

Commencement Bay Natural Resource Damage Assessment: Clear Creek Draft Restoration Plan and NEPA Evaluation

Prepared by:

**U.S. Department of the Interior
National Oceanic and Atmospheric Administration
Muckleshoot Indian Tribe
Puyallup Tribe
State of Washington - Department of Ecology**

March 2022

Table of Contents

Executive Summary	4
1.0 INTRODUCTION	4
1.1 Relationship to Final Commencement Bay Natural Resource Restoration Plan	5
1.2 Purpose and Need.....	5
1.3 Natural Resource Trustee Authority	6
1.4 Summary of Proposed Action	6
1.5 Public Participation	6
2.0 INJURY ASSESSMENT.....	7
3.0 RESTORATION PLANNING	8
3.1 Restoration Goals and Objectives.....	9
3.2 Restoration Screening and Ranking Criteria.....	8
3.3 Alternative 1: Clear Creek Projects (<i>Preferred</i>)	9
3.4 Alternative 1: Clear Creek Projects (<i>Non-preferred</i>).....	10
3.5 Alternative B: No Action Alternative	10
3.6 Evaluation of Alternatives Using Restoration Criteria	11
3.7 Alternatives Considered but Eliminated	12
4.0 NEPA EVALUATION	13
4.1 Requirements for Analysis under NEPA	13
4.2 NOAA Restoration Center Programmatic Environmental Impact Statement.....	14
4.3 Proposed Action and Alternatives.....	15
4.4 Affected Environment	15
4.4.1 General	16
4.4.2 Commencement Bay	16
4.4.3 Clear Creek.....	17
4.5 Evaluation of Preferred and Non-preferred Alternatives Relative to the RC PEIS	20
4.5.1 Clear Creek Floodgate Replacement.....	20
4.5.2 Clear Creek Road Decommissioning Project.....	20
4.5.3 Conclusion.....	21
4.6 Impacts Analyzed for Preferred Alternative	21
4.7 Impacts Analyzed for Non-preferred Alternative	21
4.8 Evaluation of the No Action Alternative	22
4.9 Cumulative Effects	23
4.10 Climate Change	23

4.11	NEPA Conclusion	24
5.0	COMPLIANCE OTHER LAWS AND REGULATIONS	24
5.1	Federal Laws	25
	National Environmental Policy Act	24
	Federal Water Pollution Control Act (Clean Water Act).....	25
	Fish and Wildlife Coordination Act.....	25
	Endangered Species Act	25
	Migratory Bird Treaty Act.....	25
	National Historic Preservation Act	25
	Coastal Zone Management Act.....	26
	Magnuson-Stevens Fishery and Conservation Management Act	26
	Rivers and Harbors Act.....	26
	Floodplain Management, Executive Order 11998	26
	Protection of Wetlands, Executive Order 11990	26
	Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations, Executive Order 12898	27
5.2	State and Local Laws	27
6.0	REFERENCES	28
	APPENDIX.....	29

Executive Summary

This Draft Restoration Plan and National Environmental Policy Act Evaluation (RP/NEPA Evaluation) has been developed by the Commencement Bay Trustee Council to identify and analyze the action of implementing Clear Creek restoration projects (Clear Creek Projects) to restore natural resources injured by pollution in Commencement Bay. The Clear Creek Projects, which include the Clear Creek Floodgate Replacement Project and the Clear Creek Road Decommissioning Project, would improve fish passage and access to critical salmon rearing habitat. This Draft RP/NEPA Evaluation evaluates these projects and a No Action Alternative, incorporating both an integrated 1997 Commencement Bay Final Restoration Plan and Programmatic Environmental Impact Statement (Final RP/PEIS) and the National Oceanic and Atmospheric Administration (NOAA) Restoration Center's Programmatic Environmental Impact Statement (RC PEIS) in the analysis. The Commencement Bay Natural Resource Trustees (Trustees) have determined that the Preferred Alternative (Clear Creek Projects) is consistent with the original Preferred Alternative selected in the Commencement Bay Final RP/PEIS. Further, the Trustees have determined that the Clear Creek Projects are project types that fall within the scope of restoration alternatives described in the RC PEIS and are not expected to have significant negative effects as defined under NEPA.

1.0 INTRODUCTION

This Draft RP/NEPA Evaluation has been prepared by the Commencement Bay Trustee Council to identify and analyze proposed alternatives to restore natural resources injured by releases of hazardous substances and discharges of oil in Commencement Bay. The Trustees developed this Draft RP/NEPA Evaluation to document the decision-making process for choosing the Clear Creek Projects as the preferred alternative to restore natural resources in Commencement Bay and evaluate this action and the non-preferred alternatives, including No Action. With this Draft RP/NEPA Evaluation, the Trustees are seeking public review and comment to inform the Final RP/NEPA Evaluation. Once this Draft RP/NEPA Evaluation is finalized, the Trustee Council will provide \$1.1M in funds to Pierce County to construct both projects and implement an agreement between NOAA as Lead Trustee and Pierce County that defines the ongoing Trustee role in project monitoring and maintenance.

This Draft RP/NEPA Evaluation:

- Explains the purpose and need for restoration;
- Presents the restoration alternatives evaluated by the Trustees;
- Outlines the Trustees' restoration goals and restoration screening criteria;
- Evaluates the restoration alternatives under the restoration screening criteria; and
- Analyzes the restoration alternatives' likely impacts to the environment as well as cumulative effects that may result from implementation of the alternatives.

1.1 Relationship to Final Commencement Bay Natural Resource Restoration Plan

The Commencement Bay Natural Resource Trustees (Trustees) prepared a 1997 Natural Resources Damage Assessment (NRDA) Final Restoration Plan (Final RP), which selected an alternative representing the best approach to implement the preferred alternative, the “Integrated Approach,” also selected in the 1996 Programmatic Environmental Impact Statement (PEIS) to restore, replace, rehabilitate, and/or acquire the equivalent natural resources and/or services injured as a result of the release of hazardous substances or discharge of oil to the Commencement Bay environment. The Integrated Approach is a comprehensive plan to restore injured species in Commencement Bay and Basin. The Integrated Approach includes "Habitat Function" restoration and involves actions designed primarily to benefit certain habitat types that support a range of species (e.g., wetlands creation; removing impediments to river flow; breaching dikes to restore riparian and wetland habitat). The 1997 Commencement Bay Final RP expanded on the PEIS which only broadly analyzed the environmental impacts of the Integrated Approach alternative, since specific restoration activities and locations were not identified at the time.

This Draft RP/NEPA Evaluation “tiers” from (40 C.F.R. § 1501.11), and incorporates by reference (40 C.F.R. § 1501.12), portions of the 1997 Final RP and 1996 PEIS for efficiency where appropriate. Under NEPA, tiering is allowed if the future proposed activity is within the range of alternatives and if the nature of the proposed action’s environmental impacts is considered in the programmatic document. Specific sections of the 1997 Final RP and 1996 PEIS are cited and summarized to incorporate both documents by reference in this Draft RP/NEPA Evaluation. When preparing this Draft RP/NEPA Evaluation, the Trustees reviewed the 1997 Final RP and 1996 PEIS in light of current conditions and have found the Final RP and PEIS, and the analyses therein, to be relevant and applicable to current conditions in Commencement Bay. The activities proposed in this Draft RP/NEPA Evaluation are consistent with the processes and criteria set forth in the 1997 Final RP and in line with the preferred alternative, Integrated Approach, selected in the 1997 Final RP.

1.2 Purpose and Need

Because the Commencement Bay Final RP and PEIS did not evaluate specific restoration projects, the Trustees must develop a project-specific Restoration Plan and NEPA Evaluation when the Trustees decide to allocate funds to further restoration projects. The purpose and need of that restoration is to restore natural resources potentially injured and natural resource services lost due to releases of hazardous substances and discharges of oil into Commencement Bay. The Trustees have determined that the proposed Clear Creek Projects meet the restoration goals and objectives defined by the 1997 Final RP, and the project types that comprise the Preferred Alternative described in this Draft RP/NEPA Evaluation fall within the scope of the restoration alternatives considered in the RC PEIS. This Draft RP/NEPA Evaluation also documents the Trustees’ decision that the Preferred Alternative (Clear Creek Projects) would not have adverse impacts beyond the scope of those analyzed in the RC PEIS or meet any other criteria for exclusion from analysis under the RC PEIS (refer to Table 10 of the RC PEIS), and therefore the anticipated impacts would not be significant.

1.3 Natural Resource Trustee Authority

Designated and explained in the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA, 42 U.S.C. § 9607(f)), and the National Contingency Plan, (40 C.F.R. subpart G), the Trustees are authorized to act on behalf of the public to assess injuries to natural resources and lost services resulting from releases of hazardous substances and discharges of oil and pursue claims against potentially responsible parties to seek compensation for such losses. The goal of the natural resource damage assessment and restoration (“NRDAR”) process is for the Trustees to plan and implement actions that will restore, replace, or acquire the equivalent of those natural resources and services that were injured or lost because of releases of hazardous substances or discharges of oil.

The Trustees work together as the Commencement Bay Trustee Council to cooperate and share efforts to conduct a NRDAR for Commencement Bay. Participating Trustees are the U.S. Fish and Wildlife Service and Bureau of Indian Affairs, on behalf of the United States Department of the Interior (DOI); NOAA, on behalf of the United States Department of Commerce; the Muckleshoot Indian Tribe; the Puyallup Tribe; and the State of Washington represented by the Washington State Department of Ecology. NOAA and DOI are jointly acting as lead federal agencies for NEPA compliance for this Draft RP/NEPA Evaluation (40 C.F.R. § 1501.7).

This Draft RP/NEPA Evaluation was prepared jointly by the Trustees in accordance with Section 111(i) of CERCLA (42 U.S.C. § 9611(i)) and the CERCLA NRDAR implementing regulations (43 C.F.R. § 11.93).

1.4 Summary of Proposed Action

The Trustee Council is proposing to provide \$1.1M in funds to Pierce County to construct both Clear Creek Projects and implement an agreement between NOAA as Lead Trustee and Pierce County that defines the ongoing Trustee role in project monitoring and maintenance. The funding and agreement would cover implementation, monitoring, and stewardship of the Clear Creek Projects. The Clear Creek Projects include the Clear Creek Floodgate Replacement Project and the Clear Creek Road Decommissioning Project. The Clear Creek Floodgate Replacement Project proposes to replace an existing wooden flap gate on one of the two culverts that drain Clear Creek to the Puyallup River. The new gate would be designed to work in conjunction with the other gate and be optimized to better allow fish passage and reduce impacts from flooding along Clear Creek. The Clear Creek Road Decommissioning Project proposes to improve access to salmon habitat and increase flood storage capacity by removing sections of an existing access road separating Clear Creek from an adjacent wetland owned by the Port of Tacoma. The road removal would result in approximately 5,000 cubic yards of floodplain excavation and greatly improve access to critical salmon rearing habitat. The project is located near the mouth of Clear Creek. Together, these projects will increase fish access to critical habitats.

1.5 Public Participation

Public participation is an important part of the Trustees’ restoration planning process and is also called for under the CERCLA NRDAR regulations (e.g., 43 C.F.R. § 11.81(d)(2)). Under NEPA,

federal agencies are also required to comprehensively analyze the impacts of their proposed actions and make information related to their analyses publicly available (40 C.F.R. § 1501.5).

Accordingly, the Draft RP/NEPA Evaluation will be posted on the NOAA Damage Assessment, Remediation, and Restoration Program (DARRP) website (<https://darrp.noaa.gov/>) for public review and comment for 30 days. The public is invited to submit comments in writing or by email:

John R. Floberg
National Oceanic and Atmospheric Administration
7600 Sand Point Way NE
Seattle, WA 98115
John.r.floberg@noaa.gov

The Trustees maintain records related to the Commencement Bay NRDAR decision making process, including the 1997 Final RP and the 1996 PEIS. These records are available on the Commencement Bay NRDAR website: <https://www.diver.orr.noaa.gov/web/guest/diver-admin-record/6605>.

2.0 INJURY ASSESSMENT

The Trustees identified and described the key natural resources and the injuries to these natural resources and services in the Commencement Bay Phase I Damage Assessment (Commencement Bay Natural Resource Trustees, 1995) and in the 1997 Final RP and 1996 PEIS, and that information is incorporated here by reference. The Commencement Bay injury assessment indicated that natural resources including fish, wildlife, and birds had been exposed to injurious levels of contaminants, including elevated levels of PCBs and mercury, among other contaminants. The contamination in Commencement Bay and its waterways has injured many species of fish and wildlife, including bottom-dwelling organisms, birds, and salmon. Consumption advisories are in effect for many fish species. This led to 19 settlements worth more than \$70 million with polluters, which recovered funds, services, and properties to support restoration projects.

The natural resources identified include salmonids, flatfish, benthic infauna, epibenthic invertebrates, larger invertebrates, birds, sediments and surface water. In addition, the potentially injured or lost services identified in Commencement Bay include recreational services, non-consumptive uses, passive uses, and Tribal services. These injuries resulted from releases of contaminants into Commencement Bay as a result of the industrial, commercial and municipal activities including pulp and lumber, ship building, chlorine production, chemical manufacturing, oil refining, railroad operations, and other activities. Commencement Bay contained polynuclear aromatic hydrocarbons (PAHs), polychlorinated biphenyls (PCBs), chlorinated butadienes, dibenzofurans, phthalates, hexachlorobenzene, chlorinated pesticides, and metals, including arsenic, copper, lead, mercury and zinc (Commencement Bay Natural Resource Trustees, 1995). More detail can be found in the 1995 Phase I Damage Assessment and in the Final RP and PEIS, but these details are listed to highlight the injuries to the affected environment described in this document.

3.0 RESTORATION PLANNING

3.1 Restoration Goals and Objectives

The Trustees' overall goal is to restore, rehabilitate, replace, or acquire the equivalent of those natural resources and services injured by hazardous substances and discharges of oil released into Commencement Bay. The 1997 Final RP describes the goals and objectives that will restore natural resources injured in Commencement Bay (See Section 1.3, Final RP), and includes the evaluation and selection of the preferred alternatives that inform the NEPA Evaluation for the proposed alternatives described in Section 4.0 below. That Final RP is incorporated here by reference, but we reiterate those goals and objectives here in order to demonstrate how the Clear Creek Projects described here aligns with the original goals and objectives outlined in the Final RP. The four primary objectives developed by the Commencement Bay NRDA Restoration Panel, upon which the Final RP is based include:

1. Provide a functioning and sustainable ecosystem where selected habitats and species of injured fish and wildlife will be enhanced to provide a net gain of habitat function beyond existing conditions.
2. Integrate restoration strategies to increase the likelihood of success.
3. Coordinate restoration efforts with other planning and regulatory activities to maximize habitat restoration.
4. Involve the public in restoration planning and implementation.

As mentioned above, the 1997 Final RP describes the goals and objectives, screening criteria and ranking criteria for evaluating restoration projects to address injury to natural resources in Commencement Bay. The preferred alternative of the Final RP and PEIS, Integrated Approach, is a comprehensive plan to restore injured species in Commencement Bay and Basin, which includes restoration for habitat function to support a range of species (e.g., wetlands creation; removing impediments to river flow; breaching dikes to restore riparian and wetland habitat).

3.2 Restoration Screening and Ranking Criteria

In addition to the restoration objectives listed in Section 1.3, the 1997 Final RP outlines six habitat focus areas (HFAs) with various approaches and needs for restoration. The HFA addressed by the proposed alternatives identified in this Draft RP/NEPA Evaluation is the Puyallup River wetlands/corridors, with target habitats of riverine and riparian areas for juvenile and adult salmon migration routes, off-stream feeding, rearing, resting, and acclimation areas, migratory and waterfowl nesting, and small mammal corridors.

Because CERCLA requires criteria and evaluation of possible alternatives, the expert panel for the Commencement Bay Trustee Council developed criteria (outlined in the 1997 Final RP) to screen, analyze, and rank proposed restoration projects. Screening criteria to determine suitability of a restoration project were:

1. Land availability
2. Source control
3. Restoration of injured natural resources or lost services

If projects met minimum levels of these screening criteria, they were ranked using the following preferred criteria:

1. High importance (functional connectivity, physical location in the Bay, distance from sources of contamination or human disturbances, cost-effectiveness, and sustainability);
2. Medium importance (size, ownership and management, land use compatibility, and water quantity and flow [unique criterion for freshwater stream and riparian sites relating to flooding and erosion potential]); or
3. Lesser importance (public access).

Any proposed restoration alternatives should also comply with the CERCLA NRDAR regulations (43 C.F.R. §§ 11.82).

Table 1 provides a comparative analysis of the proposed restoration alternatives under the two-tiered restoration screening criteria. In Section 4.0 below, the Trustees analyze the potential beneficial and adverse impacts of the proposed alternatives on the human environment.

3.3 Alternative 1: Clear Creek Projects – Floodgate Replacement and Road Decommissioning (*Preferred*)

Alternative 1, consists of two restoration actions combined: the Clear Creek Floodgate Replacement Project and the Clear Creek Road Decommissioning Project.

The Clear Creek Floodgate Replacement Project proposes to replace an existing wooden flap gate on one of the two culverts that drain Clear Creek to the Puyallup River. A new vertical combination sluice/flap gate would be installed on the existing box culvert. The goal is to improve hydrologic interchange between Clear Creek and existing wetlands, allow for more effective flood management, and improve fish access to available habitat. A coffer dam would be installed and dewatered during construction. Appropriate fish screening, isolation, and removal methods would be implemented. Above the ordinary high water mark (OHWM), a new elevated concrete platform and headwall would be constructed. A generator and electronic components for the gate would be installed on the elevated platform. Existing access roads (located above the OHWM) would be regraded with new gravel for future maintenance. The trash rack located on the upstream side would be cleaned and inspected, and encroaching vegetation would be removed along the access road. Once the new flood gate has been tested and is operational, the temporary coffer dam would be removed from Clear Creek. The new gate would be designed to work in conjunction with the floodgate on the adjacent culvert and be optimized to better allow fish passage and reduce impacts from flooding along Clear Creek.

The Clear Creek Road Decommissioning Project proposes to improve access to salmon habitat and increase flood storage capacity by removing sections of an existing access road separating Clear Creek from an adjacent 9.5-acre wetland owned by the Port of Tacoma and managed as a mitigation wetland under an agreement with the United States Environmental Protection Agency (EPA). The road removal would result in approximately 5,000 cubic yards of floodplain excavation and greatly improve access to critical salmon rearing habitat. The excavation would create six hydraulic connections or “bellies” between Clear Creek and the

wetland. The project is located approximately 0.15 mile upstream from the mouth of Clear Creek.

With Alternative 1, the Trustee Council will provide \$1.1M in funds to Pierce County to construct both projects.

3.4 Alternative 2: Clear Creek Project – Floodgate Replacement

With Alternative 2, only one of the Clear Creek Projects would be implemented—floodgate replacement. The description of the Floodgate Replacement Project remains unchanged from what is provided in Section 3.3.

With Alternative 2, the Trustee Council will provide approximately \$330,000 in funds to Pierce County to construct the Floodgate Replacement Project.

3.5 Alternative 3: No Action Alternative

The No Action Alternative is premised on "natural recovery" for CERCLA restoration planning (43 C.F.R. § 11.82(c)(2)). Under a No Action Alternative, the Trustees would not provide funding or enter into an agreement with Pierce County to implement restoration for the Clear Creek Projects. In this scenario, Pierce County, the project implementer, would then be without funding from the Trustee Council to support the actions necessary to restore fish passage and reduce impacts from flooding along Clear Creek. Pierce County would be without funding to reconnect passage to an adjacent wetland owned by the Port of Tacoma to improve access to salmon rearing habitat and support injured natural resources in Commencement Bay.

Further, under a No Action Alternative, the Trustees would rely on natural recovery for injured resources to return to the condition they would otherwise be absent the release of hazardous substances or discharges of oil. A No Action Alternative would not compensate for interim lost resource services. Additionally, this alternative assumes ongoing federal and state activities such as institutional controls, source control, and remedial actions continue, but does not include actions by the Trustees specifically targeting injured resource restoration such as habitat creation.

In the absence of the Clear Creek Projects, habitat supporting injured fish, migratory birds, and wildlife in Commencement Bay would continue to degrade. Juvenile salmonids and other fish would be unable to rest and forage in additional needed off-channel habitat. The Commencement Bay ecosystem processes would continue to remain impaired for a longer period. Flooding would continue to be an issue in the area.

3.6 Evaluation of Alternatives Using Restoration Criteria

The Commencement Bay Trustee Council determined that it had at least \$2,000,000 in funds that could be used to fund additional restoration projects. In order to use these funds to the best effect, the Trustees reviewed the existing 1997 Final RP that was developed to guide restoration activities for the case.

In order to determine what restoration options were available, the Trustees collected projects from Washington's Water Resource Inventory Area's 10 and 12 three-year work plan and the Washington Recreation and Conservation Office's PRISM database. The Trustees further solicited ideas through the associated Washington Watershed Councils using a web-based solicitation, and accepted applications for eight weeks. Through this process, the Trustees reviewed 73 project ideas from the three-year work plan, 12 project ideas from the PRISM database, and 5 project ideas from the web-based solicitation.

Trustees culled the large list using required selection criteria identified in the 1997 Final RP. After the culling process, the Trustees requested more information from project proponents on 18 remaining projects. Only six of the 14 project proponents who responded provided the required information. The Trustees requested in-person presentations from the six project proponents. Using the requested information and information garnered during the presentations, the Trustees further scored the projects using site selection criteria identified in the 1997 Final RP.

Scores for each Criteria Factor for the six remaining projects were decided by Vote of the Trustees, using a scale of 1-3, with 3 being the highest score. The scores for the Clear Creek Project alternatives are included in the table below. The scores were then weighted by level of importance, with high criteria importance scores given the greatest weight and lowest importance criteria given the least weight. Cumulative results were then normalized on a scale of 1-100. The Clear Creek Projects received a score of 63 and are being proposed for funding by the Trustees.

Table 1. Evaluation of Alternatives under Restoration Screening Criteria.

Restoration Criteria	Alternative 1: Clear Creek Projects – Floodgate Replacement and Road Decommissioning	Alternative 2: Clear Creek Project - Floodgate Replacement	Alternative 3: No Action
Screening Criteria			
Land Availability	Yes, required	Yes, required	N/A
Source Control	Yes, required	Yes, required	N/A
Restoration of Injured Natural Resources or Services Lost	Yes, required	Yes, required	N/A
Importance Criteria			
High			
Functional connectivity	2	1	N/A
Physical location in the Bay	3	3	N/A
Distance from sources of	2	2	N/A

contamination or human disturbances			
Cost-effectiveness	1.5	0.5	N/A
Sustainability	2.5	2.5	N/A
Medium			
Size	3	2	N/A
Ownership and management	3	3	N/A
Land use compatibility	2	2	N/A
Water quantity and flow	3	2	N/A
Low			
Public access	2	2	N/A

Based on the evaluation of the proposed alternatives using the established restoration screening and importance criteria described above, consideration of the alternatives against the CERCLA NRDAR evaluation criteria, project readiness, consistency of the projects with the Trustees' original restoration goals and objectives, and the additional habitat value from implementing both projects, the Trustees have selected the Alternative 1 Clear Creek Projects – Floodgate Replacement and Road Decommissioning as the Preferred Alternative to compensate the public for injured natural resources and services in Commencement Bay.

Alternative 2 (Clear Creek Project - Floodgate Replacement) is not preferred by the Trustees based on the evaluation above. While the amount of funding needed to implement the project would be less than if the combined Clear Creek Floodgate Replacement and Road Decommissioning projects (Alternative 1) were selected, Alternative 2 would provide significantly less habitat benefits for salmon than if Alternative 1 was selected and implemented.

The No Action Alternative is also not preferred by the Trustees. No action is not consistent with the Trustees' restoration goals and objectives and would not contribute towards compensating the public for the losses to natural resources and services in the Commencement Bay environment. Juvenile salmonids and other fish would be unable to rest, forage, and rear in additional needed off-channel habitat. The Commencement Bay ecosystem processes would continue to remain impaired for a longer period and flooding would continue to be an issue in the area.

3.7 Alternatives Considered but Eliminated

In developing a reasonable range of possible alternatives, the Trustees were unable to identify other projects that are ready-to-be-implemented (e.g., final designs and/or permitting completed) that would restore injured resources and services as cost-effectively and expeditiously as the Clear Creek Projects. Moreover, the Trustees have not identified any other restoration alternatives that could be implemented at this time that meet the original screening and selection

criteria and the Trustees' restoration goals and objectives that would restore natural resources injured in Commencement Bay.

During the alternatives screening and development process, the Trustees also identified two levee set-back projects that could potentially compensate the public for the natural resources injured in Commencement Bay—TransCanada and Pacific Right Bank. The TransCanada Levee Removal Project is located on the White River and would remove angular toe rock from a levee and restore habitat with engineered logjams while protecting private property and roads from flooding. The Pacific Right Bank Restoration Project is also on the White River in the city of Pacific and would restore off-channel rearing habitat for ESA-listed Chinook. However, based on feedback received from the project proponents and current uncertainties regarding project design and feasibility, the Trustees have decided to eliminate these projects from further evaluation at this time. If and when the TransCanada and Pacific Right Bank projects are more fully developed and closer to implementation, they will also be considered and evaluated by the Trustees in a future RP/NEPA document which will be made available to the public for review and comment before a final decision is made.

4.0 NEPA EVALUATION

The National Environmental Policy Act (NEPA), 42 U.S.C. § 4321, *et seq.*, and the regulations guiding its implementation at 40 C.F.R. Parts 1500-1508, apply to restoration actions that federal natural resource trustees plan to implement under CERCLA and other federal laws. NEPA and its implementing regulations outline the responsibilities of federal agencies and provide specific procedures for preparing the documentation necessary to demonstrate compliance.

The Trustees integrated the NRDA and NEPA processes in this Draft RP/NEPA Evaluation. Integration of the NEPA evaluation process into this document allows the Trustees to provide for public involvement under both statutes concurrently. This approach is recommended under 40 C.F.R. § 1500.2(c), which provides that federal agencies should “[i]ntegrate the requirements of NEPA with other planning and environmental review procedures required by law or by agency practice so that all such procedures run concurrently rather than consecutively.” Thus, this document serves, in part, as the agencies’ compliance with NEPA.

4.1 Requirements for Analysis under NEPA

Under NEPA, federal agencies must evaluate potential impacts to the environment from their proposed actions and reasonable alternatives. If impacts are potentially significant an environmental impact statement (EIS) is required, but if impacts are either unclear or considered not significant, an environmental assessment (EA) may be prepared. Additionally, some types of actions may qualify for a Categorical Exclusion (CE), or otherwise not be subject to NEPA. NEPA allows for broad programmatic analyses that subsequently can be used to meet NEPA requirements for project-level actions through incorporation by reference and tiering. This process is discussed further in section 4.2 below. The NEPA process ensures that public decision-makers are fully informed about the potential impacts of the proposed actions and alternatives and allows for meaningful public involvement in the decision-making process.

For this Draft RP/NEPA Evaluation, the federal Trustees propose to satisfy their NEPA compliance obligations by applying the impacts analysis and conclusions drawn in another, previously published programmatic NEPA document—NOAA’s RC PEIS. The public will be invited to provide feedback on the Trustees’ proposed action and alternatives and the analysis conducted in the Draft RP/NEPA Evaluation.

This Draft RP/NEPA Evaluation complies with NEPA by 1) describing the purpose and need for restoration; 2) addressing public participation for this process; 3) identifying alternative actions; 4) summarizing the current environmental setting; and 5) analyzing environmental consequences.

4.2 NOAA Restoration Center Programmatic Environmental Impact Statement

After decades of experience evaluating and implementing environmental restoration projects, NOAA’s Restoration Center (RC) determined that many of its efforts involve similar types of activities with similar environmental impacts. To increase efficiency in conducting future NEPA analyses for a large suite of habitat restoration actions, the RC developed the “Programmatic Environmental Impact Statement for habitat restoration activities implemented throughout the coastal United States” (RC PEIS) in 2015. After a public comment period, a Record of Decision was signed July 20, 2015. USFWS documented their adoption of the RC PEIS with a Record of Decision, dated August 20, 2019 (84 Federal Register 45515). The RC PEIS is available at the following link:

<https://www.fisheries.noaa.gov/resource/document/restoration-center-programmatic-environmental-impact-statement>

The RC PEIS provides a program-level environmental analysis of NOAA’s habitat restoration activities throughout the coastal and marine environment of the United States. Specifically, it evaluates typical impacts related to a large suite of projects undertaken frequently by the RC, including, but not limited to: Coral Reef Restoration; Debris Removal; Beach and Dune Restoration; Signage and Access Management; Fish Passage; Fish, Wildlife, and Vegetation Management; Levee and Culvert Removal, Modification, and Set-Back; Shellfish Reef Restoration; Subtidal Planting; Wetland Restoration; Freshwater Stream Restoration; and Conservation Transactions. These analyses may be incorporated by reference in subsequent NEPA documents, including tiered NEPA documents, where applicable. For example, a site-specific NEPA document may evaluate a restoration project where all potential impacts were addressed in the RC PEIS. In that instance, the site-specific NEPA document would, in effect, incorporate by reference the full impacts analysis from the RC PEIS. In those cases where the RC PEIS determined none of the potential impacts would be significant, the site-specific NEPA document could incorporate that conclusion by reference as well. In short, no further NEPA analysis may be necessary so long as the proposed activity is within the range of alternatives and scope of potential environmental consequences analyzed in the RC PEIS and would not cause significant adverse impacts. Conversely, if the site-specific restoration activity is not within the scope of alternatives or environmental consequences considered in the RC PEIS, it will require additional NEPA analysis through preparation of a new NEPA document.

For this Draft RP/NEPA Evaluation, the Trustees have made the preliminary determination that the RC PEIS fully covers the scope of the proposed actions and all environmental impacts. There are no site-specific considerations, sensitivities, unique habitat, or resources associated with the proposed alternatives and a separate NEPA analysis and decision document is not needed. This determination has been documented in Sections 4.3 - 4.10 below, and in a draft NEPA “Inclusion Analysis” (Appendix A).

4.3 Proposed Action and Alternatives

The proposed action (Preferred Alternative) and alternatives to the proposed action (Non-preferred and No Action alternatives) being evaluated under NEPA are the restoration alternatives (and restoration projects therein) being considered as part of the Draft RP/NEPA Evaluation:

<i>Alternative 1 (Preferred)</i>	<ul style="list-style-type: none"> • Clear Creek Floodgate Replacement Project and • Clear Creek Road Decommissioning Project
<i>Alternative 2</i>	<ul style="list-style-type: none"> • Clear Creek Floodgate Replacement Project
<i>Alternative 3</i>	No Action/Natural Recovery – no restoration projects implemented

Alternative 1 is preferred by the Trustees and includes the Clear Creek Floodgate Replacement Project *and* the Clear Creek Road Decommissioning Project, as described in Section 3.0 of this Draft RP/NEPA Evaluation. This alternative is evaluated in this Draft RP/NEPA Evaluation to determine whether the scope of the alternative and all potential impacts are sufficiently addressed in the RC PEIS. This evaluation is described below in Sections 4.5 and 4.6 and is further documented in the draft Inclusion Analysis, which is appended to this Draft RP/NEPA Evaluation (Appendix A).

Alternative 2 is not preferred by the Trustees and includes only the Clear Creek Floodgate Replacement Project, as described in Section 3.0 of this Draft RP/NEPA Evaluation. Because this alternative includes one of the projects included as part of Alternative 1, the NEPA evaluation described for Alternative 1 applies to this alternative as well.

Alternative 3 represents the “no action” alternative which is not preferred. Under the No Action Alternative, the Trustees would undertake no restoration projects and any further restoration of natural resources and services injured by hazardous waste and oil releases would instead occur through natural recovery alone. No action is a non-preferred alternative because it fails to compensate the public for losses associated with the incident. However, NEPA mandates that federal agencies evaluate the environmental impacts of no action.

4.4 Affected Environment

This section provides both general and project-specific descriptions of the affected physical, biological, and social environments, and related resources, as they relate to the geographic area

that may be affected by the restoration alternatives considered in this Draft RP/NEPA Evaluation.

4.4.1 General

While stream and riverine systems are dynamic and highly variable environments, they do share certain qualities that are somewhat universal. This Draft RP/NEPA Evaluation incorporates by reference and briefly summarizes the affected environment description of stream and river channels in the RC PEIS (Section 3.1.3).

Tidal and nontidal stream and river systems are located in every region of the country where NOAA and its co-trustees conduct restoration. Many rivers and streams along the coast are tidal, with the effects of ocean tides extending upstream. The channel of a stream or river is the portion of the cross section that is usually submerged and totally aquatic (U.S. EPA Office of Water, 2004). Channel substrates may be composed of various materials, including cobbles, boulders, sand, clay, and silt. Portions of a river channel often contain biological elements such as oyster reefs or submerged aquatic vegetation beds that help shape or define the channel.

Stream and river channels are critical to the viability of living coastal and marine resources. In addition to providing freshwater, rivers and streams transport nutrients and provide habitat for thousands of aquatic and terrestrial species, including birds, shellfish, finfish, amphibians, reptiles, mammals, plants, and invertebrates. Vegetation that grows along the banks of rivers and streams stabilizes the banks, shades the water, and provides cover and food for animals and nutrients for the ecosystem (e.g., from fallen leaves).

The integrity of stream and river channels is important to the viability of not only the streams and rivers themselves, but also to the estuaries, oceans, marshes, and wetlands connected to them. Processes such as accelerated channel erosion, pollution, diking, damming, channel alteration, scouring, and dumping can drastically affect the rivers and streams and their receiving waters by causing accelerated sedimentation and alteration of temperature and water quality, among other factors.

The Trustees have made the determination that the RC PEIS contains an applicable description of the affected environment generally associated with the restoration activities described in this Draft RP/NEPA Evaluation. More detailed attributes of the affected environment in Commencement Bay and Clear Creek are described below.

4.4.2 Commencement Bay

The affected environment of the Primary and Expanded Study Areas (as defined below) of the Commencement Bay NRDA is fully described in Section 2.0 of the 1996 PEIS, and that discussion is incorporated here by reference and briefly summarized. This discussion of the environmental setting is for purposes of compliance with NEPA. This section does not describe the baseline conditions pursuant to CERCLA.

The Primary and Expanded Study Areas cover approximately 1,000 square miles and extend over portions of Pierce and King counties. The combined study area includes Commencement Bay, the drainage basins of the Puyallup -White Rivers, and the coastal areas adjacent to the Bay.

The Primary Study Area is within, or adjacent to, the environs of Commencement Bay, an estuarine bay of approximately 5,700 acres (8.9 square miles) at the southern end of Puget Sound. The Primary Study Area includes lands and waters adjacent to the Tacoma shoreline and the Puyallup River, extending inland to State Route 161. This includes Wapato, Hylebos, Puget, Clear/Swan and Clarks Creeks. The marine boundary is the shoreline, intertidal areas, and bottom sediments of the nearshore area of Commencement Bay, subtidal areas, and the various waterways. The Port of Tacoma and its associated industrial areas occupy the Puyallup River delta at the east end of the Bay. Most of the upland inland area is densely urbanized with extensive industrial, commercial, and mixed-use development. A portion of Commencement Bay is designated as a Superfund site, the Commencement Bay Nearshore/Tideflats Site, and is on the National Priorities List. The primary areas of contamination for the Commencement Bay Nearshore/Tideflats Superfund Site are the Expanded Study Area for the RP/PEIS and include approximately 600,000 acres (1,000 square miles) of the Puyallup River basin. It is comprised of Commencement Bay and its basin, including the main tributaries (the Puyallup, Carbon, and White Rivers) and the coastal areas adjacent to the Bay (southern Vashon and Maury Islands and Dumas Bay). This area has important ecological connections with injured natural resources (particularly migratory species) that use Commencement Bay.

4.4.3 Clear Creek

Physical Environment

The Clear/Clarks Creek Basin drains approximately 32.9 square miles (21,038 acres) of northcentral Pierce County, of which 27.4 square miles (83 percent) exist within unincorporated Pierce County. The remaining 5.5 square miles (17 percent) lie in the cities of Tacoma and Puyallup.

Swan Creek, Squally Creek, and Canyon Creek are three subbasins which discharge into Clear Creek in the Puyallup River valley before Clear Creek enters the Puyallup River at the project site (Figure 1 – Pierce County Clear/Clarks Creek Basin Plan). All of the basin creeks are very flat in the upland areas, and then drain through narrow and relatively steep channels down the hillside into the flat floodplain area of the Puyallup River and the project site.

The basin contains many fabricated stormwater conveyance channels that carry water from roads and developed areas to natural streams, and Clear Creek drains some of the flat agricultural areas in the floodplain south of the Puyallup River and north of Pioneer Way. Channel erosion and associated reduction of aquatic habitat is common in the Clear/Clarks Creek Basin. This is due to large increases in both the frequency and magnitude of high-volume flows, resulting from development within the Basin. Much of this floodplain area falls within designated flood hazard areas and has experienced repetitive losses of property due to floods.

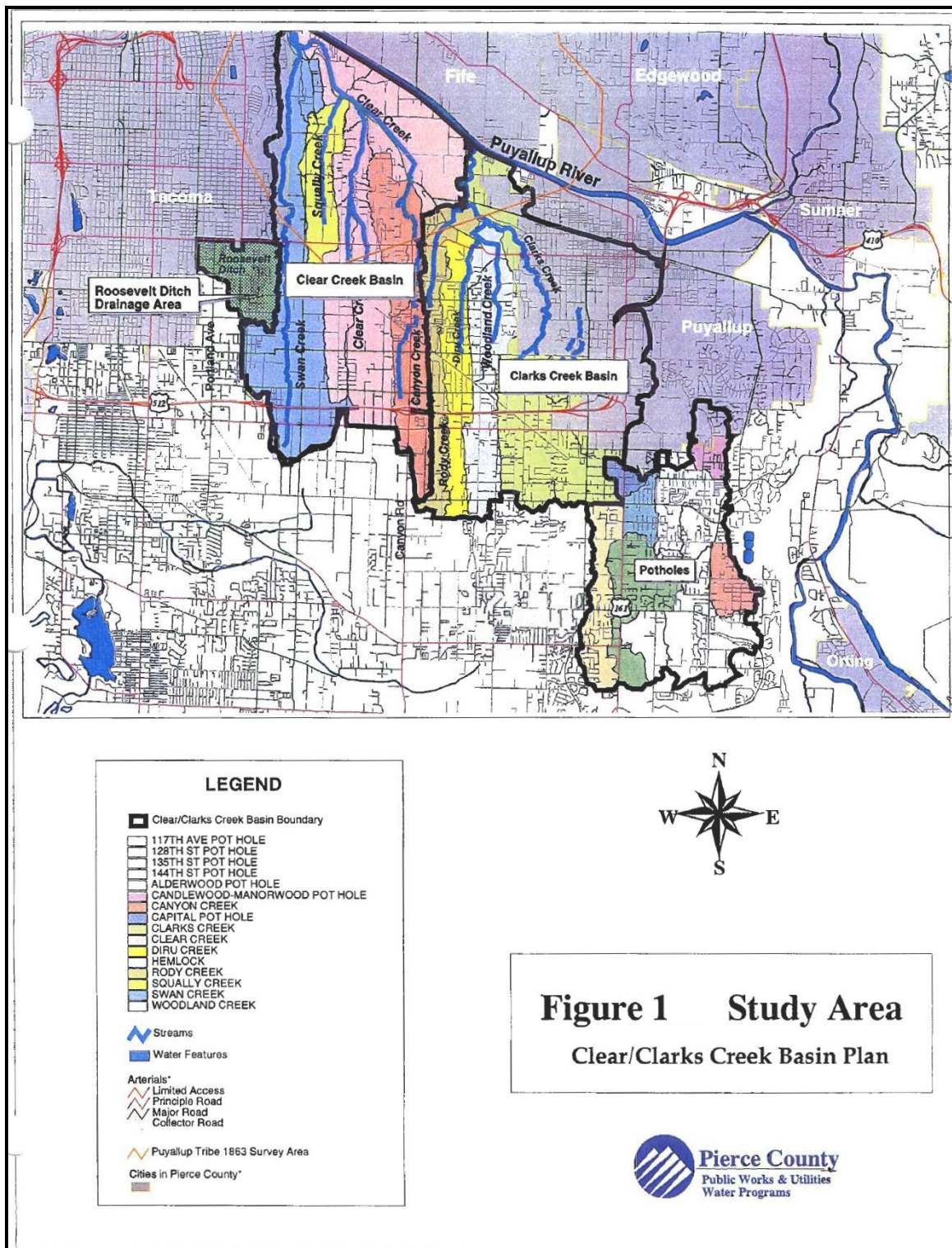


Figure 1. Clear/Clarks Creek Basin (Source: Pierce County Public Works Clear/Clarks Basin Plan, 2006)

Biological Environment

The floodplain reaches of all the streams and has been adversely affected by practices that have removed the native riparian cover. This has allowed invasive species such as Himalayan blackberry (*Rubus armeniacus*), elodea (*Egeria densa*), and reed canary grass (*Phalaris arundinacea*) to encroach on the streams. Nearly all of the creeks in this area have been channelized (straightened and rerouted from their original courses). Stream channelization limits the complexity of the riparian community and eliminates fish refuge areas by removing meander bends and disconnecting the stream from the floodplain.

Clear Creek supports or has the potential to support five species of salmonids: chinook salmon (*Oncorhynchus tshawytscha*), coho salmon (*O. kisutch*), chum salmon (*O. keta*), steelhead trout (*O. mykiss*), and cutthroat trout (*O. clarki*), as well as river lamprey (*Lampetra Ayresi*). There is also potential for bull trout (*Salvelinus confluentus*) rearing after spawning occurs in the upper reaches of the Puyallup River.

Problems identified in the Basin include degraded aquatic habitat for salmon and other species, loss of floodplain, flooding of property and roads, impaired water quality, stream channel incising, erosion and sedimentation.

Environmental Justice

Executive Order 12898, “Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations,” directs federal agencies to identify and address, as appropriate, disproportionately high and adverse human health or environmental impacts of federal projects on minority and low-income populations, and Tribal Nations. The U.S. Environmental Protection Agency (USEPA) defines environmental justice as “the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies.” Environmental justice efforts focus on improving the environment in communities, specifically minority and low-income communities, and addressing disproportionate adverse environmental impacts that may exist in those communities. Impacts on minority and low-income populations are considered disproportionately high and adverse under EO 12898 if they would “significantly ... and adversely” affect a low-income or minority population and would “appreciably exceed or [be] likely to appreciably exceed” impacts on the general population or another appropriate comparison group (CEQ 1997).

Consistent with EO 12898, this section identifies low-income and minority populations within the Clear Creek project area based on the most recent socioeconomic and demographic statistics currently available from the U.S. Census Bureau’s American Community Survey (ACS) 5-year estimates from 2015 to 2019 (<https://www.census.gov/acs/www/data/data-tables-and-tools/data-profiles/>).

The USEPA’s EJSCREEN: Environmental Justice Screening and Mapping Tool (<https://ejscreen.epa.gov/mapper/>) was used to identify low-income and minority (people of color) populations at the Census Block scale—in this case Block Group 530539400072

(population: 1,096), which encompasses the proposed project area¹. According to EJSCREEN, people of color comprise approximately 62% of this block group, which is greater than the United States (approximately 40%). 32% of the block group's population consists of low-income households, which is comparable to the United States as a whole (31%).

4.5 Evaluation of Preferred Alternative and Non-preferred Alternative Relative to the RC PEIS

As discussed in Section 3.3 above, the Preferred Alternative is comprised of two projects (Clear Creek Floodgate Replacement and Road Decommissioning) located on Clear Creek, within the Puyallup River Wetlands/Corridors Habitat Focus Area in the Primary Study Area of the Commencement Bay NRDA case. The Non-preferred Alternative consists of only one of the Clear Creek projects—floodgate replacement.).

4.5.1 Clear Creek Floodgate Replacement

This project proposes to replace an existing wooden flap gate on one of the two culverts that drain Clear Creek to the Puyallup River. The new gate would be designed to work in conjunction with the other gate and be optimized to better allow fish passage and reduce impacts from flooding along Clear Creek. Restoration activities that involve the repair or replacement of culverts and similar infrastructure to improve fish access and habitat function are fully described in Section 2.2.2.3.1 of the RC PEIS (Dam and Culvert Removal, Modification, or Replacement). Additionally, the removal and/or modification of levees, dikes, culverts, and similar infrastructure—including floodgates—for the purposes of enhancing or restoring hydrologic connections in tidal or riverine systems is described in Section 2.2.2.11.1 of the RC PEIS (Levee and Culvert Removal, Modification, and Set-Back).

4.5.2 Clear Creek Road Decommissioning Project

This project proposes to improve access to salmon habitat and increase flood storage capacity by removing sections of an existing access road separating Clear Creek from an adjacent wetland owned by the Port of Tacoma. The road removal would result in approximately 5,000 cubic yards of floodplain excavation and greatly improve access to critical salmon rearing habitat. The project is located near the mouth of Clear Creek. Restoration activities that involve the removal and/or modification of levees, dikes, culverts, and similar infrastructure for the purposes of enhancing or restoring hydrologic connections in tidal or riverine systems are described in Section 2.2.2.11.1 of the RC PEIS (Levee and Culvert Removal, Modification, and Set-Back). As described in the RC PEIS, NOAA and its co-trustees implement levee and berm modification, set-back, and removal activities to restore the natural flow and hydrology to affected areas and reconnect additional fish habitat that has been blocked, such as floodplains. Some elements of

¹A block group is an area defined by the Census Bureau that usually has in the range of 600-3,000 people living in it. People of color=the percent of individuals in a block group who list their racial status as a race other than white alone and/or list their ethnicity as Hispanic or Latino. That is, all people other than non-Hispanic white-alone individuals.

Low-income=the percent of a block group's population in households where the household income is less than or equal to twice the federal "poverty level."

the proposed road decommissioning project (e.g., excavation of soils; roadbed removal), are also described in Section 2.2.2.7 of the RC PEIS (Road Upgrading and Decommissioning; Trail Restoration).

4.5.3 Conclusion

The Trustees have determined that the project types that comprise the Preferred Alternative and Non-preferred Alternative described in this Draft RP/NEPA Evaluation fall within the scope of the restoration alternatives considered in the RC PEIS. Further, the restoration activities associated with the Preferred Alternative and Non-preferred Alternative described in this Draft RP/NEPA Evaluation are fully described in the draft Inclusion Analysis under Section III “Project Description/Scope of Activities” (Appendix A).

4.6 Impacts Analyzed for Preferred Alternative

The RC PEIS impacts analysis includes a description of the impacts associated with the types of restoration activities in this Draft RP/NEPA Evaluation. That information can be found in Section 4.0 of the RC PEIS (Environmental Consequences; also see Table 11). More specifically, the environmental consequences for the activity types associated with the Clear Creek Floodgate Replacement and Road Decommissioning projects are fully described in Section 4.5.2.3.1 and Table 18 (Dam and Culvert Removal, Modification or Replacement), Section 4.5.2.7 and Table 28 (Road Upgrading and Decommissioning; Trail Restoration), and Section 4.5.2.11.1 and Table 33 (Levee and Culvert Removal, Modification, and Set-back).

Direct, indirect, and cumulative impacts to relevant resources (geology and soils, water resources, living coastal and marine resources and essential fish habitat (EFH), threatened and endangered species, cultural and historic resources, land uses, and demographics) with the Preferred Alternative are fully summarized in the draft Inclusion Analysis under Section IV “Project Impact Analysis; core questions 4 and 5” (Appendix A).

The Trustees have also determined that the Preferred Alternative would not have adverse impacts beyond the scope of those analyzed in the RC PEIS or meet any other criteria for exclusion from analysis under the RC PEIS (refer to Table 10 of the RC PEIS).

Ultimately, the RC PEIS concludes that the anticipated impacts would not be significant, and the Trustees propose to adopt that conclusion and the analysis in this case. A more detailed description of the Trustees’ justification for doing so can be found in the draft Inclusion Analysis (Appendix A).

4.7 Impacts Analyzed for Non-preferred Alternative

The RC PEIS impacts analysis includes a description of the impacts associated with the types of restoration activities in this Draft RP/NEPA Evaluation. That information can be found in Section 4.0 of the RC PEIS (Environmental Consequences; also see Table 11). More specifically, the environmental consequences for the activity types associated with the Clear Creek Floodgate Replacement Project are fully described in Section 4.5.2.3.1 and Table 18 (Dam and Culvert

Removal, Modification or Replacement) and Section 4.5.2.11.1 and Table 33 (Levee and Culvert Removal, Modification, and Set-back).

Direct, indirect, and cumulative impacts to relevant resources (geology and soils, water resources, living coastal and marine resources and essential fish habitat (EFH), threatened and endangered species, cultural and historic resources, land uses, and demographics) with the Non-preferred Alternative are fully summarized in the draft Inclusion Analysis under Section IV “Project Impact Analysis; core questions 4 and 5” (Appendix A).

The Trustees have also determined that the Non-preferred Alternative would not have adverse impacts beyond the scope of those analyzed in the RC PEIS or meet any other criteria for exclusion from analysis under the RC PEIS (refer to Table 10 of the RC PEIS).

Ultimately, the RC PEIS concludes that the anticipated impacts would not be significant, and the Trustees propose to adopt that conclusion and the analysis in this case. A more detailed description of the Trustees’ justification for doing so can be found in the draft Inclusion Analysis (Appendix A).

4.8 Evaluation of the No Action Alternative

The Trustees evaluated the impacts of the No Action (natural recovery) Alternative on geology and soils, water, air, living coastal and marine resources and Essential Fish Habitat, threatened and endangered species, cultural and historic resources, land use and recreation, and socioeconomics. As noted in Section 3.4 above, the No Action Alternative is a non-preferred alternative because it fails to compensate the public for losses associated with releases of hazardous substances and discharges of oil in Commencement Bay. However, NEPA mandates that federal agencies evaluate the environmental impacts of no action.

By definition, the No Action Alternative lacks physical interaction with the environment. Accordingly, the No Action Alternative would cause no direct impacts to any of the elements of the environment listed above. However, if the Trustees undertook no action, the environment would not benefit from the ecological uplift created by active restoration. In addition, existing habitat conditions may decline under climate change and population growth, or as habitat conditions continue to degrade under conditions of degraded natural processes (reduced fish passage, reduced flood storage capacity, reduced access to salmon habitat, etc.).

Conversely, the type of active restoration with the proposed action would restore the resources and services that were injured by releases of hazardous substances and discharges of oil in Commencement Bay.

Based on this evaluation, the Trustees concluded that the No Action Alternative would have either no effect or minor to moderate short or long-term indirect adverse effects on the environment, including living coastal resources and threatened and endangered species.

4.9 Cumulative Effects

Under NEPA, federal agencies are required to consider the effects of their proposed actions within the affected environment, taking into consideration other activities that have occurred, are occurring, and are likely to occur in the future (i.e., past, present, and reasonably foreseeable future actions) (40 C.F.R. § 1508.7). The RC PEIS generally addresses the cumulative impacts expected with the types of habitat restoration typically undertaken by NOAA and its co-trustees, and that discussion is incorporated here by reference. Overall, the adverse impacts from restoration project construction are likely to be short-term and only minor to moderate when they do occur. As most project sites are isolated from each other, cumulative short-term construction impacts (from both Trustee and other restoration projects) are unlikely. On the other hand, because projects are restoring natural habitat structure and function, any successful restoration project should lead to longer-term beneficial impacts on the community, living coastal and marine resources and endangered species, and ecosystems of the coastal United States (e.g., Commencement Bay). Because project implementation periods (and the associated adverse effects from construction activities) are short-term, and the beneficial impacts from a restoration project are long-term, generally, the cumulative impact of the proposed action program-wide is estimated to have a net beneficial impact to the identified resources, because the long-term benefits essentially reflect increased sustainability and quality of coastal habitat, restored ecosystem services, and improved fishery production.

The Trustees expect that there will be long-term, positive cumulative effects on the biological and physical health of the Puyallup River/Clear Creek watershed under both Alternative 1 (preferred) and Alternative 2. Beneficial cumulative impacts to resources would likely be greater with the implementation of both Clear Creek projects (Alternative 1) rather than just the floodgate replacement project (Alternative 2), due to the increased scale and scope of the restoration. However, relative to the magnitude of adverse ecological impacts that currently exist in the watershed, the positive cumulative benefits of these proposed restoration actions are not expected to be significant as defined under NEPA. Cumulative impacts to relevant resources (geology and soils, water resources, living coastal and marine resources and EFH, threatened and endangered species, cultural and historic resources, land uses, and demographics) with the Preferred and Non-preferred Alternative are also summarized in the draft Inclusion Analysis under “Project Impact Analysis – IV.5” (Appendix A).

Cumulatively, it is anticipated that there may be long-term adverse effects to the physical and biological resources of the Puyallup River/Clear Creek watershed were Alternative 3 (no action) selected because no active restoration would occur. However, relative to the magnitude of adverse ecological impacts that currently exist in the watershed, the adverse cumulative effect of the No Action Alternative is not expected to be significant as defined under NEPA.

4.10 Climate Change

The habitat restoration activities analyzed in the RC PEIS are particularly relevant to the discussion of carbon emissions and climate change science and its practical application in environmental restoration and conservation. The release of carbon and other greenhouse gasses into the atmosphere is due to a number of causes, most notably the combustion of fossil fuels and

the destruction of ecological “carbon sinks”—ecosystems that absorb or contain more carbon than they emit. In the context of habitat restoration, a carbon sink could be coastal and freshwater wetlands, salt marshes, mangroves and submerged aquatic vegetation (SAV) beds, the associated biomass for these habitats, or even the ocean itself—all environments that NRDA trustees work to restore, enhance, rehabilitate, reestablish, or protect. Sequestered carbon is an important concept in assessing the impacts of habitat restoration because many of the habitats described in the RC PEIS as part of the affected environment do serve as carbon sinks and therefore their restoration or protection from damage, degradation, or outright conversion/development either prevents greenhouse gas emissions, or conversely increases the capacity of the habitat to further sequester carbon. One goal of these activities is to improve the functionality of ecosystems to where their carbon sequestration potential is enhanced or protected.

In addition to carbon sequestration, the restoration activities described in the RC PEIS also enhance the physical resiliency of coastal ecosystems to better withstand the effects of climate change and sea level rise.

4.11 NEPA Conclusion

Through the analysis in this Draft RP/NEPA Evaluation, the Trustees have made a preliminary determination that the corresponding project type descriptions and related impacts with the Preferred (and Non-preferred) Alternative fall entirely within the scope of the project descriptions and analyses contained in the RC PEIS sections referenced herein. Moreover, there are no site-specific considerations, sensitivities, unique habitat, or resources that warrant additional NEPA analyses beyond what is provided in the RC PEIS. The public will be invited to provide feedback on the Trustees’ proposed action and alternatives and the analysis conducted in the Draft RP/NEPA Evaluation, which includes the federal Trustees’ draft Inclusion Analysis (Appendix A). If, after the public comment period and review of any additional information it is determined that no substantive changes are needed to the Draft RP/NEPA Evaluation and draft Inclusion Analysis, the Trustees will not prepare any further NEPA analysis or seeking a Finding of No Significant Impact (FONSI) or Record of Decision (ROD) for the proposed restoration, and the Final RP/NEPA Evaluation will be prepared. Alternatively, if after the public review it is determined that the proposed activities do not fall within the scope of alternatives or environmental consequences considered in the RC PEIS, they will require additional analysis under NEPA through the preparation of a subsequent NEPA document (e.g., EA).

5.0 COMPLIANCE OTHER LAWS AND REGULATIONS

The proposed action can be implemented in compliance with all applicable federal, state, and local permits and approvals, and associated state water quality certification. All permits and environmental compliance would be obtained and satisfied prior to project implementation, as discussed below.

As appropriate, the Trustees will ensure compliance with applicable statutes, regulations, and policies prior to implementation of any restoration alternatives. The following is a list of statutes that may apply to the proposed projects. Compliance with these authorities, and other authorities not listed, is considered part of the restoration planning process. All projects that receive funding

will be responsible for obtaining necessary permits and complying with relevant statutes, regulations, and policies prior to implementation.

5.1 Federal Laws

National Environmental Policy Act

The National Environmental Policy Act (NEPA; 42 U.S.C. § 4321 *et seq.*), requires that federal agencies consider the environmental impacts of proposed actions and reasonable alternatives to those actions. The Authorized Officials will determine, based on the facts and recommendations in this document and input from the public, whether the RC PEIS provides adequate NEPA coverage or if an EA or EIS should be prepared.

Federal Water Pollution Control Act (Clean Water Act)

The Clean Water Act (CWA; 33 U.S.C. § 1251 *et seq.*), is the principal law governing pollution control and water quality of the nation's waterways. Section 404 of the CWA regulates the discharge of dredged or fill material into waters of the United States. Section 401 of the CWA requires any applicant for a federal license or permit that conducts any activity that may result in a discharge of a pollutant into waters of the United States to obtain a certification from the State in which the discharge originates or would originate. The Trustees will require all necessary permits to be in place prior to implementation of the proposed restoration activities.

Fish and Wildlife Coordination Act

The Fish and Wildlife Coordination Act (16 U.S.C. § 661 *et seq.*) requires that federal agencies consult with USFWS, NOAA, and state wildlife agencies regarding 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 aquatic environments. This coordination is generally incorporated into compliance processes used to address the requirements of other applicable statutes, such as Section 404 of the CWA.

Endangered Species Act

The Endangered Species Act (ESA; 16 U.S.C. § 1531 *et seq.*), is intended to protect species that are threatened with extinction. It provides for the conservation of habitats and ecosystems that these species depend on and produces a program for identification and conservation of these species. Federal agencies are required to ensure that any actions are not likely to jeopardize the continued existence of a threatened and endangered species. The Trustees will engage in required ESA consultations prior to implementing any restoration actions.

For the Clear Creek Projects, the U.S. Army Corps of Engineers (USACE) is serving as the lead federal agency in the ESA consultation. They have determined that the projects are not likely to adversely affect threatened or endangered species. The projects will adhere to all conservation and mitigation measures in Pierce County's storm water manual, the Regional Road Maintenance Program guidelines, and the National Marine Fisheries Service (NMFS) Fish Passage and Restoration Actions (FPRP) requirements to ensure the effects to listed species are minimal.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act of 1918 (16 U.S.C. §§ 703-712), protects all migratory birds and their eggs, nests, and feathers and prohibits the taking, killing, or possession of migratory birds. The proposed restoration actions would not result in the taking, killing, or possession of any migratory birds.

National Historic Preservation Act

The National Historic Preservation Act (NHPA; 16 U.S.C. § 470 *et seq.*), is intended to preserve historic and archaeological sites. Compliance with the NHPA would be fulfilled through coordination with the State Historic Preservation Office (SHPO). The Trustees have consulted with the SHPO and Tribal Historic Preservation Officers (if applicable) to identify historic properties that may be affected by a proposed project and to assess potential adverse effects of restoration actions.

The U.S. Army Corps of Engineers (USACE) is also serving as the lead federal agency in consultations on the NHPA. The Washington State Historic Preservation Officer (SHPO) has concurred with USACE that no historic properties will be affected by the current proposed projects and no potential to cause effects for the flood gate replacement, but if archeological resources are recovered during construction, the work will halt immediately to contact Native American Tribes and the Department of Archeology and Historic Preservation (DAHP) for further consultation. The tribes notified of the projects and their anticipated effects include the Muckleshoot Indian Tribe, the Nisqually Indian Tribe, the Puyallup Tribe of Indians, the Snoqualmie Indian Tribe, the Squaxin Island Tribe, and the Squamish Tribe.

Coastal Zone Management Act

The Coastal Zone Management Act (CZMA; 16 U.S.C. §§ 1451-1464), encourages states to preserve, protect, develop, and where possible, restore and enhance the nation's coastal resources. Restoration actions undertaken or authorized by federal agencies within a state's coastal zone are required to comply, to the maximum extent practicable, with the enforceable policies of a state's federally approved Coastal Zone Management Program. The proposed projects will comply with the CZMA and be consistent with Washington state policy.

Magnuson-Stevens Fishery and Conservation Management Act

The Magnuson-Stevens Fishery and Conservation Management Act (MSFCMA; 16 U.S.C. § 1801 *et seq.*), requires federal agencies to consult with NMFS when their actions or activities may adversely affect habitat identified as EFH. The Trustees will require MSFCMA consultation prior to implementing any restoration actions.

Rivers and Harbors Act

The Rivers and Harbors Appropriation Act (33 U.S.C. § 403 *et seq.*), regulates development and use of the nation's navigable waterways and regulates obstruction or alteration of navigable waters. The Trustees will require all necessary permits be in place prior to implementation of restoration activities.

Floodplain Management, Executive Order 11998

Executive Order 11998 (42 Federal Register 26951) requires federal agencies to avoid to the extent possible the long- and short-term adverse impacts associated with the occupancy and modification of floodplains and to avoid direct and indirect support of floodplain development wherever there is a practicable alternative. The Trustees will ensure compliance with this executive order as part of the state permitting process.

Protection of Wetlands, Executive Order 11990

Executive Order 11990 (42 Federal Register 26961) requires federal agencies to take action to minimize the destruction, loss, or degradation of wetlands and to preserve and enhance the natural and beneficial values of wetlands in carrying out the agency's responsibilities for acquiring, managing, and disposing of federal lands and facilities; providing federally undertaken, financed, or assisted construction and improvements; and conducting federal activities and programs affecting land use, including but not limited to water and related land resources planning, regulating, and licensing activities. The Trustees will ensure compliance with this Executive Order as part of the state permitting process.

Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, Executive Order 12898

Executive Order 12898 (59 Federal Register 7629) directs federal agencies to identify and address the disproportionately high and adverse human health or environmental effects of their actions on minority and low-income populations, to the greatest extent practicable and permitted by law. The Executive Order directs each agency to develop a strategy for implementing Environmental Justice, is intended to promote nondiscrimination in federal programs that affect human health and the environment, and provides minority and low-income communities access to public information and public participation.

Restoration activities supported by the Trustees help to ensure the enhancement of environmental quality for all populations in the project area. The Trustees have determined that the proposed restoration activities would provide long-term or permanent beneficial impacts to the Environmental Justice communities described in Section 4.4.3 by improving the quality of the natural environment and ecosystem services to local communities. None of the alternatives are expected to have a disproportionately high and adverse impact on minority or low-income populations in the area, including economically, socially, or in terms of conditions affecting their health.

5.2 State and Local Laws

The Trustees will ensure compliance with all applicable state and local laws and other applicable federal laws and regulations relevant to the State of Washington prior to project implementation.

6.0 REFERENCES

Commencement Bay Natural Resource Trustees. 1995. Commencement Bay Phase I Damage Assessment. Prepared by EVS Environmental Consultants for the Commencement Bay Natural Resource Trustees and the NOAA Damage Assessment and Restoration Center, Seattle, WA.

U.S. EPA Office of Water. 2004. Monitoring and assessing water quality. Section 2.1, Watersheds. Available: <http://www.epa.gov/volunteer/stream/vms21.html>.

APPENDIX A
NEPA Inclusion Analysis

NOAA Restoration Center NEPA Inclusion Analysis

Award Number

I. IDENTIFYING PROJECT INFORMATION

Project Name Commencement Bay NRDA—Clear Creek Restoration Plan and NEPA Evaluation	Project State WA
Project Proponent / Applicant Commencement Bay Natural Resource Trustees, including NOAA and DOI	Project Contact John Floberg

II. OTHER FEDERAL PARTNERS AND LEVEL OF NEPA ANALYSIS

Has another Federal agency completed NEPA? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	NOAA and DOI are co-lead federal agencies
Is NOAA the lead federal agency for this NEPA analysis? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	

III. PROJECT DESCRIPTION / SCOPE OF ACTIVITIES FOR ANALYSIS

Please check one of the following conditions:

☐ I am analyzing impacts of project planning and design activities, in order to gather all required project information

☒ I have all information needed to complete the final analysis of impacts for the entire project

Has a NEPA review been conducted for prior project activities? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Date of NEPA completion for prior phase Final PEIS ROD 10/3/1997
---	--

Describe the full scope of the project, including historic/ geographic/ ecological context, the type of restoration, and how it will be conducted.

The Commencement Bay Natural Resource Trustees prepared a 1997 Final Natural Resources Damage Assessment (NRDA) Restoration Plan (RP) which selected an alternative representing the best approach to implement the preferred alternative, the Integrated Approach, selected in the 1996 Programmatic Environmental Impact Statement (PEIS) to restore, replace, rehabilitate, and/or acquire the equivalent natural resources and/or services injured as a result of the release of hazardous substances or discharge of oil to the Commencement Bay environment. The "Integrated Approach," is a comprehensive plan to restore injured species in Commencement Bay and Basin. The Integrated Approach includes "Habitat Function" restoration and involves actions designed primarily to benefit certain habitat types that support a range of species (e.g., wetlands creation; removing impediments to river flow; breaching dikes to restore riparian and wetland habitat). The Final RP expanded on the 1996 Programmatic Environmental Impact Statement (PEIS) which only broadly analyzed the environmental impacts of the Integrated Approach alternative, since specific restoration activities and locations were not identified at the time.

The Trustees have now identified project-specific restoration actions in the Primary Study Area of Commencement Bay, which are described and evaluated in a Draft RP/NEPA Evaluation that "tiers" from the 1997 Final RP and 1996 PEIS. This Inclusion Analysis provides the NEPA review for the Trustees' preferred alternative: Clear Creek Floodgate Project and Clear Creek Road Decommissioning Project, collectively the Clear Creek Projects, described more fully in the Draft RP/NEPA Evaluation and summarized below.

Describe the proposed action (i.e. the portion of the project that NOAA is funding/approving).

The proposed action (Preferred Alternative) consists of the following restoration:

Clear Creek Floodgate Project - This project proposes to replace an existing wooden flap gate on one of the two culverts that drain Clear Creek to the Puyallup River in Pierce County, WA. The new gate would be designed to work in conjunction with the other gate and be optimized to better allow fish passage and reduce impacts from flooding along Clear Creek.

Clear Creek Road Decommissioning Project - This project proposes to improve access to salmon habitat and increase flood storage capacity by removing sections of an existing access road separating Clear Creek from an adjacent wetland owned by the Port of Tacoma. The road removal would result in approximately 5,000 cubic yards of floodplain excavation and greatly improve access to critical salmon rearing habitat. The project is located near the mouth of Clear Creek in Pierce County, WA.

The Trustees also considered implementing only one of the Clear Creek projects described for the proposed action—Floodgate Replacement Project. While less funding would be needed for this alternative the public would not be compensated at the same scale were the proposed action to be implemented. This alternative was considered non-preferred. The Trustees also considered a No Action alternative ("natural recovery") as described and evaluated in the Draft RP. With no action, no additional active restoration would occur. This alternative is rejected by the Trustees because by itself it would not provide sufficient restoration of, nor compensate the public for, injured natural resources and services.

Check the types of activities being conducted in this project:

<input type="checkbox"/> Implementation and Effectiveness Monitoring	<input type="checkbox"/> Environmental Education Classes, Programs, Centers, Partnerships and Materials; Training Programs	<input type="checkbox"/> Fish and Wildlife Monitoring
<input type="checkbox"/> Planning, Feasibility Studies, Design Engineering, and Permitting		

NEPA Inclusion Analysis

Riverine and Coastal Habitat Restoration		
<input type="checkbox"/> Beach and Dune Restoration	<input type="checkbox"/> Bank Restoration and Erosion Reduction	<input type="checkbox"/> Water Conservation and Stream Diversion
<input type="checkbox"/> Debris Removal	<input type="checkbox"/> Coral Reef Restoration	<input checked="" type="checkbox"/> Levee & Culvert Removal, Modification, Set-back
<input checked="" type="checkbox"/> Dam and Culvert Removal & Replacement	<input type="checkbox"/> Shellfish Reef Restoration	<input type="checkbox"/> Fringing Marsh and Shoreline Stabilization
<input type="checkbox"/> Technical and Nature-like Fishways	<input type="checkbox"/> Artificial Reef Restoration	<input type="checkbox"/> Sediment Removal
<input type="checkbox"/> Invasive Species Control	<input checked="" type="checkbox"/> Road Upgrading/Decommissioning; Trail Restoration	<input type="checkbox"/> Sediment/Materials Placement
<input type="checkbox"/> Prescribed Burns/Forest Management	<input type="checkbox"/> Signage and Access Management	<input type="checkbox"/> Wetland Planting
<input type="checkbox"/> Species Enhancement	<input type="checkbox"/> SAV Restoration	
<input type="checkbox"/> Channel Restoration	<input type="checkbox"/> Marine Algae Restoration	
Conservation Transactions		
<input type="checkbox"/> Land Acquisition	<input type="checkbox"/> Water Transactions	<input type="checkbox"/> Restoration/Conservation Banking
IV. PROJECT IMPACT ANALYSIS		
Core Questions		
1. Are the activities to be carried out under this project fully described in Section 2.2 of the NOAA RC PEIS?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
2. Are the specific impacts that are likely to result from this project fully described in Section 4.5.2 of the NOAA RC PEIS?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
3. Does the level of adverse impact for the project exceed that described in Table 11 of the NOAA RC PEIS for any resource, including significant adverse impact?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
<p>4. Describe the project impacts to resources (including beneficial impacts) and any mitigating measures being implemented.</p> <p>1. Proposed Action (Preferred Alternative) The Preferred Alternative is consistent with the Trustees' "Integrated Approach" selected in the 1997 Final RP, and includes two habitat restoration projects:</p> <p>Clear Creek Floodgate Replacement - This project proposes to replace an existing wooden flap gate on one of the two culverts that drain Clear Creek to the Puyallup River. The new gate would be designed to work in conjunction with the other gate and be optimized to better allow fish passage and reduce impacts from flooding along Clear Creek. Restoration activities that involve the repair or replacement of culverts and similar infrastructure to improve fish access and habitat function are fully described in Section 2.2.2.3.1 of the RC PEIS (Dam and Culvert Removal, Modification, or Replacement). Additionally, the removal and/or modification of levees, dikes, culverts, and similar infrastructure—including floodgates—for the purposes of enhancing and/or restoring hydrologic connections in tidal or riverine systems is described in Section 2.2.2.11.1 of the RC PEIS (Levee and Culvert Removal, Modification, and Set-Back). Therefore, the Trustees have determined that the activities associated with the Clear Creek Floodgate Project are fully described in the RC PEIS.</p> <p>Clear Creek Road Decommissioning Project - This project proposes to improve access to salmon habitat and increase flood storage capacity by removing sections of an existing access road separating Clear Creek from an adjacent wetland owned by the Port of Tacoma. The road removal would result in approximately 5,000 cubic yards of floodplain excavation and greatly improve access to critical salmon rearing habitat. The project is located near the mouth of Clear Creek. Restoration activities that involve the removal and/or modification of levees, dikes, culverts, and similar infrastructure for the purposes of enhancing or restoring hydrologic connections in tidal or riverine systems are described in Section 2.2.2.11.1 of the RC PEIS (Levee and Culvert Removal, Modification, and Set-Back). As described in the RC PEIS, NOAA implements levee and berm modification, set-back, and removal activities to restore the natural flow and hydrology to affected areas and reconnect additional fish habitat that has been blocked, such as floodplains. Some elements of the proposed road decommissioning project (e.g., excavation of soils; roadbed removal), are also described in Section 2.2.2.7 of the RC PEIS (Road Upgrading and Decommissioning; Trail Restoration). Therefore, the Trustees have determined that the activities associated with the Clear Creek Road Decommissioning Project are fully described in the RC PEIS.</p> <p>Project impacts applicable to both the Clear Creek Floodgate Replacement and Road Decommissioning projects can be found in Section 4.0 of the RC PEIS (Environmental Consequences), and more specifically, in Section 4.5.2.3.1 (Dam and Culvert Removal, Modification or Replacement) and Table 18, Section 4.5.2.7 (Road Upgrading and Decommissioning; Trail Restoration) and Table 28, and Section 4.5.2.11.1 (Levee and Culvert Removal, Modification, and Set-back) and Table 33. Potential impacts are summarized in Table 11 in the RC PEIS and are described below.</p>		

Core Questions (continued)

A. Fish Passage: Dam and Culvert Removal, Modification, or Replacement

In general, dam and culvert removal, modification, or replacement projects typically implemented produce short-term adverse ecological impacts, but the long-term ecological benefits—improved water quality, sediment transport, and native resident and migratory species recovery—demonstrate that removal of these barriers is an effective long-term and beneficial river restoration tool.

Barrier removals may include indirect and direct, short-term, minor, moderate adverse impacts on geology and soils, water resources, air quality, and living coastal and marine resources and essential fish habitat (EFH), both localized to the project site and beyond the project site. They may also have direct, long-term, minor adverse and moderate beneficial impacts to land use and recreation. Indirect and direct, short-term, minor, and moderate adverse impacts to threatened and endangered species may include effects from handling, noise, turbidity, contaminants, changes to hydraulics and local hydrology, additional habitat quality/quantity, and displacement. However, indirect and direct, long-term, moderate benefits to threatened and endangered species, as well as to other resources, would result as well.

Adverse impacts to geology and soils during project construction are direct and indirect, short term, and of minor to moderate effect, and may be localized to the project site or realized beyond the project site. These impacts stem from the use of heavy machinery and construction equipment and include soil compaction, temporary grading, minor bedrock removal, short-term downstream sediment deposition, and increased soil erosion and runoff in the immediate area of construction operations. The scale and duration of impacts may depend on the size of the dam or culvert to be removed, but more often will depend on the magnitude of the overall project footprint and include many factors such as the construction of haul roads, stockpile areas, cofferdams, or the size of area to be cleared for equipment storage. Post-construction scouring of the channel bed caused by a release of water and sediments may occur, although this is more common for dam removals.

During and after the construction phase, there are impacts to water resources that extend beyond the project site as a result of stream flow. The change in obstruction (e.g., fully or partially removed barrier) increases the connection between upstream and downstream areas and therefore produces direct and indirect, short- and long-term impacts, generally resulting from altered hydraulics and stream geomorphology. In general, smaller dams and culverts store less water and sediment and have fewer impacts during removal, and thus the removal of a run-of-river dam is unlikely to alter downstream hydrology. Short-term adverse impacts to water resources may include downstream turbidity and sedimentation. This impact may also be affected by a potential increase in site-specific (local) erosion, changes in channel geomorphology, and minor changes to stream hydraulics. Long-term, post-construction impacts from the removal of dams and culverts would result in direct and indirect, long-term beneficial impacts to water resources.

Potential impacts to air quality could include direct, short-term, minor adverse impacts to air quality during construction or other on-the-ground activities. These impacts include exhaust emissions (including greenhouse gases) from off-road construction equipment, on-road hauling, construction worker employee commuting vehicles, and fugitive dust emissions from paved roads and earthmoving activities. These impacts may be localized or extend beyond the project site.

Adverse impacts to living coastal and marine resources such as vegetation and wildlife are direct and indirect, short-term, and of minor to moderate effect. They occur most often during the construction phase and can extend beyond the project site. Impacts to vegetation around the site from the construction process include removal of the vegetation for equipment access or trampling. The scale of the impacts varies based on the overall footprint of the project site, similar to the impacts to geology and soils described earlier in this section. Wildlife species near the project site, including endangered or threatened species, may be temporarily displaced or harassed during construction activities due to reverberations, noise, air quality impacts, and artificial lighting. Habitat may be lost by the filling or cutting off of side channels from sediment deposits following dam removal, or when vegetation is uprooted by migrating stream channels. These types of habitat loss impacts are anticipated to be temporary until a large flood event or groundwater sources carve new channels in such areas. Human activities may also be temporarily affected. Post-construction beneficial impacts to living coastal and marine resources also occur. Without obstruction, migratory fish can reach historic spawning areas. Additional impacts may be triggered by the shifts in temperature and nutrient gradients which can lead to changes such as fish assemblages and behavior; re-establishment of natural flow regimes; and sediment, nutrient, and organic material being available to downstream habitats. Dam and culvert removal may increase the abundance and diversity of aquatic insects, fish, and other organisms, and may even decrease invasive and undesirable species. When the fish species in question is an endangered species, increased access to their spawning habitat can have long-term, beneficial impacts. Additionally, reintroducing migratory fish to habitats upstream of a barrier may result in a more native fish assemblage. Further, overall ecosystem productivity could increase as a result of the presence and spawning activity of migratory fish species.

Many dam and culvert removal, modification, or replacement projects result in a long-term change to cultural and historic resources. In some cases, cultural and historic sites are made accessible after a barrier removal where they were once submerged by reservoirs. Such activities may be considered to have direct, long-term or potentially permanent, beneficial impacts to such cultural/historic resources.

There are generally direct and indirect, long-term socioeconomic impacts related to changes in aesthetics at a removal site, increased access for recreation and indirectly, increased business opportunities for the local recreation sector, which are largely beneficial. Changes in property values, land-use, and recreational opportunities (e.g., shifts in recreation types) adjacent to a removal site may be beneficial or adverse depending on the perspective of the user group.

B. Wetlands Restoration: Levee and Culvert Removal, Modification, and Set-back

The removal and/or modification of levees, dikes, culverts, and similar infrastructure would cause direct and indirect, short-term, localized, minor adverse impacts on geology and soils, water, air, living coastal and marine resources and EFH, and threatened and endangered species during the construction phase of the project. These impacts also apply to the construction of new or replacement levees (set-back levees) as part of the overall project. The use of heavy machinery and construction equipment is the primary cause of the direct, adverse impacts associated with this activity, which may include soil compaction, emissions (including greenhouse gas emissions) from heavy equipment, removal or crushing of understory vegetation, increased soil erosion in the immediate area of construction operations, and unintentional introduction of non-native, potentially invasive, species. Mitigation for potential impacts would focus on implementation of best management practices (BMP).

These restoration activities would provide direct and indirect benefits to geology and soils, water, living coastal and marine resources and EFH, and threatened and endangered species. These projects result in benefits to riparian, stream and river channel habitats, and shoreline habitats such as wetlands. Restoration of natural hydrology would aid in the development of vegetated communities that provide vital rearing, feeding, and refuge habitat for fish and benthic communities and wildlife species. This technique is beneficial for anadromous fish that need connected coastal waterways and rivers with unaltered hydrology for passage during migration events, as well as for estuarine fish species that benefit from increased habitat area. Long-term beneficial effects to the quality of surface water resources at the project site and beyond are expected due to restoration of tidal flow and water movement. Restoration of these areas to natural states would enhance water quality and salinity, reduce turbidity and soil erosion, increase carbon sequestration and storage capacity (providing climate change mitigation), and enhance habitat quality, although some increases in turbidity in the water column could result due to increased water movement. In areas where berms and levees bounded ponded areas restored to wetland, indirect, long-term minor beneficial effects would be expected by uptake and transformation of nutrients resulting from enhanced vegetative growth in the restoration area.

Cultural and historic resources and land use could experience indirect, long-term, minor adverse impacts resulting from levee modification or removal. Land use and recreation in the floodplain, including any potential culturally sensitive areas, would change as the water resources in the floodplain changed. Because land use would stabilize in the floodplain over time, the adverse impacts would be minor.

C. Road Decommissioning

Road upgrading and decommissioning project activities would cause direct and indirect, short-term, minor and moderate adverse impacts, typically in riparian and upland affected environments, resulting from temporary construction activities in the project area. Aside from construction impacts, however, most of the impacts resulting from these activities would be direct and indirect, beneficial impacts, as they are designed to control access to sensitive areas, limit the use of sensitive areas as routes for vehicular transportation, and reduce a road's propensity for erosion. In general, roads that are targeted by NOAA are those that pass through or near sensitive habitats such as wetlands or streams, or have been determined to injure living resources or habitat areas through erosion or human traffic. Beneficial impacts would also be both short- and long-term in duration, depending on whether the road or trail is maintained (short-term) or upgraded, restored, or decommissioned (long-term).

Activities involving the decommissioning or upgrading of roads that travel through or adjacent to, or are located within watersheds that feed into, sensitive habitat areas would have direct and indirect, short-term, minor and moderate adverse impacts on geology and soils, water resources, air quality, living coastal and marine resources and EFH, threatened and endangered species, and land use and recreation. Impacts to threatened and endangered species may include effects from handling, noise, turbidity, contaminant exposure, altered hydrology, additional habitat quality/quantity, displacement, and mortality. These impacts would result from temporary construction activities in the project area. Road decommissioning would cause direct, long-term, beneficial impacts on geology and soils, water, living coastal and marine resources and EFH, threatened and endangered species, and cultural and historic resources because removal of roads would protect living resources and habitat from disturbance, erosion, and species introductions caused by human and vehicle traffic. The decommissioning of roads would have direct, long-term, minor impacts on land use because such actions would limit access to the areas once served by the roads, which could be both an adverse or beneficial impact depending on what that use was (i.e., reduced recreational access or reduce human

NEPA Inclusion Analysis

disturbance). Lastly, as long as the roads decommissioned do not prevent people from accessing work, home, or other necessary destinations, projects involving the decommissioning of roads would have beneficial impacts on socioeconomics.

2. Non-preferred Alternative

The Non-preferred Alternative is consistent with the Trustees' "Integrated Approach" selected in the Final RP/PEIS, but only includes one of the Clear Creek projects described above for the proposed action—i.e., floodgate replacement. Project impacts applicable to the Floodgate Replacement project can be found in Section 4.0 of the RC PEIS (Environmental Consequences), and more specifically, in Section 4.5.2.3.1 and Table 18 (Dam and Culvert Removal, Modification or Replacement) and Section 4.5.2.11.1 and Table 33 (Levee and Culvert Removal, Modification, and Set-back). Potential impacts are summarized in Table 11 in the RC PEIS and are described above (see Clear Creek Floodgate Replacement Project under the Proposed Action).

3. No Action

The no action alternative, which is premised on "natural recovery" for CERCLA and OPA restoration planning, is further described and analyzed in the Draft RP/NEPA Evaluation. By definition, the no action alternative lacks physical interaction with the environment. Accordingly, the no action alternative would cause no direct impacts to any of the elements of the environment listed above. However, if the Trustees undertook no action, the environment would not benefit from the ecological uplift created by active restoration. In addition, existing habitat conditions may decline under climate change and population growth, or as habitat conditions continue to degrade under conditions of degraded natural processes (reduced fish passage, reduced flood storage capacity, reduced access to salmon habitat, etc.).

5. Describe any potential cumulative impacts that may result from past, present or reasonably foreseeable future actions (beneficial or adverse).

Cumulative project impacts would not be significant or occur at a regional scale, and are consistent with those described in the RC PEIS (Section 4.9, Cumulative Impacts). Because the proposed restoration is restoring natural habitat structure and function, the Trustees expect that there will be long-term beneficial cumulative effects on resources in the Project Area under the proposed action (Preferred Alternative). Beneficial cumulative impacts to resources would likely be greater with implementation of both Clear Creek Floodgate Replacement and Road Decommissioning projects (Preferred Alternative) rather than just one project (Non-preferred—Floodgate Replacement Project), due to the increased scale and scope of the restoration.

There may be long-term adverse impacts to the physical and biological resources of the project area were the no action alternative selected because the restoration would not occur. However, relative to the magnitude of adverse ecological impacts that currently exist in the affected area, the adverse cumulative impacts of the no action alternative are not expected to be significant.

6. Describe the public outreach and/or opportunities for public comment that have taken place to this point. Are any future opportunities for public input anticipated?

The Draft RP/NEPA Evaluation, including this draft Inclusion Analysis, will be made available to the public for review and comment. All comments on the Draft RP/NEPA Evaluation and Inclusion Analysis will be addressed prior to finalization and approval of the Final RP/NEPA Evaluation. If after the public comment period, and review of any additional information, it is determined that no substantive changes are needed to the RP/NEPA Evaluation, the Trustees will not prepare any further NEPA analysis or seek a Finding of No Significant Impact (FONS) or Record of Decision (ROD) for the proposed action, and the RP/NEPA Evaluation will be finalized.

7. Have any public comments raised issues of scientific/environmental controversy? Please describe.

To date, the Trustees have not received public comments raising issues of scientific/environmental controversy. All public comments on the Draft RP/NEPA Evaluation and Inclusion Analysis will be addressed prior to finalization and approval of the Final RP/NEPA Evaluation.

8. Describe the most common positive and negative public comments on issues other than scientific controversy described above in Question 7.

The proposed restoration activities are similar to those that have been occurring throughout the Pacific coast for many years, and the public has generally been supportive of spending restoration funding (including CERCLA and OPA NRDA settlement funds) on on-the-ground restoration projects, especially those associated with restoring natural resources and services lost. Any common positive and negative public comments received on the Draft RP/NEPA Evaluation and this draft Inclusion Analysis will be addressed and summarized in the Final RP/NEPA Evaluation which will be made available to the public.

Dam and Culvert Removal, Modification, or Replacement

(These considerations are most likely applicable to dams, not culvert removal or modification, but should be addressed for all projects of this type)

Describe the amount and type of sediment in the reservoir behind the dam, its impact on downstream areas, and how the impact has been evaluated.

n/a

Will the restored river channel be in the same location as the original channel? Please describe any changes.

The river channel will remain in the same location, although there will be improved hydrologic connectivity to the Puyallup River and to the wetlands adjacent to lower Clear Creek which will provide salmon with access to critical rearing habitat.

Are there contaminated sediments behind the dam? Describe the disposal method (i.e., will these be released downstream or taken off-site?).

n/a

NOAA Restoration Center NEPA Inclusion Analysis

Supplemental Questions (continued)

Describe the anticipated changes to the flood zone.

The proposed improvements to the floodgate at the mouth of Clear Creek, and the newly restored hydrologic reconnection to wetlands adjacent to Clear Creek, are expected to increase flood storage capacity in the lower Clear Creek watershed and reduce potential upstream impacts from flooding.

Levee and Culvert Removal, Modification and Set-back

Describe the extent and the height of the levee/culvert targeted in the restoration project. How is it consistent with the types and impacts of species enhancement presented in the NOAA RC PEIS in Sections 2.2 and 4.5.2?

This project proposes to replace an existing wooden flap gate on one of the two culverts that drain Clear Creek to the Puyallup River. The new gate would be designed to work in conjunction with the other gate and be optimized to better allow fish passage and reduce impacts from flooding along Clear Creek—consistent with the types and impacts of species enhancement presented in the RC PEIS.

V. NEPA DETERMINATION

☒

The action is completely covered by the impact analysis within the NOAA RC Programmatic EIS (PEIS). The project and its potential impacts may be limited through terms or conditions placed on the recipient of NOAA funds. It requires no further environmental review. An EIS Inclusion Document will be prepared.

☐

The action analyzed here has unknown impacts. At this time, funding will be limited to those portions of the action and impacts analyzed in the PEIS. These limitations will be described in terms or conditions placed on the recipient of NOAA funds. If all remaining activities and impacts are later determined to be described in the PEIS, this analysis will be documented in the program record and the applicant may then proceed with the project. If all remaining activities and impacts are later determined to not be described in the PEIS, further NEPA review will be required; see below.

☐

The action or its impacts are not covered by the analysis within the PEIS. It will require preparation of an individual EA, a supplemental EIS, adoption of another agency's EA or EIS, or will be covered by a Categorical Exclusion.

Signature

DRAFT

Date Signed