Community Involvement Plan

The Upper 9 Miles of the Lower Passaic River Study Area

Diamond Alkali Superfund Site

Bergen, Essex, and Passaic Counties, New Jersey

EPA Region 2

October 2022

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Diamond Alkali Superfund Site

Prepared by

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For the

U.S. Environmental Protection Agency Region 2

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Abbreviations and Acronyms

ANJEC	Association of New Jersey Environmental Coalitions
ANJEE	Association of NJ Environmental Educators
AOC	administrative order on consent
CAG	community advisory group
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CIP	community involvement plan
CPG	Cooperating Parties Group
DDT	dichloro-diphenyl-trichloroethane
EPA	U.S. Environmental Protection Agency
FS	feasibility study
LPRSA	Lower Passaic River Study Area
NCP	National Contingency Plan
NJDEP	New Jersey Department of Environmental Protection
NOAA	National Oceanic and Atmospheric Administration
NPL	National Priorities List
OU	operable unit
PCB	polychlorinated biphenyl
PDI	pre-design investigation
PRP	potentially responsible party
RAO	remedial action objective
RD	remedial design
RI	remedial investigation
RM	River Mile
ROD	Record of Decision
SWAC	Surface weighted average concentration
TAG	technical assistance grant
TASC	Technical Assistance Services for Communities
the site	Diamond Alkali Superfund site
USACE	U.S. Army Corps of Engineers
2,3,7,8-TCDD	2,3,7,8-tetrachlorodibenzo-p-dioxin
2,4-D	2,4-dichlorophenoxyacetic acid
2,4,5-T	2,4,5-trichlorophenoxyacetic acid
2,4,5-TCP	2,4,5-trichlorophenol
%	percent

1. Introduction

Purpose and Scope of the Community Involvement Plan

This community involvement plan (CIP) is for the upper 9-mile portion of the Lower Passaic River Study Area (LPRSA), which is within operable unit (OU) 4 of the Diamond Alkali Superfund site in New Jersey. This CIP was developed to encourage community involvement and to facilitate communication between the U.S. Environmental Protection Agency (EPA) and community members, environmental groups, government officials, the media, and other parties interested in the site and cleanup actions at the site.

This CIP provides the backbone of the community involvement program and serves as a useful resource that the cleanup team can turn to for advice on appropriate activities for community involvement.

This CIP will serve as a roadmap for EPA in providing opportunities to share information with the public and to receive input during the interim and final cleanup action design and cleanup. It will be updated, as needed, to ensure opportunities for meaningful public participation continue throughout the interim cleanup action and beyond.

This CIP is focused to fit the communication needs associated with the cleanup of the upper 9 miles of the LPRSA. It is structured to provide the reader with a high-level understanding of the work being done and to share EPA's plans for keeping the community engaged and aware.

- **Section 1 – Introduction** describes the purpose of this CIP, the regulatory authority that governs Superfund projects, the Superfund process, and the project structure and roles.
- **Section 2 – Site History** provides site description, background, history, and summarizes future activities.
- **Section 3 – Community Profiles** provides community profiles and environmental justice screening information.
- **Section 4 – Community Needs and Concerns** provides a summary of community needs and concerns based on community interviews.
- **Section 5 – Community Involvement Action Plan** lays out EPA's communication goals, tools, and methods of evaluation.
- **Section 6 – Glossary** provides terminology definitions common to Superfund and this CIP.

> The purpose of the CIP is not to provide technical answers to the community's questions. The CIP is EPA's plan for informing and involving the community during the cleanup process.

This CIP is meant to be user-friendly and understandable to the public. Use of acronyms or scientific terminology is avoided where possible. Unless otherwise identified in this plan, the terms 'community' or 'communities' refer to all those having an interest in the cleanup activities. This CIP complements the 2006 CIP that was developed for the overall Lower Passaic River Restoration Project and Newark Bay Study and the focused 2017 CIP that was developed to support the cleanup of the lower 8.3-mile portion of the LPRSA.

Superfund Overview

EPA is investigating and cleaning up the site according to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and the National Oil and Hazardous Substances Pollution Contingency Plan (National Contingency Plan, or NCP). Congress enacted CERCLA, also known as Superfund, in 1980 to identify, investigate, and clean up hazardous waste sites to protect human health and the environment. EPA adds sites that are its priority for further investigation under Superfund to the National Priorities List (NPL).

When cleaning up sites under Superfund, EPA follows the 'polluter pays' principle looking to the parties responsible for the pollution. EPA identifies potentially responsible parties (PRPs), including individuals, companies, or other entities (i.e., owners or operators of facilities at or from which there has been a release of a hazardous substance, transporters, or generators of hazardous substances) potentially responsible for, or contributing to, the contamination at a Superfund site. EPA seeks to have PRPs perform work at Superfund sites, with EPA overseeing the work to ensure it is performed appropriately, and/or to pay the costs that EPA incurs in performing work. If EPA is not able to identify PRPs, the cost of the cleanup may be paid from EPA's budget that is set by Congress.

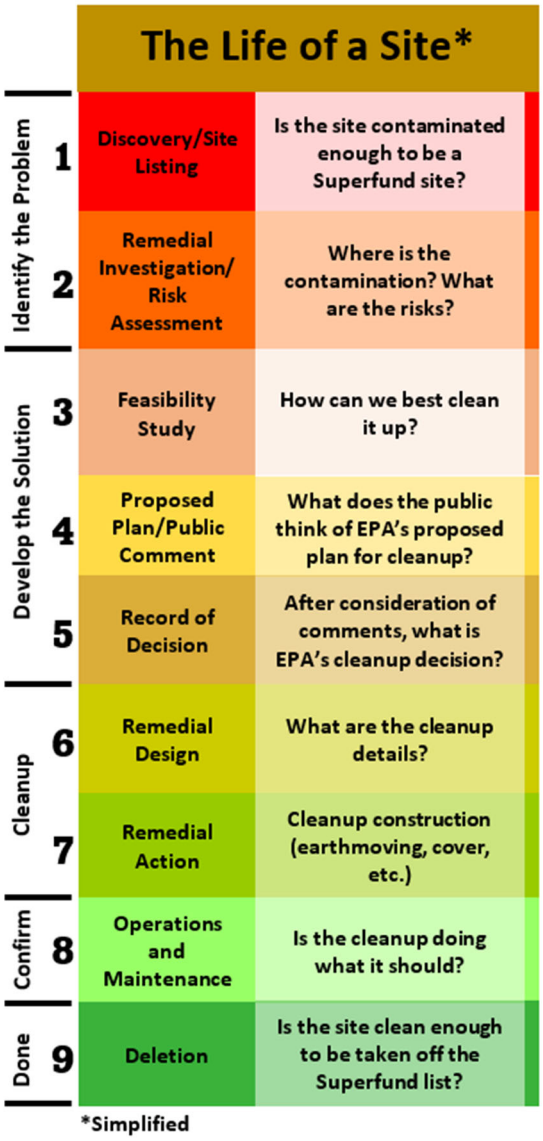
Community involvement is an important component of the Superfund program and how EPA makes cleanup decisions for contaminated sites. Superfund law requires that specific community involvement activities happen at certain points throughout the process. EPA's Superfund website includes an extensive section on community involvement.

While EPA is the lead agency for developing and implementing community involvement activities at Superfund sites, other federal, state, and local agencies frequently assume a supporting role.

The Superfund Process

The Superfund process is shown at right and summarized below.

- **Discovery/Site Listing.** The process by which a potential hazardous waste site is brought to the attention of EPA. After a hazard ranking analysis, the site may be placed on the NPL and move forward through the Superfund process.
- **Remedial Investigation (RI)**. Assesses the nature and extent of contamination and identifies how contamination may move throughout the environment. Includes a human health risk assessment and an ecological risk assessment.
- **Feasibility Study (FS).** Screens and evaluates potential cleanup alternatives based on cleanup objectives and goals. Results help EPA develop a plan for cleanup.



The Superfund Process

- **Proposed Plan.** Presents EPA's preferred cleanup plan, based on results of the RI and FS and other information considered by EPA. It is issued after those reports are finalized. The public can comment on the plan and participate in a public meeting with EPA to discuss its preferred cleanup plan and the other alternatives considered.
- **Record of Decision (ROD).** Completed after review and evaluation of all comments received on the Proposed Plan. Documents EPA's final decision on cleanup and contains a responsiveness summary providing EPA's responses to comments.
- **Remedial Design**. Develops the engineering approach and the drawings and specifications for the cleanup selected in the ROD.
- **Remedial Action**. Constructing the cleanup specified in the ROD and remedial design.
- **Operations and Maintenance/Monitoring**. Operating the cleanup and collecting data to evaluate cleanup performance and ensure the cleanup accomplishes its objectives. If hazardous substances remain on site at levels that do not allow for unlimited use/unrestricted exposure, EPA will review the site every five years to determine whether the cleanup remains protective of human health and the environment.
- **Deletion**. Removing a site from the NPL and Superfund program may occur once cleanup actions are complete, and all cleanup goals have been achieved. EPA is responsible for processing deletions with agreement from the state.

Section 2 provides an overview of where we are in the Superfund process in the upper 9 miles.

Project Structure and Roles

Lead and Support Agencies

The roles of the agencies in the cleanup work at this site:

EPA. EPA is the lead agency for ensuring investigations and cleanups are done according to Superfund law, guidance, and policy. For the upper 9-mile portion of the LPRSA, EPA and its contractors conduct and/or oversee field activities, review documents (e.g., work plans, quality assurance plans, health and safety plans, and various reports on findings), and ensure progress is achieved toward and through the completion of cleanup. EPA participates regularly in project planning meetings to ensure this progress is maintained. EPA's Remedial Project Manager is Diane Salkie.

New Jersey Department of Environmental Protection (NJDEP). NJDEP is the state support agency for the site and provides input to EPA regarding investigation and cleanup activities. NJDEP participates in planning meetings and comments on documents before they are released to the public. The NJDEP Project Manager is Julia Galayda.

Partners

In addition to NJDEP, EPA's partner agencies at the site include:

- U.S. Army Corps of Engineers (USACE)
- National Oceanic and Atmospheric Administration (NOAA)
- U.S. Fish and Wildlife Service (FWS)

EPA provides updates on investigations and reporting. Partners are invited to provide comments on deliverables for EPA consideration, and EPA meets with partners to discuss key topics such as sampling plans, contaminant mapping, human health, and ecological risk assessments, and cleanup actions.

PRPs

A group of companies that owned or operated facilities—from which hazardous substances were potentially discharged to the Lower Passaic River—previously signed an administrative settlement agreement and order on consent (AOC) with EPA. The AOC is a legal document under which the OU4 RI and FS were conducted. This group of companies is known as the Cooperating Parties Group (CPG). The membership of the CPG has changed over time since the AOC was signed.

EPA will seek to negotiate a new legal agreement or agreements with PRPs to perform the activities associated with the upper 9-mile cleanup.

Community Advisory Group

The Passaic River Community Advisory Group (CAG) provides advice and recommendations to EPA and its partner agencies to help ensure a more effective and timelier cleanup of the Passaic River. The CAG consists of stakeholders who represent a broad range of interests and locales potentially affected by the contamination and cleanup of the site. More information on the CAG is available at www.ourpassaic.org.

2. Site Description

Location and Layout

The site is in northeastern New Jersey and is currently being addressed in four OUs including the property on Lister Avenue in Newark where the former Diamond Alkali Company operated, and portions of the Lower Passaic River and Newark Bay (see maps on this and the next page). OU4, also known as the LPRSA, encompasses the entire Lower Passaic River from Newark Bay at River Mile (RM) 0 to the Dundee Dam. The area of interest for this CIP is the upper 9 miles of the LPRSA (RM 8.3 to Dundee Dam).

Site Location

EPA's 2021 interim ROD for OU4 addresses areas of highly contaminated sediment that are sources of contamination throughout the river and to the fish and crabs. Based on available data, the areas of highly contaminated sediment in the upper 9 miles are located between RM 8.3 and RM 15. The cleanup for this portion of the river will be expanded if sediment data collected during the pre-design investigation (PDI) show that inclusion of discrete areas of sediment contamination between RM 15 and Dundee Dam is needed.

The Lower Passaic River and Newark Bay are part of the New York/New Jersey Harbor Estuary. The Lower Passaic River (below Dundee Dam) and watershed includes Saddle River, Third River, and Second River. Dundee Dam isolates the Upper Passaic River from tidal mixing that influences the Lower Passaic River.

Physical Setting

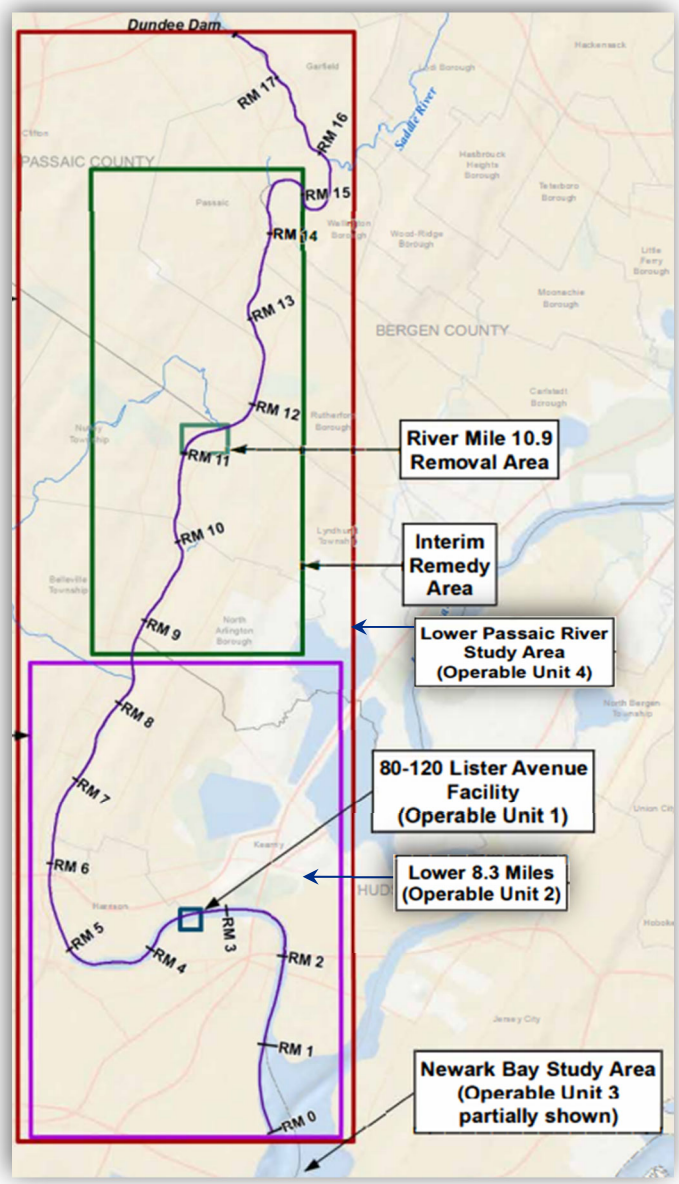
Land Use

Land use adjacent to the upper 9 miles of the LPRSA varies with location and is summarized below. The RM system specified below and throughout this CIP, unless otherwise noted, is known as the USACE RM system, which generally follows the historical and/or current navigation channel layout of the Lower Passaic River.

- **RM 8.3 to RM 14**. The upper 9 miles of the LPRSA begins at and extends upriver from RM 8.3. The Lower Passaic River below RM 8.3 is designated as OU2 of the site. Land use in the RM 8.3 to RM 14 section changes from industrial to commercial and recreational, with pockets of

residential development. The upper portions of the river in this reach have steeper and hardened shorelines on the west bank with limited vegetation. New Jersey State Highway 21 runs parallel to the river along the west bank up to RM 14. The east bank has a more natural shoreline, residential areas, and parks. The river can be reached in clearings where vegetation is limited and where the bank is not too steep, such as at Riverside Park in Lyndhurst (see the description of parks in Section 3).

- **Above RM 14.** The river is narrower and shallower, and adjacent land use is more residential. Pulaski Park is on the western bank between RM 15.5 and RM 16. Much of the shoreline between RM 16 and Dundee Dam is vegetated and there are several points of public access to the water.



Layout of the Site and its Components

River Characteristics

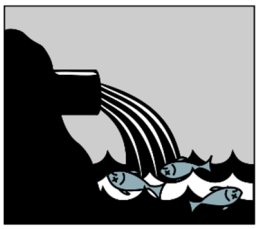
Within the upper 9 miles of the LPRSA, the river narrows steadily up to Dundee Dam and riverbed sediment is generally coarser (sand and gravel) with smaller areas or pockets of fine-grained sediment (as compared to the lower 8.3 miles of the LPRSA, which is predominantly fine-grained). About 90 percent (%) of the fine-grained sediment in the Lower Passaic River is found in the lower 8.3 miles. The inside bends of the river generally accumulate finer sediment, while the outside bends have little or no sediment accumulation. Sediment can be eroded by the action of river flow near structures, such as bridge abutments, and at tributary confluences. A tributary is a freshwater stream that feeds into a larger stream or river, but not directly into the ocean. The point where a tributary meets a large stream of water is called the confluence.

The primary source that continues to contaminate the Lower Passaic River is the contaminated sediment already present in the river that is disturbed, moves back into the water column, and eventually resettles elsewhere. Other less significant sources include tidal exchange with Newark Bay flows from above Dundee Dam, combined sewer overflows, overland flow, and groundwater.

Background

Industrial Development

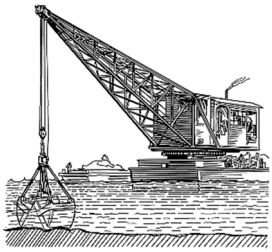
The Passaic River was one of the major centers of the American Industrial Revolution that started two centuries ago. Early manufacturing (particularly textile mills) developed in the area around Great Falls in the City of Paterson, eight miles upriver of Dundee Dam. Dundee Dam was constructed along with a canal and locks in the mid-nineteenth century on top of an earlier dam and was originally conceived to provide waterpower to nearby businesses, supporting further industrialization along the river.



By the end of the nineteenth century, a multitude of industrial operations, such as manufactured gas plants, paper manufacturing and recycling facilities, petroleum refineries, shipping facilities, tanneries, creosote wood preservers, metal recyclers, and manufacturers of materials such as rubber, rope, textiles, paints and dyes, pharmaceuticals, and chemicals, had located along the river's banks as cities such as Newark and Paterson grew. Industrial operations and municipalities alike used the river for wastewater disposal.

Navigational Dredging

Along with Dundee Dam, a defining component of development and urbanization of the river was construction of a navigable channel for commercial vessels. Between 1884 and 1915, navigational dredging projects authorized by Congress and constructed by USACE created a federally authorized navigation channel from RM 0 to RM 15.4 (at Wallington, New Jersey). Further deepening of the channel was authorized by Congress in 1930.



In 1932, the navigation channel was constructed to its maximum dredged depth—30 feet from RM 0 to RM 2.6, 20 feet from RM 2.6 to RM 4.6, 16 feet from RM 4.6 to RM 8.1, and 10 feet from RM 8.1 to RM 15.4. USACE performed dredging to maintain the channel through the 1950s above RM 1.9 and until 1983 below RM 1.9. The federal navigation channel above RM 1.7 was deauthorized by Congress in 2018, and the authorized depth between RM 0.6 and RM 1.7 was modified to a depth of 20 feet.

History

EPA's response to contamination in the Lower Passaic River began at a former manufacturing facility located at 80-120 Lister Avenue in Newark, New Jersey, at RM 3.4, now known as OU1. Manufacturing of dichlorodiphenyltrichloroethane (DDT) and other products began at this facility in the 1940s. In the 1950s and 1960s, the facility was operated by the Diamond Alkali Company. Between 1951 and 1969, the Diamond Alkali Company manufactured the chemical 2,4,5-trichlorophenol (2,4,5-TCP) and the herbicides 2,4-dichlorophenoxyacetic acid (2,4-D) and 2,4,5-trichlorophenoxyacetic acid (2,4,5-T), which are ingredients in the defoliant, or a chemical that removes the leaves from trees and plants, 'Agent Orange.' A by-product of the manufacturing was 2,3,7,8-tetrachlorodibenzo-p-dioxin (2,3,7,8-TCDD)—the most toxic form of dioxin. These substances have all been found in river sediment and in fish/crab tissue. EPA placed the site on the Superfund program's NPL in 1984.

Preliminary Actions

Preliminary actions were taken at the Lister Avenue facility to address that source of contamination.

- **OU1 ROD.** After investigations and emergency response actions to address dioxin contamination on nearby properties, EPA issued a ROD in 1987 to select an interim containment cleanup for the Lister Avenue facility. Among the goals of the cleanup were to keep the on-site contamination from getting into the Passaic River.
- **OU1 Construction.** The cleanup plan consisted of demolition, capping, subsurface slurry walls, a sheet-pile flood wall, and a groundwater collection and treatment system. Occidental Chemical Corporation, the PRP for OU1, completed the construction under EPA oversight in 2001. Operations and maintenance continue.

Studies, Past Removals, and Ongoing Activities

LPRSA milestones, including studies, past removals, and ongoing activities are described in detail in the 2021 OU4 ROD and are listed in the box at right. The one past removal and one ongoing activity that include part or all of OU4 are described below.

- Six-Mile Study (RM 1 to RM 7) (1994)
- Tierra Removal (2008)
- RM 10.9 Removal (2012)
- Newark Bay Study (ongoing)
- Lower 8.3 Miles of the LPRSA (ongoing)
- 17-Mile LPRSA (ongoing)

Site Studies, Past Removals, and Ongoing Activities

RM 10.9 Removal

EPA and a group of PRPs signed an AOC in June 2012, for a time-critical removal action to address the risks posed by high concentrations of dioxins/furans, polychlorinated biphenyls (PCBs), and other contaminants found at the surface of a mudflat on the east bank of the river at RM 10.9 next to a recreational park in Lyndhurst, New Jersey. An engineered cap was placed over contaminated sediment, thereby reducing exposure, and preventing migration of contamination. Surface sediment was first dredged to make space for the cap. The work was conducted in 2013 and 2014, and a total of 16,000 cubic yards of sediment were removed. A monitoring program continues to evaluate the long-term performance of the cap; this monitoring program will be merged into the monitoring program associated with the upper 9-mile cleanup.

17-Mile LPRSA

EPA signed a settlement agreement with the CPG in 2004, under which they agreed to pay for EPA to perform the 17-mile LPRSA RI and FS. The agreement was amended in 2005 and 2007 to add more parties, thus exceeding 70 settling parties. From 2004 to 2007, EPA investigated contamination in sediment and surface water and investigated the major tributaries, combined sewer overflows, and stormwater outfalls to the river. In 2007, the CPG agreed to assume performance of the 17-mile LPRSA RI/FS through an AOC. Since 2007, CPG membership has continued to change.

The CPG sampled the river as part of the RI from 2008 to 2013. EPA approved the baseline human health risk assessment in July 2017 and the baseline ecological risk assessment in June 2019. The final RI report was submitted in July 2019 and was approved conditionally by EPA. EPA and NJDEP are reviewing the bioaccumulation model appendix to the RI report which was submitted by the CPG in December 2021. A bioaccumulation model describes how chemicals are taken up by an organism, either directly from exposure or through eating food containing the chemical.

In July 2017, the CPG proposed an adaptive management approach for evaluating an interim cleanup plan for the sediment in the upper 9 miles of OU4. Adaptive management is a formal approach to making decisions and adjustments in response to new information. The use of adaptive management in the upper 9 miles is described on page 12. In October 2018, EPA directed the CPG to evaluate an interim cleanup approach for source control in the upper 9 miles of the LPRSA through a FS. EPA approved the interim cleanup FS report, which included alternatives for the upper 9-mile source control, in September 2021.

EPA released a Proposed Plan for the interim cleanup plan in the upper 9 miles of the LPRSA in April 2021 for public comment. NJDEP agreed with EPA's preferred alternative in the Proposed Plan. The interim cleanup is an action to control the source of contamination that will significantly lower contaminant concentrations in the sediment throughout the upper 9 miles of the LPRSA. In turn, EPA expects the interim cleanup to reduce exposures and accelerate system recovery (i.e., further decrease in sediment concentrations, and improvements in conditions in surface water and fish/crab tissue). Once source sediment has been addressed, the river system will be monitored to assess response to the source removal action and recovery.

When sufficient data have been collected to characterize the response of the river system to the upper 9-mile interim cleanup and when further evaluations regarding the recovery of the river and attainment of risk-protective conditions for people's health and the environment have been completed, EPA expects to issue a final ROD selecting a final cleanup plan addressing any remaining risks in sediment within the upper 9 miles and in surface water throughout the LPRSA.

This CIP supports the upper 9-mile cleanup actions and complements the 2006 and 2017 CIPs developed for the entire site. This CIP will be updated or amended to incorporate new or additional community engagement, public participation, and communication needs after the upper 9-mile interim cleanup has been performed.

2004 –2019
Plan, Conduct, and Document RI

2018–2021
Evaluate Interim Cleanup Alternatives through FS

2019-2022
Conduct Baseline Sampling

2021
Issue Proposed Plan

2021
Sign Record of Decision

Project Milestones

The interim cleanup plan for the upper 9 miles of the LPRSA targets areas of high 2,3,7,8-TCDD and/or total PCB concentrations in sediment and coincides with addressing other contaminants co-located with high concentrations of 2,3,7,8-TCDD and/or total PCBs. The areas with high contaminant concentrations that act as a source tend to be composed of fine-grained sediment and are responsible for contributing to overall high average contaminant concentrations, the redistribution of contamination through erosion and redeposition, and an overall inhibition of system recovery.

Basis for the Interim Cleanup Plan

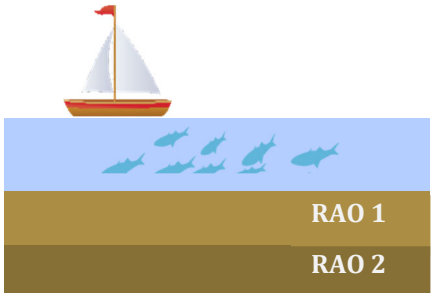
The sediment in the lower 8.3 miles of the LPRSA, which is OU2 of the site, predominantly consists of fine-grained sediment, and contains the vast majority of the contamination present in Lower Passaic River sediment. Because of the extent of contamination and because tides in the river can move contamination upstream, EPA first selected and is currently designing the cleanup plan for the lower 8.3-mile section of the LPRSA. The cleanup plan, documented in the 2016 OU2 ROD for the lower 8.3 miles of the LPRSA will address sediment bank-to-bank throughout the lower 8.3-mile section (through sediment removal to accommodate the placement of an engineered cap designed to contain remaining contamination, without exacerbating flooding) and represents an interim cleanup for surface water.

The evaluation of RI data, including the 9 miles from RM 8.3 to Dundee Dam, found that fine-grained sediment in the upper 9 miles is interspersed with areas of coarse-grained, less-contaminated sediment, and that sediment upriver of approximately RM 15 is predominantly coarse-grained and generally lacks contamination. EPA determined that an interim cleanup to control the sediment sources of contamination in the upper 9 miles would expedite the overall site cleanup process and will result in significantly reduced average contaminant concentrations. Additionally, the infrastructure constructed for the cleanup in the lower 8.3 miles (such as a sediment dewatering facility or materials storage areas) may be usable for the upper 9 miles, which would minimize disruption to the river ecology and the many communities along the river. The interim cleanup for the upper 9 miles does not alter the previously selected cleanup for the lower 8.3 miles of the LPRSA.

Remedial Action Objectives

There are two remedial action objectives (RAOs) for the interim cleanup of the upper 9 miles of the LPRSA.

- RAO 1 – Address Surficial Sediment Source Areas: Address surface sediment with elevated concentrations of 2,3,7,8-TCDD and/or total PCBs.
- RAO 2 – Address Subsurface Sediment Source Areas: Address subsurface sediment with elevated concentrations of 2,3,7,8-TCDD and/or total PCBs in areas with the potential to erode and expose the subsurface sediment.



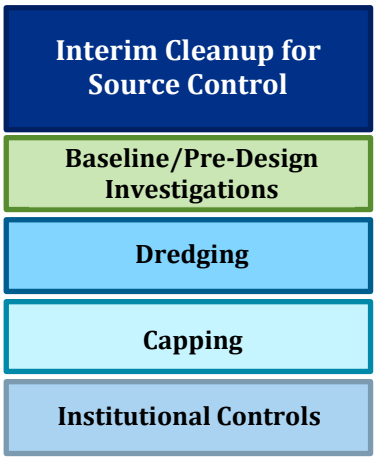
Remedial Action Objectives

The specifics of these goals are provided in the ROD for OU4.

Selected Interim Cleanup Plan

The interim cleanup plan described in the ROD for OU4 focuses on source control and targets removing sediment with higher contaminant concentrations in the upper 9 miles of the LPRSA. It is based on the RI/FS prepared by the CPG under EPA oversight and the Proposed Plan developed by EPA.

The upper 9-mile interim cleanup plan will:



Interim Remedy Components

- Use a monitoring program, including the PDI, to assess baseline conditions, inform design, and facilitate the post-interim cleanup response and recovery assessment. The CPG collected data as part of a current conditions monitoring program (surface water sampling, fish tissue sampling, and bathymetry surveying to evaluate patterns of erosion and deposition) under the existing RI/FS AOC. The PDI will be performed under a future legal agreement between EPA and PRPs and will consist of an extensive sediment sampling program throughout the river reach from RM 8.3 to Dundee Dam and various other design-related surveys and investigations.
- Identify areas between RM 8.3 and RM 15 to target surface sediment (upper 6 inches) with elevated levels of 2,3,7,8-TCDD and/or total PCBs to achieve a 2,3,7,8-TCDD surface weighted average concentration (SWAC) of 75 parts per trillion and a total PCB SWAC equal to or less than background (0.46 parts per million). These areas will be capped to isolate the underlying contaminated sediment. Before capping, these areas will be dredged to accommodate the cap and ensure that the action does not increase the potential for flooding.

- Identify areas between RM 8.3 and RM 15 that are vulnerable to erosion and have elevated subsurface concentrations of 2,3,7,8-TCDD and/or total PCBs. These areas will be capped to isolate the underlying contaminated sediment. Before capping, these areas will be dredged to accommodate the cap and ensure that the action does not increase the potential for flooding.
- Assess the area above RM 15 (where contamination is generally absent based on prior investigations) for potential sediment source areas and evaluate any identified source areas above RM 15 as part of the interim cleanup.
- Potentially dredge specific areas to native (uncontaminated) sediment based on a cost-benefit evaluation to avoid capping or longer-term monitoring.
- Process, stabilize, and dispose of dredged material off-site.

- Monitor/sample during and after construction to evaluate construction quality and demonstrate that the interim cleanup RAOs have been achieved.
- Implement appropriate and necessary institutional controls (e.g., fish and crab advisories).

Example of An Institutional Control

Adaptive Management

Adaptive management will be applied to evaluate the upper 9-mile interim cleanup performance, assess the response of the river system to the interim cleanup and the long-term recovery of the system, and to inform selection of a final risk-based cleanup plan in a final ROD.

Adaptive management is a formal and systematic site management approach centered on rigorous site planning and a firm understanding of site conditions and uncertainties. Under adaptive management, uncertainties are identified, information needs are identified to fill gaps in knowledge, and a plan is developed to generate and assimilate that needed information to inform subsequent management decisions.

The process for the upper 9-mile cleanup consists of the following:

- Adaptive management framework developed in the FS will be expanded into a formal adaptive management plan as the engineering design for the interim cleanup progresses.
- New information will be specifically planned for and used to address uncertainties and maximize the success of the project throughout design, implementation, and post-interim cleanup monitoring.
- Data collected, once the interim cleanup is completed, will be used to determine if further in-river work is needed to attain risk-based goals in a reasonable time frame.

Schedule

EPA signed the ROD for the upper 9-mile interim cleanup in September 2021. Next steps will include seeking to negotiate a new legal agreement or agreements with parties to perform remedial design and remedial action activities. The interim cleanup and the final cleanup action for the upper 9 miles of the LPRSA are expected to take a number of years to complete. The schedule below provides an estimate of the sequence and timing of work, but it is subject to change. While dates for the next steps cannot be provided until legal documents are in place, the following information details what the next steps (the Remedial Design and Remedial Action components of the Superfund process identified on page 2) are:

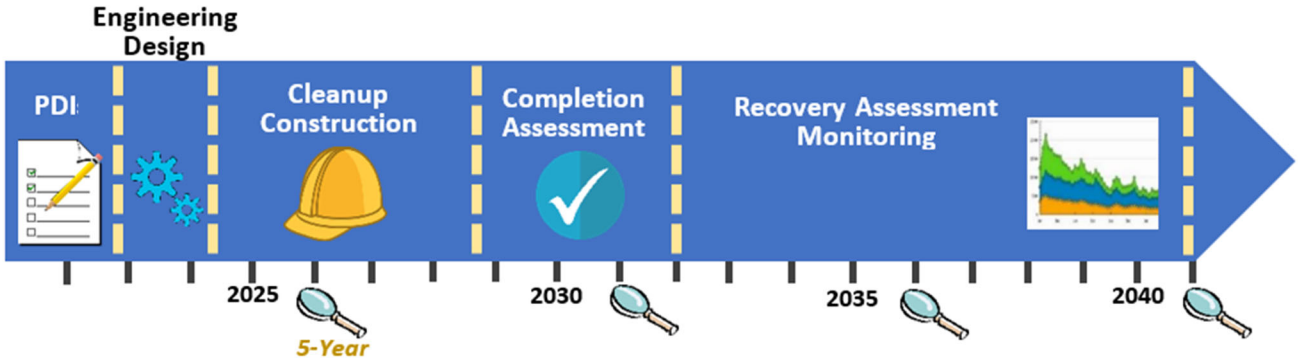
- **PDI**. Under EPA oversight, the CPG collected and analyzed the samples needed to fill certain known data gaps through the current conditions monitoring program. The next stage of sampling will be the PDI, under which an extensive sediment sampling program and other design-related surveys and investigations will be performed. The PDI will also be performed under EPA oversight. The current conditions monitoring program and the PDI will produce a baseline pre-interim cleanup dataset that can be compared to post-interim cleanup data.

- **Interim Engineering Design**. Using the data from the current conditions monitoring program and the PDI, the interim engineering design will be developed to address how the project will be conducted. It will contain details such as how and where to dredge and how and where to cap. Dredging and capping of river sediment will achieve the two interim cleanup RAOs, and the design will ensure that flooding of the river is not worsened through the cleanup construction.

- **Cleanup Construction**. Construction of the upper 9-mile interim cleanup is anticipated to take four to five years to complete. During construction, data will be collected to demonstrate cleanup progress, to ensure the cleanup is constructed properly, and to ensure the construction itself does not impact the environment. Following construction, post-construction sediment data will be collected and evaluated.

- **Completion Assessment.** Baseline, construction, and post-construction data will be used to determine if interim cleanup construction was conducted as designed and if the RAOs were attained. The completion assessment will also document any changes to the cleanup plans necessitated by field conditions and approved by EPA.

- **Recovery Assessment Monitoring.** Per the adaptive management plan described earlier, new information will be gathered and evaluated to reduce uncertainties such as what specific actions would be needed to attain final cleanup in a reasonable timeframe. The information will provide a basis for future remedial action decisions and confirmation of how to complete the final cleanup.

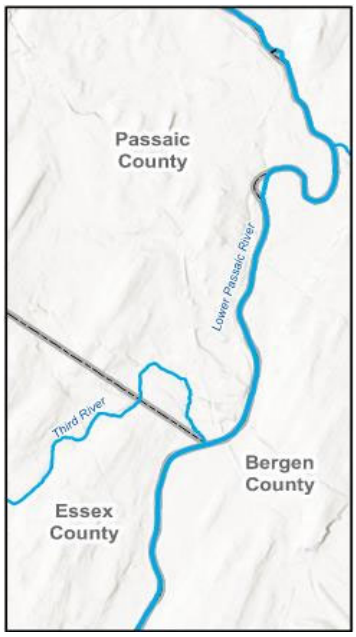


Interim Cleanup Schedule

3. Community Profiles

This section provides a profile of Bergen, Essex, and Passaic Counties and the townships, boroughs, and cities within those counties that are located in the upper 9 miles of the LPRSA (RM 8.3 to Dundee Dam). An environmental justice screening is also provided.

The area of New Jersey that encompasses the upper 9 miles of the LPRSA is represented by two members of the U.S. House of Representatives (Districts 8 and 9), two U.S. Senators, and a governor. The portion of OU4 above RM 8.3 encompasses part of five state legislative districts (28, 29, 34, 35, and 36). Contacts for these elected officials, and officials in the communities profiled below, are provided in Appendix A.



Counties in the Upper 9 Miles

Community Profiles

Bergen, Essex, and Passaic Counties

The portion of OU4 that extends from RM 8.3 to Dundee Dam crosses three counties—two on the west side (Essex and Passaic) and one on the east side (Bergen) (see map at right). Demographic statistics for these counties are summarized in the following table.

Demographic Statistics for the Upper 9 Miles

Category	Demographic Statistics			
	Bergen	Essex	Passaic	New Jersey
Total Population	955,732	863,728	524,118	9,288,994
Area (square miles)	233	126	186	7,352
Persons per Square Mile	4,107	6,850	2,818	1,263
Median Household Income	$104,623	$63,959	$73,562	$85,245
Housing Units	342,059	334,896	185,367	3,761,229
Median Value	$469,500	$386,000	$415,578	$440,081
Occupants per Household	3.2	3.38	3.44	3.23
Owner Occupied	64.8%	44.4%	52.3%	64%
Median Rent	$1,557	$1,211	$1,310	$1,368
Education (bachelor's degree or higher)	50.7%	36.3%	29.5%	40.7%
Households with Computer Access	94.1%	91.1%	91.3%	89%
Broadband Access	91.2%	82.5	86.3%	88.1%
Foreign Born	30.8%	27.7%	34.2%	22.7%
Language Other than English Spoken at Home	40.3%	36.5%	49.4%	31.6%

The three counties are in the northeastern corner of the state, within 15 miles of New York City. Their population density is two to five times that for the state. A higher-than-average percentage of people are foreign born and/or speak a language other than English in the home, with Spanish or an Indo-European language being the most common. At least 91% of residents have access to a computer, although the

percentage of those with broadband access is slightly lower in Essex and Passaic counties than for the state. Education, housing prices, median household income, and percentage of occupants who are homeowners are all highest in Bergen County.

Local Municipalities

The 10 municipalities that are captured within the upper 9 miles of the LPRSA are the City of Garfield, City of Clifton, City of Passaic, Borough of Wallington, Borough of East Rutherford, Borough of Rutherford, Township of Lyndhurst, Township of Nutley, Borough of North Arlington, and Township of Belleville. The river serves as an east or west boundary to the municipalities.

Municipalities in the Upper 9 Miles

The 10 municipalities (shown at right) are described briefly from north to south:

- **City of Garfield, Bergen County, New Jersey**. Garfield borders the east shore of the Passaic River in the area of OU4 that extends from Dundee Dam to roughly RM 15.9. The city covers 2.2 square miles and has 32,655 people and a median household income of $64,242. Roughly 65% of residents speak a language (Spanish or Other Indo-European) other than English at home. Garfield has a mayor, deputy mayor, and three other council members. Of particular interest for this CIP, are the Go Green Garfield team, a redevelopment agency, and a planning board.

- **City of Clifton, Passaic County, New Jersey**. Clifton borders the west bank of the Passaic River in the portion of OU4 that extends from Dundee Dam to roughly RM 17 and then wraps around the City of Passaic to again border the west bank of the Passaic from roughly RM 12.8 to RM 11.6. Clifton covers 11.4 square miles and has 90,296 people with a median household income of $83,086. Roughly 56% of the population speaks a language (Spanish or Other Indo-European) other than English at home. Government includes a mayor and five council members. Of particular interest for this CIP, are the Action Clifton Committee, environmental commission, and planning board.

- **City of Passaic, Passaic County, New Jersey**. Passaic borders the west bank of the Passaic River from roughly RM 17 to RM 12.8. The city has a total area of 3.2 square miles. Passaic has a mayor and seven council members. The city has a population of 70,537 with a median household income of $44,779. Three-quarters of the population speaks a language (Spanish) other than English at home. The county commissioned a report *New Americans in Passaic County* that was completed in 2022. Of particular interest for this CIP, are the planning board and redevelopment agency.

- **Borough of Wallington, Bergen County, New Jersey**. Wallington borders the east bank of the Passaic River from roughly RM 15.9 to RM 14.2. It covers one square mile, with a population of 11,868 and a median household income of $72,389. Roughly 43% of residents are of Polish ancestry and 65% of the people speak a language other than English at home (Other Indo-European). Government includes a mayor and six council members. Of particular interest for this CIP are the planning board and recreation board.

- **Borough of East Rutherford, Bergen County, New Jersey**. East Rutherford borders the east bank of the Passaic River from roughly RM 14.2 to RM 13.7. The borough covers four square miles, with a population of 10,022 and a median household income of $76,777. Forty percent of residents speak a language other than English at home (primarily Spanish, Other Indo-European, and Asian). Government includes a mayor and six council members. Of particular interest for this CIP are the planning board and Department of Public Works.

- **Borough of Rutherford, Bergen County, New Jersey**. Rutherford borders the east bank of the Passaic River from roughly RM 13.7 to RM 11.9. It covers 2.9 square miles, with a population of 18,834 and a median household income of $106,817. A third of its residents speak a language other than English at home (primarily Spanish, Other Indo-European, and Asian). Government includes a mayor and six council members. Of particular interest for this CIP are the Green Team and the Recreation Department.

- **Township of Lyndhurst, Bergen County, New Jersey**. Lyndhurst borders the east bank of the Passaic River from roughly RM 11.9 to RM 10.3. The township covers 4.9 square miles and has a population of 22,519 and a median household income of $90,181. Roughly 38% of people speak a language other than English at home (primarily Spanish or Other Indo-European). Government includes a mayor and four council members. Of particular interest for this CIP is the Recreation Department.

- **Township of Nutley, Essex County, New Jersey**. Nutley borders the west bank of the Passaic River, opposite Lyndhurst, from roughly RM 11.6 to RM 10.3. It covers 3.4 square miles, with a population of 30,143 and a median household income of $97,750. Less than 30% of people speak a language other than English at home (primarily Spanish or Other Indo-European). Government includes a mayor and four commissioners. Of particular interest to this CIP is the Parks and Recreation Department.

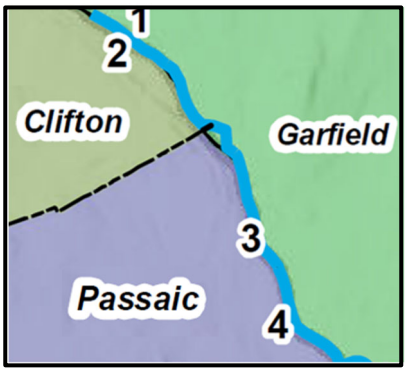
- **Borough of North Arlington, Bergen County, New Jersey**. North Arlington borders the east bank of the Passaic River, south of the border with Lyndhurst at roughly RM 10.3. The borough covers 2.5 square miles and has a population of 16,457 with a median household income of $87,589. Half the residents speak a language other than English at home (primarily Spanish or Other Indo-European). Government includes a mayor and six council members. Of particular interest for this CIP is the Recreation Department.

- **Township of Belleville, Essex County, New Jersey**. Belleville borders the west bank of the Passaic River, across from North Arlington, south of the border with Nutley at roughly RM 10.3. The township covers 3.4 square miles and has a population of 38,222 and a median household income of $70,039. Roughly 55% of residents speak a language other than English (primarily

Spanish) at home. Government includes a mayor and five commission members. Of particular interest for this CIP are the Green Team and the Recreation Department.

Riverfront Parks

Most residents and visitors to the area access the Passaic River though parks. There are three riverfront parks on the west bank (Dundee Island Preserve, North Pulaski Park, and Dundee Island Park) and all are above RM 16. The east bank has 11 such parks. Given the importance of these public access points, public parks along the river are identified (from north to south) in the following list, and pictures of the park follow:



Riverfront Parks in Clifton, Garfield, and Passaic

1. **Dundee Island Preserve, Clifton.** Dundee Island was created by the construction of a 1.8-mile industrial canal. Dundee Dam was at the north end and provided water for the canal. The dam was the lowest hydropower site built on the river, just above the tidal zone. The preserve, which is adjacent to the west bank of the river, is largely undeveloped with some access to the river. Trash from storm sewer outfalls and flooding has become an increasing problem.

2. **Post Ford Park, Garfield.** Post Ford Park is a small park on the east bank across from the Dundee Island Preserve, just below Dundee Dam, between Riverside Drive and the river. It is just north of Columbus Avenue. The park is a Revolutionary War site, and the Post Ford monument marks the site where British and Hessian soldiers crossed the Passaic River from Garfield in 1776, in pursuit of Washington's army. A ford is a shallow spot in a river that can be crossed on foot or horseback.

3. **North Pulaski Park, Passaic.** This small park is on the west bank of the river just north of Dundee Island Park and has walking paths and benches.

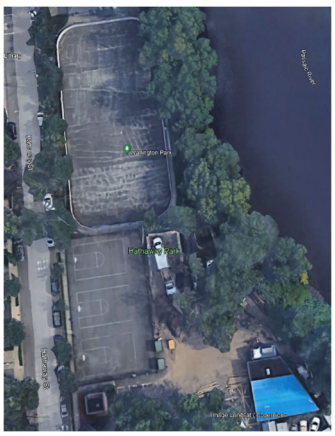
4. **Dundee Island Park, Passaic.** Dundee Island Park is the first addition to Passaic County in 50 years. It is adjacent to North Pulaski Park along the west bank of the river and has a field house, soccer field, playground, spray park, and fitness equipment area. There is a sculpture designed by a local artist, community garden, boat launch, and river walk. The park is part of a long-term plan to refurbish an abandoned freight rail bridge into a pedestrian greenway connecting Passaic County to Bergen County, incorporate North Pulaski Park into Dundee Island Park, and connect Dundee Island Park and North Pulaski Park into one recreational facility.

1. Dundee Island Preserve

2. Post Ford Park

3. North Pulaski Park

4. Dundee Island Park



6. Hathaway/ Wallington Park

5. Main Avenue Park, Wallington. This small park lies between Main Avenue and the river along the east bank of the river, just below Stein Avenue. No picture is available for this park.

6. Hathaway/Wallington Park, Wallington. These two adjacent parks along the east bank of the river have basketball courts and a hockey area that are tucked between Hathaway Street and the river.

7. Waterfront Park/Sesselman Park/Veteran's Park Extension, East Rutherford. These parks run south from Main Avenue along the east bank of the river for one-quarter mile. They offer benches, picnic areas, and gazebos.

8. Memorial Park, Rutherford. Memorial Park along the east bank of the river in Rutherford has eight baseball/softball diamonds, six tennis courts, a picnic area, Tryon Field (lighted track, football/soccer stadium), and three playgrounds.

9. Rutherford Waterfront Park, Rutherford. Rutherford Waterfront Park is along the east bank of the river adjacent to the Nereid Boat Club.

10. Van Winkle Park, Rutherford. This small park at the end of Pierrepont Avenue, along the east bank of the river, between the river and Riverside Avenue, was dedicated in 1931. It offers a memory grove, benches, and walking paths for a view of the river and the state highway.

Riverfront Parks in Wallington, East Rutherford, and Rutherford

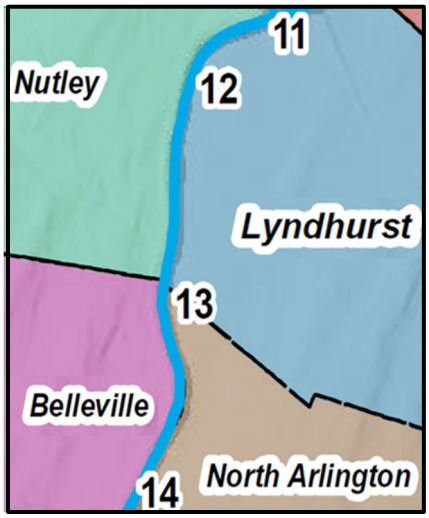
7. Waterfront/ Sesselman/ Veteran's Park Extension

8. Memorial Park/ Tryon Field

9. Rutherford Waterfront Park

10. Van Winkle Park

11. **Lyndhurst Greenways (1–3).** The greenways are roughly one-half mile of green space along the eastern riverbank between the river and Riverside Avenue that begin on the upriver edge of the Lyndhurst community center and Riverside County Park. They are undeveloped and offer access to the river. No aerial photo is available showing the greenways.



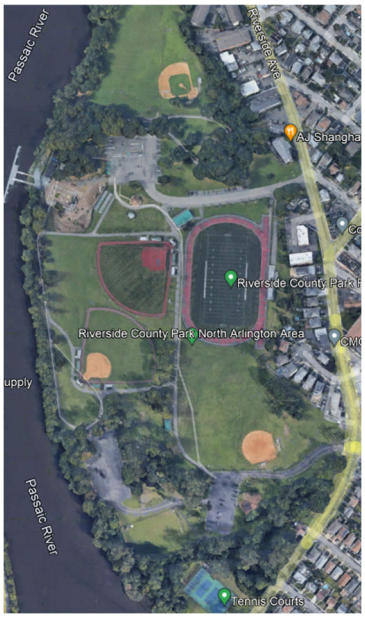
Riverfront Parks in Lyndhurst and North Arlington

12. **Riverside County Park, Joseph Carucci Area, Lyndhurst.** Riverside County Park (516 River Road) has 85 level-acres along the eastern bank of the Passaic River in the municipalities of Lyndhurst and North Arlington. Amenities include a pedestrian pathway, off-leash dog park, playground, fitness center, bocce and tennis courts, a picnic pavilion, and athletic fields for softball and baseball. The Passaic River Rowing Association maintains a boathouse and a 120-foot-long public access floating dock.

13. **Riverside County Park South, North Arlington Area, Lyndhurst.** This park at 22 Bogle Drive covers 49 acres along the eastern bank of the river, including 1.2 acres of water, 5.8 acres of wetlands, 41.5 acres of recreational land, 0.2 mile of path, and 1.3 miles of road. It offers benches, picnic tables, baseball fields, tennis courts, soccer fields, a track, a boat dock and storage, and a playground. The Bergen County Rowing Center also has a dock available to the public and has broken ground on a state-of-the art two-story rowing center.

14. **Passaic River Park, North Arlington.** Passaic River Park is a small, relatively undeveloped park in a residential area along the eastern bank of the river. It lies between River Road and the river, near the intersection with Arlington Boulevard. There are benches and access to the river.

12. Riverside County Park North



13. Riverside County Park South

14. Passaic River Park

Environmental Justice Screening

EPA's *EJScreen* tool was used to conduct an environmental justice screening for the communities within the upper 9 miles of the LPRSA. *EJScreen* is based on nationally consistent data and an approach that combines environmental and demographic indicators in maps and reports to describe issues related to environmental justice.

EPA ran reports for Belleville, Nutley, Lyndhurst, North Arlington, Rutherford, East Rutherford, Wallington, Passaic, Clifton, and Garfield with the purpose of identifying areas within those communities that might require additional outreach efforts to address existing potential environmental justice impacts.

The EJScreen reports are in Appendix C, EJScreen Reports. They compare the relevant statistics for the chosen area with those for the state, EPA Region 2 (which encompasses New Jersey and New York, along with Puerto Rico, the U.S. Virgin Islands, and eight Indian Nations), and the nation overall. EPA has determined that all municipalities have communities with environmental justice concerns.

- **Environmental indicators**. Indicators of environmental justice concern that are elevated in comparison to national data are poor air quality, cancer risk, traffic density, lead paint prevalence, proximity to sites with chemical management plans and to hazardous waste facilities, and occurrence of wastewater discharges. Particularly elevated environmental indicators were found in Garfield, Passaic, Wallington, Clifton, North Arlington, and Belleville.

- **Demographic indicators**. The demographic index and statistical averages for people of color, low-income residents, population with less than high school education, and population with ages over 64 or under 5 years of age, which are indicators of environmental justice concern, were not particularly elevated in comparison to national data, with the exception of Passaic, Wallington, Garfield, Belleville, and Clifton. EPA also evaluated communities where languages other than English are spoken. Most communities have some level of linguistic isolation, with the highest degree of linguistic isolation found in Passaic, Wallington, and Garfield.

4. Community Needs and Concerns

EPA solicited input from representatives of the 10 municipalities found in the upper 9 miles of the LPRSA, including state representatives, residents, and members of stakeholder groups. Elected officials and/or private community members from six municipalities (North Arlington, Belleville, Rutherford, Nutley, Passaic, and Clifton) agreed to be interviewed. EPA's Remedial Project Manager (Diane Salkie) and community involvement coordinator (Shereen Kandil) conducted ten interviews in March and April 2022. The interviews and resulting write-up in this CIP are a powerful way to communicate EPA's commitment to listening and responding to community concerns and providing timely information and opportunities for community involvement.

Interviewees were asked a variety of questions to identify their general knowledge of the site and the upper 9-mile cleanup, communication preferences, and key concerns. The results are grouped into common themes that help EPA to understand how to fill knowledge gaps, create a specific strategy of communication tools for the upper 9-mile communities to harness meaningful involvement, and determine how to address key community needs during the Superfund process.

General Awareness

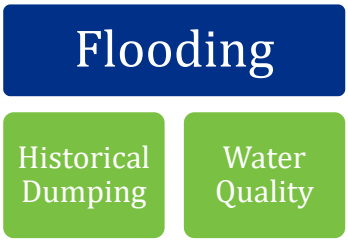
The following information was gathered when asking interviewees about general awareness of the site and the upper 9-mile interim cleanup actions:

- All of the interviewees lived, worked, and/or recreated in the upper 9 miles of the LPRSA. Time spans given ranged from 10 to 62 years.
- Some interviewees were aware that contamination was the result of industrial discharges to the river and of the ongoing work below RM 8.3, and a few were aware of the interim cleanup work planned by EPA in the upper 9 miles.
- No one could name any individual contaminant of concern in the river, although a few people cited Agent Orange.
- A few interviewees noted that there is asbestos contamination on some parts of Dundee Island that they have to avoid when doing trash cleanup days.
- Eight of 10 interviewees reported an interest in issues related to the site, including flooding, construction of a river walk, cleanup progress, and contributor responsibility.
- Two of the interviewees are members of the Passaic River CAG and attend meetings for the Passaic River. Only one other interviewee was aware that there was a CAG. A few interviewees expressed interest in either joining the CAG or participating in CAG meetings.
- When asked to describe the characteristics of the neighborhood near the river, interviewees cited residential (single-family and multi-family), recreational (parks, boathouses), open space, manufacturing, warehousing, and shopping. The percentage of these different uses varies depending upon location along the river.

- Most interviewees were not aware of EPA's role at the site or the role of other agencies. The CAG members believed that EPA was doing good work on an enormous project but that their association with the public was not as good. The work cannot be done as quickly as people want and so "they think of EPA as another slow government agency."

Specific Concerns

Eight of the 10 interviewees said that river flooding was a concern. Flood-related problems cited include movement of mud flats and deposition of trash on the riverbank, as well as property flooding in areas with lower elevations. Two people mentioned historical dumping of waste and one mentioned water quality as specific concerns. Two people interviewed had no specific concerns. None of the interviewees mentioned any specific concerns with the activities planned in the upper 9 miles.



Economic Development

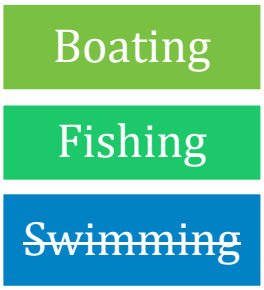
Interviewees were asked if they had an interest in economic development near the river and all responded in the affirmative. Responses included:

- Restrictions on development near the river include issues with private property ownership and USACE permitting requirements.
- Economic development issues include cleanup of the area and availability of resources, such as passive parks, benches, and trees.
- The Botany Special Improvement District (near Dundee Island) was established to encourage economic development and encourages restaurants and businesses to establish in the area.
- More businesses should use the riverfront location as an attraction and should provide river access.
- Cleanup itself will impact how the Passaic River is viewed for economic development opportunities. Currently, people just think of it as a "dirty body of water."

Recreational Use

Interviewees were asked if they knew of recreational use of the river (fishing, swimming, boating) in the upper 9-mile reach. Responses included:

- Multiple communities have crew teams, including Nutley and Belleville. In Belleville, the high school has a crew team that uses the river and rows out of the Kearny boat house near Route 7 and River Road. There is a rowing club in Lyndhurst with a boat house. While rowing is the most common recreational activity that interviewees reported seeing on the river, kayaking and canoeing were also reported to be popular.



- Three interviewees said that people fish on the river and from the shore, although it is unclear what they catch and if the fish are eaten or thrown back. They said that there are signs posted in several places, including Dundee Island, that warn against eating the fish because of contamination.
- Two interviewees said that people no longer swim in the river.

Languages Spoken

Interviewees were asked if they knew of members of the community who speak languages other than English and would need translation of information and materials. Responses indicate that other languages are common, although the need for translation is not clear. Information learned from interviewees includes:

- The area near Dundee Island is transitioning and has people from around the world, most recently Ukrainian, Chechen, Hispanic, Polish, Russian, and Columbian. The City of Passaic has a large variety of Hispanic heritages (Honduran, Guatemalan, Mexican, etc.). There is a large Muslim population from Morocco, other northern African countries, Lebanon, and Palestine, as well as a Middle Eastern Muslim population that includes Arabic-speaking individuals. Interviewees indicated that the area is a mixing pot of heritages, and that numerous languages are spoken throughout the community.
- The Passaic County Division of Economic Development commissioned a study that describes these communities in *New Americans in Passaic County*.
- The mayor's office in North Arlington can provide a translator at every event. The borough has quite a few people who speak multiple languages, including Indian, Spanish, Polish, Portuguese, and Italian.
- Rutherford has populations that speak languages other than English (Spanish and multiple Hindi dialects), but translation is not needed.
- In the Botany Village section of Clifton, Spanish is the most common language besides English.
- In Belleville, 48% of residents are Hispanic and some speak Portuguese.
- Nutley has mostly English-speaking residents (or someone in the household speaks English) and does not have an immediate need for translation. Spanish and Ukrainian speakers are farther north and there are Polish speakers in Wallington.

Ethnic Groups Near the Passaic River

Chechen
Columbian
Guatemalan
Hindu
Honduran
Italian
Lebanese
Mexican
Moroccan
Palestinian
Polish
Portuguese
Russian
Spanish
Ukrainian
North African

- Spanish is common as a first language, as is Polish. Portuguese is common, but one interviewee noted that Portuguese speakers seem to communicate effectively in Spanish. Spanish dialects in the community are a mix.

Low-Income Areas

Interviewees were asked if they knew of low-income and/or minority populations living along the upper 9-mile reach of the river who may be more adversely impacted than other populations. Responses included:

- Passaic County has a significant low-income population, although not generally by the river.
- Belleville has an area by the river (valley section of town) that has a large percentage of low- to moderate-income residents.
- Garfield has significant areas of low-income residents.
- In North Arlington, River Road is 75% businesses with only a handful of residences.
- In Clifton, the Botany Village area has low-income residents.
- There are low-income areas toward Kearny (just south of the upper 9 miles) and Belleville, but it is hard to target a particular area. They are spread across town.

Role of the Public in Cleanup

Interviewees were asked what role, if any, the community should play in the environmental cleanup process. In general, interviewees thought it was important that the public be kept aware of what was happening. Responses included:

- Most interviewees said that they did not think that the general public should have a role in technical decisions about cleanup nor should they direct the cleanup.
- Some interviewees said the public should be able to voice an opinion on future land use along the river and on public access to the river.
- Some interviewees stated the public needs to be aware of how contamination is treated and to have a say in how the cleanup will take place. Interviewees also stated that the cleanup will be invasive and will occupy time, effort, and traffic to and from the site. Awareness of what is going on is important and can lessen pushback. EPA should educate the public to let them know when there are opportunities to comment.

Keep the Public Aware of:

- Project Status
- Opportunities to Comment
- Construction Impacts

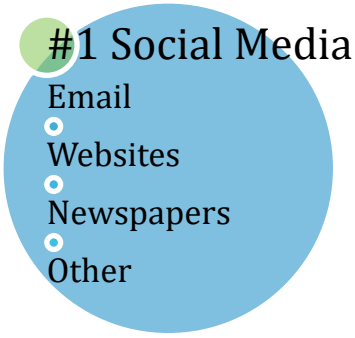
- Some interviewees stated that it is important to notify the public before work is performed, as many people will reach out if they observe something is happening in their neighborhood and they do not know what it is. More communication is better.

- Several elected officials stated that the mayor and council would like to be involved. Any questions/concerns of the community would probably be addressed to them and/or the local administrator.
- One interviewee stated that the community should have a lot of input in what is finally determined to happen, since EPA and the PRPs perform their tasks and then leave. The community has to live with the results of their work.

Methods for Obtaining Information

Interviewees were asked how they usually get information. Social media was by far the most common response. Overall, responses included:

- Social media (LinkedIn, Facebook, and Instagram)
  - Nutley is very social media friendly, and it seems that everything that happens in town is on Facebook.
  - Social media dominates, especially since the pandemic began. The Passaic City Manager has a following on Facebook and can help get information out.
  - In the past few years, social media has taken over. The North Arlington website is also a good place to post information and the mayor's Facebook page has many followers.
  - Rutherford has been branching out in social media. The mayor and council publish a newsletter after meetings. It is distributed to about 1,000 people, and that list is growing. Rutherford will help EPA get information out through official channels and can get information to other towns. The mayor has monthly meetings with other local leaders.
  - Right now, social media is the number one way to reach people. Most people in the area get their information through Facebook. Some people get news through YouTube.



- Email
  - Three interviewees cited email as a primary source of information. One person is part of an organization that shares information with constituents through emails. Nutley email chains are very good, and EPA could send information through them via the mayor's office.
- Websites
  - The Belleville and North Arlington town websites were said to be active.
- Newspapers
  - Newspapers mentioned are the *Observer* (out of Kearny), the *Bergen Record*, *El Especialito* (Spanish language), and the *Belleville Times*. One person mentioned the *Clifton Merchant Magazine*. One interviewee said that her organization issues press releases, both in print newspapers and online media.

- Other
  - It may be that churches or other religious institutions could inform their members about what is going on.

Reliable Sources

Interviewees were asked about the most reliable sources of information in the community and offered the following:

- In North Arlington, the mayor and the council are transparent and honest. They keep the public well informed.
- Clifton is a large community with different populations. The Botany Village Improvement District is well-informed and "in tune" with local events. Local organizations, elected leaders, schools, churches, social groups, and some media are trusted. Closed-circuit television in Clifton broadcasts the city council meetings and can provide information. A monthly meeting with city council members hears complaints.
- One interviewee stated it is hard to tell what is reliable right now. Everything must be fact-checked. This person advised getting information from multiple sources because most sources are not trusted since most people get information through gossip that spreads in Facebook groups.

Opportunities for EPA to Talk About the Project

Interviewees suggested the following activities for EPA to provide outreach to the community:

- There are opportunities for EPA in each town. Each has their own different days when special events are held in the downtown areas. These provide opportunities to have a booth or table and do outreach.
- North Arlington has baseball events and a summer concert series in a river-view park. The borough would be happy to set something up. There is a Memorial Day event and a festival for North Arlington's birthday (March). Trunk or Treat is hosted for Halloween. There are a few parades (Veterans Day, Memorial Day, etc.) where EPA can get out and engage with locals.
- Clifton has the Dundee Island River Cleanup each April. The Botany Village group has monthly flea markets (in a village square with tables) and EPA would be welcome to participate. The big event is the tree lighting for Christmas in December, but it is hectic with so many kids. There are weekly concerts from June through August where EPA could set up a booth and hand out information to the public.

- Belleville has a Green Fair, food truck festivals, and concerts (every Thursday night in July and August). These are great opportunities to do giveaways and outreach.
- Nutley has Rotary Club meetings that are a good place to get information out. The recreation department does an Earth Day event.
- Libraries are always looking for engaging ways to reach out to communities like participating in evening programs to talk about the site. The libraries often offer a lot of programs.

Interested Groups and Resources for EPA

Interviewees were asked if they were part of or knew of any groups or organizations that have an interest in the Passaic River. The results are shown in the callout box on the right. Suggestions for environmental resources that may be helpful to EPA in assessing the impact of the river on the community include:

- North Arlington's redevelopment consultant is helping the borough get EPA grants and might offer input.
- The Association of New Jersey Environmental Coalitions (ANJEC) is a good resource, and many municipalities have an environmental commission or Green Team. EPA should check community websites and commission meetings.
- EPA should view a movie that came out recently about the Passaic—*American River*.

Contact information for these and other potential stakeholders is provided in Appendix A.

Groups or Organizations Interested in the Passaic River

- Flood Fighters (Passaic)
- Passaic River Coalition
- River Keeper
- Habitat for Humanity
- New Jersey Future
- Rutgers University Cooperative Extension
- Rutherford Green Team
- Botany Village Improvement District
- Great Swamp Watershed Association
- Passaic River Rowing Association

Public Meetings

Interviewees were asked if they thought that regularly scheduled public meetings would be a good way to reach the public. Responses were:

- People have gotten used to going to meetings virtually. Virtual meetings can reach people better, even if just calling in using a phone, and have the slides of a presentation emailed later. Some people do not have adequate internet, but almost everyone has phone access. Consider using an Owl camera that allows for a hybrid approach so that the camera would focus on whoever was talking.
- Meetings are a good way to reach out but may not be the best way. People want to be involved but have problems coming to specific meetings at specific times. A website or social media would work better to get messages out. It is not that people would not come to meetings, but it would not be the best way to reach them.
- Maybe not regularly scheduled meetings. Try quarterly meetings first. Information meetings are needed.

- Better to have them at big milestones, rather than too frequently. People are meeting in person more now, and that should be a consideration.
- Meetings appeal to some people. Board and town hall meetings are regular but not big. Maybe fewer regular meetings are a good idea (once every other month). Have them at milestones as well.

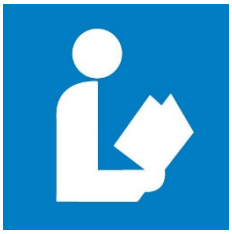
Locations for Public Meetings

With the understanding that it may not be for a while, interviewees were asked for ideas on the best locations for EPA to hold public meetings or information sessions. Suggestions have been added to Appendix B and include:

- Passaic City Hall and Passaic County Community College.
- Clifton Main Memorial Library. For a smaller session, there is the council room or the courtroom. In the past, EPA has used the art room. Schools sometimes have space.
- There are multiple places in North Arlington and the mayor is happy to find one that works.
- Local government meeting space in the borough hall of Rutherford is available.
- The recreation department in Nutley has a meeting room upstairs. There is also the gym or the senior citizen room (190 people maximum capacity).
- The Passaic River Rowing Association is getting a boathouse and the space may be available.

Suggestions for Location of the Local Information Repository

EPA makes certain that the local community has access to site documents, such as fact sheets and cleanup plans. Two local repositories (Elizabeth and Newark) were established when work began at the site. Several interviewees were asked for their opinion on where EPA should place a local repository in support of the upper 9-mile cleanup. Each suggested that the library was the best place because of location, access, and hours of operation. EPA will decide which community will host the local information repository.

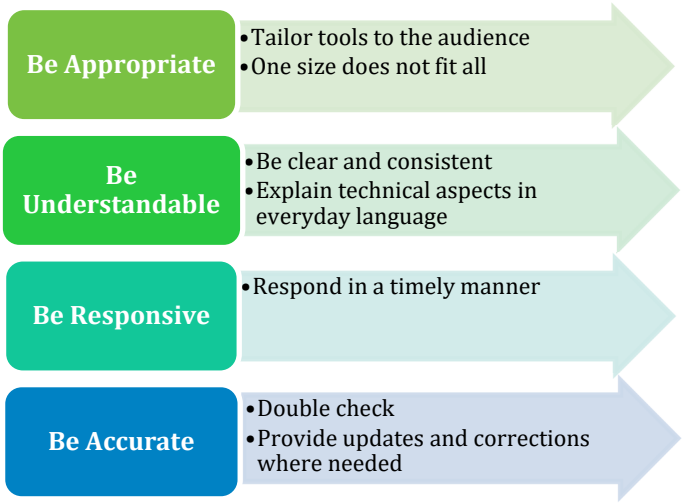


5. Community Involvement Action Plan

The action plan describes steps EPA will take to promote engagement to ensure community members and others are aware of involvement opportunities during the cleanup process. It is based on current knowledge of outreach needs and will be modified as needed and as work progresses. The next big opportunities for public input are likely during the engineering design process for the upper 9-mile interim cleanup action, after all current conditions monitoring and PDI sampling data are available. For the final cleanup action, the next major opportunity for public input is the Proposed Plan, which would be developed to document a preferred cleanup plan to address any remaining risk associated with sediment in the upper 9 miles of the LPRSA and surface water throughout the LPRSA. The timing of this plan would occur after the performance of the upper 9-mile interim cleanup action has been constructed and evaluated and the recovery of the river system toward risk-based cleanup goals has been assessed. Most activities listed do not have a date associated with them in order to allow flexibility to address community needs and interests. EPA welcomes public input at all stages of the process. Simply call or email Diane Salkie or Shereen Kandil. EPA also attends Passaic River CAG meetings every other month to provide the community with updates for the entire Diamond Alkali Superfund site.

EPA's Communication Goals

EPA is committed to providing the information needed to keep the communities in the upper 9 miles of the LPRSA aware of the cleanup status during the interim cleanup, especially at key points in the design process where public input could be valuable. EPA will also alert communities about opportunities for public participation so that people have a voice in what happens in their specific community. EPA will use multiple communication efforts to not only provide information, but to learn from the community. Our four major goals to guide the community involvement and outreach process are shown at right.



Tools for Sharing Information and Opportunities for EPA to Learn from the Community

EPA will use a variety of tools to ensure that community members are made aware of the project status and have opportunities to provide meaningful input where appropriate. Community members can provide input at any time by contacting EPA. Additional tools may be added depending on the type of project activity and complexity, community interest or concerns, environmental justice issues, and media interest. EPA will coordinate with and involve local governments as much as possible in all phases of work and decisions concerning the cleanup. This coordination may include comments on proposed designs.

The most relevant communication tools available to EPA are presented in alphabetical order:

Advertisements/Notifications

Notifications will be placed in appropriate newspapers and other news media as major documents are available for public review and at opportunities for public involvement. Notices will be posted to EPA's site profile webpage and may be posted on websites for each municipality, as well as ourpassaic.org, the EPA website that includes information about the Passaic River CAG, and on local social media accounts.

Briefings for Elected Officials

Briefings for elected officials (such as congressional, commissioners, mayors, administrators) can be scheduled, as needed, to communicate significant events. Handouts may be provided to assist officials in responding to public inquiries. These briefings can even be done remotely with representatives from various municipalities online simultaneously. EPA will coordinate with local government, and other state and federal agencies, to keep them informed and obtain feedback through the life of the project.

CAG

A CAG is made up of representatives of diverse community interests who serve as liaisons for their communities and constituents. A CAG may form at any point in the Superfund process and offers an opportunity to provide community input, especially on issues of cleanup and restoration. During the interview process, EPA provided general information about the Passaic River CAG to interviewees. No one interviewed suggested the need for a CAG specific to the upper 9 miles of the LPRSA, but EPA would be happy to provide the information necessary to any who express an interest in the future. Until then, interested individuals can visit ourpassaic.org, the EPA website, that includes information about the Passaic River CAG as well as providing access to most major documents related to the upper 9 miles.

Community Events

Interviewees had many suggestions for places where EPA could make an appearance to talk about the project or hand out fact sheets or other materials from a booth or table (see *Opportunities for EPA to Talk About the Project* under *Community Needs and Concerns*). Opportunities include volunteer cleanups, summer concerts, holiday or sporting events, food truck festivals, Halloween trunk or treat, and flea markets. EPA can meet with service clubs (e.g., Rotary) and community green teams. During the design process, EPA may take advantage of one or more of these opportunities to meet potential users of the river and to engage in conversation.

Email List

Email is a great way to get information to stakeholders (such as local officials and interest groups). Those individuals can then use their website or social media accounts to pass the information on to the community. This synergy increases the potential viewers of the information and adds to its credibility. EPA maintains an email list to distribute

information and will add anyone to the site email list upon request. To be added to the list, please contact Shereen Kandil, EPA's Community Involvement Coordinator.

Field and Safety Notifications

Advisories, restrictions, and explanatory signs will be posted for the public to mark any project work areas and access or use restrictions.

Media Notification and Events

EPA will continue to provide updates and information to local newspapers, radio, and television outlets, where applicable (Appendix A). The size of the site overall and the upper 9-mile interim cleanup action area makes this challenging, but EPA will coordinate with stakeholders to determine the best media outlets to reach a given audience. Information presented will be concise and understandable.

Newsletters, Fact Sheets, Flyers, Posters, and Other Materials

EPA will prepare written materials specific to the upper 9 miles of the LPRSA to increase awareness and knowledge of the project and its status. Materials will use plain language and content may include upcoming activities, project status, contact information, and more. EPA will also translate the written materials in languages other than English.

Outreach to Users of Riverside Parks

EPA will work to develop outreach that targets users of the riverside parks identified in the community profile (see *Riverfront Parks*) in an effort to target the most obvious users of the river. The goal will be to keep them informed of project activities and obtain feedback on their concerns. This process will foster communication and clarify roles. Those users can convey the information to groups with whom they are associated. Communication efforts may include small group meetings or one-on-one conversations. EPA has no set schedule for this communication and will rely on input from the stakeholders as to how often and which form of contact is preferred.

Public Meetings / Public Information Sessions

EPA will host public meetings / public information sessions at appropriate times throughout the interim engineering design and construction process. Interviewees suggested having them at important milestones. Meetings will be held when it is most convenient for the community. Handouts and visual aids will explain topics in an accessible and understandable format. Advance notice will be provided via news media, emails, partner organizations, websites, and social media. When available, copies of poster boards used at meetings will be posted to the site profile webpage and ourpassaic.org.

Libraries, municipal buildings, and recreational facilities were the most popular meeting locations suggested. The number of communities in the upper 9 miles makes a single location challenging. EPA will short-list accessible locations in advance and may rotate through individual communities, depending on interest and feedback. Multiple nights of public meetings at different locations might also be an option. Online meetings or a hybrid mix are possibilities.

Public Input

Written communications and informal discussions with agency staff are just some of the ways that EPA can be contacted about project-related information. This open line of communication is important to gain better understanding of the public's concerns and needs, so that they can be addressed efficiently and effectively. Informal comments can be offered at any time, such as during information sessions, open houses, community visits, and workshops. Written comments may be submitted to Diane Salkie or Shereen Kandil via mail or email.

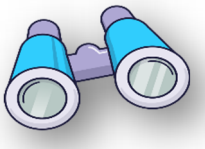
Signs

Signs can be effective tools for communicating human health and environmental risks. EPA will likely employ signs as part of the institutional controls component of the interim cleanup action. EPA will work with the community to develop appropriate signs and may contact the government representatives interviewed for this CIP to get their input on the format, scope, and languages to be used. Signs may include a quick response code that will direct a person to the site profile webpage and the ourpassaic.org or to other sources (such as the Agency for Toxic Substances Disease Registry) for more detailed information.

Social Media

Interviewees were clear in their belief that social media is important to get information out to the communities. Many of the interviewees offered to get information (such as upcoming meetings) out for EPA on their city/township/borough Facebook pages or websites.

EPA may use the agency's social media accounts to also provide updates, notifying the community of upcoming meetings, available documents, and opportunities for involvement. EPA Region 2 has both a Facebook page and a Twitter account.



Tours

Site visits and demonstrations provide the public with a good working understanding of project work and conditions and allow activities to be demonstrated and/or discussed in the field. This goes a long way in addressing community concerns. If there is interest, EPA would consider facilitating a tour with the cooperation of NJDEP to highlight a particular aspect of the upper 9-mile interim cleanup action project.

Websites

EPA will ensure the site profile webpage is up to date. We will provide regular updates to the websites of the 10 municipalities (see *Local Municipalities* under *Community Profile*) within the upper 9 miles of the LPRSA about issues that might be of interest to them. The information will also be shared with the Passaic River CAG.

Examples of information that may be distributed include:

- Sentence or two explaining the presence of sampling personnel at the river.
- Heads-up notice of any upcoming impacts to rights-of-way that might impact traffic.
- Requests for information regarding fishing practices in the river.

These efforts alert the public, provide a warning to local officials that their constituents may be calling with questions, and provide needed information to EPA.

Sources of Existing Additional Information

Detailed information relevant to the interim cleanup action in the upper 9 miles of the LPRSA is available to the public electronically on the EPA website and at the two existing information repositories (Newark and Elizabeth). Most of these documents are available by visiting ourpassaic.org which is an excellent source of information about the interim action in the upper 9 miles of the LPRSA as well as the entire site.

Some documents of interest available on ourpassaic.org include:

- Fact sheet for the EPA's cleanup decision for the upper 9 miles of the LPRSA.
- Fact sheet for the EPA's cleanup decision for the upper 9 miles of the LPRSA (in Spanish).
- EPA's ROD for the upper 9 miles of the LPRSA.
- EPA's Proposed Plan to address sediment contamination sources in the upper 9 miles of the LPRSA.
- Final FS report for the upper 9 miles of the LPRSA.
- Description of the LPRSA RI report and access to the contents.
- NJDEP online information on fish and shellfish consumption.
- NJDEP brochure for restrictions on eating fish and shellfish (in Spanish).

Outreach Evaluation

Obtaining and responding to feedback is an important aspect of effective community involvement to determine if communication tools are reaching their targeted audience or working as expected. Informal solicitation of feedback is a useful tool to gather this information.

EPA will set reasonable and achievable goals for outreach as work progresses, using questions that may include:

- What do we want to accomplish?
- Who is our target audience?

- What do we want members of the community to learn, or what actions do we want them to take as a result?

Evaluation will include setting measures of success and identifying, collecting, and analyzing measurement data. Evaluation results can be used to adjust specific communication practices or the overall approach.

Informal feedback can be used to make mid-course corrections or to address any issues or shortcomings as they arise. Consistent evaluation of community involvement efforts throughout the Superfund process can help the team continuously improve its approach. Informal feedback may come through conversations after a community meeting, or via emails or phone calls from community members regarding outreach efforts.

CIP Updates

This CIP is an evolving document and will be updated as follows:

- Text will be updated once the location of the local information repository is determined. Given the length of the upper 9-mile reach of the LPRSA, it is possible that more than one location may be selected.
- Contacts listed in the CIP will be updated annually to assure that they are current and reflect changes, such as election cycles.

- The CIP will be updated as activities change, such as when the project moves from interim engineering design to interim cleanup construction. Construction activities tend to elicit a higher degree of public interest, and communication methods will likely be adjusted before that transition.

Local Information Repositories and the Administrative Record

As discussed in Section 4, two local repositories (Elizabeth and Newark) were established when work began at the site (Appendix B). EPA will continue to make information available to the public at those repositories and will establish a local information repository (or repositories) specific to the work in the upper 9 miles. The new repository will likely be housed at a library in one (or more) of the 10 municipalities in the upper 9 miles of the LPRSA (Appendix B). The repository will contain this CIP, fact sheets, work plans, reports, Proposed Plans, RODs, and more.

The administrative record is housed at the EPA Region 2 Superfund Records Center and holds documents that EPA considers or relies on when making decisions at the site. Documents are also available to the public at the site profile webpage and ourpassaic.org.

6. Glossary

Adaptive Management. A formal approach to making decisions and adjustments in response to new information. This formal process focuses on making decisions based on what is known, identifying information data gaps, and developing a plan to reduce uncertainty in those areas by collecting the specific information that is needed. Adaptive management is not about changing goals but is about establishing a path to generate and respond to new information, make appropriate management decisions, and achieve goals.

Administrative Settlement Agreement and Order On Consent (AOC). A voluntary and enforceable agreement (according to CERCLA law), signed by EPA and potentially responsible parties (PRPs), whereby the PRPs agree to perform and/or pay for some or all of the response costs involved in a site cleanup.

Administrative Record. The body of documents that forms the basis for the selection of a particular response at a Superfund site. For example, the Administrative Record includes all documents that were considered or relied upon when selecting a cleanup plan through the Record of Decision.

Advisory. State-generated health warning regarding eating contaminated animals (e.g., fish). Advisories include advice on how to reduce exposures to chemical contaminants by avoiding or reducing consumption and by the use of filleting/trimming and cooking techniques to further reduce contaminant levels. The New Jersey Department of Environmental Protection issues fish consumption advisories in New Jersey.

Agent Orange. Agent Orange is an herbicide and defoliant, one of many used by the United States military as part of its herbicidal warfare program—Operation Ranch Hand—during the Vietnam War from 1961 to 1971. It was manufactured by a number of companies for the military, including Diamond Shamrock Corporation.

Community Advisory Group (CAG). A group that represents diverse community interests and serves as the focal point for the exchange of information among the local community and EPA and other stakeholders involved in cleanup of a Superfund site. It provides a public forum for community members to present and discuss their needs and concerns related to the Superfund decision-making process and can assist EPA in making better decisions on how to clean up a site.

Community Involvement and Outreach. The term used to identify the process for engaging in dialogue and collaboration with communities. Community involvement is founded on the belief that people have a right to know what the government is doing in their community and to have a say in it. Its purpose is to give people the opportunity to become involved in the government's activities and to help shape the decisions that are made.

Community Involvement Coordinator (CIC). EPA official whose lead responsibility is to involve and inform the public about the Superfund process and response actions by following the interactive community involvement requirements provided in the National Contingency Plan.

Community Relations. EPA's effort to establish two-way communication with the public to create understanding of EPA programs and related actions, to make certain that public input in decision-making processes related to affected communities is provided, and to ensure that EPA is aware of and responsive to public concerns. Specific community relations activities are required in relation to Superfund cleanup actions.

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). Commonly known as Superfund, CERCLA is intended to protect human health and the environment by investigating and cleaning up abandoned or uncontrolled hazardous waste sites. Under the program, EPA can pay for a site cleanup when parties responsible for the contamination cannot be located or are unwilling or unable to perform the work, enter into agreements with parties responsible, and/or take legal action to require parties responsible for site contamination to clean up the site or repay the federal government for the cleanup cost.

Contaminant. Any physical, chemical, biological, or radiological substance or matter that has an adverse effect on environmental media (e.g., air, water, sediment, or soil), organisms, or humans.

Contamination. Environmental contaminants are chemicals that accidentally or deliberately enter the environment, often, but not always, as a result of human activities, and may cause risk to humans or wildlife.

DDT. Dichlorodiphenyltrichloroethane, commonly known as DDT, is a colorless, tasteless, and almost odorless crystalline chemical compound, an organochloride. Originally developed as an insecticide, it became infamous for its environmental impacts. DDT was first synthesized in 1874.

Dioxin. Dioxins and dioxin-like compounds are a group of chemical compounds that are persistent organic pollutants in the environment. They are mostly by-products of burning or various industrial processes or unwanted minor components of intentionally produced mixtures. A by-product of the manufacturing of agricultural chemicals such as herbicides, 2,3,7,8-TCDD (the most toxic form of dioxin) has been found in Passaic River sediments and in fish/crab tissue.

Enforcement. EPA, state, or local legal actions to obtain compliance with environmental laws, rules, regulations, or agreements and/or obtain penalties or criminal sanctions for violations. Enforcement procedures may vary, depending on the requirements of different environmental laws and related implementing regulations. Under CERCLA, for example, EPA may seek to require potentially responsible parties to clean up a Superfund site, or pay for the cleanup, whereas under the Clean Air Act, the agency may impose penalties against facilities or cities failing to meet emissions standards or ambient air quality standards. In other situations, if investigations by EPA and state agencies uncover willful violations, criminal trials and penalties may be sought.

Environment. The sum of all external conditions affecting the life, development, and survival of an organism.

Environmental Justice (EJ). The fair treatment and meaningful involvement of all people regardless of race, color, national origin, culture, education, sexual orientation, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. Implies that no population of people should be forced to shoulder a disproportionate share of negative

environmental impacts of contamination or environmental hazard due to a lack of political or economic strength levels.

Feasibility Study (FS). The feasibility study (FS) is the mechanism for the development, screening, and detailed evaluation of remedial action alternatives to address contamination at a site (or operable unit), from which a preferred alternative is identified. The FS is usually associated with the remedial investigation (*see below for definition)*, with the FS following the RI or possibly with overlap between the RI and FS (such that cleanup options are is beginning to be developed as the investigation is concluding).

Information Repository. A file containing current information, technical reports, and reference documents regarding a site. The information repository usually is located in a public building convenient for local residents, such as a public school, town hall, or library.

Information Session. Informal public session that often uses poster displays and fact sheets and that includes EPA personnel and contractors who are available to discuss issues and answer questions. Information sessions offer the public the opportunity to learn about project-related issues and to interact with EPA on a one-to-one basis. Information sessions do not require the use of court reporters and transcripts, although EPA may issue meeting summaries through newsletters and progress reports.

Institutional Controls. Institutional controls are non-engineered instruments, such as administrative and/or legal land use controls, that help minimize the potential for human exposure to contamination and/or protect the integrity of a cleanup by limiting land or resource use. Examples include fishing restrictions and deed restrictions. Institutional controls are often supported by informational vehicles, such as the posting of warning signs outside of a contaminated site.

Interim Action or Interim Cleanup. Steps taken to mitigate a hazardous situation at a National Priorities List site. Includes such actions as erecting restraining fences, removing contaminants, and implementing temporary water supply alternatives. Also includes addressing source areas before a final cleanup is completed.

National Priorities List (NPL). EPA's list of serious uncontrolled or abandoned hazardous waste sites identified for possible long-term cleanup under Superfund. The list is based primarily on the score a site receives from the Hazard Ranking System. EPA is required to update the list at least annually, which is done through federal rulemaking.

National Contingency Plan (NCP). Prepared and issued by EPA to serve as the blueprint for cleanups of oil spills under the Clean Water Act, it was expanded to include hazardous substances, and then, after CERCLA was passed in 1980, it was broadened to cover releases at hazardous waste sites. The NCP includes regulations that detail how CERCLA investigations and cleanups are to be conducted, including requirements for community involvement.

Operable Unit (OU). During cleanup, a site can be divided into a number of discrete components or incremental steps towards comprehensively addressing site problems, depending on the complexity of the problems associated with the site. These components, called operable units (OUs), may address geographic areas of a site, specific site problems, or phases of an action, or could include a set of actions performed over time. Examples of OUs are removing drums and tanks from the surface of a site as a discrete action, addressing soil contamination and groundwater contamination separately at a site, or dividing a large site into manageable areas based on similar types of impacts in smaller areas.

Polychlorinated biphenyls (PCBs). A group of manmade chemicals that are oily liquids or solids, clear to yellow in color, with no smell or taste. Polychlorinated biphenyls (PCBs) are very stable mixtures that are resistant to extreme temperature and pressure. They were used widely in electrical equipment, such as capacitors and transformers, and were banned by United States federal law in 1978, and by the Stockholm Convention on Persistent Organic Pollutants in 2001.

Potentially Responsible Party (PRP). An individual, company, or other entity potentially responsible for, or contributing to, the contamination problems at a Superfund site, consistent with the categories in CERCLA (i.e., owners, operators, transporters, or generators of hazardous waste). When possible, EPA requires a potentially responsible party, through administrative and legal actions, to clean up hazardous waste sites for which it is responsible.

Pre-Design Investigation (PDI). An investigation conducted to fill data gaps before developing an engineering design for a site cleanup. It generally involves additional sampling, analysis, and data evaluation.

Proposed Plan. The plan that presents EPA's preferred alternative for cleanup of a Superfund site or OU and is available to the public for comment.

Public Comment Period. A formal opportunity for community members to review and contribute oral and written comments on various documents or actions. Generally, the public comment period is 30 days, but may be extended should the agency receive a request for more time to review and provide comments.

Public Meeting. A formal public session characterized by a presentation to the public followed by a question-and-answer session. Formal public meetings involve the use of a court reporter and the issuance of transcripts. Under CERCLA, EPA is required to provide an opportunity for a formal public meeting when a Proposed Plan is released for public comment before a ROD, or a ROD amendment is issued for a site.

Record of Decision (ROD). A public document that presents and explains EPA's decision regarding which cleanup alternative(s) described in the Proposed Plan will be implemented at the National Priorities List Superfund site that is the subject of the ROD.

Remedial Action (RA). The actual construction or implementation phase that follows the design of a cleanup at a Superfund site. Remedial action is also referred to as a site cleanup.

Remedial Design (RD). The phase that follows the remedial investigation and feasibility study, Proposed Plan, and the Record of Decision, and includes development of a detailed engineering approach, drawings, and specifications for a Superfund site cleanup.

Remedial Investigation (RI). An in-depth study designed to gather data needed to determine the nature and extent of contamination at a Superfund site, identify human health and ecological risks, and establish preliminary site cleanup criteria.

Remediation. Cleanup or other methods used to remove or contain a toxic spill or hazardous materials from a Superfund site **Response Action.** A CERCLA-authorized action involving either a short-term removal action or a long-term response. This may include but is not limited to removing hazardous materials from a site to an EPA-approved hazardous waste facility for treatment, containment or treating

the waste on-site, identifying and removing the sources of contamination and halting further migration of contaminants.

Responsiveness Summary. A summary of oral and/or written public comments received by EPA during a comment period on key EPA documents, and EPA's response to those comments.

Source Reduction. Reducing the amount of material that enters a site, is associated with unacceptable levels of human health and/or environmental risk at a site and/or is known to migrate to other parts of the site and create a larger footprint of contamination.

Stakeholder. People, interest groups, and other organizations or institutions that live in project areas or closely identify with the issues associated with the project.

Superfund. The informal name for the program operated under the legislative authority of CERCLA that funds, oversees, and carries out EPA solid waste emergency and long-term cleanup activities. These activities include establishing the National Priorities List, investigating sites for inclusion on the list, determining their priority for evaluation, and conducting and/or supervising a remedial investigation, feasibility study, cleanup, and other remedial actions.

Technical Assistance Grant (TAG). The Technical Assistance Grant helps communities participate in Superfund cleanup decision-making. It provides funding to community groups to contract their own technical advisor to interpret and explain technical reports, site conditions, and EPA's proposed cleanup proposals and decisions for Superfund sites. An initial grant up to $50,000 is available to qualified community groups. Additional funding may be provided by EPA at complex sites.

Technical Assistance Services for Communities (TASC). The national Technical Assistance Services for Communities program provides independent assistance through an EPA contract to help communities better understand the science, regulations, and policies of environmental issues and EPA actions. A contractor provides scientists, engineers, and other professionals to review and explain information to communities.

Toxicity. The potential for a chemical to have a harmful effect on a living organism. It is a function of the concentration of the chemical and the duration of exposure.

Appendix A Contacts

Agency Contacts

U.S. Environmental Protection Agency, Region 2

290 Broadway 19th Floor, New York, NY 10007

- **Diane Salkie, Remedial Project Manager**, 212-637-4370, salkie.diane@epa.gov
- **Shereen Kandil, Community Involvement Coordinator**, 212-637-4333, kandil.shereen@epa.gov

New Jersey Department of Environmental Protection

- **Julia Galayda, Case Manager, Bureau of Case Management, Site Remediation and Waste Management Program,** 609-913-6471, julia.galayda@dep.nj.gov

Federal Elected Officials and Contacts

U.S. Senate

- **Cory Booker, Senator,** www.booker.senate.gov, Newark office, One Gateway Center, 23rd Floor, Newark, NJ 07102, 973-639-8700
- **Robert Menendez, Senator,** www.menendez.senate.gov, Jersey City office, 210 Hudson Street, Harborside 3, Suite 1000, Jersey City, NJ 07311, 973-645-3030

U.S. House of Representatives

- **Albio Sires, Representative** (District 8), www.sires.house.gov, Elizabeth office, 800 Anna Street, Elizabeth, NJ 07201, 908-820-069
- **Bill Pascrell, Representative** (District 9), www.pascrell.house.gov , Passaic office, 330 Passaic Street, Passaic, NJ 07055, 973-472-4510

State and Local Elected Officials

State of New Jersey

- **Phil Murphy, Governor**, Office of Governor PO Box 001, Trenton, NJ 08625, 609-292-600 www.nj.gov/governor

District 28, Nutley

- **Ronald Rice, State Senator** (District 28) (Nutley), www.njsendems.org/senators/ronald-l-rice

- **Cleopatra Tucker, Assemblywoman** (District 28) (Nutley), www.assemblydems.com/cleopatra-tucker
- **Ralph Caputo, Assemblyman** (District 28) (Nutley), www.assemblydems.com/ralph-caputo

District 29, Belleville

- **M. Teresa Ruiz, State Senator,** www.njsendems.org/senators/m-teresa-ruiz
- **Shanique Speight, Assemblywoman,** www.assemblydems.com/shanique-speight
- **Eliana Pintor Marin, Assemblywoman,** www.assemblydems.com/eliana-pintor-marin

District 34, Clifton

- **Nia Gill, State Senator,** www.njsendems.org/senators/nia-h-gill
- **Thomas Giblin, Assemblyman**, www.assemblydems.com/thomas-giblin
- **Britnee Timberlake, Assemblywoman**, www.assemblydems.com/britnee-timberlake

District 35, Garfield

- **Nellie Pou, State Senator,** www.njsendems.org/senators/nellie-pou
- **Shavonda Sumter, Assemblywoman,** www.assemblydems.com/shavonda-sumter
- **Benjie Wimberly, Assemblyman**, www.assemblydems.com/benjie-wimberly

District 36 (N. Arlington, Lyndhurst, Rutherford, E. Rutherford, Wallington, and Passaic)

- **Paul Sarlo, State Senator,** www.njleg.state.nj.us/legislative-roster/223/senator-sarlo
- **Clinton Calabrese, Assemblyman**, www.assemblydems.com/clinton-calabrese
- **Gary Schaer, Assemblyman**, www.assemblydems.com/gary-schaer

Bergen County

One Bergen County Plaza, Hackensack, NJ 07601, 201-336-6000, www.co.bergen.nj.us

- **James Tedesco III, County Executive**, 201-336-7300, countyexecutive@co.bergen.nj.us
- **Board of Commissioners (7 members)**, 201-336-6200, www.co.bergen.nj.us/county-officials/commissioners
- **Public Information Officer, Michael Pagan**, 201-336-6972, mpagan@co.bergen.nj.us

Borough of East Rutherford

1 Everett Place, East Rutherford, NJ 07073, 201-933-3444, www.eastrutherfordnj.net

- **Mayor, Jeffrey Lahullier**, 201-933-3444, www.eastrutherfordnj.net/mayor-council
- **Council** (6 members), 201-933-3444, www.eastrutherfordnj.net/mayor-council

City of Garfield

111 Outwater Lane, Garfield, NJ 07026, www.garfieldnj.org

- **Mayor, Richard Rigoglioso,** 201-933-3444, rrigoglioso@garfieldnj.org,
- **City Manager, Erin Nora Delaney**, 973-253-7965, edelaney@garfieldnj.org
- **Council** (three members), www.garfieldnj.org/directory

Township of Lyndhurst

367 Valley Brook Avenue, Lyndhurst, NJ 07071, www.lyndhurstnj.org

- **Mayor, Robert Giangeruso**, 201-804-2457 x2685, Robertg@Lyndhurstnj.org
- **Commission** (four members), www.lyndhurstnj.org/directory

Borough of North Arlington

214 Ridge Road, North Arlington, NJ 07031, www.northarlington.org

- **Mayor, Daniel Pronti**, 201-991-6060, dpronti@northarlington.org
- **Council** (six members), *www.northarlington.org* (no directory)

Borough of Rutherford

Rutherford Borough Hall, 176 Park Avenue, Rutherford, NJ 07070, 201-460-3000, www.rutherfordboronj.com

- **Mayor, Frank Nunziato**, 201-460-3022, fnunziato@rutherfordboronj.com, www.rutherfordboronj.com/government/mayor-council
- **Council** (six members), www.rutherfordboronj.com/government/mayor-council

Borough of Wallington

Municipal Building, 24 Union Boulevard, Wallington, NJ 07507, 973-777-0318, www.wallingtonnj.org

- **Mayor, Melissa Dabal**, 973-777-0318 Ext. 1, www.wallingtonnj.org/mayor-council/events/24631
- **Council** (six members), 973-777-0318 Ext. 1, www.eastrutherfordnj.net/mayor-council

Essex County

465 Dr. Martin Luther King Jr. Boulevard, Newark, NJ 07102, www.essexcountynj.org

- **Joseph DiVincenzo, Jr., County Executive**, 973-621-4400, joedi@admin.essexcountynj.org
- **Board of County Commissioners** (nine members), 973-621-4486, https://ecfnj.com/
- **Public Information Officer, Lauren Agnew**, 973-621-1590, lshears@admin.essexcountynj.org

Township of Nutley

1 Kennedy Drive, Nutley, NJ 07110, 973-284-4951, www.nutleynj.org

- **Mayor, Mauro G. Tucci**, 973-284-4969, mayortucci@nutleynj.org
- **Board of Commissioners** (four members) www.nutleynj.org/board-of-commissioners
- **Director, Board of Public Affairs (also a commissioner), John Kelly, III,** 973-284-4972, commissionerkelly@nutleynj.org

Township of Belleville

152 Washington Avenue, Belleville, NJ, 07109, www.bellevillenj.org

- **Mayor, Michael Melham**, 973-450-3345, mmelham@bellevillenj.org
- **Council** (5 members), *www.bellevillenj.org/directory*

Passaic County

Passaic County Administration Building, 401 Grand St., Patterson, NJ 07505, www.passaiccountynj.org

- **County Administrator, Anthony DeNova III**, 973-881-4405, adenova@passaiccountynj.org
- **Board of Commissioners** (seven members), 973-881-4402 www.passaiccountynj.org/government/passaic-county-board-of-county-commissioners
- **Public Information Officer, Neela Mahbuba**, 973-225-5380, mneela@passaiccountynj.org

City of Clifton

900 Clifton Avenue, 1st Floor, Clifton, NJ 07013 www.cliftonnj.org

- **Dominick Villano, City Manager**, 973-470-5854, 973-470-5265 (fax), dvillano@cliftonnj.org
- **James Anzaldi, Mayor,** 973-470-5757, janzaldi@cliftonnj.org
- **City Council** (five members), 973-470-5757, www.cliftonnj.org/101/Council

City of Passaic

330 Passaic Street, Passaic, NJ 07055 www.cityofpassaic.com

- **Hector C. Lora, Mayor**, 973-365-5510, mayor@cityofpassaicnj.gov
- **Rick Fernandez, Business Administrator**, 973-365-5513, rfernandez@cityofpassaicnj.gov
- **City Council** (seven members), www.cityofpassaic.com/229/City-Council

Stakeholder Groups

- **American Littoral Society**, Tim Dillingham, Executive Director, 18 Hartshorne Drive, Suite #1, Highlands, NJ 07732, 732-291-0055, info@littoralsociety.org
- **AmeriCorps New Jersey Watershed Ambassadors Program**, Watershed Ambassador, WMA 4: Lower Passaic and Saddle Donna Clement, Passaic Valley Sewerage Commission 973-817-5784, WMA4.NJWAP@gmail.com
- **Association of New Jersey Environmental Commissions (ANJEC)**, Jennifer M. Coffey, Executive Director, P.O. Box 157, Mendham, NJ 07945, 973-539-7547, info@anjec.org
- **Association of NJ Environmental Educators (ANJEE)**, Pat Heaney, President, 11 Hardscrabble Road, Bernardsville, NJ 07924, No phone number listed, president@anjee.net
- **Botany Village Improvement District**, Joe Waninger, Executive Director, 609-731-5454, www.facebook.com/BotanyVillage
- **Great Swamp Watershed Association**, 568 Tempe Wick Rd, Morristown, NJ 07960, 973-538-3500, www.greatswamp.org
- **New Jersey Citizen Action**, Phyllis Salowe-Kayo, Exec. Director, The Hahne's Bldg., Suite 270, 625 Broad Street, Newark, NJ 07102, 973-643-8800, phyllis@njcitizenaction.org
- **New Jersey Environmental Justice Alliance**, 204 West State Street, Trenton, NJ 08608, njejainfo@gmail.com, *Ana Baptista, Passaic CAG Co-Chair is on the board of this group*
- **New Jersey Future**, 16 W. Lafayette St., Trenton, NJ 08608, 609-393-0008, www.njfuture.org
- **Passaic River Basin**, www.passaicriverbasin.com/prb5environment.html
- **Passaic River Community Advisory Group**, Ana Baptista (baptista@newschool.edu) and Michele Langa (michele@nynjbaykeeper.org) chairs, www.ourpassaic.org
- **Passaic River Coalition**, Laurie Howard, Chair, 330 Speedwell Avenue, Morristown, NJ 07960, 973-532-9830, email via website: www.passaicriver.org
- **Passaic River Institute, Montclair State**, Meiyin S. Wu, Exec. Director, Montclair State University, 1 Normal Avenue, Montclair, NJ 07043, 973-655-3704, pri@montclair.edu
- **Passaic River Rowing Association**, president@prra.org, www.facebook.com/groups/rowatprra/
- **Passaic Valley Sewerage Commissioners**, Brian Davenport, River Restoration, 600 Wilson Avenue, Newark, NJ 07015, 973-466-2714, bdavenport@pvsc.nj.gov
- **Rutgers University Cooperative Extension**, Rutherford Green Team, Eileen Eastham, Co-Chair, greenteam@rutherfordboronj.com

Environmental Justice Groups

- Community Action Services
- Community Options, Inc. (COMOP)
- Eastern Environmental Law Center
- La Casa De Don Pedro
- Lead-Free NJ
- Moving Forward Network
- National Black United Fund (NBUF)
- Native Plant Society of New Jersey (NPSNJ)
- Natural Resources Defense Council (NRDC)
- New Community Corporation
- New Jersey Association of County and City Health Officials (NJACCHO)
- New Jersey Audubon
- New Jersey Black Issues Convention (NJBIC)
- New Jersey Clean Cities Coalition
- New Jersey Community Development Corporation (NJCDC)
- New Jersey Environmental Justice Alliance (NJEJA)
- NJ Historical Society
- NJ Institute for Social Justice
- NJ Sierra Club
- NJ Work Environmental Council
- NY/NJ Baykeeper
- The Friends of the Passaic River, Inc.
- Urban Agriculture Cooperative

Local Media Contacts

Newspapers

- ***El Diario.*** *www.eldiariony.com/*
- ***Essex Daily Voice.*** www.dailyvoice.com/new-jersey/essex/
- ***The Record.*** Affiliated with www.northjersey.com
- ***The Star-Ledger.*** Affiliated with www.nj.com
- ***The Observer.*** www.theobserver.com/category/news/bergen-county/
- ***Belleville Post.*** Affiliated with www.essexnewsdaily.com/
- ***The Belleville Times.*** www.bellevilletimes.com

Radio

- Review of a list of Federal Communications Commission–licensed radio stations in New Jersey identified no radio stations originating in any of the 10 municipalities in the upper 9 miles of the LPRSA.

Television

- Review of a list of broadcast television stations licensed to or located in New Jersey identified no stations originating in any of the 10 municipalities in the upper 9 miles of the LPRSA.

Appendix B
Meeting Locations, Administrative Record, Information Repositories, and Website

Potential Meeting and Local Information Repository Locations

- **Clifton Memorial Library**, 292 Piaget Avenue, Clifton, NJ, 07011, 973-772-5500, www.cliftonpl.org,
  (near Dundee Dam), see hours online
- **Passaic Public Library**, 195 Gregory Avenue, Passaic, NJ 07055, 973-779-0474, www.passaicpubliclibrary.org, see hours online
- **Garfield Public Library**, 500 Midland Avenue, Garfield, NJ 07026, 973-478-3800, www.garfield.bccls.org, see hours online
- **John F. Kennedy Memorial Library**, 92 Hathaway Street, Wallington, NJ 07057, 973-471-1692 www.wallingtonpubliclibrary.org, (next to Hathaway Park), see hours online
- **East Rutherford Memorial Library**, 143 Boiling Springs Avenue, East Rutherford, NJ 07073, 201-939-3930, https://eastrutherford.bccls.org/, see hours online
- **Rutherford Public Library**, 150 Park Avenue, Rutherford, NJ 07070, 201-939-8600, www.rutherfordlibrary.org, see hours online
- **North Arlington Public Library**, 210 Ridge Road, North Arlington, NJ 07031, 201-955-5640 https://northarlington.bccls.org/ , see hours online
- **Lyndhurst Free Public Library**, 355 Valley Brook Avenue, Lyndhurst, NJ 07071, 201-804-2478, www.lyndhurstlibrary.org, see hours online
- **Nutley Public Library**, 93 Booth Drive, Nutley, NJ 07110, 973-667-0405, www.nutleypubliclibrary.org, see hours online
- **Belleville Public Library**, 21 Washington Avenue, Belleville, NJ, 973-450-3434, www.bellepl.org, see hours online
- **Passaic City Hall**, 330 Passaic St, Passaic, NJ 07055, 973-365-5510
- **Borough Hall in Rutherford**, 176 Park Ave, Rutherford, NJ 07070, 201-460-3000
- **Nutley Parks Department**, 44 Park Ave, Nutley, NJ 07110, 973-284-4966

Administrative Record

- **U.S. Environmental Protection Agency, Region 2**, Superfund Record Center, 290 Broadway, Room 1828, New York City, New York, 10007-1866 (by appointment only), 212-637-4308

Information Repositories

- **U.S. Environmental Protection Agency, Region 2**, Superfund Record Center, 290 Broadway, Room 1828, New York City, New York, 10007-1866 (by appointment only), 212-637-4308
- **Newark Public Library**, New Jersey Reference Section, 5 Washington Street, Newark, New Jersey 07101, 973-733-7784
- **Elizabeth Public Library**, 11 South Broad Street, Elizabeth, New Jersey, 07202, 908-354-6060
- **Local repository location(s) to be determined**

Websites

- www.epa.gov/superfund/diamond-alkali
- www.ourpassaic.org

Appendix C Summary of EJScreen Reports

Variable	Percentiles								
	State	EPA Region	USA	State	EPA Region	USA	State	EPA Region	USA
Demographic Indicators	**North Arlington**			**Clifton**			**Lyndhurst**		
Demographic Index	-	-	-	-	-	71	-	-	-
People of Color	-	-	-	-	-	74	-	-	-
Low Income	-	-	-	-	-	-	-	-	-
Linguistically Isolated	77	73	70	-	80	85	70	-	80
Less than High School	-	-	-	-	-	72	-	-	-
Under 5 Years	-	-	-	-	-	-	-	-	-
Over 64 Years	-	-	-	-	-	-	-	-	-
Demographic Indicators	**Belleville**			**Passaic**			**Garfield**		
Demographic Index	-	-	-	81	76	81	79	73	78
People of Color	-	-	73	74	71	79	71	-	76
Low Income	-	-	-	84	79	75	83	77	72
Linguistically Isolated	79	76	86	89	86	93	87	85	93
Less than High School	-	-	-	88	84	85	86	81	82
Under 5 Years	-	-	-	75	74	72	-	-	-
Over 64 Years	-	-	-	-	-	-	-	-	-
Demographic Indicators	**East Rutherford**			**Rutherford**			**Wallington**		
Demographic Index	-	-	-	-	-	-	78	-	78
People of Color	-	-	-	-	-	-	-	-	73
Low Income	-	-	-	-	-	-	83	72	73
Linguistically Isolated	-	-	79	-	-	78	90	80	93
Less than High School	-	-	-	-	-	-	86	77	81
Under 5 Years	-	-	-	-	-	-	83	83	82
Over 64 Years	-	-	-	-	-	-	-	-	-

Nutley had no Demographic Indicators in the 70th percentile or greater.

Summary of Demographic Indicators Having Percentiles of 70 or Greater by Area

Variable	Percentiles					
	State	EPA Region	USA	State	EPA Region	USA
EJ Indexes	**North Arlington**			**Clifton**		
$PM_{2.5}$	-	-	-	76	73	74
Ozone	-	-	-	76	72	74
NATA Diesel PM	-	-	-	79	72	83
NATA Air Toxics Cancer Risk	-	-	-	77	72	75
NATA Respiratory Haz Risk	-	-	-	77	72	75
Traffic	70	-	72	75	70	78
Lead Paint	-	-	73	79	72	86
Superfund Proximity	71	73	84	84	90	95
RMP Proximity	-	-	-	78	77	77
Haz Waste Proximity	-	-	77	81	70	89
Wastewater Discharge	80	86	87	85	91	90
EJ Indexes	**Garfield**			**Belleville**		
$PM_{2.5}$	80	78	78	72	-	70
Ozone	80	77	78	71	-	-
NATA Diesel PM	84	76	87	73	-	78
NATA Air Toxics Cancer Risk	81	77	79	72	-	70
NATA Respiratory Haz Risk	82	76	80	72	-	71
Traffic	91	84	90	73	-	76
Lead Paint	85	79	90	75	-	82
Superfund Proximity	92	96	98	83	90	95
RMP Proximity	84	85	84	73	70	71
Haz Waste Proximity	83	72	91	76	-	85
Wastewater Discharge	92	94	93	83	89	89
EJ Indexes	**Passaic**			Wallington		
$PM_{2.5}$	85	83	82	85	84	-
Ozone	84	82	82	-	-	-
NATA Diesel PM	87	78	90	75	-	95+
NATA Air Toxics Cancer Risk	86	81	83	90	70-80	80-90
NATA Respiratory Haz Risk	86	80	83	80	-	80-90
Traffic	91	85	91	85	84	89
Lead Paint	87	82	92	71	-	84
Superfund Proximity	93	96	98	93	97	99
RMP Proximity	85	86	84	84	89	84
Haz Waste Proximity	86	74	92	75	-	87
Wastewater Discharge	92	94	93	89	84	84
There were no percentiles of 70 or greater for EJ indexes in Nutley, Lyndhurst, East Rutherford, Rutherford or for the site as a whole						

Summary of EJ Indexes Having Percentiles of 70 or Greater by Area