

**EARLY RESTORATION PLAN AND ENVIRONMENTAL ASSESSMENT  
NATURAL RESOURCE RESTORATION PROJECT  
EAST NEWARK, NEW JERSEY**

*Draft for Public Review and Comment*

Prepared by the  
U.S. Fish and Wildlife Service  
on behalf of the

**DIAMOND ALKALI NATURAL RESOURCE TRUSTEES**  
U.S. Department of the Interior  
National Oceanic and Atmospheric Administration

**December 2020**

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## List of Acronyms

ADA	Americans with Disabilities Act
BCSA	Berry's Creek Study Area
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CZMA	Coastal Zone Management Act
DA Site	Diamond Alkali Superfund Site
DDD	Dichlorodiphenyldichloroethane
DDE	Dichlorodiphenyldichloroethylene
DDT	Dichlorodiphenyltrichloroethane
DOI	U.S. Department of the Interior
EIS	Environmental Impact Statement
EPA	U.S. Environmental Protection Agency
ERP/EA	Early Restoration Plan and Environmental Assessment
ESA	Endangered Species Act
FONSI	Finding of No Significant Impact
LPRSA	Lower Passaic River Study Area
MSFCMA	Magnuson-Stevens Fishery and Conservation Management Act
NBSA	Newark Bay Study Area
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NOAA	National Oceanic and Atmospheric Administration
NRD	Natural Resource Damages
NRDAR	Natural Resource Damage Assessment and Restoration
OSHA	Occupational Safety and Health Act
OU	Operable Unit
PAHs	Polycyclic Aromatic Hydrocarbons
PCBs	Polychlorinated Biphenyls
PEIS	Programmatic Environmental Impact Statement
ppb	Parts per billion ( $10^{-9}$ )
ppq	Parts per quadrillion, or femtograms/liter, ( $10^{-15}$ )
ppt	Parts per trillion ( $10^{-12}$ )
PRP	Potentially Responsible Party
RM	River Mile
ROD	Record of Decision
SCP	Scientific Chemical Processing
SHPO	State Historic Preservation Office
TCDD	2,3,7,8-tetrachlorodibenzo- <i>para</i> -dioxin, or 2,3,7,8-TCDD
UOP	Universal Oil Products

## Section 1.0 Introduction

A potentially responsible party (PRP) at the Diamond Alkali Superfund Site (DA Site) and the Ventron/Velsicol/Berry's Creek Study Area (BCSA),<sup>1</sup> both located in northeast New Jersey, has proposed to fund, design and construct an early restoration Project (the "Project") on the Passaic River in East Newark, New Jersey. The proposed early restoration is located directly along the Passaic River at the DA Site, in direct proximity to the BCSA watershed, and is expected to provide ecological benefits and recreational services relating to both Sites.

As represented by this PRP (the Project proponent), the early restoration proposal is to fund, design and build a five-acre park in East Newark that, to the maximum extent practicable, incorporates natural landscaping components (*e.g.*, forest, pollinator gardens, native grasslands, and wetlands), and creates public access to the Passaic River shoreline. Preliminary conceptual landscape design includes meadow and/or wetland areas; an elevated walkway over water along the Passaic River, upland tree canopy understory, including shrubs, and groundcover; and pervious paths; while providing for the possible future development of a kayak or similar boat launch, if appropriate. The PRP's proposal also includes the creation and funding of an escrow account to support operations and maintenance for the Project for thirty (30) years. Project design and construction would be undertaken in coordination with the remedial requirements of the U.S. Environmental Protection Agency (EPA), while meeting required Federal, State and local permitting requirements.

The PRP's early restoration proposal is being considered by the Federal Natural Resource Trustees at the DA Site and the BCSA, which include the U.S. Department of the Interior (DOI), acting by and through the U.S. Fish and Wildlife Service (USFWS) and the U.S. Department of Commerce, acting by and through the National Oceanic and Atmospheric Administration (NOAA), hereinafter referred to as the "Federal Trustees." The Federal Trustees have coordinated with their State counterparts in New Jersey.

It is the role of the Federal Trustees to evaluate the technical merits of the PRP's proposed early restoration action, while considering alternatives to that proposal, as well as potential environmental impacts foreseen by Project implementation. This document, a Draft Early Restoration Plan and Environmental Assessment (ERP/EA), lays out factors from the Natural Resource Damage Assessment and Restoration (NRDAR) regulations<sup>2</sup> used to evaluate the merits of the reasonable alternatives; the considerations as prescribed under the National Environmental Policy Act (NEPA)<sup>3</sup> to evaluate and inform decision-makers about potential environmental impacts of the alternatives; and the Federal Trustees recommended selection of a "Preferred Alternative." The alternatives discussed herein are not intended to, and do not fully, address all injuries caused by the release of hazardous substances at or from the DA Site and/or the BCSA.

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<sup>1</sup> EPA ID# NJD980528996 and EPA ID# NJD980529879, respectively

<sup>2</sup> 43 C.F.R. Part 11

<sup>3</sup> 42 U.S.C. § 4321 *et seq.*

As part of this Draft ERP/EA, the Federal Trustees considered two possible East Newark park proposals: (1) a 2.3-acre esplanade featuring Community-oriented activities and (2) a more robust park encompassing approximately five (5) acres, providing ecological and recreational use services through plans for tree canopy, a variety of multiple plantings and enhanced riverfront access for the public. As legislatively mandated, the Federal Trustees also considered the technical merits and potential environmental impact of a “no action” alternative (essentially rejecting the PRP’s proposal to conduct early restoration). (*See*, Section 4.0, *Restoration Alternatives*).

When reviewing the elements of the PRP’s proposed early restoration, the Federal Trustees considered issues such as the likelihood of Project success, the benefits that may be provided by the restoration, and cost effectiveness. As part of this review, the Federal Trustees undertook an analysis to estimate Project costs, based on construction costs for similar projects in the greater New York/New Jersey metropolitan area. This analysis provided the Federal Trustees with a practical overview of potential Project costs, to ensure the reasonableness and cost effectiveness of the proposed early restoration plans. Likewise, the Federal Trustees specifically noted the scarcity of public greenspace in dense urban areas, like East Newark, which sorely lacks park options. After considering all such elements of the park proposals, the Federal Trustees recommend the proposed selection of the East Newark Riverside Park Project (Alternative 2) as the Preferred Alternative, which is described in greater detail in Sections 4.2.2 and 4.5.

Similarly, the Federal Trustees’ analysis compared the types and extent of natural resource injuries and service losses being assessed resulting from releases of hazardous substances at/near the DA Site, as well as the nearby BCSA, with the restoration anticipated to result from the Project. Based on that comparison, the Federal Trustees are confident that the Project will provide restoration with appropriate nexus to partially restore natural resources injured by those hazardous substance releases.

The Federal Trustees expect that, upon the successful design, construction, and completion of the proposed early restoration work -- to include opening the park to the public and the provision of funding for long-term operations and maintenance for thirty (30) years -- the Federal Trustees will grant the PRP (as Project proponent) with credit to offset liability for Natural Resource Damages (NRD) under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA)<sup>4</sup> and the NRDAR regulations. This credit would be applied towards offsetting PRP legal liabilities at the DA Site and potentially, to a more limited extent, towards offsetting the Project Proponent’s legal liabilities at the BCSA. The Federal Trustees anticipate that the terms and conditions for the PRP to receive this NRD credit will be addressed in an agreement, which would be separately made available for public review and comment at a later date. This agreement would include a scope of work that outlines overall requirements for Project design, construction, maintenance, and oversight, while also requiring that the PRP meet the terms and conditions of applicable Federal, State, and local permits. Completion of the proposed Project and any credit being provided to the PRP would depend on, among other things, the United States’ review of the agreement’s appropriateness in view of any comments received.

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<sup>4</sup> 42 U.S.C. § 9601 *et seq.*



Considering that the Project is expected to generate meaningful restoration of natural resources and services apparently injured or lost due to hazardous substance releases from both the DA Site and the BCSA, the Federal Trustees believe that the potential granting of NRD credit to the PRP is appropriate, because the Project provides a significant opportunity for early restoration that might not otherwise occur. In fact, the proposed Project represents the only current opportunity to provide ecological and public use/enjoyment benefits in the near-term. The Federal Trustees anticipate that the successful completion of the park could also encourage additional similar early restoration proposals with the potential to provide desired restoration earlier than would otherwise be possible.

## **1.1 Purpose and Need**

This Draft ERP/EA has been prepared to analyze whether to proceed with the early restoration Project proposed by the PRP. This Project is intended to address, in part, the restoration of the natural resources injured and the services derived from the resources that were lost due to releases of hazardous substances at or from the DA Site and, also potentially, the BCSA. In this context, restoration includes actions that would restore, rehabilitate, replace, and/or acquire the equivalent of any natural resources and services injured by the release of hazardous substances at or from the DA Site and/or the BCSA. Early restoration projects are designed to accelerate meaningful restoration and compensate the public for lost use of natural resources prior to completion of a full damage assessment. The early restoration alternatives discussed herein are not intended to, and do not fully, address all injuries caused by the release of hazardous substances at or from the DA Site and/or the BCSA. The Federal Trustees anticipate that, in the future, additional restoration will be performed to restore natural resources injured by hazardous substance releases, regardless of whether the particular early restoration Project discussed here is implemented. Any selected alternative must be consistent with statutory mandates and regulatory procedures that specify that recovered damages are used to undertake feasible, safe, and cost-effective projects that address injured natural resources, consider actual and anticipated conditions, have a reasonable likelihood of success, and are consistent with applicable laws and policies.<sup>5</sup>

Pursuant to CERCLA<sup>6</sup> and developed in accordance with the NRDAR regulations<sup>7</sup> and NEPA and its implementing regulations,<sup>8</sup> this Draft ERP/EA serves to:

- (a) inform the public as to the types and scale of restoration to be undertaken towards compensating for injuries to natural resources;
- (b) address the potential impacts of proposed restoration actions on the quality of the physical, biological, and cultural environment;
- (c) summarize the affected environment;
- (d) describe the purpose and need for action;
- (e) identify alternative actions, including the preferred alternative and a no-action alternative;
- (f) assess each alternative's applicability and environmental consequences;

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<sup>5</sup> 42 U.S.C. § 9607(f)(1); 43 C.F.R. § 11.82(d).

<sup>6</sup> 42 U.S.C. § 9601, *et seq.*

<sup>7</sup> 43 C.F.R. Part 11.

<sup>8</sup> 40 C.F.R. § 1500, *et seq.*

- (g) summarize opportunities for public participation in the decision-making process and;
- (h) evaluate potential impacts of restoration alternatives in compliance with the Endangered Species Act (ESA)<sup>9</sup> and the National Historic Preservation Act (NHPA).<sup>10</sup>

This Draft ERP/EA presents to the public the “Preferred Alternative” restoration Project that will partially accomplish the goal of restoring, rehabilitating, replacing, and/or acquiring the equivalent of the natural resources and services that were injured by the release of hazardous substances. This Draft ERP/EA is not intended to quantify the extent of restoration needed to compensate for injury and satisfy all claims under applicable law.

## 1.2 Public Review and Participation

Public review of the Draft ERP/EA is a fundamental element of CERCLA and NEPA processes. This Draft ERP/EA serves as a proposed restoration plan and environmental analysis of potential impacts of the proposed restoration Project, and a means used by the Federal Trustees to seek public review and comment. Through the public review process, the Federal Trustees seek public comment on the restoration alternatives and the Federal Trustees’ proposed Preferred Alternative to partially restore injured natural resources or replace resource services lost.

The Draft ERP/EA will be available for public comment for thirty (30) days from the date of publication of the Notice of Availability in the Newark Star Ledger. Interested individuals, organizations, and agencies may submit comments by writing or emailing:

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An electronic version of the Draft ERP/EA will be posted at DOI’s Damage Assessment Tracking System (DARTS) website at: [https://www.cerc.usgs.gov/orda\\_docs/CaseDetails?ID=127](https://www.cerc.usgs.gov/orda_docs/CaseDetails?ID=127) or at NOAA’s Damage Assessment Remediation and Restoration Program (DARRP) website at: <https://www.diver.orr.noaa.gov/web/guest/diver-admin-record/6233>. The Federal Trustees will review and consider all public comments and input on the Draft ERP/EA received during the public comment period prior to finalizing the ERP/EA. The Final ERP/EA will address public comments received and will document responses to those comments in a responsiveness summary, which will be included as an appendix to the Final ERP/EA. As restoration progresses, the Federal Trustees may amend the Final ERP/EA if significant changes are anticipated to the

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<sup>9</sup> 54 U.S.C. §300101, *et seq.*

<sup>10</sup> 16 U.S.C. § 470, *et seq.* For any restoration actions considered, the potential to affect cultural resources, such as prehistoric and historic resources, Native American remains and cultural objects, will be determined early in project planning. To this end, the procedures in 36 C.F.R. Part 800 implementing Section 106 of the National Historic Preservation Act of 1966, as amended (54 U.S.C. § 306108, *et seq.*), requirements of the Native American Graves Protection and Repatriation Act of 1990, as amended (25 U.S.C. § 3001, *et seq.*), and policies and standards specified in the Fish and Wildlife Service Manual 614 FW 1-6 will be utilized.

type, scope, or impact of the Project. In the event of a significant modification to the Draft ERP/EA, the Federal Trustees will provide the public with an opportunity to comment on that particular amendment.

The development of the Draft ERP/EA, the administration of the public comment process, and the finalization of the ERP/EA are actions carried out solely by the Federal Trustees.

The Federal Trustees are maintaining records documenting the information considered and actions taken during this process to develop the Draft and Final ERP/EA, which will include public comments received and Trustee responses to comment.

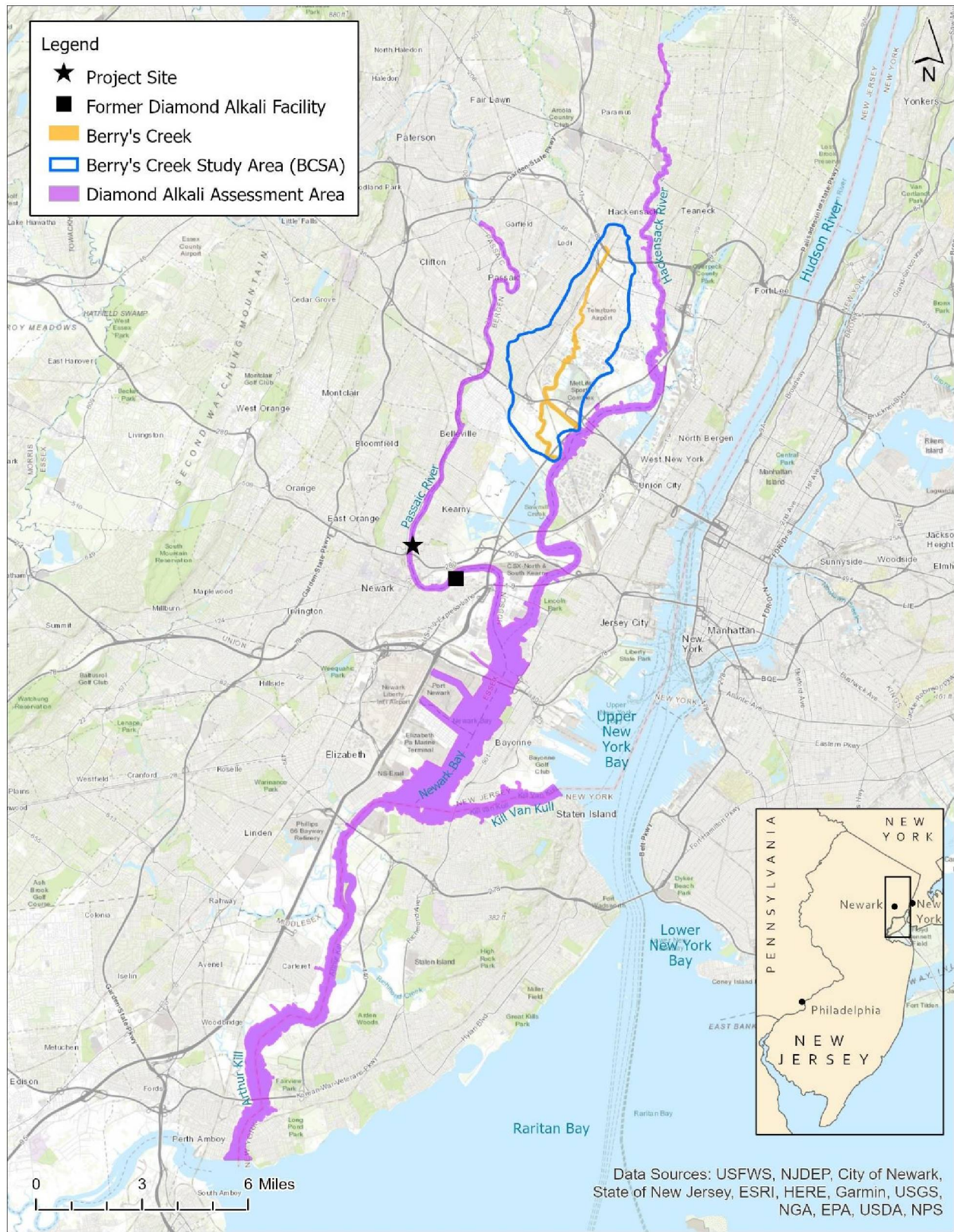
## **Section 2.0    Brief Site Description and History**

### **2.1    DA Site Description**

The DA Site consists of the former Diamond Alkali facility at 80-120 Lister Avenue in Newark, New Jersey, the Lower Passaic River Study Area (LPRSA) and the Newark Bay Study Area. The LPRSA is bounded at the upper end by the Dundee Dam and, at the lower end, by the confluence of the Lower Passaic River and Newark Bay. The Newark Bay Study Area includes Newark Bay and portions of the Hackensack River, the Arthur Kill, and the Kill Van Kull. The current extent of the DA Site lies within the New York Bight Watershed Estuary. Tidal action and local currents connect the water bodies of the DA Site to both the Upper and Lower New York Bays and the Hudson River (*See, Map 1*).



**Map 1: Former Diamond Alkali Facility Location and Federal Trustee Assessment Area**





Landscapes within and adjacent to the DA Site include a mixture of urbanized and degraded natural environments. The salt marshes of the New Jersey Meadowlands border the Hackensack River for about seven miles from just north of Newark Bay up to the confluence with the Overpeck Creek. Further north, the Hackensack River is surrounded by suburban developed land up to the Oradell Dam. The Arthur Kill and Kill Van Kull are important shipping channels in the New York/New Jersey Harbor that border Staten Island, New York on the west and north, respectively, and separate Staten Island from mainland New Jersey. The channels are surrounded by a mixture of industrial and commercial facilities, urban parks, and residential neighborhoods. Newark Bay is an urban estuary about six miles long, fed by brackish water entering from the Passaic and Hackensack Rivers at the north end and by salt water entering from the Arthur Kill and Kill Van Kull tidal straits from the south. Surrounded by an extensive infrastructure of roadways, railways, and aviation and marine transportation services, Newark Bay supports intensive commercial and industrial activities, including the Port Newark-Elizabeth Marine Terminal, which is the largest container shipping facility in the Port of New York and New Jersey, as well as the third largest and one of the busiest in the United States.

The DA Site has been divided by the U.S. Environmental Protection Agency (EPA) into four operable units (OUs)<sup>11,12</sup>

- Operable Unit 1 consists of the former Diamond Alkali Company facility at 80-120 Lister Avenue in Newark, New Jersey;
- Operable Unit 2 includes the lower 8.3 miles of the Passaic River extending from the River's confluence with Newark Bay at River Mile (RM) 0 to RM 8.3 near the border between the City of Newark and Belleville Township;
- Operable Unit 3 is the Newark Bay Study Area (NBSA) that includes the Newark Bay, Arthur Kill, Kill van Kull, and portions of the Hackensack River and;
- Operable Unit 4 is the Lower Passaic River Study Area (LPRSA) and constitutes the 17-mile tidal portion of the Passaic River, from RM 0 to Dundee Dam (RM 17.4) and its watershed, including the Saddle River (RM 15.6), Third River (RM 11.3) and Second River (RM 8.1).

There are a number and variety of contaminants of concern at the DA Site, including but not limited to:

- Dioxins and Furans, by-products of chemical manufacturing, combustion (either in natural or industrial settings), metal processing and paper manufacturing;
- Polychlorinated Biphenyls (PCBs), used widely as coolants and oils, and in the manufacture of paints, caulking and building material;
- Dieldrin, an organochlorine pesticide no longer produced used extensively as an insecticide on crops or to control termites;
- DDT (dichlorodiphenyltrichloroethane) and its primary breakdown products, dichlorodiphenyldichloroethane (DDD) and dichlorodiphenyldichloroethylene (DDE),

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<sup>11</sup> EPA sometimes divides CERCLA sites into Operable Units (OUs) in order to manage its cleanup actions numbers for managing its investigation and remediation in phases. The second five-year review of OU1 (June 8, 2011) identified OU2 as the Lower Passaic River and OU3 as the Newark Bay Study. In September 2016, EPA concluded that renumbering the OUs as they are described herein best support the site management from this point forward.

<sup>12</sup> EPA often divides cleanup activities at complex sites into different areas or OUs, so that cleanup of environmental media or areas that have been characterized can occur while the nature and extent of contamination at the remainder of the site is still being investigated.

- used widely to control insects on crops and to control mosquitoes that spread malaria;
- Polycyclic Aromatic Hydrocarbons (PAHs), major components of petroleum products; and
- Mercury, copper and lead, all heavy metals that are highly toxic to humans and animals.

## 2.2 Brief DA Site History

Throughout the nineteenth and twentieth centuries, numerous municipalities and industrial operations discharged wastewater into the waterways associated with the DA Site. From the late 1940s until the late 1960s, the Diamond Alkali Company, and its corporate predecessors and successors, owned and operated an agricultural chemical production facility on the Passaic River in Newark, New Jersey. Diamond Alkali used the facility for the manufacture of the chemicals 2,4,5 trichlorophenol and the herbicides 2,3-dichlorophenoxyacetic acid and 2,4,5 trichlorophenoxyacetic acid, ingredients in the defoliant known as “Agent Orange,” among other products. An unwanted by-product of these manufacturing processes was the extremely toxic compound 2,3,7,8-tetrachlorodibenzo-*para*-dioxin, (2,3,7,8-TCDD and hereinafter referred to as TCDD). TCDD is commonly and interchangeably referred to as “dioxin”, although dioxin(s) is a general name for a large group of chemical compounds with similar chemical structures that induce toxicity via a common mechanism of action, resulting in a common spectrum of biological responses.

In 1983, environmental sampling by the State of New Jersey and the EPA at and near the Diamond Alkali Company facility revealed high levels of TCDD, pesticides and other hazardous substances in the soil and groundwater at facility. TCDD, PCBs, metals, PAHs and various pesticides were also found in sediment of the Passaic River. Additional sampling revealed DA Site-related hazardous substances throughout Newark Bay and its tributaries, the Hackensack River, the Arthur Kill and Kill Van Kull tidal straits.

On September 21, 1984 the DA Site was included on the National Priorities List, which is a list of sites of national priority among the known releases or threatened releases of hazardous substances, pollutants, or contaminants throughout the United States and its territories.

In 1987, EPA issued a Record of Decision (ROD) selecting a cleanup of OU1, consisting of an interim containment remedy, including capping, construction of a subsurface slurry wall and flood wall, and a groundwater collection and treatment system. OU 1 was completed in 2001. EPA has been evaluating the protectiveness of this interim remedy at least every five years since it was complete. A final remedy for OU1 will be selected in the future.

In 2012, a removal action was completed to remove 40,000 cubic yards of contaminated sediments from the river adjacent to OU1. Also in 2012, EPA signed an administrative agreement with 70 PRPs to remove approximately 16,000 cubic yards of contaminated sediments from a mudflat at RM10.9 adjacent to Riverside Park in Lyndhurst, New Jersey and cap the remaining mudflat. Dredging and capping for that removal action was completed in 2014.

In 2016, after a lengthy remedial investigation, EPA issued a ROD for OU2. The selected remedy includes a bank-to-bank engineered cap after removal of approximately 3.5 million cubic



yards of contaminated sediment from the lower 8.3 miles of the Passaic River. The remedial action is currently being designed.

As of 2020, Remedial Investigations/Feasibility Study work is still underway. To date, EPA has notified over 100 entities that they are PRPs for the DA Site.

### **2.3 Berry's Creek Study Area (BCSA) Watershed Assessment Area Description**

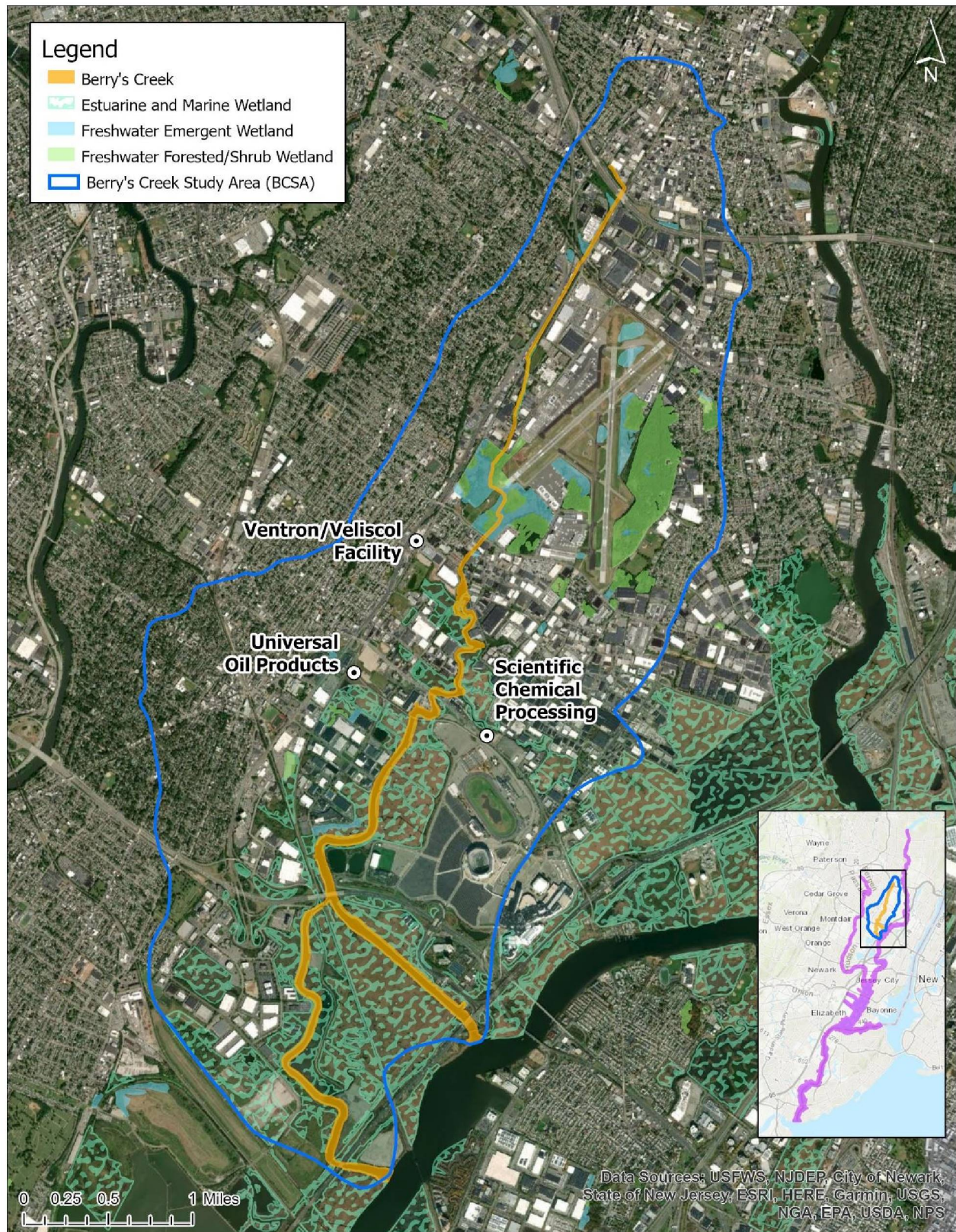
The Berry's Creek watershed assessment area encompasses approximately twelve (12) square miles, including the 6.5-mile-long Berry's Creek and related canal (which discharges into the Hackensack River and eventually discharges into Newark Bay), as well as its tributaries and approximately 750 acres of adjacent wetlands known as the Meadowlands. This watershed assessment area includes BCSA waterways, wetlands and associated ecosystems, as well as three Superfund sites: the Ventron/Velsicol Site, the Scientific Chemical Processing (SCP) Site, and the Universal Oil Products (UOP) Site. (*See*, Map 2). EPA has issued notice letters to approximately 140 PRPs for the BCSA portion of the Ventron/Velsicol Site.

Multiple hazardous substances were released into the BCSA watershed area, including mercury (and associated methyl mercury), polychlorinated biphenyls (PCBs), including dioxin-like compounds, polycyclic aromatic hydrocarbons (PAHs), volatile organic compounds, solvents, pesticides, heavy metals and related contamination from industrial wastes. Contamination in the Berry's Creek watershed is the focus of a Remedial Investigation / Feasibility Study performed by a group of PRPs under EPA oversight. In September 2018, EPA issued a ROD selecting an interim remedy for source control in certain BCSA waterways and Upper Peach Creek marsh, including sediment removal and capping in the waterways, and sediment removal and backfill or thin-layer cover of portions of the marsh. A marsh demonstration project was also included in the interim remedy, while remedial action is currently being designed. Similarly, the Federal Trustees are currently performing a natural resource damage assessment to consider the environmental impacts of contamination in the BCSA watershed, to include adverse impacts to anadromous fish, songbirds and water birds.

The BCSA watershed assessment area is located near the proposed Project location – approximately 1.5 to 4 miles from the DA Site and its upland meadowlands area, as the bird flies. As a result, the Federal Trustees considered the possible benefits that the Project could provide to ecosystems shared by both the DA Site and the BCSA watershed, as well as the benefits that could be provided to residents in the vicinity of the BCSA. Accordingly, this Draft ERP/EA outlines information on the BCSA watershed assessment area and the relationship between the BCSA and the DA Site.



**Map 2: Berry's Creek Study Watershed Assessment Area**





## **2.5 Benefits of Early Restoration for both the DA Site and the BCSA Watershed**

When evaluating the proposed restoration Project, the Federal Trustees considered the benefits that are anticipated to flow to both the DA Site and the BCSA watershed by converting an unused, concreted lot into an area that provides urban tree canopy and multiple planting, as well as public greenspace and Riverfront access. Both the DA and BCSA Sites provide ecological services such as breeding, foraging, and sheltering habitat for migratory birds and other avian species, as well as habitat for anadromous fish species. The Federal Trustees' analysis considered the specific benefits to the area's avian resources, including migratory songbirds that fly and breed in the waterways/meadowlands in and near both the DA Site and the BCSA. Currently, human uses of the DA Site and the BCSA include, but are not limited to: fishing, boating, waterfront recreation, bird watching, photography and related activities. Accordingly, the Federal Trustees noted that the proposed Project could provide significant recreational benefits to residents of the communities within the vicinity of the DA Site and the Berry's Creek watershed, in addition to ecological benefits discussed.

## **Section 3.0 Injury to Natural Resources, Damage Determination/Quantification and Restoration Scaling**

### **3.1 Injury to Natural Resources**

Ongoing natural resource damage assessment activities focus on evidence that the releases and threatened releases of hazardous substances have and continue to significantly impact natural resources at the DA Site and the BCSA watershed, including fish, migratory birds and benthic organisms and the ecosystems that support them, as well as adversely affecting the public's use and enjoyment of DA Site and BCSA waterways. Existing information and evaluations undertaken to date have provided the foundation for the evaluations in this Draft ERP/EA. When completed, these damage assessments will establish the exact nature and extent of injuries to natural resources resulting from hazardous substances released at and from the DA Site and the BCSA. Likewise, contamination in the Berry's Creek watershed is currently the focus of the BCSA natural resource damage assessment.

Injury is defined as "a measurable adverse change, either long-or short-term, in the chemical or physical quality or the viability of a natural resource" resulting either directly or indirectly from exposure to a hazardous substance. Examples of injury include physical deformities, reproductive impairment, increased incidence of cancer, death, behavioral abnormalities, or genetic mutations. Other impacts, such as exceedances of regulatory standards or the institution of fish consumption advisories or regulatory fishing closures in the assessment area, may also constitute injury.

The Federal Trustees have reviewed and evaluated the existing data relevant to natural resources and potential injuries at both the DA Site and the BCSA and identified natural resources appropriate for early restoration at this time, including migratory birds, benthic organisms, fish, and benthic, riverine and floodplain ecosystems, and the services which flow from them. Proposed restoration options are evaluated for nexus to these areas of injury.

There is a significant amount of data available from NJDEP, USFWS, EPA, NOAA, and other sources from different sites which is relevant and applicable to the DA Site. These data include information on hazardous substance releases, concentrations in the environment, and the effect of contamination on natural resources, all of which inform appropriate categories of resources to be restored. Some selected examples are provided below. Prior to 2018, the New Jersey Water Quality Standard for protection of human health from 2,3,7,8-TCDD was 13 femtograms/liter ([ppq] or 0.000000013 ppb) in saltwater and 14 ppq in freshwater. As of 2018, the standards are 51 ppq and 50 ppq for saline and freshwaters, respectively. For protection of human health from fish consumption, the State of New York established fresh and saline surface water quality standard of 0.6 ppq (0.0000000006 ppb). Both the New Jersey and New York standards are based on the total of 2,3,7,8-TCDD, not TEQ-equivalents. For protection of wildlife from fish consumption, the New York State water quality standard is 31 ppq as actual 2,3,7,8-TCDD. Detectable concentrations of 2,3,7,8-TCDD in many parts of the DA Site greatly exceeded these criteria and standards..

Sediment concentrations of 2,3,7,8-TCDD in and near the DA Site remain among the highest ever detected in aquatic ecosystems (ATSDR, 1998). For comparison, the EPA determined that 2,3,7,8-TCDD contamination was severe in Lake Ontario, Canada sediment, where a mean surface sediment concentration of 68 ppt (parts per trillion) was recorded in 1987 and a maximum subsurface sediment concentration of 500 ppt was recorded in the early 1960s. Concentrations of 2,3,7,8-TCDD in the sediments of the lower Passaic River are one or more orders of magnitude greater than the levels that were found to cause injury to fish and wildlife in Lake Ontario; and thus are highly probable of inducing similar injuries DA Site related fish and wildlife.

With respect to the BCSA, the primary Contaminants of Concern that have accumulated in the surface waters and sediments of Berry's Creek and the surrounding wetland floodplains are mercury, methyl mercury, PCBs and chromium. The mercury levels in Berry's Creek are among the highest found in any freshwater ecosystem in the United States. Concentrations of mercury and PCBs detected in the BCSA waters, sediments and aquatic invertebrates are known to be injurious to a broad range of fish and wildlife, including migratory birds, causing documented reproductive and neurological impairment.

The waters of the DA Site and BCSA provide habitat for over seventy-five (75) aquatic species. Elevated levels of DA Site and BCSA-related hazardous substances have been repeatedly detected in various aquatic resources at levels otherwise established as causing injury. In addition, significant 2,3,7,8-TCDD, PCBs, and/or mercury contamination in invertebrates such as blue crab and ribbed mussel, forage fish such as mummichog, Atlantic silverside, and menhaden, and higher predators such as striped bass, white perch, American eel, and bluefish have resulted in consumption bans or advisories beginning in 1983 and still in effect as of 2020. In fact, concentrations of 2,3,7,8-TCDD in white perch and mummichog are among the highest reported for wild fish. 2,3,7,8-TCDD concentrations observed in mummichog, white perch and juvenile striped bass are at levels that have been found to adversely affect early developmental stages of sensitive species of fish. By comparison, in 90% of fish sampled at sites around the U.S., 2,3,7,8-TCDD levels were below 5 ppt, making fish at or near the DA Site and the BCSA fish among the most contaminated in the country.



The waterways, floodplains and wetland at or near the DA Site and the BCSA are located in the Atlantic Flyway at the juncture of three physiographic areas (Southern New England, Mid-Atlantic Coastal Plain, and Mid-Atlantic Piedmont and within the hub of several major bird migration routes connecting the eastern Great Lakes, Hudson River Valley, New England, and the coast. This area, which includes the Hackensack Meadowlands, provides increasingly vital migratory stopover and breeding habitats for nearly 40 percent of the migratory bird species that occur in the eastern United States. Approximately 76 percent of the 445 species observed in New Jersey use the Meadowlands and surrounding habitats as nesting habitat or as a stopover for resting and feeding along historic migration corridors between the Atlantic Ocean and interior regions of the Hudson Valley and the Great Lakes. Habitats at or near the DA Site and/or the BCSA have supported approximately 1,200 pairs of colonial wading birds such as black-crowned night-herons, yellow-crowned night-herons, little blue herons, green herons, and great, snowy, and cattle egrets. Elevated concentrations of 2,3,7,8-TCDD and 2,3,7,8-TCDD TEQs in prey items and double-crested cormorant eggs indicates that migratory birds at or near the DA Site and/or the BCSA likely have been and continue to be injured by hazardous substance released at or near the DA Site and/or the BCSA.

To illustrate the relative severity of 2,3,7,8-TCDD contamination in and near the DA Site and the BCSA, of 180 biota samples collected from the lower Passaic River, 98.3% exceeded the Canadian avian protective dietary guidelines for the protection of wildlife consuming dietary prey of 2.4 ppt as PCB-TEQ and 4.75 ppt as dioxin/furan-TEQ for birds. Elevated levels of 2,3,7,8-TCDD TEQs are associated with embryotoxicity and developmental effects in Great Lakes region double-crested cormorant eggs collected in field studies range from 350-1300 ppt. 2,3,7,8-TCDD TEQs ranged from 254-767 ppt in five eggs from Shooters Island in Newark Bay. 2,3,7,8-TCDD-TEQs in those eggs are within the reported field effects range, indicating a high likelihood for demonstrating injuries in this species as well as others.

In sum, existing evidence supports the appropriateness of early restoration to begin to address Site-wide injury concerns regarding migratory birds, fish, benthic organisms and the ecosystems that support them arising at and from both the DA Site and the BCSA.

### **3.2 Damage Determination and Restoration Scaling**

The Federal Trustees have not yet quantified restoration requirements and natural resources damages caused by hazardous substances that have been released, or are threatened to be released, at and from the DA Site and/or the BCSA watershed. However, preliminary evaluations undertaken in collateral proceedings provide a basis to anticipate asserting significant claims under CERCLA in light of the breadth, toxicity, and complexity of the hazardous substances released.<sup>13</sup>

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<sup>13</sup> The Federal Trustees have previously estimated natural resource damages for the DA Site for purposes of the Maxus bankruptcy reorganization proceeding (*In Re: Maxus Energy Corp., et al.*, D. Del. Bankr., Case No. 16-11501).

## **Section 4.0 Early Restoration Alternatives**

### **4.1 Goals and Objectives of Early Restoration**

Under CERCLA, the goal of restoration is to compensate and make the public whole for injuries to natural resources. The objective of early restoration is to select a project or projects that are designed to accelerate meaningful restoration and compensate the public for the injury and/or lost use of natural resources prior to completion of a full site-specific damage assessment.

### **4.2 Proposed Restoration Alternatives**

In developing the Draft ERP/EA, NEPA and the CERCLA NRDAR regulations (43 C.F.R. § 11.82(a)) require that the Federal Trustees consider a reasonable range of possible restoration alternatives, depending on the circumstances and the facts of the matter. In this Draft ERP/EA, the Federal Trustees outline their decision-making on whether to accept a No Action alternative, essentially rejecting the option of early restoration (Alternative 1), and the Federal Trustees' analysis of the proposed action, which is an enhanced riverfront park, (Alternative 2) in comparison with a previously proposed restoration project with a significantly different focus and a limited nexus to Site-related injuries (Alternative 3).

At this time, the Project represents the only current opportunity to provide ecological and public use and enjoyment benefits in the near term.

#### **4.2.1 Alternative 1: No Action/Natural Recovery**

This alternative is addressed to fulfill requirements under the NRDAR and NEPA regulations.<sup>14</sup> 43 C.F.R. § 11.82(c)(2) which require that “(a)n alternative considering natural recovery with minimal management actions, based upon the “No Action–Natural Recovery” determination made in § 11.73(a)(1) of this part, shall be one of the possible alternatives considered.” 40 C.F.R. § 1502.14(d) (requiring “an alternative of no action”).<sup>15</sup>

Under Alternative 1, no action would be taken at this time to restore resources injured due to contamination at or from the DA Site and/or the BCSA. Alternative 1 considers natural recovery with minimal management actions without the PRP's proposal for early restoration. Under this Alternative, the Federal Trustees would not take action at this time to replace or acquire additional natural resources to restore ecological and human service uses provided by the injured resources at either the DA Site or the BCSA. Should the Federal Trustees choose to reject the proposed Project, this decision would not prohibit their ability to seek other restoration opportunities to address injuries to the affected resources located at or near the DA Site and/or the BCSA.

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<sup>14</sup>43 C.F.R. § 11.82(c)(2).

<sup>15</sup> The Council on Environmental Quality (CEQ) issued revised regulations for Federal agencies to implement the NEPA, which became effective on September 14, 2020. 85 Fed. Reg. 43304. Because the Federal Trustees' environmental analysis discussed herein commenced before September 14, 2020, this Draft ERP/EA, and the forthcoming Final ERP/EA, do utilize earlier CEQ NEPA regulations rather than the recently revised regulations.



Under the No Action/Natural Recovery Alternative, restoration of resources and their functions would be completely dependent upon natural processes. It is unclear when, if ever, this alternative would achieve a return to baseline, while not providing for any restoration of interim losses whatsoever. The No Action Alternative results in the loss of a current opportunity to generate additional ecological and human use services directly within the DA Site. The No Action alternative also fails to provide needed greenspace and recreational opportunities to Environmental Justice communities nearby. Therefore, the No Action Alternative is not a favorable restoration alternative when evaluated against the alternative selection factors, which are defined and discussed further in Section 4.3 below. Alternative 1 serves as a point of comparison to determine the context, duration, and magnitude of environmental consequences resulting from the implementation of Alternatives 2 and 3.

#### **4.2.2 Alternative 2: East Newark Riverfront Park Project**

A PRP at the DA Site and the BCSA (as the Project proponent), voluntarily initiated discussions of a proposed early restoration Project by developing and presenting alternative concept plans for an approximately five-acre park designed to provide both ecological and human use service benefits. Alternative 2 is a proposed commitment by the PRP to fund, design, build, and fund maintenance of a riverfront public park in East Newark, New Jersey on property adjacent to the Passaic River.

The restoration proposed with the Preferred Alternative would be in-kind, in-place, as it is located directly within the area of injury related to hazardous substance releases at or near the DA Site and the BCSA watershed, as well as the Passaic River watershed. Because of dense urban development in the area of the DA Site, in-place restoration options are at a premium; dependent on the availability of scarce real estate along the Passaic River. The Preferred Alternative would be located in the East Newark area, which is an economically depressed community which has been impacted by past hazardous substance releases. The proposed restoration offers Environmental Justice benefits with the creation of needed greenspace and waterfront access for local communities near the DA Site and the BCSA. As such, the Project provides a unique opportunity that may not be available otherwise. Alternative 2 would generate early restoration many years sooner than is otherwise feasible, while reducing or avoiding certain potential litigation costs.

Plans for Alternative 2 include the removal of existing impervious cover and historic fill to facilitate groundwater recharge and reduce the adverse impacts of stormwater runoff to the Passaic River. This Alternative favors the creation of greenspace rather than options requiring hardened surfaces. For example, the plans for Alternative 2 include proposals for possible car parking options located in areas that are conveniently located to the park to minimize impermeable surface creation within the Project footprint. As presently conceived, this option could include parking spaces for handicapped use, as well as a provision for emergency vehicles, while limiting unnecessary paved surfaces. Meanwhile, crumbling bulkheads/shoreline areas will be stabilized, and multiple public pathways and shoreline access will be included in restoration plans. The Project would include the construction of an elevated Riverfront walkway would allow the public to enjoy a direct connection to view and appreciate the Passaic River, as well as the possible option for a foundation supporting a future kayak or boat launch.

Educational signage may also be provided to promote public understanding and enjoyment of park elements. Planning and engineered designs for the Project will maximize protection of the Project site from CERCLA-related contamination by the River, while remaining compatible with EPA cleanup actions.

Alternative 2 would also provide significant ecological uplift. Converting industrial land into a mosaic of upland and riparian areas would create habitat that is highly attractive to a variety of perching birds and songbirds that live in the vicinity of both the DA Site and the BCSA, given that such habitat is rare in dense urban areas. Plans for Alternative 2 also incorporate natural landscaping components (*e.g.*, forest, pollinator gardens, native grasslands, and wetlands), effective storm water management and, to the extent feasible, and in coordination with the EPA,<sup>16</sup> possible construction of a means to establish a potential hydrologic connection of the Project area shoreline with the Passaic River.<sup>17</sup> Likewise, any proposed wetland creation would be undertaken in coordination with EPA remedial planning requirements. The Project would optimize the restoration or enhancement of injured natural resources by featuring natural systems that are ecologically sustainable, including providing habitat for pollinators, migratory birds and related species.

The Project also encompasses significant human-use value. Alternative 2 would provide active and passive recreational options, as well as greenspace for urban residents in nearby low-income and minority communities. This includes multiple pathways and small gathering areas that lead the park user to enjoy a variety of plantings, including pollinator gardens, native grasses and the significant tree canopy of upland trees – all of which are relatively rare in a dense urban environment, such as East Newark.

Alternative 2 is likewise intended to support public recreation within a relatively short drive of the Project location – to include geographic areas within the DA Site, the BCSA, and adjacent communities. When projecting possible recreational use by the public, the Federal Trustees considered the location of nearby towns within the geographic bounds of the proposed Project. Many communities are within walking and biking distance of East Newark, in addition to the option of a 5-10 minute drive. Areas such as BCSA and related communities are within an approximate 20-minute drive for visitors who may consider a day trip. Under standard economic analysis, these amounts of travel time are considered reasonable for calculating the possible use of a recreational option by the public. As a result, the Federal Trustees believe that the proposed Project is reasonably expected to provide recreational benefits to both East Newark and BCSA communities.

The Federal Trustees are in the process of coordinating with the PRP to memorialize terms and requirements for the proposed Project. In particular, the Federal Trustees and the PRP's technical experts are discussing a scope of work to outline preliminary design plans, timelines and Project requirements that would best meet the Federal Trustee restoration goals, while ensuring that

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<sup>16</sup> EPA has issued a Record of Decision for a bank-to-bank capping remedy for the lower 8.3 miles of the Lower Passaic River, including the area adjacent to the proposed restoration location. The remedy is expected to take approximately six years to construct (scheduled 2021 through 2027).

<sup>17</sup> In the event that a proposal is made to re-establish a tidal connection to the River, the Federal Trustees will review the relevant water quality and river contaminant data upon implementation of EPA's remedial actions (including the area adjacent to the proposed restoration location), as well as the outcome of regulatory permitting approvals.



Project planning harmonizes with EPA's remedial decision-making. Plans also include the creation and funding of an escrow account to fund Project operations and maintenance for the Project for thirty (30) years, as well as the implementation of land use controls to ensure the long-term stability of the park for its users. Land use controls (via a conservation easement) would be imposed to ensure that the ecological uplift provided by the park will be maintained.

#### **4.2.3 Alternative 3: 2.3-Acre Esplanade Featuring Community Use Options**

The PRP initially approached the Federal Trustees with a project proposal for a 2.3-acre waterfront esplanade in East Newark that contained some elements featured with Alternative 2 (though to a lesser extent) within the same property area. These similar options included the construction of a waterfront esplanade and public pathways leading to a small overlook of the Passaic River. Existing soil and hardened surfaces would be removed and replaced with clean fill, featuring the installation of grass and occasional plantings. Likewise, under this plan, 630 feet of shoreline bulkhead areas would be strengthened. Planning options also proposed a promenade with a central plaza and grand stairway, including limited greenery and a small amount of plantings and trees, as well as a tiered garden would allow for grasses and bushes to follow steps down to the River. Another design element featured the development of a small tidal pond with pocket plantings and public pathways. The Federal Trustees agreed that the ecological components of this park proposal could be worthy of NRD credit, so these elements of Alternative 3 are further addressed in the CERCLA alternatives evaluation and NEPA analysis provided in this Draft ERP/EA.

However, some of the main components originally proposed for Alternative 3 contained multiple features that the Federal Trustees concluded were not appropriate for NRD credit. This included proposals for community recreational, educational and artistic amenities, as well as plans that would result in large amounts of paved space. These project elements are not considered in the CERCLA alternatives evaluation and NEPA analysis provided in this Draft ERP/EA, and the Federal Trustees' reasoning is outlined below.

As originally conceived, the goal of Alternative 3 was to create a pleasant outdoor gallery experience for the park user, which could highlight rotating art installations or a permanent sculpture garden, as well as attractive "green" multi-use buildings. Additional proposed design features included an educational center, a display garden, a playroom, a discovery room, a restaurant plaza and a possible kayak launch. A large amount of parking was considered – approximately one fourth of the surface area could have been used for this purpose. In keeping with the art-gallery concept, the PRP proposed the possibility of soliciting artwork from local schools or community artists responding to various themes, which would be presented for public appreciation as revolving exhibitions. Another option was more permanent – a sculpture garden that would be nestled in areas for public seating. Architectural enhancements were also proposed, such as plans for a rain porch over a paved area that featured a canopy to support vegetation for a living roof. Other buildings located nearby could be constructed with similar "green" roofs to filter rainwater.

The Federal Trustees appreciated the community-focus of Alternative 3, along with the desirability of providing access to artwork for the public, lawn areas for outdoor recreation, and

creating accessible play and education spaces. Nevertheless, it was recognized that many of the identified project elements (however attractive) were not eligible for NRD credit since they would not restore, replace, or acquire the equivalent of resources injured by the release of hazardous substances, nor compensate the public for service losses.<sup>18</sup> The Federal Trustees also noted that Alternative 3 required the creation of hardened space, to include a large paved parking area and proposed buildings, which would only be partially offset by turf and selected plantings. The possible kayak launch was inviting, but concerns were raised about the need to ensure compatibility with ongoing EPA remedial planning. In summary, although Alternative 3 generates significant public use and enjoyment opportunities through art installations, restaurants, and play spaces, these activities would have only limited, if any, nexus to public use natural resource services and enjoyment lost as a result of natural resource injuries.

### 4.3 Selecting the Alternative to Pursue

When selecting the alternative to pursue, the Federal Trustees must evaluate each of the possible alternatives based on all relevant considerations, including the following factors<sup>19</sup>, and as addressed in Table 1.

1. Technical feasibility;<sup>20</sup>
2. The relationship of the expected costs of the proposed actions to the expected benefits from the restoration, rehabilitation, replacement, and/or acquisition of equivalent resources;
3. Cost-effectiveness;<sup>21</sup>
4. The results of any actual or planned response actions;
5. Potential for additional injury resulting from the proposed actions, including long-term and indirect impacts, to the injured resources or other resources;
6. The natural recovery period determined in 43 C.F.R. § 11.73(a)(1);<sup>22</sup>
7. Ability of the resources to recover with or without alternative actions;
8. Potential effects of the action on human health and safety;
9. Consistency with relevant Federal, State, and tribal policies; and
10. Compliance with applicable Federal, State, and tribal laws.

The evaluation of the range of possible alternatives using the selection criteria listed above is summarized in Table 1 below. Based on the comparison of alternatives in this evaluation, the Federal Trustees identified the Preferred Alternative, which is presented in more detail at Sections 4.2.2 and 4.5.

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<sup>18</sup> 42 U.S.C. § 107(f)(1).

<sup>19</sup> 43 C.F.R. § 11.82(d).

<sup>20</sup> Technical feasibility means that the technology and management skills necessary to implement [a Restoration Plan] are well known and that each element of the plan has a reasonable chance of successful completion in an acceptable period of time.

<sup>21</sup> Cost effectiveness means that two or more activities provide the same or a similar level of benefits, the least costly activity providing that level of benefits will be selected. 43 C.F.R. § 11.14(j).

<sup>22</sup> The natural recovery period is the amount of time needed for recovery if no restoration, rehabilitation, replacement, and/or acquisition of equivalent resources efforts are undertaken beyond response actions performed or anticipated. 43 C.F.R. § 11.73(a)(1).



**Table 1. Summary and comparison of the alternatives evaluation using the selection criteria in the CERCLA Regulations (43 C.F.R. § 11.82(d)).**

Comparison of Alternatives Using Selection Criteria			
Selection Criteria	Alternative 1 No Action	Alternative 2: Riverfront Park Project	Alternative 3: 2.3 Acre Esplanade with Community Options
<b>Technical feasibility:</b>	Alternative 1 is technically feasible	Alternative 2 is technically feasible. The technological and management skills necessary to implement the Project are well known and each element of the plan has a reasonable chance of successful completion in an acceptable period of time.	Alternative 3 is technically feasible. The technological and management skills necessary to implement the project are well known and each element of the plan has a reasonable chance of successful completion in an acceptable period of time.
<b>Cost Effectiveness:</b>  <i>The relationship of the expected costs of the proposed actions to the expected benefits from the restoration, rehabilitation, replacement, and/or acquisition of equivalent resources.</i>	Alternative 1 has no cost or benefit at this time. Rather, under Alternative 1, any expenditures on restoration would be delayed until some uncertain time in the future, at which point an unknown set of restoration options may be available. Given the significant uncertainty surrounding potential future restoration, the cost effectiveness of such restoration is highly speculative and, therefore, not amenable to meaningful analysis.	The estimated costs for Alternative 2 were verified through an Independent Government Cost Estimate developed by the DOI Restoration Support Unit, and a comparison to construction costs of similar-sized projects in the greater New Jersey/ New York City metropolitan area. This analysis was undertaken to ensure that the expense of developing the proposed Riverfront Park are practical and reasonable. It is anticipated that Alternative 2 will prove effective in generating significant restoration gains with nexus to the Trustees' injury concerns.	Alternative 3 cost, including the reasonable direct and indirect costs incurred by the Federal Trustees will be borne by the PRP and would be commensurately less than Alternative 2 as the project would be significantly smaller in scope. There would only be limited expected benefits constituting appropriate restoration for the injuries of concern, accordingly costs compared to the injury-related benefits would be greater than Alternative 2. Costs for Alternative 3 were not developed as the project's characteristics were not in alignment with the Federal Trustees' requirements of an appropriate nexus to the natural resource injuries.
<b>The results of any actual or planned response actions</b>	Absent restoration actions beyond planned remedial actions (a riverbed cap and mudflat restoration) in the OU2 ROD, there is a reduced potential for resources to fully recover to baseline conditions.	EPA's cleanup plans outlined in the OU2 ROD (a riverbed cap and mudflat restoration) are expected to improve conditions in the Passaic River, allowing for greater public access and a potential tidal connection in the future. In addition, the Federal Trustees envision significant uplift of all aspects of current conditions at the proposed Project location, including removal of historic fill to allow for installation of natural soils and creation of a desirable	EPA's cleanup plans outlined in the OU2 ROD (a riverbed cap and mudflat restoration) are expected to improve conditions in the Passaic River, allowing for greater public access and a potential tidal connection in the future. However, Alternative 3 has only a limited approach to fill removal and bulkhead stabilization, so the level of uplift provided by this Alternative would be

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		topographic relief. Also, shoreline bulkheads would be stabilized. The anticipated fill removal/stabilization is in addition to any proposed response actions.	proportionately limited.
<b><i>Potential for additional injury resulting from the proposed actions, including long-term and indirect impacts, to the injured resources or other resources</i></b>	No additional natural resource injuries would be caused Alternative 1, but injuries and losses associated with the DA Site and the BCSA would go unaddressed, at least for the time being. This alternative does nothing to compensate the public for interim losses of ecological services. Because remedial activity will not improve the project area above baseline conditions, interim losses have and will continue to accrue into the future.	Under Alternative 2, no additional natural resource injuries would be caused by the proposed Project, while injuries and losses associated with the DA Site and/or the BCSA would be, in part, addressed and damages compensated by providing early restoration where no benefit is otherwise anticipated to accrue.	Under Alternative 3, no additional natural resource injuries would be caused, and injuries and losses associated with the DA Site and/or the BCSA would be, in part, addressed and damages compensated by providing early restoration at a Site where no benefit is otherwise anticipated to accrue. However, the level of overall ecological and recreational benefit provided by Alternative 3 is more limited.
<b><i>The natural recovery period as determined in 43 C.F.R. § 11.73(a)(1) (i.e., the amount of time needed for recovery if no restoration, rehabilitation, replacement, and/or acquisition of equivalent resources efforts are undertaken beyond response actions performed or anticipated)</i></b>	The natural recovery period and the abilities of the resources to recover with or without alternative actions, considered together, would likely be on the order of decades or longer.	Under Alternative 2, the development of significant tree canopy, meadowlands and related plantings, as well as the removal of historic fill and installation of natural soils, in coordination with EPA's remedial actions, is expected to accelerate the time required for recovery of the affected ecosystem.	Under Alternative 3, there would be development of a modest amount of plantings and some removal of historic fill in coordination with EPA's remedial actions. These actions could accelerate the time required for recovery of the affected ecosystem. However, there would be virtually no significant tree canopy and only small availability of plants and grasses, so the level of uplift provided would be more limited.
<b><i>Ability of the resources to recover with or without alternative actions</i></b>	Absent restoration, the project area would remain available for development as industrial, commercial, retail, and/or multi-unit residences. The ability of the resources to recover without alternative actions would be lost for decades, if not in perpetuity, without similar restoration occurring in the area.	With Alternative 2, the entire Project area would be converted from its current industrial use and would become a public greenspace. Land use restrictions would be imposed to prevent the use of this space from becoming converted into industrial, commercial, retail or multi-unit residence use in the future – providing the City of East Newark with a commitment to future public greenspace.	Under Alternative 3, the project area would be converted from industrial use and would become a public greenspace. However, the amount of space available for the creation of a park would be approximately half of the land provided in Alternative 2.
<b><i>Potential effects of the action on human health and safety</i></b>	Alternative 1 would not affect or change existing circumstances for human health and safety.	Alternative 2 would have no anticipated negative effect on human health and safety; rather the alternative would provide access to nature and increase	Alternative 3 would have no anticipated negative effect on human health and safety; rather the alternative would provide access to nature and



		quality of life and the human environment.	increased quality of life and the human environment.
<b><i>Consistency with relevant Federal, State, and tribal policies</i></b>	Alternative 1 is not inconsistent with any relevant Federal or State policies.	Alternative 2 is consistent and in accordance with both relevant Federal and State policies to restore natural resources injured by hazardous substances. In particular, the project would be required to meet applicable federal legal standards, as well as any applicable State and local permitting requirements.	Alternative 3 is consistent and in accordance with both relevant Federal and State policies to restore natural resources injured by hazardous substances. In particular, the project would be required to meet applicable federal legal standards, as well as any applicable State and local permitting requirements
<b><i>Compliance with applicable Federal, State, and tribal laws and tribal policies</i></b>	Because Alternative 1 would not provide for any restoration at this time, it would not facilitate achieving the Federal Trustees' goal of restoring injured natural resources and services.	Alternative 2 is consistent and is in accordance with CERCLA's requirement that damages recovered by the Federal Trustees for natural resource injuries be used for restoration or replacement of those resources. Moreover, it does so in the near term, rather than delay potential restoration until some unknown time and unknown form. Of the Alternatives considered, the proposed Preferred Alternative provides the greatest ecological uplift and benefit to the public.	Alternative 3 does not provide meaningful appropriate restoration towards the Federal Trustees' goal of restoring injured natural resources and services.

Below, the Federal Trustees provide more specific detail on their analysis of Project Alternatives, to include the No Action Alternative.

#### **4.4 No Action**

The No Action alternative may be used as a benchmark to evaluate the comparative benefit of other actions. Under the No Action (i.e., natural recovery) alternative, the Federal Trustees would take No Action to restore, rehabilitate, replace, and/or acquire the equivalent of injured natural resources, including their supporting habitats and the services they provide, at this time. While consideration of the No Action alternative is required by CERCLA, this alternative would not currently advance progress towards the requirements of CERCLA and the NRDAR process under CERCLA to restore injured natural resources and services. Rather, any restoration of injured natural resources and services would be delayed until some uncertain time in the future, at which time the Federal Trustees would need to evaluate whatever other restoration options may be available at that time. The Federal Trustees lack meaningful information on what future restoration options might be available and analysis of any such options would be exceedingly speculative at this time. That said, in light of current property availability and trends in the vicinity of the proposed Project location, the Federal Trustees reasonably anticipate that: (1) the exact Project location will not be available in the future, if the Federal Trustees take No Action at this time; and (2) similar locations along the Passaic River, within the DA Site, are likely to be quite limited, if any are available at all.

Because no action is taken at this time, this alternative also has no cost at this time.

#### **4.5 Preferred Alternative**

Based on the evaluation of all possible alternatives against the evaluation factors listed in Section 4.3 (and as summarized above and in Table 1), the Preferred Alternative is Alternative 2: the East Newark Riverfront Park Project, in which the PRP funds, designs, and constructs a five-acre project along the Passaic River in East Newark, New Jersey. Upon completion of the project, the Federal Trustees may grant the PRP with credit to partially offset its CERCLA liability for Natural Resource Damages.

The Federal Trustees foresee numerous benefits to the public from Alternative 2, a park plan that encompasses approximately five acres. As described in more detail in Sections 4.2.2 and 4.5, the Preferred Alternative would remove impervious cover, replacing concrete with clean fill, reducing the adverse impacts of stormwater runoff, while shoring up bulkhead areas on the waterfront. Project plans allow for the creation of numerous public walkways, as well as a significant amount of plantings of native grasses, pollinator plants, wetland area, understory, and tree canopy that would provide ecological uplift for migratory birds, pollinators and related species. Such habitat is rare in dense urban areas like the DA Site and ecological benefits to migratory and song-birds extend to the nearby BCSA and related areas along the Passaic watershed. In addition, Project plans include significant recreational enjoyment for local communities near the DA Site and the BCSA. Alternative 2 also allows for construction of an elevated riverfront walkway, would provide public access to and enjoyment of the Passaic River for an urban community that sorely lacks greenspace and options to appreciate the River. Educational signage may also be included. Because the Preferred Alternative would be located in the East Newark area, an economically depressed community impacted by past hazardous substance releases, the proposed Project offers Environmental Justice benefits. Plans for the Preferred Alternative also include a means to fund future operations and maintenance for the park, as well as the implementation of land use controls, ensuring that the benefits created by the Project are maintained into the future.

The proposed Preferred Alternative may change based on public input on this Draft ERP/EA, and/or additional engineering/scientific findings. If, during implementation, the Federal Trustees determine that significant changes are appropriate to the selected restoration alternative, additional public review and comment will be sought and the ERP/EA amended, as appropriate.

#### **4.6 Non-Preferred Alternative**

The Non-Preferred Alternative proposed many community-oriented elements that were appreciated by the Federal Trustees, but these did not meet the legal requirement to restore, replace, or acquire the equivalent of resources injured by the release of hazardous substances, nor did they compensate the public for service losses.<sup>23</sup> Major components of Alternative 3 that did not constitute appropriate restoration that met legally-mandated requirements for the granting of NRD credit included: art installations or a sculpture garden (art-viewing is not a creditable recreational use), play stations, restaurants, attractive buildings, and related options. When

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<sup>23</sup> 42 U.S.C. § 107(f)(1).



considering the ecological benefits that could be provided by Alternatives 2 and 3, the Federal Trustees expect that the development of greenspace and waterfront access for nearby urban dwellers was desirable and eligible for possible NRD credit. So from this standpoint, both Alternatives are meritorious; however, both the injury related public-use services and the ecological benefits provided by Alternative 3 were limited in comparison. Multiple project proposals required installing hardened surfaces and the amount of possible parking encompassed almost one-fourth of the proposal. In addition, the size of the Alternative 3 (2.3 acres) was almost half of the Alternative 2 footprint (5 acres), while shoreline/bulkhead improvements were similarly limited. The plans for Alternative 3 included fewer pathways for the public with limited planting options for shrubs, meadows and trees. The Federal Trustees further noted that the dense tree canopy provided by Alternative 2 would provide ecological uplift for the DA Site and the BCSA watershed by supporting the resting and breeding of migratory birds and songbirds in the vicinity of both Sites. Likewise, the proposed river viewing options for Alternative 3 were smaller and less attractive than the Preferred Alternative's elevated walkway that would allow the public to have a more expansive experience of the River. So after considering all proposed Project elements, the Federal Trustees recommend Alternative 2 as the Preferred Alternative.

## **Section 5.0    Environmental Assessment**

Restoration actions taken by the Federal Trustees under CERCLA and other federal laws are subject to NEPA, 42 U.S.C. § 4321 *et seq.*, and regulations at 40 C.F.R. §§ 1500-1508.<sup>24</sup> In general, agencies contemplating implementation of a major federal action must produce an Environmental Impact Statement (EIS) if the action is expected to have significant impacts on the quality of the human environment. When it is uncertain whether the proposed action is likely to have significant impacts, agencies prepare an EA to evaluate the need for an EIS. If the EA demonstrates that the proposed action will not significantly impact the quality of the human environment, the agencies issue a Finding of No Significant Impact (FONSI), which satisfies the requirements of NEPA, and no EIS is required.

This Draft ERP/EA complies with NEPA by:

- (1) Describing the purpose and need for restoration (Section 1.1);
- (2) Addressing public participation for this process (Section 1.2);
- (3) Identifying and describing restoration alternative actions (Section 4.2);
- (4) Summarizing the affected environment (Section 5.1); and
- (5) Analyzing environmental consequences (Section 5.3).

This document constitutes the EA for the proposed restoration of natural resources proposed in Alternative 2. The following will address the potential impact of proposed restoration actions on the quality of the physical, biological, and cultural environment at the proposed site of the Project. The Federal Trustees integrated the CERCLA and NEPA processes in this Draft ERP/EA, as recommended under 40 C.F.R. § 1500.2(c). The USFWS is acting as the lead federal agency for NEPA compliance for this Draft ERP/EA and NOAA is a cooperating agency.

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<sup>24</sup> This Draft ERP/EA is being prepared using the 1978 CEQ NEPA Regulations. NEPA reviews initiated prior to the effective date of the revised CEQ regulations may be conducted using the 1978 version of the regulations. The effective date of the 2020 CEQ NEPA Regulations is September 14, 2020. The NEPA review for this Draft ERP/EA began in October 2019; therefore, the Federal Trustee agencies have decided to proceed under the 1978 regulations.

NOAA may adopt the Final EA in accordance with 40 C.F.R. § 1506.3 and its agency-specific NEPA procedures.

## **5.1 Affected Environment**

This section describes the general environmental setting that may be affected by the restoration alternatives identified in this Draft ERP/EA (40 C.F.R. § 1502.15). It includes information on the physical, biological, and socioeconomic environment in the immediate vicinity of the Alternatives 2 and 3, as well as in the lower Passaic River, including those resources that may be affected either beneficially or adversely by the alternatives previously described and evaluated in Section 4.0.

The affected natural, recreational, and socioeconomic environment of the lower Passaic River is described in detail in the [2020 Final Natural Resource Damage Assessment Plan for the Diamond Alkali Superfund Site](#), and that information is incorporated here by reference.

The immediate affected environment includes a five-acre industrial-use property adjacent to the Passaic River, in East Newark, New Jersey. The property is currently comprised of degraded, compacted surfaces (concrete and asphalt), as well as crumbling parking areas, abandoned structures, decommissioned underground utilities and weathered bulkheads. Soils are compacted and highly disturbed, and engineered surfaces are underlain with Industrial Site Recovery Act<sup>25</sup> regulated historic fill. This area is adjacent to the Passaic River and its environs which are described in greater detail in Section 5.1.1 below.

### **5.1.1 Physical Environment**

The Passaic River drains a watershed of 935 square miles. It begins in the hilly, wooded regions of northern New Jersey, flows through the meadows and bogs of the Central Basin, passes through the gorge at Little Falls, and finally enters the suburban and industrialized areas of the Lower Valley. At the port city of Newark, the Passaic empties into Newark Bay, one of the major water bodies of the New York/New Jersey Harbor. The lower Passaic River watershed includes the northeastern New Jersey counties of Bergen, Essex, Hudson, and Passaic. Most of the area is developed, with these counties having a combined population in 2018 of approximately 3 million people (<https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?src=bkml>). Land use in the watershed is a mix of residential, commercial, and industrial. Intensive commercial and industrial uses also occur near Newark Bay, which is in proximity to an extensive infrastructure of roadway, railway, and marine transportation services.

### **5.1.2 Biological Resources<sup>26</sup>**

Biological resources are generally absent within the immediate proposed Project area; however, fish and shellfish are critical links in the food web in the adjacent Passaic River. They serve as

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<sup>25</sup> N.J.S.A 13:1K-6, *et seq.*

<sup>26</sup> Biological resources described in Section 5.1.2 are analogous to “living coastal and marine resources” cited in PEIS Sections 5.3.2.1 – 5.3.2.13 below.



both predators and prey in the food web, where they consume plants, insects, shellfish, worms, and other organisms. In turn, fish and shellfish are consumed by amphibians, reptiles, birds, and mammals. The Passaic River provides habitat to shellfish and resident and migratory fish, including several species of special concern. The resource is used by recreational and subsistence anglers and crabbers. Because many of the fish and shellfish within the DA Site and the BCSA, as well as related reaches of the Passaic River are in direct contact with contaminated sediment, water, and prey, they are an important indicator of the overall health of the ecosystem. Since 1982, numerous NJDEP fish advisories for consumption and sale of fish and shellfish have been in effect in the lower Passaic River.

Birds are an integral part of the ecosystem and provide a number of important ecosystem services such as seed distribution, plant pollination, and insect control. Birds are also an important source of prey to other species. Birds are valued by the public through participation in activities such as bird watching, nature study, and bird feeding.

Federal and State Trustees may have overlapping jurisdiction over the natural resources potentially affected in this matter. This shared trusteeship is reflected in the coordinated wildlife management practices and policies of the USFWS, NOAA and the State of New Jersey.

#### **5.1.3 Recreational Services**

Fish advisories were first issued for the lower Passaic River in 1982 for striped bass, American eel, bluefish, white perch and white catfish due to PCB contamination. While consumption of fish is banned on the Passaic River due to contamination, impacting the nature and extent of recreational angling, some recreational angling still occurs.

Current site conditions at the proposed Project site provide no recreational services or opportunities and there is no immediate public access to the Passaic River.

#### **5.1.4 Socioeconomic Trends**

Non-governmental entities and municipalities with river frontage on the lower 8.3 miles of the Passaic River have published master plans that call for the expansion and improvement of parks and open space that will lead to greater public access to the River and improved ecological habitat. For example, the Riverfront Park in the nearby City of Newark, which opened in 2013, is a prime example of how implementation of the Passaic River Coalition's master plan is leading to greater access to and use of the River.<sup>27</sup> Throughout the Lower Passaic River, college, high school and community rowing clubs use the river for recreation and competition.

#### **5.1.5 Environmental Justice**

In accordance with Executive Order 12898, *Environmental Justice* 1-103 (1994), federal agencies, including the Federal Trustees, are required to consider actions that may address adverse human health and/or environmental effects of their programs or activities on minority

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<sup>27</sup> <https://passaicriver.org/site/wp-content/uploads/2018/01/ARiverForThePeople2015.WebCopy.pdf>

and low-income populations. The EPA Environmental Justice (EJ) Mapper indicates that there are sensitive Environmental Justice communities within the Passaic River watershed, including the proposed Project area, based on environmental and demographic indicators (<https://www.epa.gov/ejscreen>). The population of East Newark, New Jersey is approximately 60% Hispanic or Latino and 13% are designated as living below the poverty line (see [https://factfinder.census.gov/faces/nav/jsf/pages/community\\_facts.xhtml?src=bkmk](https://factfinder.census.gov/faces/nav/jsf/pages/community_facts.xhtml?src=bkmk)). The East Newark community has been long-impacted by the releases or threatened releases of hazardous substances.

## **5.2 Scope of NEPA Analysis and Trustee Approach**

The Federal Trustees' NEPA analysis for this Draft ERP/EA includes consideration and utilization of the "Programmatic Environmental Impact Statement for Habitat Restoration Activities Implemented throughout the Coastal United States", completed by the NOAA Restoration Center in 2015 (PEIS). NOAA developed the PEIS to evaluate coastal habitat restoration activities funded or implemented through its existing programs. DOI documented its adoption of the PEIS with a Record of Decision, dated August 20, 2019 (84 Federal Register 45515). The PEIS includes an evaluation of typical impacts for a suite of restoration activities that are inclusive of the Preferred Alternative (Alternative 2) and the Non-preferred Alternative (Alternative 3), which are Alternative Project types identified in this Draft ERP/EA, including:

- Planning, Feasibility Studies, Design Engineering, and Permitting
- Implementation and Effectiveness Monitoring
- Fish, Wildlife, Vegetation Management: Invasive Species Control
- Wetland Restoration: Levee and Culvert Removal, Modification, and Set-Back
- Wetland Restoration: Restoration and Shoreline Stabilization
- Wetland Restoration: Wetland Restoration and Wetland Planting
- Road Upgrading and Decommissioning: Trail Restoration
- Freshwater Stream Restoration: Bank Restoration and Erosion Reduction
- Signage and Access Management
- Environmental Education Classes, Programs, Centers, Partnerships, and Materials

To avoid duplication of effort and streamline the NEPA analysis in this Draft ERP/EA, the Federal Trustees are using the applicable analysis from the PEIS as part of achieving NEPA compliance. Specific environmental impacts are summarized briefly below in Section 5.3. However, the full analysis provided in the PEIS is incorporated by reference (40 C.F.R. § 1502.21).

The PEIS is available at: <https://www.fisheries.noaa.gov/resource/document/restoration-center-programmatic-environmental-impact-statement>

## **5.3 Impacts of Proposed Alternatives**

When undertaking their analysis of short and long-term adverse and beneficial impacts of the Proposed Alternatives, the Federal Trustees considered the context for potential impacts (e.g.



duration and the geographic area), as well as intensity (e.g. the severity of potential impacts) before developing a determination on the significance of such impacts on the human environment. This analysis was undertaken to consider the No Action Alternative (Alternative 1), the Preferred Alternative (Alternative 2) and the Non-preferred Alternative (Alternative 3).

### **5.3.1 No Action Alternative (Alternative 1)**

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. Under the No Action alternative, there would be no project. Accordingly, there would be no direct impacts to the ecological services and public use, since no actions would be taken to restore, rehabilitate, replace, and/or acquire the equivalent of injured natural resources or the supporting habitats and services they provide. Likewise, project area water, geological/soil, and land cover would not be affected, because no restoration would occur. Terrestrial and aquatic habitats would not be affected, and the trajectory of any ecologically degraded areas would remain unchanged. There would be no effect on cultural and historic resources. Project area fish, wildlife, and threatened and endangered species would not be affected. Project area vegetation, habitats, fish, and wildlife would not be affected. Finally, potential recreational and ecological benefits to nearby Environmental Justice communities would not be realized.

If the No Action alternative was accepted, the environment would not benefit from the ecological uplift created by active restoration. In addition, existing habitat conditions may decline as habitat conditions continue to worsen under conditions of degraded natural processes. Based on this evaluation, the Federal Trustees concluded that the No Action Alternative would have either no effect or minor short-or long-term indirect adverse effects on the environment.

### **5.3.2 Alternative 2: East Newark Riverfront Park Project (Preferred Alternative) and Alternative 3: 2.3-Acre Esplanade Featuring Community Use Options (Non-Preferred Alternative)**

While the restoration activities under Alternative 3 are smaller in scope than those for Alternative 2 (for example, a limited project footprint), the impacts relating to greenspace creation involve similar issues for impact analysis related to human activities. Therefore, impacts under both alternatives are discussed in this section.

The PEIS impacts analysis includes a description of the impacts associated with the types of restoration activities proposed in this Draft ERP/EA. Activities under Alternative 2 and 3 with the potential for environmental impacts include the following on-the-ground restoration types which are described and analyzed in Sections 2.2.2 and 4.5.2 of the PEIS: Riverine and Coastal Habitat Restoration - Debris Removal; Fish, Wildlife, Vegetation Management - Invasive Species Control; Wetland Restoration; Wetland Planting; Trail Restoration; Freshwater Stream Restoration - Bank Restoration and Erosion Reduction; and Signage and Access Management. These restoration types are generally comparable to the proposed habitat restoration actions (upland, grassland, and wetland vegetative plantings; shoreline/bulkhead improvements and stabilization, construction of a water control structure with the means to provide a range of

hydrologic options, including open water, tidal and non-tidal pond, and wet meadow features;<sup>28</sup> and stormwater management) and recreational features (walkways, pervious paths, paved open areas, riverfront and elevated walkway and other public access proposed for Alternative 2 and the central plaza, promenade, rain porch, and viewing platform outlined with Alternative 3) proposed for both alternatives, as described in Sections 4.2.2 and 4.2.3 of this Draft ERP/EA and in the East Newark Riverfront Park SOW.

Technical assistance activities in support of these restoration activities include planning, feasibility studies, design and engineering, and permitting, implementation and effectiveness monitoring, and environmental education materials (informational and educational signage). These types of activities are also described and analyzed in Sections 2.2.1 and 4.5.1 of the PEIS. The Federal Trustees also determined that some activities and/or impacts associated with Alternatives 2 and 3 are not addressed in the PEIS. For these activities/impacts, the additional analysis is provided in PEIS Sections 5.3.2.12 and 5.3.2.13.

#### **5.3.2.1 Planning, Feasibility Studies, Design Engineering, and Permitting**

The PEIS Section 4.5.1.1 states the following regarding the potential impacts of Planning, Feasibility Studies, Design Engineering, and Permitting:

*“The completion of project planning, feasibility studies, design engineering studies, and permitting activities would cause indirect, long-term, beneficial impacts to the affected environment. These activities would support the continued implementation of the most successful projects and therefore result in effective and efficient habitat restoration. Some feasibility studies would cause direct, short-term, minor impacts through associated fieldwork, including drilling into soil or sediment with an augur, drill rig, or other tools to remove surface, subsurface, or core samples. These impacts would be very minor and localized to the project site given how small such areas are in relation to an overall project area. Similar short-term impacts to living coastal resources...essential fish habitat...and threatened and endangered species may include effects from handling, noise, and displacement (see PEIS Section 4.7).”*

The Federal Trustees have determined that all the restoration activities associated with Alternatives 2 and 3 may involve planning and/or feasibility studies and/or design engineering and/or permitting. Project permitting requirements are expected to address potential short and long term impacts. Likewise, after consulting the analysis provided in the PEIS, the Federal Trustees determined that the short and long-term adverse and beneficial impacts from planning, feasibility studies, design engineering, and permitting associated with Alternatives 2 and 3 fall within the range of alternatives and scope of potential environmental impacts analyzed in the PEIS. The Federal Trustees have determined that these actions do not have significant adverse impacts on the human environment based on consideration of the context and intensity of the likely effects (40 C.F.R. §§ 1508.27(a) and (b)).

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<sup>28</sup> Hydrologic reconnection to the Passaic River would not be implemented until after the EPA remediation of the DA Site has been completed and there is no risk of exposure of the human environment to unacceptable levels of in-river contaminants.



### 5.3.2.2 Implementation and Effectiveness Monitoring

The PEIS Section 4.5.1.2 states the following regarding the potential impacts of Implementation and Effectiveness Monitoring:

*“The environmental consequences of the initial implementation of restoration monitoring could cause direct and indirect, short-term, minor, localized, adverse impacts. Impacts to threatened and endangered species may include effects from handling, noise, turbidity, displacement, and mortality (see PEIS Section 4.7). These impacts would result from activities associated with in-water or on-site observation or experimentation, such as the use of equipment for sampling or monitoring of organisms. Although these adverse impacts may occur, the monitoring products would result in indirect, long-term, minor-to-major beneficial impacts that extend beyond the project site. The benefits would allow future restoration proposals to be planned with better information and implemented more effectively by using the most successful methods, materials, or equipment for achieving the goal of restoration.”*

Both Alternatives are expected to include some level of local, short-term noise, turbidity and immediate displacement during monitoring activities. The Federal Trustees considered the PEIS analysis on these matters and have determined that the short and long-term adverse and beneficial impacts from implementation and effectiveness monitoring associated with Alternatives 2 and 3 fall within the range of alternatives and scope of potential environmental impacts analyzed in the PEIS. The Federal Trustees have determined that these actions do not have significant adverse impacts on the human environment based on consideration of the context and intensity of the likely effects (40 C.F.R §§ 1508.27(a) and (b)).

### 5.3.2.3 Riverine and Coastal Habitat Restoration: Debris Removal

The PEIS Section 4.5.2.2 states the following regarding the potential impacts of Debris Removal:

*“Most debris removal activities would have both adverse and beneficial impacts on the affected environment in the project area, but would ultimately restore habitat for marine species and reduce the hazards of debris to trust resources. Generally, debris removal projects would cause direct, short- and long-term, localized, minor to moderate beneficial impacts. By identifying, locating, and removing unwanted debris from the affected environments, beneficial impacts to geology, soils, and land use and recreation would occur simply because areas are cleaner. In some cases (e.g., general solid waste and unwanted natural debris), debris would re-accumulate in the project area and benefits would be short-lived. In other cases (e.g., derelict fishing gear, abandoned vessels, and pilings), pollution would no longer occur and benefits would be local and long-term or even permanent in some cases. Whether short- or long-term, there would be direct, moderate beneficial impacts to water quality when debris is removed and the debris or associated leachate is no longer present in the coastal environment. Implementation of debris removal projects would also result in indirect, long-term, moderate beneficial impacts on living coastal resources and essential fish habitat, and on the threatened and endangered species because habitats would be cleared of potentially injurious debris – these impacts would likely extend beyond the project site.”*

Alternatives 2 and 3 include the removal of historic fill and its replacement with natural soils, as well as site grading. The Federal Trustees considered the potential short and long-term adverse and beneficial impacts of debris-removal projects outlined in the PEIS. Upon consideration of this analysis, the Federal Trustees determined that the impacts from debris removal associated with Alternatives 2 and 3 fall within the range of alternatives and scope of potential environmental impacts analyzed in the PEIS. The Federal Trustees have determined that these actions do not have significant adverse impacts on the human environment based on consideration of the context and intensity of the likely effects (40 C.F.R § 1508.27(a) and (b)).

#### **5.3.2.4 Fish, Wildlife, Vegetation Management: Invasive Species Control**

The PEIS Section 4.5.2.4.1 states the following regarding the potential impacts of Invasive Species Control:

*“The impacts of invasive species removal ultimately benefit the immediate ecosystem by allowing native species the chance to re-establish. ... Generally, invasive species removal activities may cause direct, short-term, localized, minor adverse impacts to the affected area from mechanical or human activities. For terrestrial and aquatic invasive plant removal, direct adverse impacts to geology and soils may include compaction, whereas impacts to in-water substrate and water resources may include ephemeral sedimentation, turbidity, or other water quality impacts. However, long-term moderate to major beneficial impacts to geology and soils, water resources, coastal resources and essential fish habitat, and threatened and endangered species would result as non-native species are replaced by diverse native plant and animal communities.”*

*“Herbicide use for removal of invasive plant species could cause direct, short-term, moderate, adverse impacts to geology and soils, water, air, living coastal resources and essential fish habitat, threatened and endangered species, and land use and recreation. These impacts would result from the potential for lethal effects on soil biota and the short-term loss of shading and habitat for prey species provided by the invasive plant. The potential impacts to birds, aquatic organisms, and terrestrial organisms will be mitigated by the use of the least toxic herbicides, surfactants, and spray pattern indicators available, but sub-lethal impacts are possible. These include impacts to reproduction, survival to adulthood, and disrupted food webs (NMFS 2005). Potential impacts to non-target plant species are reduced when proper application methods are prescribed, but rainfall and wind may cause herbicides to leach into the surrounding soil or be transported to non-invasive plants, causing unintentional damage. Appropriate herbicide application methods should reduce the risk of such herbicide drift. Suggested methods include backpack spraying, cut stump, and hack-and-squirt; however, other methods may be used as the site or target species dictates. These methods also greatly reduce the chance of exposing surface waters and their ecological communities to these chemicals due to the high level of applicator control. Methods that do not require surfactants would be used when possible. If necessary, surfactants would be limited to products determined to be the least toxic to the terrestrial, aquatic, and marine/estuarine organisms found in the immediate area. Herbicide tracers (i.e., spray pattern indicators) should be used whenever possible to track herbicide application progress. ... Where feasible, the area will be regularly monitored for regrowth of the target or new invasive species. Generally, use of herbicides in project areas would be conducted according to established protocols for the locality, as determined by a licensed herbicide*



*applicator. Such protocols would include information and guidelines for appropriate chemical to be used, timing, amounts, application methods, and safety procedures relevant to the herbicide application.”*

Alternatives 2 and 3 involve the replacement of asphalt and hardened surfaces with differing amounts of grasses, trees, shrubs, meadows and related features. Invasive plant species removal is anticipated in advance of vegetative plantings, as needed. After review of PEIS analysis, the Federal Trustees have determined that the short and long-term adverse and beneficial impacts from invasive species removal associated with Alternatives 2 and 3 fall within the range of alternatives and scope of potential environmental impacts analyzed in the PEIS. The Federal Trustees have determined that these actions do not have significant adverse impacts on the human environment based on consideration of the context and intensity of the likely effects (40 C.F.R. § 1508.27(a) and (b)).

### **5.3.2.5 Wetland Restoration, Levee and Culvert Removal, Modification, and Set-Back**

Section 2.2.2.11.1 of the PEIS addresses 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. This impacts analysis is limited to any tidal connection that might occur after the EPA remedial actions are completed, limiting the potential for the site to be contaminated by current levels within the Passaic River and the risk of exposure of the human environment to unacceptable levels of in-river contaminants. The PEIS Section 4.5.2.11.1 states the following regarding the potential impacts of these types of activities:

*“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 resources and essential fish habitat, 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 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.”*

*“These restoration activities would provide direct and indirect benefits to geology and soils, water, living coastal resources and essential fish habitat, and threatened and endangered species. These projects result in benefits to riparian, stream and river channel habitats, and shoreline habitats such as wetlands, mangrove swamps, beaches, and mudflat areas. 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 major 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. The land use in the floodplain, including any potentially culturally sensitive areas, would change as the water resources in the floodplain changed. Because land use would stabilize in the floodplain over time, the impact would be minor.”*

Both Alternatives 2 and 3 include proposals for some form of wetland feature. Under Project planning, any proposed wetland restoration would be undertaken in coordination with EPA remedial planning requirements. After review of the PEIS’ analysis, the Federal Trustees have determined that the short and long-term adverse and beneficial impacts from wetland restoration involving restoring hydrological connection under Alternatives 2 and 3 alternative (water control structure with the means to provide a range of hydrologic options; open water, tidal and non-tidal pond, and wet meadow features) fall within the range of alternatives and scope of potential environmental impacts analyzed in the PEIS. The Federal Trustees have determined that these actions do not have significant adverse impacts on the human environment based on consideration of the context and intensity of the likely effects (40 C.F.R § 1508.27(a) and (b)).

#### **5.3.2.6 Wetland Restoration and Shoreline Stabilization**

Both Alternatives 2 and 3 included proposals relating to some amount of wetland creation, as well as necessary bulkhead stabilization. The PEIS Section 4.5.2.11.2 states the following regarding the potential impacts of Wetland Restoration and Shoreline Stabilization Techniques:

*“Construction impacts from sediment removal, materials placement, and shoreline stabilization activities are similar, and would cause direct and indirect, short-term, localized, minor adverse impacts on geology and soils, water, living coastal resources and essential fish habitat, and threatened and endangered species during the implementation phase of the projects.”*

*“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 from off-road construction equipment, on-road hauling, construction worker employee commuting vehicles, and fugitive dust emissions from paved roads and earthmoving activities.”*

*“Impacts to living coastal resources, essential fish habitat, and threatened and endangered species may include effects from handling, noise, turbidity, contaminants, changes to hydrology, and displacement (see PEIS Section 4.7). In the case of any activities using heavy machinery to conduct restoration work for marsh restoration activities, potential impacts are related to compaction of the soils, leaking petroleum products, and increased turbidity at the restoration site. Many of these impacts would be ameliorated through the use of BMPs.”*



*“These restoration activities may impact vegetation on the project site or nearby. Impacts to vegetation should be minimal, as the most frequently removed mature plants would not be native to the site or would be invasive species. For instance, shrub and tree species would be removed if the end goal is a habitat dominated by wetland obligate species. The removed plant species may not provide the same quality of habitat for fish as the goal habitat and consequently the overall impact of this removal is low. In instances where sediment and vegetation are not removed from the site, those working on the site may potentially trample existing vegetation or unintentionally introduce non-native species, but this would be kept to a minimum through the use of BMPs.”*

*“Increased water turbidity and temporary decreases in water quality may result from sediment removal, materials placement, and shoreline stabilization activities, which may in turn impact living resources in the area. Behavior of species that use wetlands impacted by this restoration activity may be temporarily modified. Mitigation for potential impacts would focus on implementation of BMPs. Direct short-term, localized moderate impacts would be expected on benthic fauna and in fauna smothered by sediment placement. Materials with contaminant concentrations consistent with published sediment quality guidelines and background levels rarely impact biota, and will be considered non-significant.”*

*“After construction, these projects would result in direct and indirect long-term or permanent, moderate to major beneficial impacts to geology and soils, water, living coastal resources and essential fish habitat, and threatened and endangered species, and minor beneficial impacts related to socioeconomic resources as a result of increased tourism opportunities that could result from an improved resource.”*

After analysis of the PEIS, the Federal Trustees have determined that the short and long-term adverse and beneficial impacts from wetland restoration associated with Alternatives 2 and 3 (water control structure with the means to provide a range of hydrologic options; open water, tidal and non-tidal pond, and wet meadow features) fall within the range of alternatives and scope of potential environmental impacts analyzed in the PEIS. The Federal Trustees have determined that these actions do not have significant adverse impacts on the human environment based on consideration of the context and intensity of the likely effects (40 C.F.R § 1508.27(a) and (b)).

#### **5.3.2.7 Wetland Restoration, Wetland Planting**

The PEIS Section 4.5.2.11.3 states the following regarding the potential impacts of Wetland Planting:

*“Wetland planting may occur as a separate restoration activity or in combination with other restoration types described in this [PEIS] document. Planting may cause short-term, direct adverse impacts to living coastal and marine resources when existing vegetation is trampled during the donor harvest or planting process. Planting is generally short-term in duration, lasting days to weeks, but the length of time between the restoration efforts that prepare a site for planting and when planting is begun may be several months, as planting cannot be completed outside the local growing season. For this reason, active wetland restoration activities may last*

*over a year, even at smaller sites. Short-term damage to stands of healthy wetland vegetation may occur where native species are harvested from donor sites using species-appropriate techniques. The growth habit and length of the growing season determines how rapidly a donor site would recover. Generally, the benefits of using a local, native plant source outweigh the damage to the donor site, which is temporary. For restoration activities that involve building native plant nurseries, although the nursery use may be long-term, the impacts are low because the sites are generally constructed in areas that do not have existing habitat value (e.g., a school playground, a disturbed upland area, or former sewage treatment plant or aquaculture pond). Minor adverse impacts to cultural and historic resources may occur during wetland restoration, when historic structures are present within a project site.”*

*“Long-term, moderate beneficial impacts to water resources, living coastal and marine resources and threatened and endangered species would occur due to the erosion reduction and increased shelter provided by wetland plants. Wetland planting activities would result in beneficial impacts by restoring or creating wetland and/or shallow-water habitats that provide areas for feeding and shelter for fish, as well as nutrient cycling and carbon sequestration and storage capacity. Changes in land use would be similar to those described above in Section 4.5.2.11.2. Minor beneficial impacts related to socioeconomic resources may result from increased tourism opportunities that could develop around an improved resource.”*

The Federal Trustees have determined that the short and long-term adverse and beneficial impacts from wetland, upland, and grassland vegetative plantings associated with Alternatives 2 and 3 fall within the range of alternatives and scope of potential environmental impacts analyzed in the PEIS. The Federal Trustees have determined that these actions do not have significant adverse impacts on the human environment based on consideration of the context and intensity of the likely effects (40 C.F.R § 1508.27(a) and (b)).

#### **5.3.2.8 Trail/ Pathway Construction/Restoration**

Both Alternatives 2 and 3 include the construction of public pathways, paved open areas, and other access features, as well as proposals for some amount of public parking. The PEIS Section 4.5.2.7 states the following regarding the potential impacts of Trail Construction and Restoration (analyzed here to address the proposed installation of a variety of semi-pervious paths, paved walkways and open areas, as well as other access options):

*“Road upgradings and decommissioning, and trail restoration 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, moderate to major 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.”*

*“Trail restoration projects would take place in all types of habitat areas; however, they have historically occurred most frequently in riparian and upland affected environments. These activities would cause direct, short-term, minor, adverse impacts on geology and soils, water,*



*and air quality, and would cause direct and indirect, short-term, minor, adverse impacts on living coastal resources and essential fish habitat, and threatened and endangered species, resulting from temporary construction activities, as previously described. There may be direct, long-term minor to moderate adverse impacts that result from increased shading over previously exposed habitat that depends on photosynthetic processes. Areas that experience such impacts are relatively small, and may be reduced with BMPs (e.g., increased spacing of boardwalk boards). Trail restoration projects would cause indirect, short-term, minor impacts on land use, resulting from construction activities required to restore the trail (e.g., temporarily blocking trails with machinery). Impacts to threatened and endangered species may include effects from handling, noise, turbidity, contaminant exposure, altered hydrology, additional habitat quality/quantity, displacement, and mortality (see PEIS Section 4.7).”*

*“Trail restoration projects would also cause direct and indirect, long-term, minor to major beneficial impacts on geology and soils, water, living coastal resources and essential fish habitat, threatened and endangered species, cultural and historic resources, and socioeconomics. The beneficial impacts would result from reduced erosion potential and rates after projects were implemented and from both allowing and controlling access to sensitive areas.”*

The Federal Trustees have determined that the short and long-term adverse and beneficial impacts from trail construction/restoration, including elevated walkways, pervious paths, paved open areas, riverfront promenade and viewing platform and other public access features associated with Alternatives 2 and 3 fall within the range of alternatives and scope of potential environmental impacts analyzed in the PEIS.<sup>29</sup> The Federal Trustees have determined that these actions do not have significant adverse impacts on the human environment based on consideration of the context and intensity of the likely effects (40 C.F.R § 1508.27(a) and (b)).

### **5.3.2.9 Freshwater Stream Restoration, Bank Restoration and Erosion Reduction**

The PEIS Section 4.5.2.5.2 states the following regarding the potential impacts of Bank Restoration and Erosion Reduction:

*“Bank restoration and erosion reduction activities would cause direct and indirect, short-term, minor adverse impacts on geology and soils, water, air quality, living coastal resources and essential fish habitat, and threatened and endangered species during the on-the-ground implementation phase. Impacts to threatened and endangered species may include effects from handling, noise, turbidity, contaminant exposure, altered hydrology, additional habitat quality/quantity, displacement, and mortality (see PEIS Section 4.7). These impacts would result from installation of natural features or geotextile materials, stabilization of slopes, removal of bulkheads or other artificial shoreline armoring, or introduction of new vegetation (planting). Depending on the nature of each project, the installation of materials and stabilization of slopes could require small or large earth-moving machines, which would cause minor amounts of localized soil compaction, may introduce non-native species if not properly decontaminated, and*

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<sup>29</sup> Activities associated with a possible kayak or similar boat launch feature, though not specifically described in the PEIS, generally fall within the description of “Road Upgrading and Decommissioning; Trail Restoration” in Section 2.2.2.7 of the PEIS and will likely result in similar types of benefits (i.e., provide better public access to natural areas) and environmental impacts

*other impacts as described above. The duration of impacts typically range from weeks to months, depending on the length of the shoreline or stream bank. Wildlife would also be displaced temporarily during construction activities. By protecting erodible or unstable soils, bank restoration and erosion reduction would result in indirect, long-term, minor and moderate beneficial impacts to water quality and benthic habitat in wetlands, water bodies, and other sensitive riparian or coastal habitats where benthic habitat in wetlands, water bodies, and other sensitive riparian or coastal habitats where erosion is a problem beyond the project site. Natural processes (beginning after planting) would help stabilize banks and shorelines. Installation of biologs or geotextile materials also would stabilize areas of high erosion.”*

*“Habitat restoration practices that are most likely to take place on stream banks, riparian habitat, and coastal areas usually involve revegetation, placement of woody debris, stabilization of banks, removal of bulkheads or other artificial shoreline armor, and stormwater management practices. Revegetation usually results in minor disturbance of the surrounding habitat, which is quickly remedied by the revegetation of the area itself. However, the placement of woody debris and other wildlife habitat features, stabilization of banks, removal of bulkheads or other artificial shoreline armor, and stormwater management practices may require the use of heavy machinery. The use of heavy machinery can often cause damage to the surrounding riparian area such as clearing of existing vegetation, compaction, and disruption of the soil. This, in turn, may cause sedimentation in the adjacent stream, with turbidity plumes typically being short-term and quickly dispersed by the river current.”*

*“The restoration activity will also have direct, short- and long-term, minor and moderate, adverse and beneficial impacts to land use and recreation because increases in recreational opportunity will likely occur in the project area and beyond in the larger river system in the long term; however, short-term use may be curtailed during construction activities.”*

Alternatives 2 and 3 include opportunities for shoreline stabilization efforts and the installation of clean fill that would assist with stormwater runoff issues. After considering the analysis in the PEIS, the Federal Trustees have determined that the short and long-term adverse and beneficial impacts from stormwater management activities and shoreline/bulkhead protection planning associated with Alternatives 2 and 3 fall within the range of alternatives and scope of potential environmental impacts analyzed in the PEIS. The Federal Trustees have determined that these actions do not have significant adverse impacts on the human environment based on consideration of the context and intensity of the likely effects (40 C.F.R § 1508.27(a) and (b)).

#### **5.3.2.10 Signage and Access Management**

The PEIS Section 4.5.2.5.2 states the following regarding the potential impacts of Signage and Access Management:

*“Temporary or permanent fencing, signage, or netting is intended to eliminate or reduce degradation of streams, streambanks, lakeshores, riparian/wetland vegetation, and unstable upland slopes. The effects of livestock grazing, human access, and vehicle traffic on riparian and instream habitats can be detrimental to habitat quality. . .”*

*“The installation of temporary or permanent fencing, signage, or netting would have direct,*



*long-term (fencing would likely have a long-term impact, but not netting), moderate beneficial impacts on the geology and soils of the project site, and on water resources, living coastal and marine resources and EFH, and threatened and endangered species beyond the project site. The benefits of these actions are reduced disturbance by humans, animals, and vehicles. . .”*

Construction related to plans with both Alternatives 2 and 3 could require appropriate signage. The Federal Trustees have determined that the short and long-term adverse and beneficial impacts from any required fencing, netting and/or signage activities associated with Alternatives 2 and 3 fall within the range of alternatives and scope of potential environmental impacts analyzed in the PEIS. The Federal Trustees have determined that these actions do not have significant adverse impacts on the human environment, based on consideration of the context and intensity of the likely effects (40 C.F.R § 1508.27(a) and (b)).

#### **5.3.2.11 Environmental Education Classes, Programs, Centers, Partnerships, and Materials**

The PEIS Section 4.5.1.4 states the following regarding the potential impacts of Environmental Education Classes, Programs, Centers, Partnerships, and Materials:

*“Projects that provide environmental educational classes, programs, and centers; encourage and maintain partnerships with local school systems; and fund the development of education materials would have direct and indirect, long-term, minor beneficial impacts on geology and soils, water resources, living coastal resources and essential fish habitat, threatened and endangered species, land use, and socioeconomics. The beneficial impacts would result because education of local citizens and youth about environmental issues in the community and beyond, habitat restoration, and conservation would promote environmental stewardship, an understanding of living coastal resources and environmental issues, and a sense of community pride. Educational materials developed would encourage conservation and environmental stewardship, and educate the public on the benefits of habitat restoration projects.”*

*“Projects that train volunteers to participate in restoration projects and provide outreach and education to the community would have indirect, long-term, minor beneficial impacts on all resources because training and involvement of local citizens in environmental projects would promote environmental stewardship, an understanding of living coastal resources and environmental issues, and a sense of community pride. Projects are not likely to adversely impact threatened and endangered species.”*

Alternatives 2 and 3 could include an educational feature promoting the benefits of urban greenspace. The Federal Trustees have determined that the short and long-term adverse and beneficial impacts from installation of informational and educational signage associated with both Alternatives fall within the range of alternatives and scope of potential environmental impacts analyzed in the PEIS. The Federal Trustees have determined that these actions do not have significant adverse impacts on the human environment based on consideration of the context and intensity of the likely effects (40 C.F.R § 1508.27(a) and (b)).

### **5.3.2.12 Impacts Not Addressed in the PEIS - Environmental Justice**

Riverine and coastal habitat restoration projects that include environmental justice are not directly addressed in the PEIS impacts analysis; therefore, the Federal Trustees have provided additional NEPA analysis for potential impacts to Environmental Justice communities.

Restoration activities supported by NOAA and USFWS help to ensure the enhancement of environmental quality for all populations in New Jersey. The Federal Trustees have determined that all proposed restoration activities would provide long-term or permanent beneficial impacts to the Environmental Justice communities described in Sections 4.2.2; 4.5 and 5.1.5 by improving the quality of the natural environment and ecosystem services, and providing recreational and educational benefits to local communities. None of the alternatives are expected to adversely impact minority or low-income populations.

The Federal Trustees have determined that the restoration activities associated with Alternatives 2 and 3 are relevant to this impact category. The Federal Trustees have determined that the impacts from Alternatives 2 and 3 do not have significant adverse impacts to Environmental Justice given the context and intensity of the Alternatives' likely effects. (40 C.F.R. § 1508.27(a) and (b))

Restoration activities that would allow existing Passaic River baseflow to inundate the site via implementing the proposed (tidal) hydrologic connection prior to the EPA remediation of the river (the bank-to-bank capping remedy for the lower 8.3 miles), could expose the proposed Project to contamination from existing river conditions. To reduce this impact, the Federal Trustees would limit support for a tidal hydrologic connection to only occur after EPA's remedial action is completed.

### **5.3.2.13 Activities Not Addressed in the PEIS**

The PEIS lists a variety of complex project types with potential impacts that may fall outside of the PEIS environmental consequences analysis (identified in Table 10 of the PEIS). Riverine and coastal habitat restoration projects that include debris removal are generally excluded from the PEIS analysis when the debris contains high levels of contaminants and/or industrial waste. The PRP has committed to undertake all required site-investigations and remedial work at the proposed Project site. The PRP shall design and construct the Project to prevent or minimize, to the extent practicable, the transport of significant debris, sediment and CERCLA hazardous substances (including, but not limited to, dioxins, PCBs, heavy metals) from or into the Passaic River. Project planning and engineered designs shall maximize protection of the project site from CERCLA-related contamination by the Passaic River, while remaining compatible with EPA response actions at or near the Passaic River. In general, to achieve these goals, the restoration and enhancement activities at the project site can and may involve modification of the existing site grade/topographic change via vegetative planting and engineered structures.



### *Contaminated Sediment/Debris Removal*

For Alternatives 2 and 3, sediment removal and/or dredging of areas affected by contamination would likely result in increased injury to wetlands and associated living coastal resources, representing short-term minor to moderate adverse impacts due to physical habitat disturbance, including the removal of well-developed wetland geology, soils, and existing vegetation. Direct, short-term, localized, minor adverse effects to air quality and noise are expected at the Project site due to the operation of heavy equipment and other on-the-ground activities. Direct and indirect, short-term moderate beneficial impacts to socioeconomic resources are expected from job creation as a result from the funding spent on the Project. Following sediment and debris removal, clean fill would need to be brought in and the site revegetated. Losses in habitat value would occur until the dredged areas recovered from remedial activities. The removal of contaminated sediments and debris would have short or long-term moderate beneficial impacts to water quality and soils, and short or long-term moderate beneficial impacts on living coastal resources and threatened and endangered species because habitats would be cleared of potentially deleterious contamination. However, the site should be monitored for potential recontamination from external sources, which may reinjure wetlands and habitats and put living coastal resources at risk of further exposure to contaminants.

There is potential for sediment/debris removal to adversely impact cultural and historic resources. Care would be taken to ensure such properties are avoided during removal, and coordination with the State Historic Preservation Officer would be carried out, as appropriate. Short or long-term beneficial impacts to recreation would occur simply because the area is cleaner.

The Federal Trustees have determined that the impacts from contaminated sediments or debris removal associated with Alternatives 2 and 3 will not have significant adverse impacts on the human environment based on a consideration of the context and intensity of likely effects. (40 C.F.R. § 1508.27(a) and (b)).

#### **5.3.2.13 Summary of Impacts**

Based on the analysis in this Draft ERP/EA, the Federal Trustees have made the determination that the proposed restoration activities associated with both the Preferred Alternative (Alternative 2) and the Non-preferred Alternative (Alternative 3) are within the range of alternatives and scope of potential environmental consequences analyzed in the PEIS (with the exception of contaminated sediment/debris removal which is discussed in PEIS Section 5.3.2.13), and do not have significant adverse impacts. Moreover, the Federal Trustees have fully considered and determined that there are no geographic, project, or site-specific conditions, sensitivities, unique habitat, or resources (with the exception of Environmental Justice, which is discussed in Section 5.3.2.12) that warrant additional NEPA analyses beyond what is provided in the PEIS.

As the Project design is further refined or if there are proposed changes to the Project, or if it is determined that the Project may no longer fall within the scope of the PEIS or has impacts exceeding those described in the PEIS or in this Draft ERP/EA, additional NEPA review may be warranted--in which case, any necessary environmental analysis would be conducted and

provided in a subsequent NEPA document (e.g., Supplemental EA) which would be subject to public review.

Based on the analysis of environmental consequences in this Draft ERP/EA, the Federal Trustees' preliminary findings indicate that the Alternatives evaluated in this Draft ERP/EA would not result in any significant impacts on the human environment in accordance with the guidelines for determining the significance of proposed federal actions (40 C.F.R. 1508.27). All potential beneficial and adverse impacts have been considered in reaching this conclusion. After considering and addressing public comments on the Draft ERP/EA and if the findings are confirmed, the Federal Trustee agencies will issue a FONSI which would fulfill and conclude all requirements for compliance with NEPA by the Federal Trustees.

## **5.4 Cumulative Impacts Analysis**

### **5.4.1 Cumulative Impacts of No Action Alternative**

The No Action Alternative (Alternative 1) would have long-term, minor adverse effects to physical and biological resources in the Passaic River watershed, since no active restoration would occur. Natural resources would not return to baseline and the public would not be compensated for interim losses. 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.

### **5.4.2 Cumulative Impacts of the Preferred and Non-Preferred Alternative**

Alternatives 2 (Preferred) and 3 (Non-preferred) would have no major adverse impacts on habitats, lands, or waterways in the Passaic River watershed. Both Alternatives may result in minor, short-term adverse impacts and both short and long-term beneficial impacts to habitats and the natural resources they support. When considered in tandem with other past, present, and reasonably foreseeable future actions within the Passaic River watershed, Alternatives 2 and 3 are not anticipated to have adverse cumulative impacts. Direct and indirect adverse impacts are likely to be short-term and will occur primarily during and immediately after periods of active construction. Both Alternatives are expected to result in long-term, beneficial cumulative impacts on the human environment since it may positively impact the area's land use, through habitat restoration and land preservation, as well as heightened opportunities for recreational use benefiting nearby low-income communities with greenspace and public access to the River. Cumulative project impacts would not be significant or occur at a regional scale.

## **Section 6.0 Compliance with other Laws and Regulations**

As appropriate, the Federal 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 Project. Compliance with these authorities, and other authorities not listed, is considered part of the restoration planning process. Any Project implemented will be responsible for obtaining necessary permits and complying with relevant statutes, regulations, and policies.



## **6.1 Federal Laws**

### **6.1.1 National Environmental Policy Act**

The NEPA of 1969, as amended (83 Stat. 852; 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 Federal Trustees will determine, based on the facts and recommendations in this document and input from the public, whether this EA supports a FONSI or whether an EIS should be prepared.

### **6.1.2 Clean Water Act**

The Clean Water Act of 1977, as amended (CWA; 33 U.S.C. § 1251 *et seq.*), is the principle 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 to conduct 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 PRP will be required to obtain all necessary permits prior to commencing any construction activities.

### **6.1.3 Fish and Wildlife Coordination Act**

The Fish and Wildlife Coordination Act (48 Stat. 401; 16 U.S.C. § 661, *et seq.*) requires that Federal agencies consult with the USWFS, 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.

### **6.1.4 Endangered Species Act**

The ESA of 1973, as amended (87 Stat. 884; 16 U.S.C. § 1531 *et seq.*), is intended to protect species that are threatened with extinction. It provides for the conservation of 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 Affected Environment supports threatened and endangered species and their habitat. The Federal Trustees will conduct required ESA consultation prior to any Project implementation.

### **6.1.5 Migratory Bird Treaty Act**

The Migratory Bird Treaty Act of 1918, as amended (40 Stat. 755; 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 in the Preferred Alternative would not result in the taking, killing, or possession of any migratory birds. Quite the opposite –

the proposed planting of tree canopy in an urban setting that is bereft of collective trees is particularly supporting of migratory birds.

#### **6.1.6 National Historic Preservation Act**

The National Historic Preservation Act (NHPA) of 1966, as amended (80 Stat. 915; 54 U.S.C. § 300101 *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). Federal agencies will consult with SHPO and Tribal Historic Preservation Officers (if applicable) to identify historic properties that may be affected by the proposed Project and to assess potential adverse effects of restoration actions.

#### **6.1.7 Occupational Safety and Health Act**

The Occupational Safety and Health Act (OSHA) of 1970, as amended (84 Stat. 1590; 29 U.S.C. § 651 *et seq.*), governs the health and safety of employees from exposure to recognized hazards, such as exposure to toxic chemicals, excessive noise, mechanical dangers, and unsanitary conditions. The PRP will be required to ensure that restoration work conducted on the proposed Project planning and construction will comply with OSHA requirements.

#### **6.1.8 Americans With Disabilities Act**

The Americans with Disabilities Act (ADA) of 1990 (42 U.S.C. § 12101), is a civil rights law that prohibits discrimination against individuals with disabilities in all areas of public life, including jobs, schools, transportation, and all public and private places that are open to the general public. The purpose of the law is to ensure that people with disabilities have the same rights as opportunities as everyone else. The proposed restoration action will comply with ADA requirements.

#### **6.1.9 Coastal Zone Management Act**

The Coastal Zone Management Act (CZMA) of 1972, as amended (86 Stat. 1280; 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 restoration action will comply with the CZMA and be consistent with state policy.

#### **6.1.10 Magnuson-Stevens Fishery and Conservation Management Act**

The Magnuson-Stevens Fishery and Conservation Management Act (MSFCMA) of 1996, as amended (16 U.S.C. § 1801 *et seq.*), requires Federal agencies to consult with the National Marine Fisheries Service when their actions or activities may adversely affect habitat identified as essential fish habitat. The Federal Trustees will require any applicable MSFCMA consultation prior to implementing any pertinent restoration actions.



### **6.1.11 Rivers and Harbors Act**

The Rivers and Harbors Appropriation Act of 1899 (90 Stat. 2795; 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 PRP will be required to have all necessary permits prior to initiating construction activities.

### **6.1.12 Floodplain Management, Executive Order 11998**

Executive Order 11998 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 Federal Trustees plan to ensure the PRP's compliance with this Executive Order.

### **6.1.13 Protection of Wetlands, Executive Order 11990**

Executive Order 11990 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 PRP will ensure compliance with this Executive Order as part of the state permitting process.

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

Executive Order 12898 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 also directs each agency to develop a strategy for implementing Environmental Justice. The Order is also intended to promote nondiscrimination in Federal programs that affect human health and the environment, as well as provide minority and low-income community access to public information and public participation. The terms of Executive Order 12898 were considered in the process of weighing all Project Alternatives. The Federal Trustees determined that providing a Project with multiple ecological and recreational components would benefit nearby low-income and minority residents who currently face diminished recreational opportunities, limited local greenspace and no practical access to the Passaic River.

## **6.2 State and Local Laws**

The PRP will be responsible for ensuring compliance with all applicable Federal, State and local laws and regulations. Specifically, the PRP is also responsible for obtaining necessary State and local permits, as well as the requirement to comply with land-use requirements.

## Section 7.0 Summary

This Draft ERP/EA evaluates the potential impacts of proposed early restoration Project proposals for park options in East Newark, New Jersey within the immediate vicinity of the Passaic River, for public review and comment, prior to the publication of a Final ERP/EA. The Federal Trustees may supplement the information provided in this Draft ERP/EA, if appropriate.



**Artist rendition of a potential restoration project outcome.**



**U.S. Department of the Interior  
U.S. Fish and Wildlife Service**

**Approval of Draft Early Restoration Plan and Environmental Assessment  
Natural Resource Restoration Project in East Newark, New Jersey**

In accordance with U.S. Department of the Interior (Department) policy regarding documentation for natural resource damage assessment and restoration projects (521 DM 3), the Authorized Official for the Department must demonstrate approval of draft and final restoration plans and their associated National Environmental Policy Act documentation, with concurrence from the Department's Office of the Solicitor.

The Authorized Official for the Diamond Alkali Superfund Site and the Ventron/Velsicol Superfund Site- Berry's Creek Study Area is the Regional Director, North Atlantic – Appalachian Region, U.S. Fish and Wildlife Service.

By the signatures the Draft Early Restoration plan (ERP) is hereby approved. This approval does not extend to the Final ERP. The draft ERP shall be released for public review and comment for a minimum of 30 days. After consideration of the public comments received, the ERP may be revised, with the Final ERP to address such comments.

Approved by:

WENDI  
WEBER

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Wendi Weber  
Regional Director  
North Atlantic – Appalachian Region  
U.S. Fish and Wildlife Service

\_\_\_\_\_  
Date

Concurrence:

*Mark Barash*

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Mark Barash, Esq.  
Senior Attorney  
Northeast Region  
Office of the Solicitor

12/17/2020

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Date