternatives.

The following definitions characterize the nature of the various impacts evaluated with this EA:

Short-term or long-term impacts. These characteristics are determined on a case-by-case basis and do not refer to any rigid time period. In general, short-term impacts are those that would occur only with respect to a particular activity or for a finite period. Long-term impacts are those that are more likely to be persistent and chronic.

Direct or indirect impacts. A direct impact is caused by a proposed action and occurs contemporaneously at or near the location of the action. An indirect impact is caused by a proposed action and might occur later in time or be farther removed in distance, but still be a reasonably foreseeable outcome of the action. For example, a direct impact of erosion on a stream might include sediment-laden waters in the vicinity of the action, whereas an indirect impact of the same erosion might lead to lack of spawning and result in lowered reproduction rates of indigenous fish downstream.

Minor, moderate, or major impacts. These relative terms are used to characterize the magnitude of an impact. Minor impacts are generally those that might be perceptible but, in their context, are not amenable to measurement because of their relatively minor character. Moderate impacts are those that are more perceptible and, typically, more amenable to quantification or measurement. Major impacts are those that, in their context and due to their intensity (severity), have the potential to meet the thresholds for significance set forth in CEQ regulations (40 C.F.R. § 1508.27) and, thus, warrant heightened attention and examination for potential means for mitigation to fulfill the requirements of NEPA.

Adverse or beneficial impacts. An adverse impact is one having adverse, unfavorable, or undesirable outcomes on the man-made or natural environment. A beneficial impact is one having positive outcomes on the man-made or natural environment. A single act might result in adverse impacts on one environmental resource and beneficial impacts on another resource.

Cumulative impacts. CEQ NEPA regulations define cumulative impacts as the “impacts on the environment which result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions.” (40 C.F.R. § 1508.7). Cumulative impacts can result from individually minor but collectively significant actions taking place over time within a geographic area.

1.5 Administrative Record

This EA references a number of resource documents prepared by and for the Trustees and through the restoration planning process for the LDR RP/PEIS. These documents, incorporated by reference into this EA, are part of the administrative record on file for the LDR NRDA and restoration effort with the Lead Administrative Trustee. These referenced documents and the comments received on the draft EA may be viewed by contacting Rebecca Hoff at 206-526-6276 or via email at Rebecca.Hoff@noaa.gov.

2. ALTERNATIVES

This section provides a summary of the NEPA alternatives that NOAA considered for this EA. NEPA requires that any Federal agency proposing a major action consider reasonable alternatives to the proposed action. The evaluation of alternatives under NEPA assists the Secretary of Commerce in ensuring that any unnecessary impacts are avoided through an assessment of alternative approaches to achieve the underlying purpose of the project that may result in less

environmental harm. A No Action Alternative must be included in the evaluation under NEPA regulations.

To warrant detailed evaluation by NOAA, an alternative must be reasonable and meet the purpose and need (see Section 1.2). NOAA and the Trustees therefore screened potential restoration projects to determine whether each is a reasonable alternative for inclusion in the analysis. The initial screening of project proposals used guidance and requirements outlined in the LDR RP/PEIS, and the Trustees did not further consider project proposals that did not meet those initial requirements. The initial (Tier 1) screening for project eligibility requires projects to be:

- Located within the Duwamish in Habitat Focus Area 1 (extending from the northern tip of Harbor Island upstream to North Winds Weir) or within Elliott Bay in Habitat Focus Area 2 (inner Elliott Bay shoreline between the Duwamish head and Port of Seattle Terminal 91; see Figure 2)- Section 6.6 of the LDR RP/PEIS;
- Consistent with the LDR RP and include marsh and/or mudflat habitat with a riparian buffer- Sections 2.2.2 and 6.3 of the LDR RP/PEIS;
- Protected from conversion to other than habitat purposes in perpetuity- Section 6.5 of the LDR RP/PEIS;
- Maintained through a long-term stewardship program to preserve ecological function- Section 7.4 of the LDR RP/PEIS;
- Implementable without long-term negative impacts on existing habitat or public safety- Sections 9.2.1 and 9.2.2 of the LDR RP/PEIS;
- Free from risk of release of contamination from implementation- Section 9.2.5 of the LDR RP/PEIS; and
- Monitoring conducted for a minimum of 10 years- Section 7.3 of the LDR RP/PEIS.

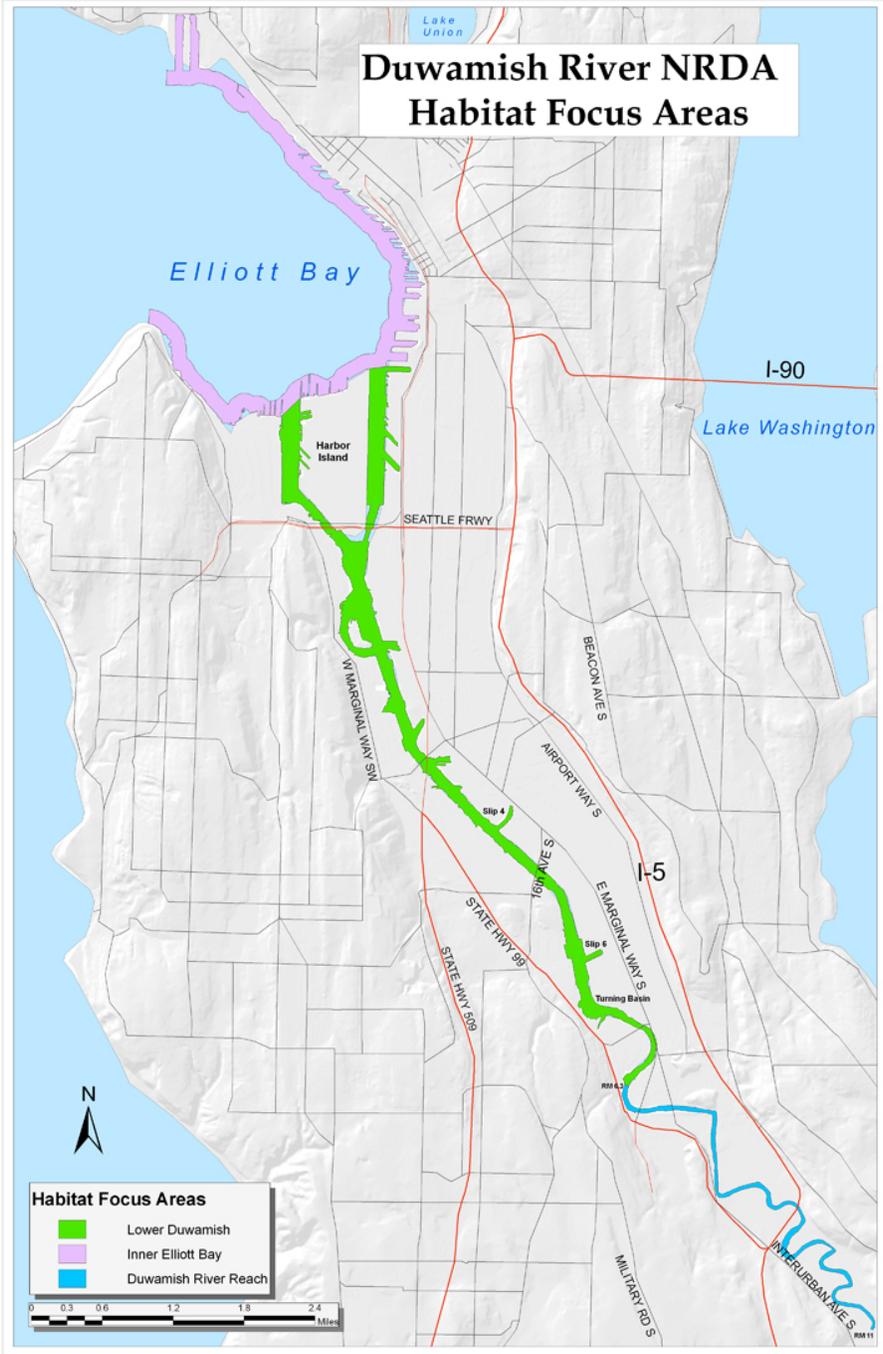
These criteria were classified into five categories: **HFA** (Habitat Focus Area, i.e., location), **Benefits** (desired habitat types and mix), **Management** (monitoring, stewardship, and protection), **Feasibility** (ability to construct project and do so in timely manner), and **Contamination** (project be built safely without releasing contaminants).

Projects meeting the initial criteria then underwent additional screening focusing on the relative value of the project with respect to considerations related to:

- Meeting project goals of addressing injuries to natural resources (degree of benefits to multiple injured natural resources, degree of habitat diversity, relative size of the project, and proximity to existing habitat);
- Relative cost of the project (to NRDA settlement funds); and
- Timing of implementation (with a preference of implementing restoration within 3 years).

Appendix B describes the screening process of the proposed project alternatives.

Figure 2. Map showing Habitat Focus Areas 1 (green), 2 (purple), and 3 (blue).



2.1 Site 2 Partial Funding (Preferred Alternative)

Under this Alternative, NOAA and the Trustees would purchase 30 credits in the Bluefield Site 2 project using a portion (\$3 million) of the Pacific Sound Resources settlement funds. Site 2 is a NRDA restoration bank project that Bluefield will build with the intent to sell the balance of the restoration credits to potentially responsible parties (PRPs) for the PRPs to use to resolve their

liability for injury to natural resources in the LDR.⁵ The purchase of 30 credits by NOAA and the Trustees will allow construction of the Site 2 project within 3 years (the length of time specified by the Trustees in the Request for Proposals (RFP) for projects to begin construction). Once purchased by the Trustees these 30 credits will not be available for purchase by PRPs to resolve their liability. However, credits remaining in the project after the Trustees' purchase will be available for PRPs to buy and use to resolve their liability.

Bluefield intends to build the restoration project regardless of whether NOAA and the Trustees purchase 30 credits of the total generated by the project, but if NRDA settlement funds are not used to purchase these credits, project implementation would be delayed until other parties purchase 30 credits in the project. Therefore, the impacts resulting from the project will occur whether or not the Trustees purchase credits, so the purchase of credits is independent of the impacts of the project except with respect to timing of those impacts. If the Trustees do not purchase 30 credits of the total credits generated by the Site 1 project, harmful impacts from project construction would occur later, but this decision would also delay restoration of injured natural resources.

2.1.1 Site 2 Setting

Bluefield negotiated a lease for Site 2 from the City of Seattle. This lease allows Bluefield to build a restoration project on property owned by the Seattle Department of Transportation. The lease with the city requires Bluefield to provide public access to non-habitat portions of the site, developed for the public's use. Additionally, Bluefield purchased property from the Port of Seattle and got a lease from the Washington Department of Natural Resources for use of state aquatic lands to increase the size of the Site 2 project.

The Site 2 project is 2.91 acres total size and is located on the east side of the West Waterway on Harbor Island, with both the Spokane Street and the West Seattle bridges crossing over the site (Figure 3). Site 2 is located approximately 0.5 miles from the mouth of the West Waterway at Elliott Bay. Site 2 is bordered to the east and south by railroad tracks and to the north by an abandoned facility. The shoreline of Site 2 is predominantly rip-rap, with a portion armored by a creosote wood bulkhead. Site 2's intertidal area has debris and creosote pilings in addition to the rip-rap. The upland portion of the site is largely unvegetated, vacant industrial property except for the bridge supports and other infrastructure. Site 2 provide little current habitat value to the natural resources injured by releases of hazardous substances in the LDR.

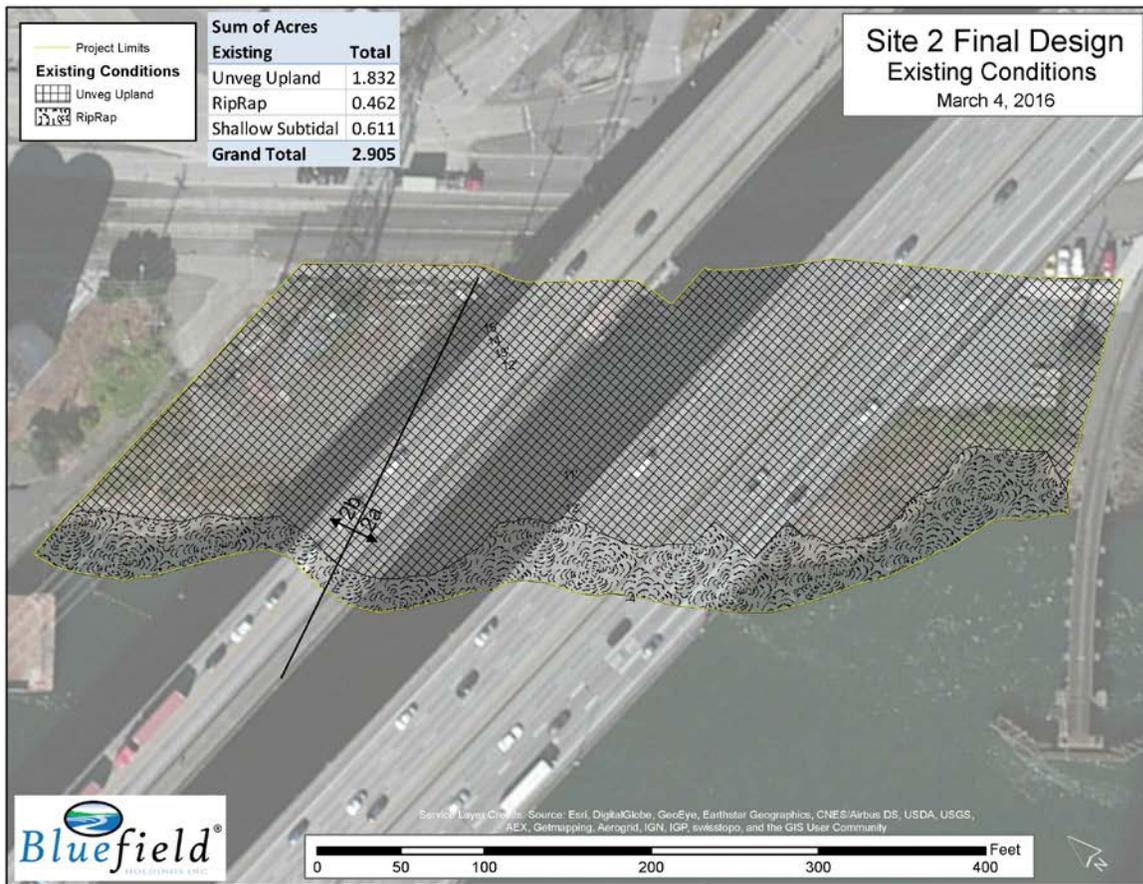
2.1.2 Site 2 Project Description

Site 2 construction activities include removal of debris and derelict creosote piles along the shoreline, excavation of upland (currently at +16 ft Mean Lower Low Water (MLLW)) to create new off-channel intertidal area. Once completed, Site 2 will have two channels from the improved shoreline into the intertidal area, separated by the base of the Spokane Street Bridge swing arm (Figure 4). The northern channel will extend approximately 175 ft into the off-channel area. The entrance to this channel will be at approximately +8 ft MLLW, and marsh will be planted at this elevation up to approximately +12 ft MLLW. Above this marsh zone, Bluefield will plant a vegetated buffer of trees and shrubs. The southern channel will extend approximately 265 ft into the intertidal area, and will have similar elevations and plantings as the northern channel. The current shoreline will be sloped back and most of the rip-rap will be replaced (or covered) with sediment, habitat mix gravels over a base of rip-rap, and large woody debris. Clean soil will be placed on the excavated

⁵ NRDA restoration banking is similar in concept to mitigation banking, with the major difference being that credits purchased in a NRDA bank offset NRDA liability while the purchase of mitigation credits offsets permitted impacts to sensitive habitats.

surface, and riparian and marsh vegetation will be planted at appropriate elevations. The presence of the marsh and riparian vegetation will benefit the shallow subtidal area in front of Site 2, and increase its ecological function (see description of baseline adjusted and fully functional habitats in Appendix D of the RP/PEIS⁶. When finished, Site 2 will include the full habitat complex identified in the LDR RP/PEIS as most valuable for restoring the suite of natural resources injured by hazardous substance releases into the LDR. If built as currently designed, it will result in an increase of 0.442 acres of vegetated buffer, 0.806 acre of intertidal marsh, 0.611 acre of shallow subtidal, 0.450 acre of habitat mix over rip-rap/debris, and 0.165 acres of mudflat. The anticipated total area of created/improved habitat at Site 2 is 2.47 acres. The project is consistent with the LDR RP/PEIS preferred alternative: Integrated Habitat Restoration.

Figure 3. Current conditions at Site 2 project location.



2.2 Fund No Restoration Actions at this Time (No Action Alternative)

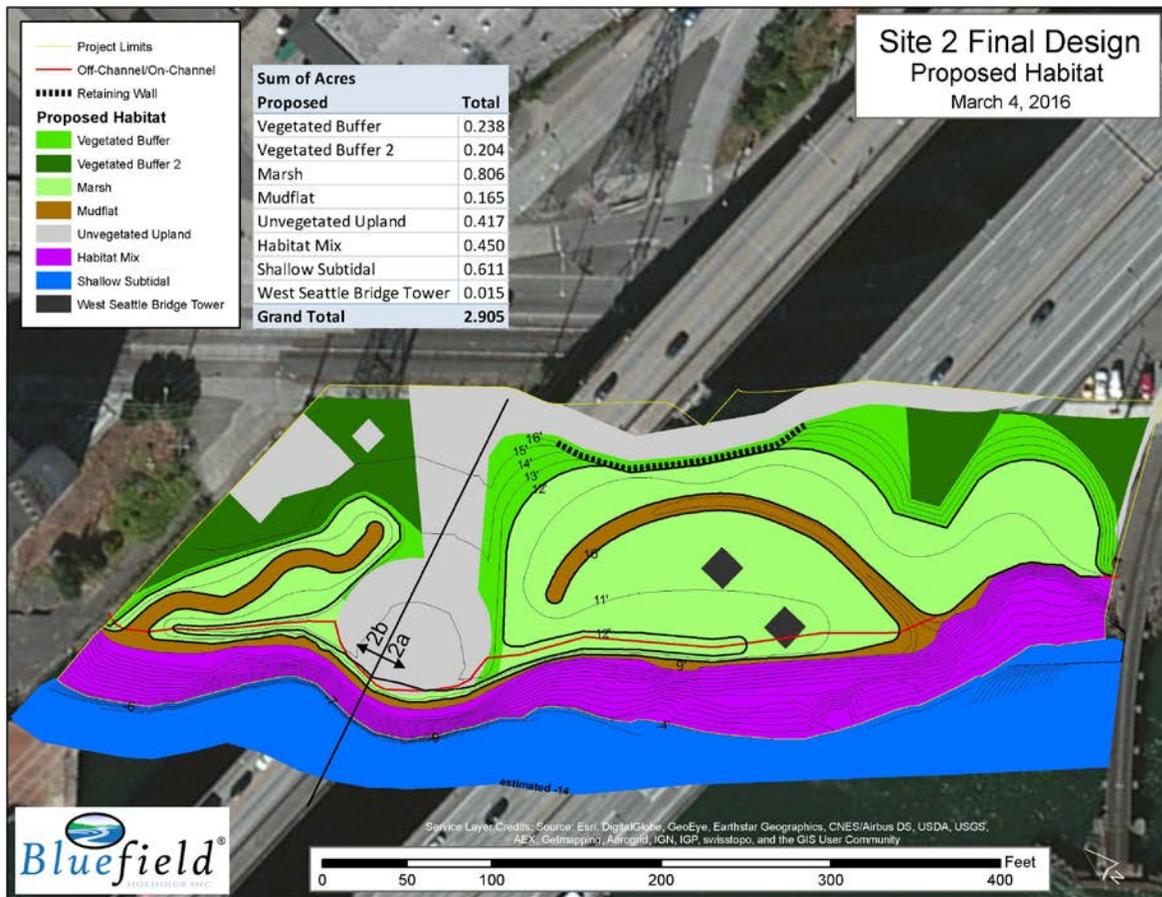
The No Action Alternative would result in the Trustees providing no NRDA funding for Site 2 or any other restoration project at this time. The Trustees would allow additional settlement funding to accumulate, and at a later time could then either acquire property and construct a restoration project or solicit further restoration proposals for funding. There is a lot of uncertainty about the

⁶ Available at:

https://casedocuments.darrp.noaa.gov/northwest/lowerduwamishriver/pdf/PEIS%20Appendix%20D_0720_2012.pdf

timing of achieving future NRDA settlements, and how many of those settlements would be cash-based rather than project-based, so it is not possible to know with any certainty when NOAA and the Trustees would use NRDA settlement funds to build projects under this alternative. The high cost of property along the LDR, the potential presence of contamination and/or infrastructure that would require removal, and limitations on the amount of property for sale, among other uncertainties, are further considerations making this alternative less desirable from a NRDA perspective than the Action Alternative.

Figure 4. Current concept for Site 2 habitat restoration project.



2.3 Other Alternatives Considered and Rejected

NOAA and the Trustees received proposals from four parties for restoration funding in response to the RFP, including a second Bluefield proposal, for other projects to consider as restoration alternatives. These alternatives are described briefly below, with an explanation for why they were rejected. Appendix B has additional details on the screening of these alternatives. The Trustees have no property under ownership or otherwise currently available to us for restoration purposes in the LDR, and do not currently have sufficient funding to both purchase property and build a restoration project, so Trustee implementation of a restoration project now is not a possible alternative and therefore was not considered as such.

2.3.1 Bluefield Holdings Site 12

Bluefield proposed that the Trustees provide \$400,000 to fund the permitting and site investigation

work necessary for the eventual construction of Site 12. Site 12 is a proposed project of approximately 3.5 acres, and it would include the same habitat complex as Site 2. In the initial consideration of this project, Site 12 appeared to meet the Tier 1 criteria, but it was rejected after further consideration, due to timing. The concern was that since the proposal only covered permitting and site investigation work (and not project implementation), it was uncertain when the project would be constructed, and the RFP required projects to have the potential to be built within 3 years.

2.3.2 Puget Creek Watershed Restoration

The proposed project would fund riparian restoration along Puget Creek, a tributary to the LDR. NOAA and the Trustees eliminated this proposed project because it is located outside of the area specified in the RFP for potential funding (HFA1 and HFA2). It is also outside of the approved restoration area in the LDR RP/PEIS, which allows restoration at the mouth of tributaries to the LDR, but not far upstream.

2.3.3 South Park Bank Restoration

The proposed project would restore riparian habitat along the west bank of the LDR on both public and private property. The project was not considered further because some of the property owners were not willing to place an easement on their property, and protection of proposed projects in perpetuity is a requirement for LDR NRDA restoration projects (LDR RP/PEIS Section 1.8.2).

2.3.4 Terminal 105 Enhancement Project

The project was proposed by Spannerwerks (now RestorCap, and used henceforth) and would be an enhancement of an existing restoration project on Port of Seattle property. The Terminal 105 project would restore a total of 2.7 acres of marsh, mudflat, and riparian habitat. The project was rejected because of concerns regarding potential contamination at the project site. Samples in the area had polychlorinated benzenes (PCBs) as well as other contaminants at levels exceeding state standards.

2.3.5 Centennial Park Shoreline Restoration

This RestorCap proposed project would include conversion of rip-rap and upland park property to habitat, including small coves and habitat benches, and is located in HFA 2. The Trustees visited the site, but had concerns with the likely public controversy that would result from the proposal to convert part of a popular park from public access to habitat, which would almost certainly greatly increase the time needed to get necessary permits, etc. Those concerns were the basis for not considering this proposal any further.

2.3.6 Site 16 and Site 21

Both of these potential sites would involve similar restoration actions and RestorCap proposed them as one project. Actions at both sites would involve placement of fill and there would be some excavation of the existing bank for Site 16. The placement of fill would limit aquatic area available for Tribal Treaty Rights fishing, a practice opposed by the Muckleshoot Indian Tribe. Under the terms of the Memorandum of Agreement for the Elliott Bay Trustee Council⁷, a consensus is required for decisions on use of settlement funds. Therefore, the opposition of the Muckleshoot Indian Tribe prevents the Site 16 and Site 21 project alternatives from further consideration.

⁷ available at:

<https://casedocuments.darrp.noaa.gov/northwest/lowerduwamishriver/pdf/MOA%20for%20Elliott%20Bay%20,%20Duwamish%20River%20&%20Eagle%20Harbor.2005.pdf>

3. EXISTING ENVIRONMENT

Chapter 3 of the LDR RP/PEIS includes a detailed description of the LDR environment; a brief summary is included below.

3.1 Physical Environment

Most of the LDR has been highly altered by the clearing of the original forestlands and the filling of freshwater and estuarine wetlands and intertidal flats. The area surrounding the LDR now consists largely of industrial and residential development. The river channel is highly restricted along both banks by levees or rock revetments, and is dredged periodically between its mouth and River Mile 5.5 for navigation. Approximately 99% of the former estuarine wetlands and mudflats are lost, having been either dredged or filled in for development purposes (U.S. DOI, Fish and Wildlife Service, 2000; U.S. Army Corps of Engineers, 2000). Currently, the Green/Duwamish River drains about one-quarter of its original watershed (Warner and Fritz, 1995). The Army Corps of Engineers maintains a navigable waterway through dredging to the Upper Turning Basin. The typical cross section of the LDR includes a deeper maintained navigation channel in the middle, with shallow benches at intermittent locations along the margins of the channel (LDWG, 2008). The riverbanks are primarily occupied by structures, including piers and buildings, or armored with rip-rap and concrete debris. A bottom layer saltwater wedge moves up and down stream with the tide and stream flow, while freshwater flows downstream in a layer over the top of the salt wedge (Stoner, 1972). Sediments in the LDR are highly contaminated in many places, and remedial actions are planned for these areas. For information on the on-going clean-up in the LDR, see: <https://yosemite.epa.gov/r10/cleanup.nsf/sites/lduwamish>.

3.2 Biological Environment

As mentioned above, approximately 99% of existing marsh and mudflat habitat in the LDR was lost due to development, and little natural habitat remains. Fish species that were historically present in the basin included Chinook, coho, sockeye, pink and chum salmon, steelhead and sea-run cutthroat trout, Dolly Varden and bull trout, resident rainbow and cutthroat trout, and other resident fish (U.S. Army Corps of Engineers, 2000). Fifty-three resident and non-resident fish species were identified during the fish sampling conducted for the Environmental Protection Agency (EPA) Remedial Investigation (EPA, 2007). Significant numbers of Chinook, coho and chum salmon, and steelhead trout are released from state and tribal hatcheries.

Nearly 100 bird species (see Appendix A in RP/PEIS) have been observed in the Duwamish River estuary, including migrating shorebirds, loons, grebes, alcids, geese, surface feeding and diving ducks, raptors, kingfishers, gulls, and terns (Cordell et al., 1999; EBDP, 2000; U.S. DOI, Fish and Wildlife Service, 2006). Several nesting areas have been identified in the vicinity of Harbor Island. They include the cavity-nesting pigeon guillemots (*Cephus columba*) found historically in the West Duwamish Waterway under the P/S Freight Dock and Terminal Five in 1994 (U.S. DOI, Fish and Wildlife Service, 1989).

Federally listed threatened salmonid species under the ESA known to occur in the LDR include Coastal-Puget Sound bull trout, Puget Sound Chinook, and Puget Sound steelhead (WDFW, 2008). Other federally listed species that may occur within the LDR includes Steller sea lion, humpback whale, southern resident killer whale, leatherneck sea turtle, and marbled murrelet. Federal Species of Concern include bald eagle and peregrine falcon (U.S. DOI, Fish and Wildlife Service, 1986). In addition, the LDR is essential fish habitat for Chinook and steelhead.

3.3 Socioeconomic Environment

The majority of jobs in King County are in the manufacturing, wholesale and retail trade, financial services, and government sectors. These data are somewhat inappropriate for the Green/Duwamish basin area since there is still a large rural agricultural, timber harvest, and mining component in the basin. An economic analysis conducted in 2007- estimated that the Port of Seattle is responsible for over 56,000 jobs (Port of Seattle, 2009). The unemployment rate for the civilian labor work force for Seattle/Bellvue/Seattle was 4.0% in August 2016 (Bureau of Labor Statistics; available at: http://www.bls.gov/eag/eag.wa_seattle_md.htm). The 2015 projected median household income for King County was \$78,657 (Washington Office of Financial Management; available at: <http://www.ofm.wa.gov/economy/hhinc/medinc.pdf>). The median value for a house in February 2016 was \$514,975 (<http://www.seattletimes.com/business/real-estate/king-county-home-prices-hit-a-new-high/>). Both recreational and Tribal Treaty Rights fishing occur on the LDR, although there is a fish consumption advisory against consumption of most species of fish and shellfish in the LDR (all non-salmonid species). Although much of the LDR is developed for industrial and commercial purposes, the South Park and Georgetown residential neighborhoods are located along the west and east banks, respectively.

4. ENVIRONMENTAL IMPACTS

This section evaluates the potential environmental effects of the proposed Action and the No Action Alternatives described in Chapter 2. Direct, indirect, and cumulative effects on the physical, biological, social, and economic environments for each alternative are discussed below and summarized in Table 1.

4.1 Provide Partial Funding for Site 2 (Preferred Alternative)

The Site 2 project is consistent with the description of restoration projects under the Integrated Habitat Restoration Alternative selected in the LDR RP/PEIS, and detailed information on potential impacts from projects under this alternative are discussed in Chapter 9 of the LDR RP/PEIS. That document analyzes the impacts from all the anticipated restoration actions necessary to address the injury to natural resources resulting from releases of hazardous substances in the LDR. The project-specific impacts from Site 2 are discussed immediately below.

Physical/Biological Impacts: Adverse impacts to the banks, sediments, and water column will be short-term, direct, and minor. These impacts will result from construction activities, and will end after completion of construction. Use of best management practices will limit unavoidable impacts during construction. A silt curtain will be placed along the shoreline at Site 2 to limit increases in turbidity in the waters of the LDR in the vicinity of the project. Erosion and sediment control measures will be installed. To avoid impacts to juvenile salmonids (including ESA-listed Puget Sound Chinook and Steelhead), “in-water” construction activity will be restricted to the time when juvenile salmonids would not be expected to be present, and will occur during low tide to minimize impacts on water quality. Construction of the interior of Site 2 will occur behind a berm and could occur when juvenile salmonids are present in the area, however breaching of the berm and work along the LDR shoreline will occur only during the in-water work window. The project will result in minor to moderate positive impacts to shoreline habitats and species that utilize them because of the conversion of armored shoreline to beneficial estuarine habitats (mudflat, marsh, riparian) and the creation of additional off-channel habitat, all of which is almost totally absent in the LDR.

Essential Fish Habitat: Site 2 and vicinity are essentially barren of essential fish habitat currently, so adverse impacts to this habitat are not expected. Instead, there will be moderate, direct, long-term benefits provided by the restoration of new essential fish habitat (EFH) such as marsh, mudflat, and off-channel areas. The project proponents will be required to undertake consultation under Section 7 and will be required to take actions to minimize potential impacts to EFH during

construction.

Air Quality: Short-term, direct, and minor adverse impacts are expected from implementation of this alternative, primarily due to exhaust from construction machinery and dust from construction activities. These impacts will end when construction is over. The establishment of riparian and marsh vegetation will have minor, direct, and long-term benefits on air quality (including carbon sequestration).

Water Quality: There will be short-term, direct, and minor impacts to water quality during the construction of Site 2, primarily due to increased turbidity. These impacts will cease when construction activities are over. Best management practices will be used to minimize turbidity, and much of the work on the interior of the project will be done “in the dry”, behind a berm. Work on the shoreline, including removal of the berm, will occur during low tide to limit impacts to water quality. Long-term, minor benefits to water quality are anticipated from the increase in marsh vegetation at Site 2, because of the well-established role marshes play in filtering water.

Socioeconomic: Short-term and long-term, direct and indirect, minor beneficial impacts are expected to result from implementation of this alternative. During construction of Site 2 there will be direct benefits provided to construction contractor workers from the salaries received, and indirect benefits to local businesses due to anticipated increases in purchases related to Site 2. Following project construction there will be long-term, minor, and direct beneficial impacts to local residents who will be able to enjoy the replacement of rip-rap and shoreline armoring by native vegetation planted at Site 2 and utilize the public access areas of the project.

4.2 Withhold Restoration Funding at this Time (No Action Alternative)

Impacts for this restoration alternative would be similar to those from the Action Alternative, since the Trustees will ultimately spend the \$3 million in settlement funds (proposed to go to Site 2 under the Preferred Alternative) on restoration projects consistent with the LDR RP/PEIS analysis of impacts, similar to Site 2. However, although the impacts will be similar in type, magnitude, and scope, these impacts will occur only when NOAA and the Trustees spend settlement funds on another LDR restoration project. The difference in project timing should not affect anticipated impacts. Because the impacts from this “No Action” Alternative are identical to those anticipated from the Preferred Alternative- except in a temporal sense- the impacts analysis is not repeated here, but are presented in Table 1.

5. CUMULATIVE IMPACTS

Section 9.2.7 of the RP/PEIS discusses past, present and reasonably foreseeable future actions in the LDR area. The cumulative effects analysis in the RP/PEIS is commensurate with the degree of direct and indirect effects anticipated by implementing the proposed federal action or the alternatives considered. Individual restoration projects (such as Site 2) considered in accordance with an overall CERCLA action are intended to compensate for injury to natural resources under the Trustees’ jurisdiction resulting from releases of hazardous substances, and therefore typically have predominantly beneficial impacts toward redressing impacts to those resources. In the case of the LDR proposed restoration effort, it is one component of the overall CERCLA remediation and restoration for the LDR; therefore, the potential for cumulative impacts is considered in the context of the LDR. Although impacts to natural resources under the Trustees’ jurisdiction, and impacts in general, may occur in the larger regional vicinity of Puget Sound, the potential for Site 2 and other restoration projects implemented under the Integrated Habitat Restoration Alternative 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 actions under the Integrated Habitat Restoration Alternative appropriately focuses on the incremental effects of the action in the context of other ongoing actions under CERCLA in the LDR.

Table 1: Comparison of Action and No Action Alternatives: Goals and Impacts

CATEGORY	NO ACTION ALTERNATIVE OF DELAYING FUNDING RESTORATION	PREFERRED ALTERNATIVE OF PURCHASING CREDITS IN SITE 2
1. Potential for the Trustees' Goal of Restoring Injured Natural Resources to be Met	<p>High</p> <p>Trustees would likely choose restoration project consistent with this goal as required under NRDA statutes and regulations, but no estimate is possible on when restoration would occur.</p>	<p>High</p> <p>Site 2 contains all the desired habitat types laid out in the LDR RP/PEIS, and is therefore appropriate for restoring injured natural resources in the LDR. This alternative would restore resources more quickly than would occur in the No Action Alternative, and is therefore more valuable in a NRDA sense.</p>
2. Potential to Provide Benefits to Multiple Natural Resources and Services	<p>High</p> <p>Projects under this alternative would be consistent with the RP/PEIS and contain an integrated habitat complex.</p>	<p>High</p> <p>Site 2 contains multiple habitats, consistent with the Integrated Habitat Restoration Alternative in the LDR RP/PEIS, each of which provides benefits to the range of species injured by releases of hazardous substances in the LDR.</p>
3. Potential for Physical/Biological Impacts	<p>Minor-Moderate</p> <p>Minor, short-term, and direct adverse impacts would be expected during construction of potential restoration projects that would eventually be implemented under this alternative; long-term, direct and moderate beneficial impacts to habitat services would be expected; long-term, indirect and moderate beneficial impacts would be expected to species dependent on restored habitat types.</p>	<p>Minor-Moderate</p> <p>Minor short-term adverse impacts would be expected during construction; long-term, direct and moderate beneficial impacts to habitat services would be expected; long-term, indirect and moderate beneficial impacts would be expected to species depending on one or more of the restored habitat types.</p>

CATEGORY	NO ACTION ALTERNATIVE OF DELAYING FUNDING RESTORATION	PREFERRED ALTERNATIVE OF PURCHASING CREDITS IN SITE 2
Potential for Essential Fish Habitat Impacts	<p>Minor Short-term minor adverse impacts would occur during construction of likely projects under this Alternative; long-term, direct, and moderate beneficial impacts would result from wetland habitat creation.</p>	<p>Minor Short-term minor adverse impacts would occur during construction of Site 2; long-term, direct, and moderate beneficial impacts would result from wetland habitat creation.</p>
Potential for Air Quality Impacts	<p>Minor Short-term, minor, and direct adverse impacts would occur during construction of projects under this Alternative; there would be a long-term minor beneficial impact on air quality provided by the increased vegetation.</p>	<p>Minor Short-term, minor, and direct adverse impacts would occur during construction of Site 2; there would be a long-term minor beneficial impact on air quality provided by the increased vegetation.</p>
Potential for Water Quality Impacts	<p>Minor Short-term minor adverse impacts from turbidity could occur during construction of likely projects under this Alternative; long-term minor and direct beneficial impacts to water quality would be expected from projects under this Alternative because of the increase in wetland filtering capacity.</p>	<p>Minor Short-term minor adverse impacts could occur during construction of Site 2; long-term minor and direct beneficial impacts would be expected from Site 2 because of the increase in wetland filtering capacity.</p>
Potential for Socioeconomic Impacts	<p>Minor Short-term minor adverse impacts could occur during construction of projects under this Alternative; short-term minor beneficial impacts would be expected under this Alternative directly to workers and indirectly to the businesses they frequent; possibility of long-term minor and direct benefit to the local public if public access is included.</p>	<p>Minor Short-term minor adverse impacts could occur during construction of Site 2; short-term minor beneficial impacts would be expected under this Alternative directly to workers and indirectly to the businesses they frequent; long-term minor and direct benefit to the local public from public access requirements in the lease with Seattle.</p>

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 quality (from temporary increases in 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 best management practices (BMPs). Remedial activities and other restoration projects that may occur in the LDR vicinity at the same time as actions taken under the Integrated Habitat Restoration Alternative would similarly incorporate required BMPs, such as dust control and soil and erosion practices. Additionally, the overall footprint of projects, including Site 2, built under the Integrated Habitat Restoration Alternative would be relatively small in the context of the overall LDR. 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 adverse impacts to these resources.

Outside of CERCLA remedial and other clean-up actions, it is difficult to predict exactly what other actions may be undertaken by other entities within the LDR that could combine with NRDA restoration actions to produce cumulative impacts, but some of these are known. The South Park Bridge replacement project was recently completed, and it is likely that there will be similar infrastructure projects undertaken in the LDR area in the future. Maintenance dredging in the LDR will occur as needed for navigation (including planned dredging deeper in some areas than was done in previous navigational dredging to allow access for the newer larger container ships). Additionally the Port of Seattle and others entities' waterfront facilities will require maintenance. Several other entities may conduct non-NRDA habitat restoration projects in the LDR for different purposes (e.g., for threatened Puget Sound Chinook recovery) and/or under different authorities. Other than restoration projects, most of these actions will have at least short-term negative impacts during construction activities, but some of them may have longer negative impacts if the construction is prolonged. Although mitigation will be required for projects that will damage critical habitats, some construction activities may result in long-term adverse impacts to habitats or species in the LDR that are not fully offset by mitigation. The restoration of habitat that would result from the Site 2 and future restoration projects implemented under the Integrated Habitat Restoration Alternative would serve to counter such impacts. As discussed in Section 3.2, past alterations to the LDR eliminated approximately 99% of marsh and mudflat habitat, armored most of the shoreline, and reduced adjoining riparian habitat. The restoration of mudflat, marsh, and riparian habitat through the Site 2 project and anticipated restoration projects (including other NRDA projects under the Integrated Habitat Restoration Alternative) will therefore offset some of these past impacts, resulting in long-term moderate cumulative benefits.

In sum, 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 quality (from temporary increases in turbidity). Some slight and temporary impacts to marine fauna and flora could occur, but use of BMPs will reduce the magnitude of these impacts and limit how much in-water work is done. Remedial activities and other restoration projects that may occur in the LDR at the same time would similarly incorporate required BMPs, such as dust control and soil and erosion practices. Consequently, the minor and temporary impacts from the construction of Site 2 in combination with impacts from other present and future actions on air quality, physical and biological resources, EFH, and water quality has a low potential to result in cumulatively significant negative impacts to these resources. Cumulative long-term moderate positive impacts will result from increases in habitat acreage from Site 2 and future LDR restoration projects, which will directly offset some of the past losses of ecologically important habitat.

6. COORDINATION AND CONSULTATION

This section presents a review of the potentially applicable laws and regulations that govern restoration projects built with Trustee funding. The Site 2 project will need to comply with many federal, state, tribal, and local laws and regulations, including obtaining all required federal, state, and local permits and approvals. A brief review of potentially applicable laws and regulations that may pertain to this project is presented below. The Trustees and Bluefield will ensure that there is coordination among these programs where possible and that project implementation and monitoring complies 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 C.F.R. pt. 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 and contaminated sites prioritized for response actions go on the National Priorities List (NPL). There are three such sites within the LDR (the Pacific Sound Resources superfund site is outside the LDR, but very near the mouth of the West Waterway). CERCLA also establishes natural resource trustees' ability to bring claims for damages to natural resources injured by releases of hazardous substances, and requires recovered damages be used to restore, replace, rehabilitate, or acquire the equivalent of those injured natural resources. DOI promulgated CERCLA NRDA regulations, 43 C.F.R. pt. 11, which establishes procedures for natural resource trustees in the assessment of damages for injury to, destruction of, loss of, or loss of use of natural resources. Additionally, the CERCLA regulations procedures indicate how natural resource trustees present a claim, recover damages, and develop and implement a plan for the restoration, rehabilitation, replacement, or acquisition of the equivalent of the injured natural resources under their trusteeship.

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 WDEC. The Statewide regulations set forth cleanup standards and requirements for managing contaminated sites in Washington. WDEC is a participant in the Trustees' Site 2 funding decision 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 C.F.R. Pts. 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. CEQ's NEPA regulations (40 C.F.R. pts. 1500-1508) outline the responsibilities of federal agencies under NEPA and provide specific procedures for preparing environmental documentation to comply with NEPA. Where appropriate, NEPA requires that an EIS or EA be prepared in order to analyze the effects of a proposed federal action on the quality of the human environment. The LDR RP/PEIS serves the purpose of analyzing anticipated impacts from restoration projects consistent with the preferred alternative, Integrated Habitat Restoration. This EA evaluates the impacts from providing funding for Site 2, and supports the finding that the proposed action would not significantly impact the quality of the human environment, because of Site 2's consistency with the Integrated Habitat Restoration Alternative's impact analysis in the LDR RP/PEIS. This EA will be available for public comment, and the final EA, the appropriate regulatory documents, and the public comments will become a part of the administrative record for the LDR NRDA.

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 SEPA process for Site 2 will occur during the permitting process for the 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. The CWA 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 §§ 401 and 404 of the CWA. The U.S. Army Corps of Engineers has the primary responsibility for administering the § 404 permit program. Under § 401 of the CWA, actions 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, or 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 U.S. Army Corps of Engineers with authority to regulate discharges of fill and other materials into such waters. Actions that require § 404 CWA permits are also likely to require permits under § 10 of this Act. A single permit ensures compliance with both § 10 of the Rivers and Harbors Act and the CWA, so this mechanism will ensure compliance for Site 2.

Endangered Species Act of 1973 (ESA), 16 USC §§ 1531, et seq.; 50 C.F.R. pts. 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 ESA, the National Marine Fisheries Service (NMFS) and USFWS publish lists of endangered and threatened species. Section 7 of the Act requires that federal agencies consult with these agencies if their action may affect endangered and threatened species or adversely modify or destroy designated critical habitat. Consultation under the ESA for Site 2 will occur during the permitting process and the consultation terms and conditions will set forth a number of required measures to follow during Site 2 implementation.

Magnuson-Stevens Act (MSA) (formerly Magnuson-Stevens Fishery Conservation and Management Act, MSFCMA), 16 USC §§ 1801, et seq., 50 C.F.R. pt. 600. The MSA requires consultation for all federal agency actions that may adversely affect EFH. 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" (50 C.F.R. § 600.10). Under § 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 § 7 consultations, such consultations may be combined to accommodate the substantive requirements of both ESA and MSA. Bluefield will consult NMFS regarding MSA-managed species residing or migrating through the LDR, and required conditions that result from this consultation will be followed if the Site 2 project is implemented.

Fish and Wildlife Coordination Act (FWCA), 16 USC §§ 661, et seq.; Migratory Bird Treaty Act of 1918 (MBTA), 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. These consultations are generally incorporated into § 404 of the CWA, NEPA, or other federal permit, license or review requirements. Similarly, the MBTA requires the protection of ecosystems of special importance to migratory birds against detrimental alteration, pollution, and other environmental degradation.

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 § 2(b) of Executive Order 11514, as amended, including the development of procedures to accomplish this objective. Site 2 will provide some extra floodplain water holding capacity by removing fill and creating off-channel habitat.

Executive Order 11990: Protection of Wetlands. On May 24, 1977, President Carter issued Executive Order 11990, Protection of Wetlands. This Executive Order requires each federal agency to provide opportunity for early public review of any plans or proposals for new construction in wetlands, in accordance with § 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 and Muckleshoot Indian Tribe constitute distinct, separate communities of Native Americans who rely on Treaty-reserved fish and shellfish resources in the LDR for subsistence, economic and spiritual purposes. Other members of low-income communities may rely on LDR fishery resources for subsistence purposes. The Trustees have not identified any disproportionate, adverse impacts on human health or environmental effects due to implementation of the preferred alternative on Native Americans or other minority or low-income populations, and believe that this project will be beneficial to these communities. The Tribes are participants in the project planning and their representation will be inherent in the Trustee Counsel's decision-making process.

Presidential Memorandum: Mitigating Impacts on Natural Resources from Development and Encouraging Related Private Investment. On November 3, 2015, President Obama issued this Presidential Memorandum, encouraging private investment in restoration and private-public partnerships to achieve restoration and conservation objectives. Federal agencies are encouraged to pay particular attention to opportunities to promote investment by the non-profit and private

sectors in restoration or enhancement of natural resources to deliver measurable environmental outcomes related to an established natural resource goal, including, if appropriate, as part of a restoration plan for natural resource damages. NRDA restoration bank projects, such as Site 2, are consistent with the goals of this Presidential Memorandum.

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 § 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 § 515 pre-dissemination review and complies with applicable guidelines.

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

- Archaeological Resources Protection Act, 16 U.S.C. §§ 469, *et seq.*
- Clean Air Act, as amended, 42 U.S.C. §§ 7401, *et seq.*
- Coastal Zone Management Act of 1982, as amended, 16 U.S.C. § 1451, *et seq.*
- Marine Mammal Protection Act, 16 U.S.C. §§ 1361, *et seq.*
- National Historic Preservation Act, 16 U.S.C. §§ 470, *et seq.*
- Shoreline Management Act, Ch. 90.58 RCW and Ch. 173-14 WAC
- Hydraulic Code, Ch. 77.55 RCW and Ch. 220-110 WAC
- Historic Preservation Act, Ch. 27.34 RCW, Ch. 27.44 RCW, and Ch. 27.53 RCW

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8.0 LIST OF PREPARERS:

The following Trustees participated in the development of this EA:

Rebecca Hoff, NOAA

John Kern, NOAA

Glen St. Amant, Muckleshoot Indian Tribe

Rich Brooks, Suquamish Tribe

Jeff Krausmann, USFWS

Michael Carlson, USFWS

Randy Carman, WDFW

Donna Podger, WDEQ

Appendix A: Request for Proposals Solicitation

Request For Proposals

The Elliott Bay Trustee Council (EBTC) invites proposals for habitat restoration projects in the Lower Duwamish River (LDR)⁸.

The EBTC consists of federal, state, and tribal natural resource trustees that are acting under the Comprehensive Environmental Response, Liability and Compensation Act to assess injuries to natural resources in the LDR resulting from unpermitted releases of hazardous substances and to undertake restoration actions that will compensate for these injuries. The EBTC has natural resource damage assessment (NRDA) settlement funds available to address natural resource injuries in the LDR and seeks proposals from entities for funding to implement appropriate restoration projects. In this round of project proposal solicitation, the EBTC will review proposed projects and may choose to provide funding to one or more project proponents to implement projects in the LDR.

Eligible Projects

To be eligible for funding under this initial project solicitation round, restoration projects must create new habitat and/or rehabilitate degraded or impaired habitat consistent with the habitat project description in the [Final-Lower Duwamish River NRDA Restoration Plan and Programmatic Environmental Impact Statement](#) (RP)⁹. Projects must be:

- **Located within the Duwamish in Habitat Focus Area 1 (extending from the northern tip of Harbor Island upstream to North Winds Weir) or within Elliott Bay in Habitat Focus Area 2 (inner Elliott Bay shoreline between the Duwamish head and Port of Seattle Terminal 91; see map at end);**
- **Consistent with RP and include marsh and/or mudflat habitat with a riparian buffer;**
- **Protected from conversion to other than habitat purposes in perpetuity;**
- **Maintained through a long-term stewardship program to preserve ecological function;**
- **Implementable without long-term negative impacts on existing habitat or public safety;**
- **Free from risk of release of contamination from implementation; and**
- **Monitored for a minimum of 10 years consistent with the guidelines in the RP**

The EBTC is interested in accomplishing restoration as quickly as possible, and therefore projects that can be implemented within three years will be preferred for funding under this solicitation over similar projects that will take longer to construct.

Projects proposed for funding can include projects designed to address Endangered Species Act and Section 404 mitigation as well as NRDA liability. However, if a portion of a proposed project is intended to be used for mitigation or other such purposes, a strict accounting system must be in place to guarantee that the portion of the project funded by NRDA settlement funds is not used for mitigation or other such purposes.

Available Funding

The EBTC currently has approximately \$3.4 million available for restoration activities. Further funding may become available as additional NRDA settlements are reached. Some or all of this funding may be used to fund projects proposed in response to this solicitation.

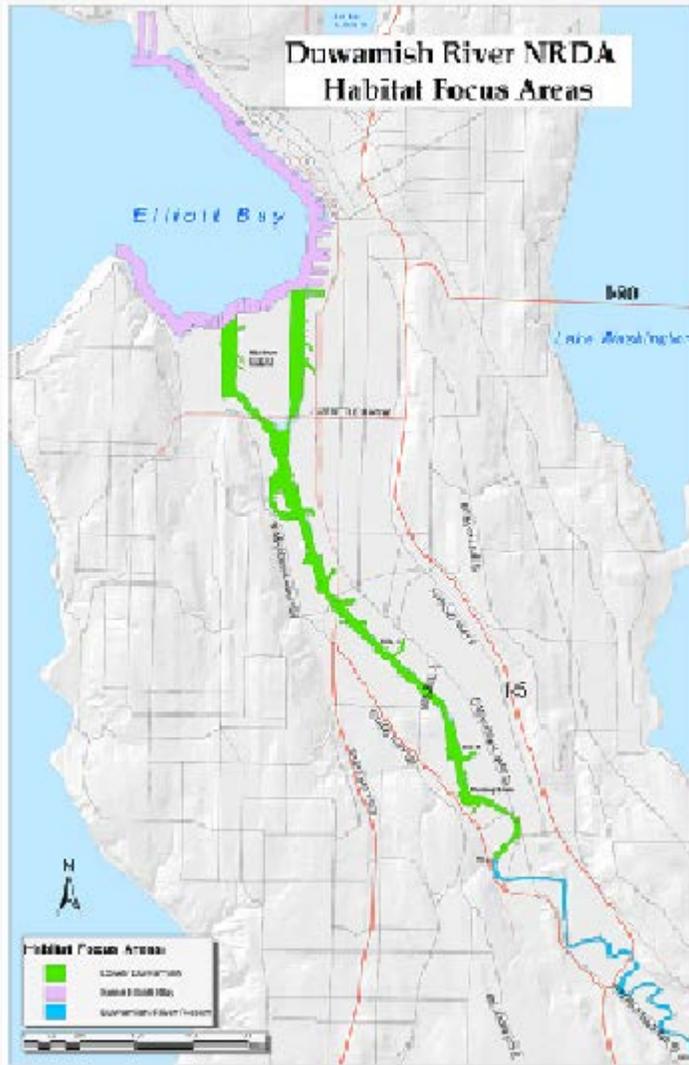
Proposal Evaluation

⁸ Projects within a portion of Elliott Bay may also be eligible for funding.

⁹ Project proponents may attempt to create marsh at elevations down to +6 ft MLLW, however the likelihood of success of marsh planting below +8 ft MLLW is low based on examination of existing marsh in the Lower Duwamish River.

Factors that will improve the likelihood of a project receiving EBTC settlement funding include:

- Large size relative to other proposed projects
- Proximity to existing high quality habitat
- Strong potential to be constructed within 3 years;
- Low cost to EBTC settlement funds compared to overall size and benefits of the project, including use of other sources of funding
- High habitat diversity
- Degree of expected benefits to multiple injured natural resources in the LDR



Map of Habitat Focus Areas. Habitat Focus Area 1 is colored green, and Habitat Focus Area 2 is colored purple.

Appendix B: Review and Funding Decision on 2015 Restoration Project Proposals

Memorandum to Administrative Record for Lower Duwamish River Natural Resource Damage Assessment

John Kern, NOAA Restoration Center

Review and Funding Decision on 2015 Restoration Project Proposals

On January 26, 2015 the Elliott Bay Trustee Council (EBTC) issued a Request for Proposals (RFP) for restoration projects within the lower Duwamish River and Elliott Bay to receive funding from existing settlement funds. Project proposals were received from four parties by the March 27, 2015 proposal deadline (see attached RFP informational material). The EBTC initially discussed the proposals received at the April 15, 2015 Trustee Council meeting, and again on a conference call on May 7, 2015. On that call, the EBTC determined that the proposal to conduct restoration on Puget Creek was not responsive to the RFP because Puget Creek is outside of the area specified in the RFP, and it was therefore eliminated from further consideration.

The EBTC had some questions and recommendations regarding the remaining proposals. Spannerwerks (a restoration banking firm) had initially proposed 4 potential projects for funding, but the EBTC suggested that two of the potential projects- Site 16 and T105- had more potential than the other two proposals, after visiting all four sites, and made suggestions that would improve the design of these two projects. They also asked for more information concerning existing contamination and potential recontamination, and clarification on how many credits our funds would obtain. For the South Park Bank Restoration proposal from Nicoterra Trails, the EBTC asked for additional information regarding the discussions between the major landowner within their project area, the Port of Seattle (POS), and other landowners regarding their willingness to allow restoration and place conservation easements on their properties. The EBTC had a few clarifying questions for the two projects proposed by Bluefield Holdings (another restoration banking firm)- Site 2 and Site 12- regarding funding (specifically whether the full amount requested for Site 2 was necessary for construction of the project) and credits.

At the September 16, 2015 Council meeting, the Trustees considered the additional material provided by project proponents and screened projects using a two-tiered approach that had been developed prior to the issuance of the RFP (attached). The South Park Bank Restoration proposal was eliminated from further review based on the fact that several of the landowners on which restoration was proposed were unwilling to place a conservation easement on their property, and the willingness of some others- including the POS- to place easements was not known. This caused uncertainty regarding the requirement that properties restored with EBTC funding be protected as habitat into the future.

Both of the projects proposed by Spannerwerks had potential contamination issues, and these concerns remained after reviewing the additional material provided by Spannerwerks in response to the Trustees' questions about how contamination would be addressed. Therefore both of the proposed projects were eliminated from further consideration at this time due to the uncertainty regarding effects of contaminants on the potential habitat. .

Bluefield Holdings' Site 12 project was eliminated from further consideration after the Tier 1 screening but before Tier 2 screening was completed because their funding request for this site was only for permitting and design, not construction. The EBTC judged that there were not sufficient guarantees that the project would be built within the desired timeframe of three years. Additionally, both restoration banking firms had been told that no restoration funding would be provided to them until financial assurances were in place to guarantee the construction, monitoring, and maintenance of the project, so providing funding for permitting and design ahead of these assurances would be inconsistent with this requirement.

Bluefield Holdings' proposal for Site 2 met all Tier 1 criteria and achieved satisfactory scores on Tier 2 criteria, and therefore the EBTC decided to provide the requested funding of \$3 million for construction of this project. Ahead of providing funding, the EBTC will need evaluate the action of purchasing credits in Site 2 under the National Environmental Policy Act, will need to develop a specific agreement with Bluefield Holdings concerning use of the funds and details of the credit purchase, and will need to have all appropriate financial assurances per the protocol with

Bluefield Holdings in place. The Trustees will require that all permits, consultations, and approvals needed for such projects be obtained, and that the steps detailed in the Scope of Work for the project be followed.

Tier 1 and Tier 2 screening is presented in the tables below:

Project	Tier 1 Criteria				
	HFA	Benefits	Management	Feasibility	Contamination
BH Site 2	Yes	Yes	Yes	Yes	Yes
BH Site 12	Yes	Yes	Yes	Yes	Yes
Spannerwerks Site 16	Yes	Yes	Yes	Yes	No
Spannerwerks T105	Yes	Yes	Yes	Yes	No
South Park Bank Project	Yes	Yes	No	Yes	Yes

Project	Score	Tier 2 Criteria					
		Goals			Cost	Timing	
		Multiple Resources	Habitat Diversity	Size			Proximity
BH Site 2	18.5	3	3	2	2	2.5	4