



Newtown Creek NPL Site Community Involvement Plan



**U.S. Environmental
Protection Agency -
Region 2**

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List of Acronyms

Anchor	Anchor QEA
AOC	Administrative Order on Consent
ATSDR	Agency for Toxic Substances and Disease Registry
BERA	baseline ecological risk assessment
BNR	Brooklyn Neighborhood Reports
CAG	community advisory group
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CIP	community involvement plan
CSTAG	Contaminated Sediments Technical Advisory Group Review
EPA	U.S. Environmental Protection Agency
EWIP	East Williamsburg Industrial Park
EWVIDCO	East Williamsburg Valley Industrial Development Corporation
FS	feasibility study
FWS	U.S. Fish and Wildlife Service
GWAPP	Greenpoint Waterfront Association for Parks and Planning
LIC	Long Island Community
NAG	Neighbors Aligned for Good Growth
NCA	Newtown Creek Alliance
NCG	Newtown Creek Group
NCMC	Newtown Creek Monitoring Committee
NCP	National Contingency Plan
NOAA	National Oceanic and Atmospheric Administration
NPL	National Priorities List
NYC	New York City
NYCDEP	New York City Department of Environmental Protection
NYSDEC	New York State Department of Environmental Conservation
NYDOH	New York Department of Health
OSA	Open Space Alliance for North Brooklyn
PRP	potentially responsible party
QCD2	Queens Community District 2
RI	remedial investigation
ROD	Record of Decision
Site	Newtown Creek Superfund Site
SMIA	Significant Maritime and Industrial Area
TAG	Technical Assistance Grant
TASC	Technical Assistance Services for Communities

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Section 1

Introduction

1.1 Purpose and Goals of the Community Involvement Plan

This community involvement plan (CIP) has been prepared in accordance with federal regulation as a **guide for the U.S. Environmental Protection Agency (EPA)** to engage and inform community members, environmental groups, government officials, the media, and other interested parties in the environmental investigation and cleanup activities at the Newtown Creek Superfund Site (the Site). The CIP is a living document and will be updated or revised, as appropriate, as conditions change.



EPA's goals for the CIP are:

- Ensure that the public has appropriate opportunities for involvement in a wide variety of site-related decisions, including site analysis and characterization, alternatives analysis, and selection of a response action.
- Determine (based on community interviews and other relevant information) appropriate activities to ensure such public involvement.
- Provide appropriate opportunities for the community to learn about the Site.

The CIP is meant to be user-friendly and understandable to the public. Use of acronyms or scientific terminology has been avoided (where possible). The plan was written after community interviews and research concerning community demographics were completed so the content could be tailored to fit the needs of the community.

EPA will review and update this plan periodically. The next review likely will be when the decision document (the Record of Decision) is issued. Also, appendices will need to be updated periodically as contact information changes.

Guidance documents and other resources used in drafting this CIP include:

- *National Oil and Hazardous Substances Pollution Contingency Plan (NCP)* (NCP 1994)
- *Superfund Community Involvement Handbook* (EPA 2005)
- *Community Involvement Toolkit* (EPA 2016)

1.2 Regulatory Authority

In 1980, Congress enacted the Comprehensive Environmental Response Compensation and Liability Act (CERCLA). CERCLA or Superfund, as it is more commonly known, allows EPA to clean up hazardous waste site and to force responsible parties to perform cleanups or reimburse the government for cleanups lead by EPA.

To implement Superfund, EPA created the National Contingency Plan (NCP), which is a set of regulations that detail how Superfund cleanups are to be conducted, including requirements for community involvement. In the case of the Newtown Creek Superfund site, EPA is conducting a remedial action and will be following the requirements specified in the NCP for this type of response action. The first phase of remedial work being done at the site is the remedial investigation (RI) and feasibility study (FS). The RI assesses the nature and extent of contamination at the site and the FS looks at feasible options to address the contamination. During the RI and FS process, EPA will actively involve the community in the manner detailed in the NCP. This community involvement plan is part of that outreach and engagement process.

1.3 Project Structure and Roles

The work at the Site is being conducted by a group of *respondents* who signed an *Administrative Order on Consent* (AOC) with EPA in 2011. The project structure is shown in Figure 1.1 and described below.

An AOC is a legal agreement to perform work as outlined under EPA's oversight.

1.3.1 Regulatory Oversight

Lead Agency

EPA is the lead agency for regulatory oversight at the Site, primarily for all in-water investigations and cleanup. As such, EPA is responsible for ensuring work is done in accordance with Superfund law, the NCP, guidance and policy, and the terms of the AOC. EPA and their consultant will oversee field activities, review documents (work plans, quality assurance plans, health and safety plans, and various reports on findings. For more information on EPA, visit their website at: www.epa.gov.



Partner Agencies (Trustees)

Partner agencies with EPA at the Site are: New York State Department of Environmental Conservation (NYSDEC), the National Oceanic and Atmospheric Administration (NOAA), and the U.S. Fish and Wildlife Service (FWS). Their roles are described below:

- NYSDEC.** As the department within state government responsible for conservation, improvement, and protection of natural resources, NYSDEC is responsible for evaluating and controlling upland sources of contamination to Newtown Creek. NYSDEC will provide input to EPA on sampling and cleanup activities, can comment on documents prior to release to the public, and can serve as a participant in planning meetings. For more information on NYSDEC, visit www.dec.ny.gov.



- NOAA.** As the agency that guides the use and protection of ocean and coastal resources and conducts research to improve understanding and stewardship of the environment, NOAA is interested in the Site because of its environmental impacts to a tidal estuary. NOAA will provide input to EPA on sampling and cleanup, can comment on documents prior to release to the public, and can serve as a participant in planning meetings. For more information on NOAA, visit www.noaa.gov.
- FWS.** As the federal agency dedicated to the management of fish, wildlife, and natural habitats, the FWS works to enforce federal wildlife laws, protect endangered species, manage migratory birds, restore nationally significant fisheries, and conserve and restore wildlife habitat (such as wetlands). Their interest in the Site is related to impacts of contamination and cleanup on fisheries and wildlife habitats and restoration of those habitats. FWS will provide input to EPA on sampling and cleanup activities, can comment on documents prior to release to the public, and can serve as a participant in planning meetings. For more information on FWS, visit www.fws.gov.



1.3.2 Potentially Responsible Parties

The term *respondents* in the AOC refers to parties that are liable for payment of Superfund cleanup costs. Respondents are also commonly known as *potentially responsible parties* (PRPs). Companies that generate hazardous substances disposed of at a Superfund site, current and former owners and operators of the site, and transporters who selected the site for disposal of hazardous substances are typically responsible for part or all of the cleanup costs. At Newtown Creek, the current PRPs are:

- Phelps Dodge Refining Corporation
- Texaco, Inc.
- BP Products North America, Inc.
- National Grid NY (formerly Brooklyn Union Gas Company)
- ExxonMobil Oil Corporation
- City of New York

PRPs are respondents who are liable for Superfund cleanup costs.

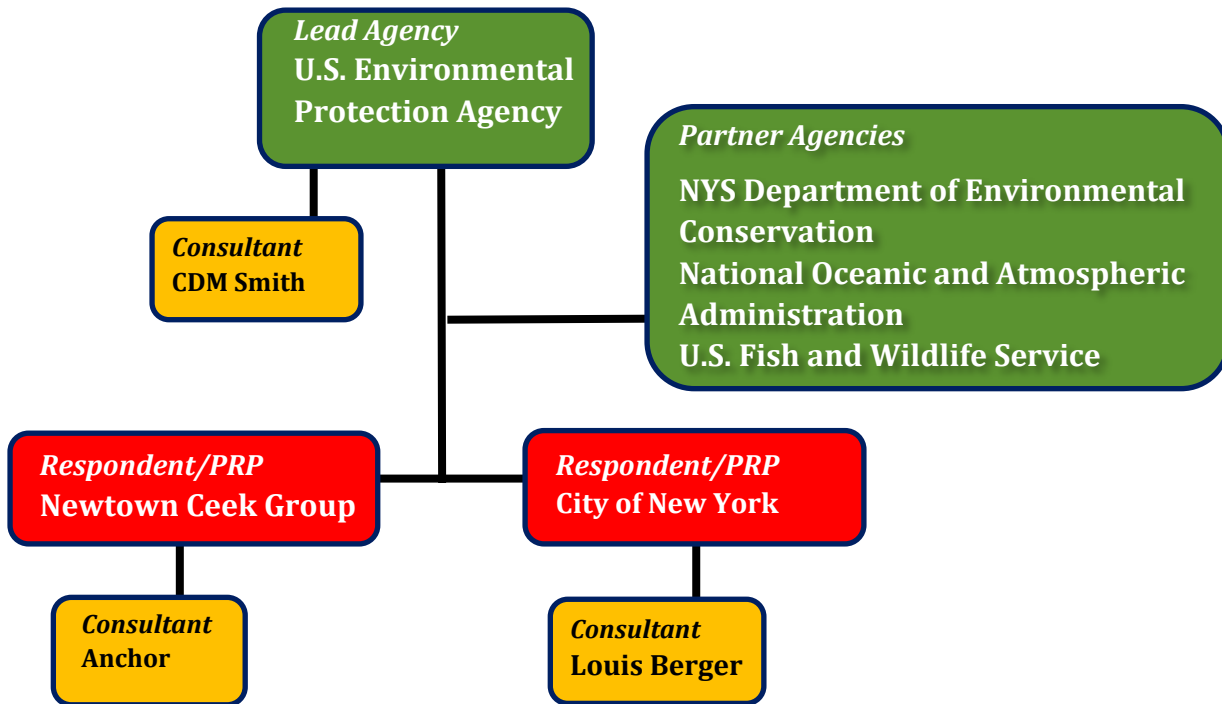


Figure 1.1. Key Site Stakeholders

In addition to the costs that the PRPs will incur for conducting work under the agreement, the AOC requires that the PRPs reimburse EPA for the past costs that EPA paid prior to the AOC, and for EPA's ongoing costs in overseeing both the RI and the FS under the AOC.

Newtown Creek Group

Except for the City of New York, the respondents have chosen to act as a group known as the Newtown Creek Group (NCG). NCG's consultant, Anchor QEA (Anchor), conducts the work specified in the agreement. Work will be conducted under EPA oversight and generally covers contamination related to industrial operations by the PRPs. The NCG has a website (www.newtowncreek.info) that houses site documents, site status descriptions (through 2014), a photo gallery, and contact information.

City of New York

The City of New York (the City) has chosen to operate separately from the other PRPs. As a significant respondent, it is afforded the opportunity to review and comment on draft deliverables and participate in meetings with EPA and NCG. The City is reviewing Anchor's work (including by doing separate "at risk" studies outside of the AOC) and has its own consultant (The Louis Berger Group) to perform the work specified in the agreement. This work is generally related to contamination from municipal activities (e.g., Newtown Creek wastewater treatment plant and associated sewer lines) but also includes work related to what the NCG is doing (groundwater, sediments, and point source sampling and ecological risk assessment).



1.4 Community Involvement Plan Structure

This community involvement plan provides outreach information for the Site in a single location. It is not necessary to read all sections to understand the scope of planned outreach activities; however, the individual sections provide added information on the Site and on concerns expressed to EPA during community interviews conducted in February, March, and April 2016.

The plan structure is:

- **Section 1 – Introduction.** Purpose and goals of the plan, regulatory authority, project structure and roles, and plan structure
- **Section 2 – Site Description.** Location and layout, physical description, site history, regulatory history to date, planned regulatory activities, and exposure issues
- **Section 3 – Community Profile.** Demographics and neighborhood descriptions and community involvement activities conducted to date
- **Section 4 – Community Concerns and Issues.** Distillations of issues and concerns heard by EPA in interviews, at public meetings, and in other interactions with the public
- **Section 5 – Community Involvement Action Plan.** Planned actions, schedule, and measurement of success
- **Section 6 – References.** List of references cited for text and figures in this document
- **Appendices – A through J.** Contact information for people, repositories, and venues and specific documents

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Section 2

Site Description

The Site (Figure 2.1) is in New York City, in the boroughs of Brooklyn and Queens. This section covers the following:

- Section 2.1. Location and Layout
- Section 2.2. Physical Description
- Section 2.3 Site History
- Section 2.4. Regulatory Involvement to Date
- Section 2.5. Upcoming Milestones
- Section 2.6. Site Exposure Information
- Section 2.7. Contaminated Sediments Technical Advisory Group Review



Figure 2.1. General area of the Site

2.1 Location and Layout

The Site forms a boundary between the boroughs of Queens and Brooklyn. Its primary feature is Newtown Creek itself, which is part of the Hudson Estuary and flows west for 3.5 miles between Queens and Brooklyn and empties into the East River. The creek has five short tributaries (Dutch

Kills, Whale Creek, Maspeth Creek, East Branch, and English Kills), which total another 3.8 miles. The average width of the creek is 200 to 300 feet (except for the turning basin), and the orientation is generally east to west, with the easternmost section oriented south to north (Figure 2.1). Surface water flow is generally east to west, although reversal of flow may occur with incoming tides. The typical tidal range is 4 to 6 feet. Newtown Creek is a tidally influenced estuary, with a total surface area of 140 acres. It once flowed through wetlands and marshes, which have since been paved. The creek is part of the core area of the New York-New Jersey Harbor Estuary, which EPA designated as an “estuary of national significance.” The areas surrounding the Site are heavily developed and include commercial, industrial, and residential properties. The five neighborhoods included in the Site are described in Section 3.

The layout of the creek and general locations of the major respondents are shown on Figure 2.2. Those respondents are City of New York, ExxonMobil, Texaco, BP, Phelps Dodge, and the Brooklyn Union Gas Company doing business as the National Grid. They are discussed further in Section 2.3.

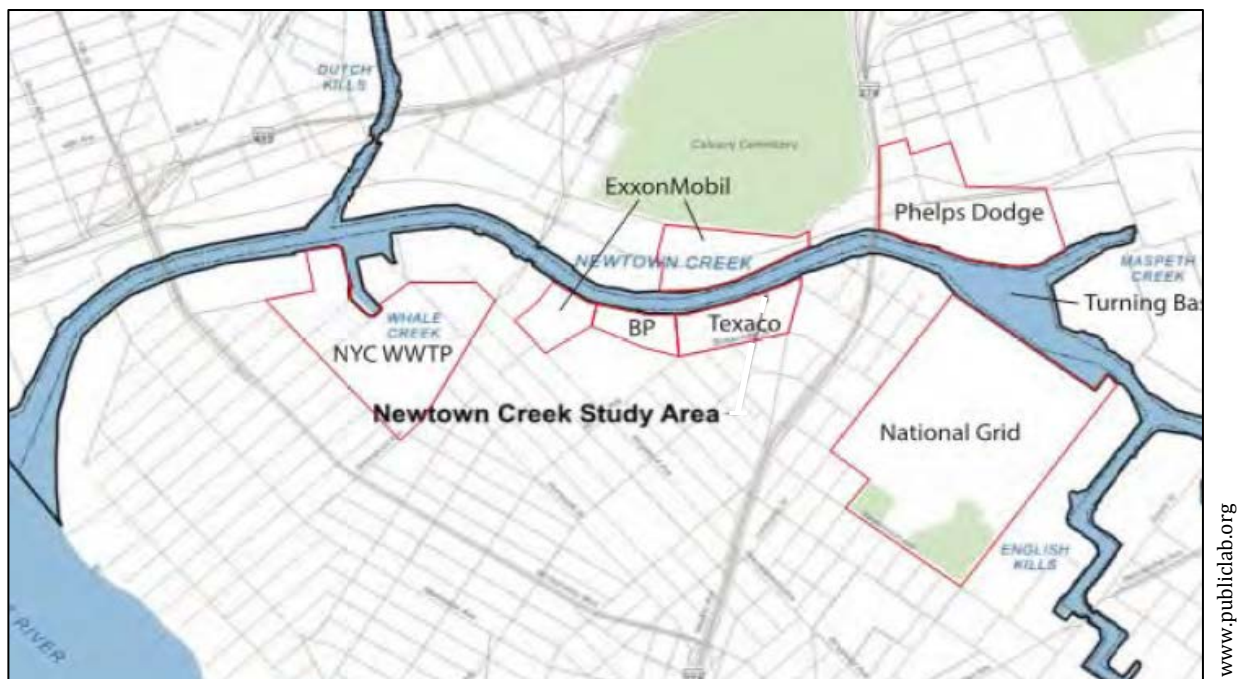


Figure 2.2. Plan view of Site showing locations of notable industrial and municipal sources

2.2 Physical Description

Newtown Creek and its tributaries were originally a natural stream with fringe marshes and side channels. During the late 1800s and early 1900s, the creek and tributaries were channelized and dredged for drainage and navigation purposes (Figure 2.3). Thus, the system has gone from a natural drainage condition to one largely controlled by engineered and institutional systems. The creek and tributaries still serve as a navigation channel today (Figure 2.4). A substantial portion of the shoreline is contained by bulkheads or protected with riprap. Bulkheads are generally wood, steel, cement, or stone and are in various states of repair.



Figure 2.3. Map of Newtown Creek, circa 1844

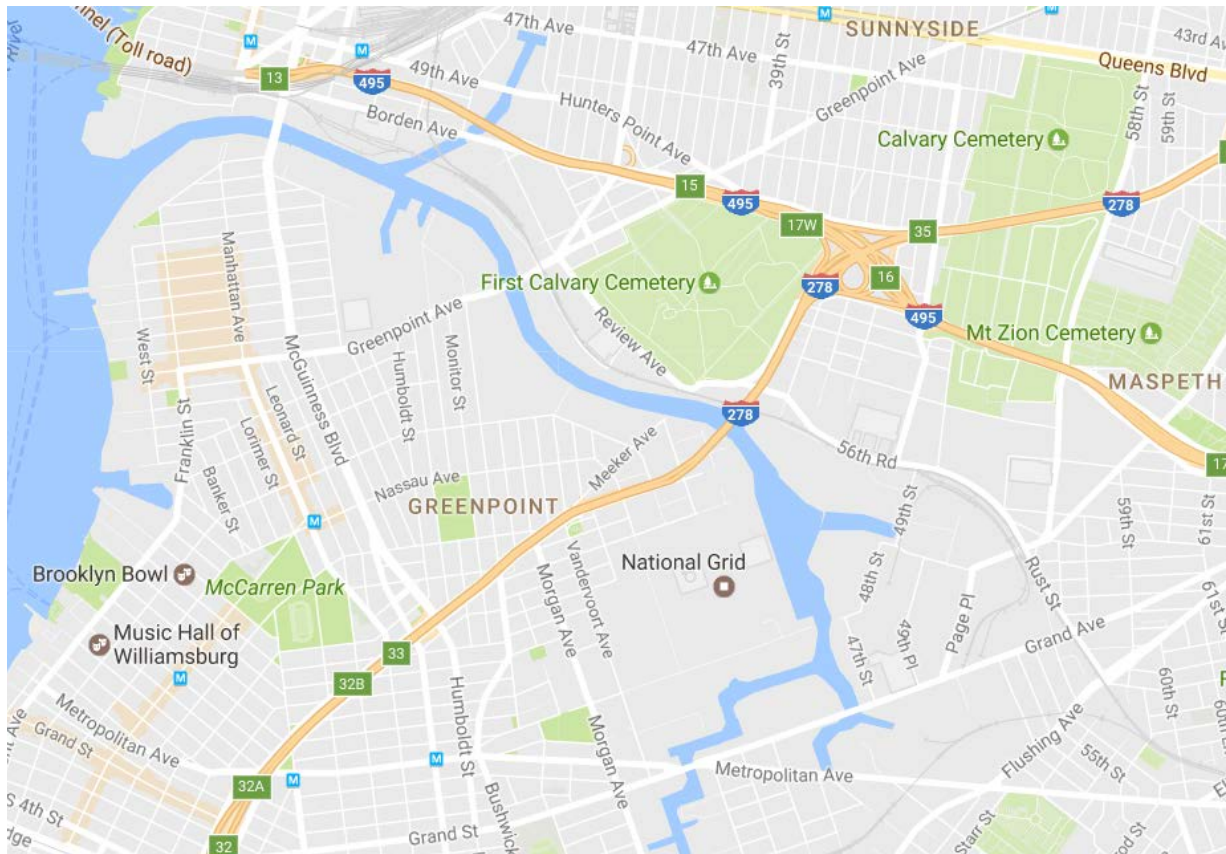


Henderson (Wikipedia 2016)

Figure 2.4 Photos of Newtown Creek as seen from Pulaski Bridge and Greenpoint Avenue Bridge

Businesses on the creek and its tributaries include Exxon Mobil and other former refinery sites, former Phelps Dodge Refining Company smelter, former Manufactured Gas Plant sites owned by National Grid, cement plant, scrap yard, beverage distributor, construction supply company, used concrete recycling plant, plumbing fixture show room, dry ice manufacturer, petroleum bulk storage facilities, liquefied natural gas storage site, and the Newtown Creek wastewater treatment plant. There are also a wide variety of vehicle maintenance and storage operations, retail wholesale and distribution establishments, and other businesses.

Eight highway and road bridges span Newtown Creek and its tributaries, the largest being the Brooklyn Queens Expressway (U.S. Interstate 278) and the Long Island Expressway (U.S. Interstate 495) (Figure 2.5). The remaining six bridges are draw or swing bridges that allow vessel access to the upper reaches of the creek and its tributaries. Two railroad bridges on Dutch Kills are currently in disrepair and cannot be opened for navigation. These bridges prevent water-side access, other than by small boats, to the upper reaches of Dutch Kills. There is an additional railroad bridge crossing on English Kills. Figure 2.6 is an aerial photograph of much of the Site showing several of the bridges and the degree of development in the area.



Google maps, April 2017

Figure 2.5. Road map of Site area showing bridges



Figure 2.6. Aerial photograph of Newtown Creek (2013) looking east

2.3 Site History

2.3.1 Early Settlement and Use

The first survey of Newtown Creek was completed by Dutch explorers in 1613-1614 (Figure 2.7), and the area was acquired from the local Mespaches tribe shortly thereafter. Initially, the area around Newtown Creek and its tributaries was used primarily for agriculture, but following the Revolutionary War, it became industrialized with glue and tin factories, rope works, tanneries, and the Sampson Oil Cloth Factory operating along the Creek. There was a shift to shipbuilding in the Pre-Civil War Period. Following the Civil War, textile manufacturing and oil refining replaced shipbuilding along Newtown Creek and its tributaries.

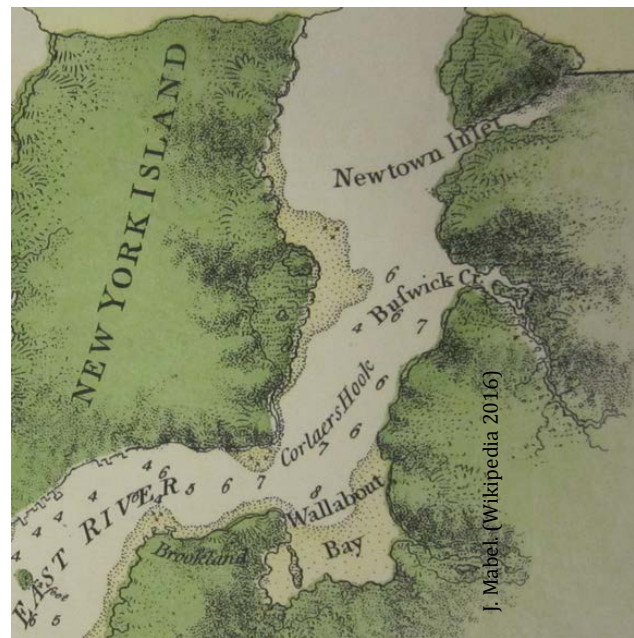


Figure 2.7. Early depiction of the area during Dutch settlement – 1600s.

2.3.2 Industrialization of the Area and Sources of Contamination

Industrialization of Newtown Creek continued through to the present, with a wide variety of businesses taking advantage of resources provided by the creek (transportation, process water, and waste disposal). Figure 2.8 illustrates a variety of these businesses and the time periods during which they operated. Newtown Creek was home to the first kerosene refinery and the first modern oil refinery in the United States, paving the way for the area to become the most industrialized in the nation by the 1900s. With industry came the establishment of the Long Island Railroad Hub in 1861, the Queensboro Bridge in 1909, and the Interborough Rapid Transit subway line in 1917.

1860 to 1900	1900 to 1960s	1960s to Present
<ul style="list-style-type: none"> • Oil refining • Gas manufacture • Fertilizer manufacture • Manure dumping • Ice manufacture • Docking • Tanneries • Fat rendering • Railroading • Bone-boiling • Animal slaughter • Chemical manufacture • Metals-related industries 	<ul style="list-style-type: none"> • Oil refining • Gas manufacture • Metals-related industries • Lumber • Sand and gravel • Dumping • Varnish works • Cement & asphalt • Railroads • Meatpacking • Silk and fur dyeing • Coal storage • Chemical manufacture 	<ul style="list-style-type: none"> • Natural gas supply • Scrap-metal recycling • Waste treatment & storage • Metal plating • Chemical manufacture • Warehousing • Light industry • Railroading • Trucking • Bottling • Concrete manufacture

Figure 2.8. Summary of typical industrial activity over time at the Site

Every year, Newtown Creek receives 1.2 billion gallons of combined sewage overflow, a mixture of rainwater runoff, raw domestic sewage, and industrial wastewater (NCA 2016). There are also discharges from numerous permitted and unpermitted pollution sources. The creek is mostly stagnant, meaning much of the pollution that has entered the creek over the past two centuries remains.

Industrial Sources

By the early 1900s, Newtown Creek and its tributaries were home to over 40 industrial facilities (oil refineries, tanneries, manufactured gas plants, metal manufacturers, incinerators, and other industrial operations). Many of the area industries discharged waste directly into the creek and tributaries and upland spills of waste also eventually reached the water as groundwater seeps.

Post-World War II, transport of raw materials and finished goods shifted from waterways to highways, and the industrial activities along Newtown Creek and its tributaries declined. By the early 1980s, historic industrial activities were replaced by industries such as cement plants, scrap yards, a construction supply company, bulk storage terminal, and liquid natural gas storage. A brief description of the industrial PRPs for the Site is given below and illustrated in Figures 2.9 through 2.11.

Exxon Mobil, BP, and Texaco Refineries

The areas of the northeast industrial section of Greenpoint along Newtown Creek were home to dozens of oil refineries and petroleum processing plants, many of which were incorporated into the Standard Oil Trust toward the end of the century. Standard Oil's successors (Mobil and later ExxonMobil) used the refining facilities until 1966 and later operated a bulk petroleum storage facility and a distribution terminal on the Site until 1993. Other petroleum companies in the area were Amoco (later part of BP) and Paragon Oil (now part of ChevronTexaco) (Wikipedia 2016).



NCA 2016

Figure 2.9. Aerial photo of Mobil refinery, 1960

Operations at these refineries are reported to have leaked oil and refining products into the soils and aquifers of Greenpoint over decades (EPA 2007). The oil spill is not the result of one distinct event but the toxic culmination of 140 years of spillage. Since 1978, roughly 8.8 million gallons of oil and oil products have been recovered from soils beneath Greenpoint and the waters of Newtown Creek.

Phelps Dodge Refining Corporation Former Laurel Hill Site

This property is located along the northern shore of Newtown Creek, near the confluence of Maspeth Creek and the turning basin (Figure 2.12). As early as 1881, G.H. Nichols (later Nichols Copper Co.) ran a chemical works here (Figure 2.13). The copper refinery was built in 1905 by Nichols Refining. Phelps Dodge acquired the refinery in 1930 and used it to process scrap copper

and blister copper, a mostly pure form of copper, with a blistered surfaced, produced during smelting.

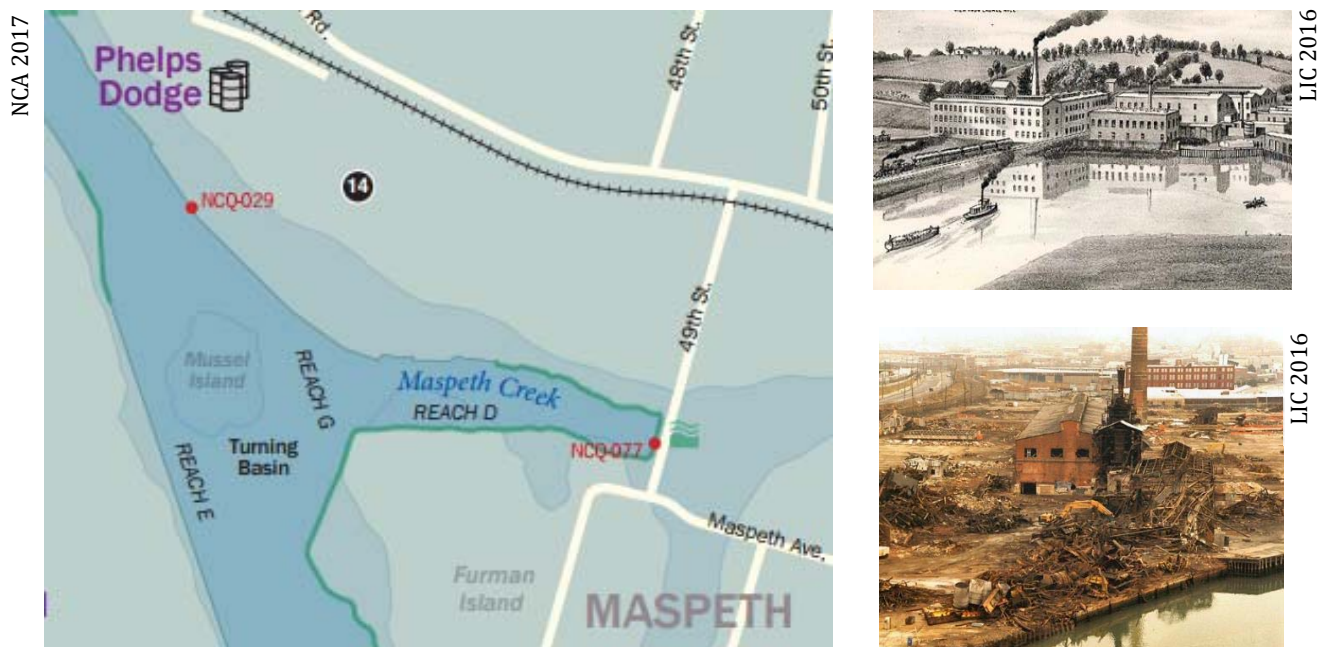


Figure 2.10. Map of Turning Basin area, depiction of former Laurel Hill Chemical Works (1881), and photo of Phelps Dodge Former Laurel Hill Site

Products produced at Laurel Hill are reported to have included copper sheets and 265-pound bars of copper that would be melted down and drawn into copper wire. Copper was moved from the property by train. The Laurel Hill works closed in 1983 and was eventually torn down (Figure 2.10). Metals are the primary contaminants associated with the former facility including arsenic, cadmium, copper, lead, mercury, selenium, and zinc. These metals were detected in soils, groundwater, and sediment at elevated levels. The facility also produced and used acids including sulfuric and nitric acids. PCBs (from transformers) and PAHs were also found to be present in soils and sediments.

Municipal Sources

Wastewater Treatment Plants

In the mid to late 1800s, sewer lines were built that discharged raw sewage directly into Newtown Creek and its tributaries. The lines in Queens were connected to the Bowery Bay wastewater treatment plant, which went on line in 1938, and the lines in Brooklyn were connected to the Newtown Creek wastewater treatment plant, which went on line in 1967.

The Newtown Creek wastewater treatment plant (Figures 2.2 and 2.11) is the largest of New York City's 14 plants. It was recently expanded and redesigned, and includes the 1/4-mile Newtown Creek Waterfront Nature Walk. Both sewer systems have combined sewer overflows that periodically discharge primarily stormwater mixed with sanitary sewage into the creek and its tributaries during certain wet weather conditions.

The NCA website (NCA 2016) states that *these overflows are reported to be one of the greatest sources of pollution impacting Newtown Creek. Large upland areas surrounding Newtown Creek, like most of New York City, are serviced by a combined sewer system, which sends both sanitary sewage and stormwater to local wastewater treatment plants. Unfortunately, wet weather events can overwhelm the system and send untreated sewage and stormwater directly into a local*



Henderson. (Wikipedia 2016)

waterbody via outfalls. As little as 1/10 an inch of rain over the course of 1 hour can trigger events on Newtown Creek; as shown in the most recent modeling numbers, over 3 billion gallons of water are discharged into the Creek each year. There are 22 outfalls in Newtown Creek, but 95 percent of the total volume is released via just 5 of those outfalls, which are all placed at the heads of tributaries (Dutch Kills, Whale Creek, Maspeth Creek, East Branch, and English Kills) where wind and tidal current conditions are more stagnant and less effective at flushing out pollution.

Figure 2.11. Newtown Creek wastewater treatment plant

National Grid (formerly Brooklyn Union Gas Company)

This location (Figure 2.2) is upstream of the waste water treatment plant and the refineries. It was the site of a manufactured gas plant between 1928 and 1952. Per local historians (The Faded Past 2016), *the utility traces its roots to 1824 when enterprising Brooklynites launched the idea of lighting their village's streets with methane. In 1825, these entrepreneurs sought and gained approval from the New York State legislature for the establishment of the Brooklyn Gas Light Company. Brooklyn Union Gas constructed a vast new coal-gasification plant at Greenpoint. Opened in 1928, the new Greenpoint Works replaced five older plants at 60 percent of the cost. Built on 115 acres of land on Newtown Creek, the Greenpoint Works used both the coke-oven method and the water-gas method to produce new supplies.*

Stormwater Runoff, Seeps, and Other Sources

There is no natural freshwater flow into Newtown Creek as the historic tributaries were filled in and paved over. Flow into the creek consists of contaminated stormwater runoff (Figure 2.12), which carries trash from numerous bridges, unsewered and paved streets, industrial sites (with permitted and illegal discharge pipes), waste transfer stations, and combined sewer overflows from the city's sewer system. Contaminated groundwater seeps through the bed and banks of the creek into the water.



Figure 2.12 Debris from stormwater runoff

Other historic sources of contamination to the Site include federal government operations, including coal handling, ship fueling, and defense manufacturing; railroad operations and maintenance; illegal dumping; and shipping and barging operations, still (in 2010) at a level of over 1,000,000 tons annually.

Over at least a century of use, the industrial and other sources listed above have contributed to the contamination of Newtown Creek. A thorough review of the nature and extent of contamination will be provided in the RI report and is *not* covered here.

- Oil seepage directly into Newtown Creek from an upland spill was first observed by the U.S. Coast Guard in 1978 (Geraghty and Miller 1979). The total volume of petroleum in the subsurface has been estimated to be between 17 and 30 million gallons, making this the second largest petroleum release in U.S. history, only behind the Deepwater Horizon Gulf spill. Petroleum recovery efforts have been ongoing since discovery.
- Investigation at National Grid’s Greenpoint Energy Center (a manufactured gas plant from 1928 and 1952) revealed the presence of coal tar in near-shore recent sediments below Newtown Creek as well as in deeper native sediments. Boring log descriptions of sediment along National Grid’s bulkhead include “flowable tar,” “tar saturated,” and “tar blebs” in both the soft sediments and the underlying native material.
- Metals are the prime contaminants of concern in area groundwater, with widespread exceedances of groundwater standards for arsenic, cadmium, copper, lead, nickel, and zinc. There are many historic sites upland from the creek (undergoing investigations) that have the potential for contaminated groundwater to discharge to Newtown Creek.
- Both surface water and an estimated 1 million cubic yards of creek sediment contain a range of contaminants such as pesticides, heavy metals, polychlorinated biphenyls, polycyclic hydrocarbons, and volatile organic compounds.

- Contaminant concentrations are higher in the Turning Basin, English Kills, and Dutch Kills and lower in other parts of the creek, especially near the mouth.

2.3.3 Current Land Use

Maritime Use

Maritime use of Newtown Creek continues today and commercial vessels regularly deliver and pick up raw materials, supplies, and finished goods from industries located along the creek and its tributaries. Most of the area surrounding the creek itself is designated by the city as one of New York City's (NYC's) six *Significant Maritime and Industrial Areas (SMIAs)* (Figure 2-13). The *New York City New Waterfront Revitalization Program* describe SMIAs as areas where NYC wants to support a future use as a functioning industrial waterfront. Specifically, the New York City Comprehensive Waterfront Plan states that the fundamental *objectives of the waterfront plan are to facilitate and encourage water dependent uses and ensure the retention of sufficient manufacturing-zoned land to accommodate future needs.*



Figure 2.13. Footprint of Newtown Creek SMIA

Public Access

Public access is restricted on the land side by physical controls (e.g., fencing and bulkheads) and security/surveillance controls conducted by commercial and industrial facilities along the creek and its tributaries. Two access areas are present on the Brooklyn side of the creek that are the only formal locations where the public can approach from shore and contact surface water and sediments. These areas are a street-end access area (Figure 2.14) constructed at the end of Manhattan Avenue and a shoreline promenade constructed at Whale Creek as part of the upgrades to the Newtown Creek wastewater treatment plant. An additional street-end access area at the end of Maspeth Avenue is in the planning stages.

NYC has installed signs at the Manhattan Avenue and Whale Creek access points. These signs serve as a caution to boaters, indicating that Newtown Creek has been designated an EPA Superfund site for the presence of hazardous substances and listing several precautions that should be taken by boaters.

In addition to these access areas, there are areas on the East River (north and south of the confluence of Newtown Creek) that are zoned for residential development. These areas include the Greenpoint waterfront in Brooklyn and the Hunters Point area in Queens. Plans have been made to allow limited public access to the waterfront along walkways and in designed green spaces in these areas. A [complete map](#) of the area showing streets, bridges, interesting features, and current and potential future access points is available for download from the [Newtown Creek Alliance](#).

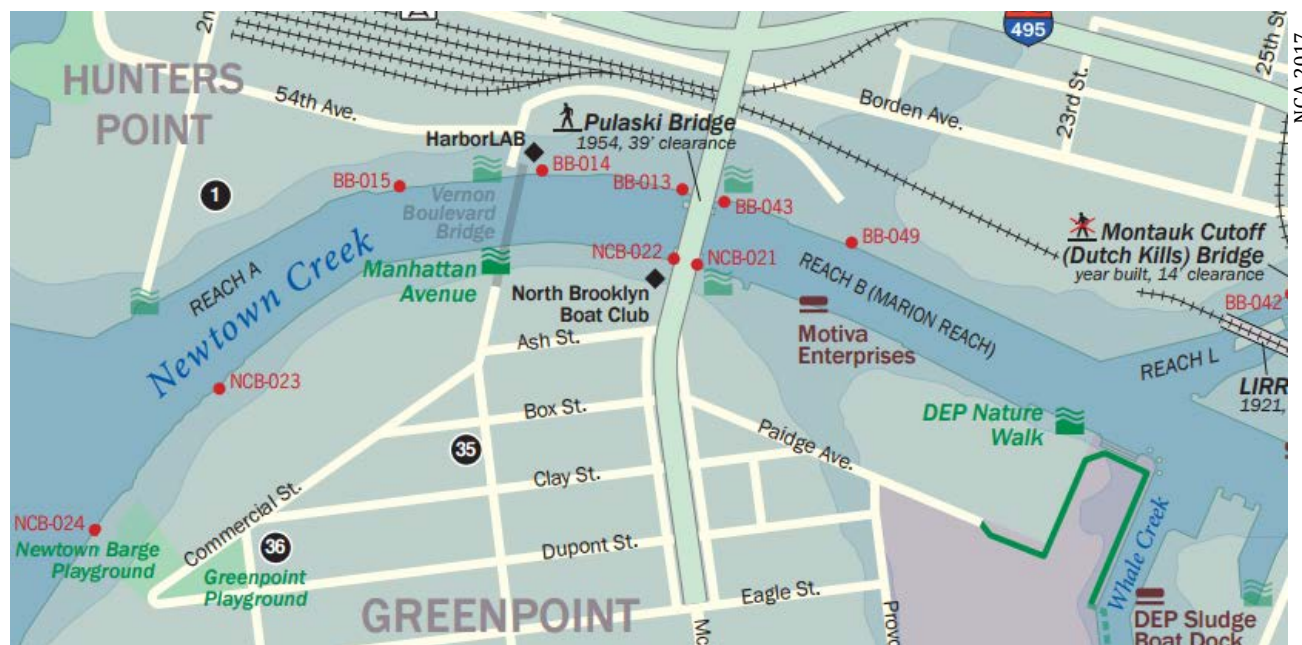


Figure 2.14. Manhattan Avenue and Whale Creek public access to Newtown Creek

2.4 Regulatory Involvement to Date

- **2009.** In a letter to EPA (January 20, 2009), the NYSDEC requested that Newtown Creek and its tributaries be nominated for listing on the National Priorities List (NPL). EPA proposed the listing on September 23, 2009.
- **2010.** The Site was added to the NPL on September 29, 2010, making it a Superfund site.
- **2011.** An AOC was signed between EPA and EPA and six respondents (the five NCG respondents and NYC) (Section 1.2). The NCG will conduct investigation and study of Newtown Creek under EPA oversight. NYC is performing separate parallel studies outside of the AOC and not subject to EPA oversight. NYSDEC is responsible for evaluating and controlling upland sources of contamination to Newtown Creek. NYSDEC will provide input to EPA on sampling and cleanup activities, have the opportunity to comment on documents prior to release to the public, and serve as a participant in planning meetings.
- **2012-2013.** Phase 1 of fieldwork took place from February 2012 through March 2013. It was conducted by the NCG under EPA oversight and included bathymetric, side-scan sonar, magnetic, topographic, and shoreline surveys; current and tidal surveys; monthly water sampling; sediment sampling; and other studies to support the risk assessments.
- **2013-2014.** Phase 2 of fieldwork was conducted as planned to collect specific information to support modeling and aspects of the RI (groundwater discharge, point sources, biota, sediment toxicity) that were not part of Phase 1. It also included collection of data to fill Phase 1 data gaps (e.g., surface and subsurface sediment, NAPL distribution).

- **2014.** The New York State Department of Health (NYDOH) and the Agency for Toxic Substances and Disease Registry (ATSDR) completed a Public Health Assessment in 2014 (Section 2.5).
- **2014-2015.** Phase 2 of fieldwork was conducted to collect information to address Phase 1 data gaps, refine contaminant fate and transport evaluation, and assess risks to human health and the environment. It began in May 2014 and was completed in December 2015. It included surveys, sampling, and testing in the creek and at 14 background locations. Testing was done of groundwater discharge, ecological communities, point source discharges, sediment and surface water chemistry, porewater, biota tissue analysis, and sediment toxicity. Bathymetric surveys were also conducted.



During the remedial investigation, permits may be required from various government organizations, including the U.S. Army Corps of Engineers and the NYCDEP for various work tasks activities in and along the Study Area.

2.5 Upcoming Milestones

The Superfund process to be conducted at the Site is summarized in Figure 2.15 and includes the following.

- **Contaminated Sediments Technical Advisory Group (CSTAG) Recommendations.** Additional work is planned in 2017 based, in part, on recommendations from the CSTAG. This includes: biota sampling (fish, crabs, bivalves), sediment coring and sampling for non-aqueous phase liquids, sampling for ebullition (sheens and gasses), shoreline sampling of sediments/soils to assess potential impacts of erosion, additional data gap sampling that may be identified during review of the draft remedial investigation report.
- **Remedial investigation (RI).** The RI assesses the nature and extent of contamination. It includes a baseline human health risk assessment, a baseline ecological risk assessment (BERA), and a final RI report. The data collection phase of the RI is complete and data are being validated and evaluated, and the report is in preparation. The draft RI report will be reviewed by EPA.
- **Feasibility study (FS).** The FS uses data gathered in the RI to screen and evaluate potential cleanup technologies based on remediation objectives and goals. The FS report presents the results so that EPA's risk management team can develop a plan for cleanup. The FS is typically prepared with an overlap to the RI. Field work to support the FS is planned for 2017 and the draft chemical fate and transport /bioaccumulation models are expected to be submitted in early 2018. The draft feasibility study report is expected to be submitted to EPA in late 2018. The completion goal for the final report is late 2019.
- **Proposed plan.** The proposed plan presents EPA's preferred plan for cleanup at the Site, based on the information in the RI and FS reports. The public is provided an opportunity to comment on this plan. The proposed plan is generally issued shortly after the RI and FS reports have been finalized. EPA expects this to be sometime in late 2019 or early 2020.

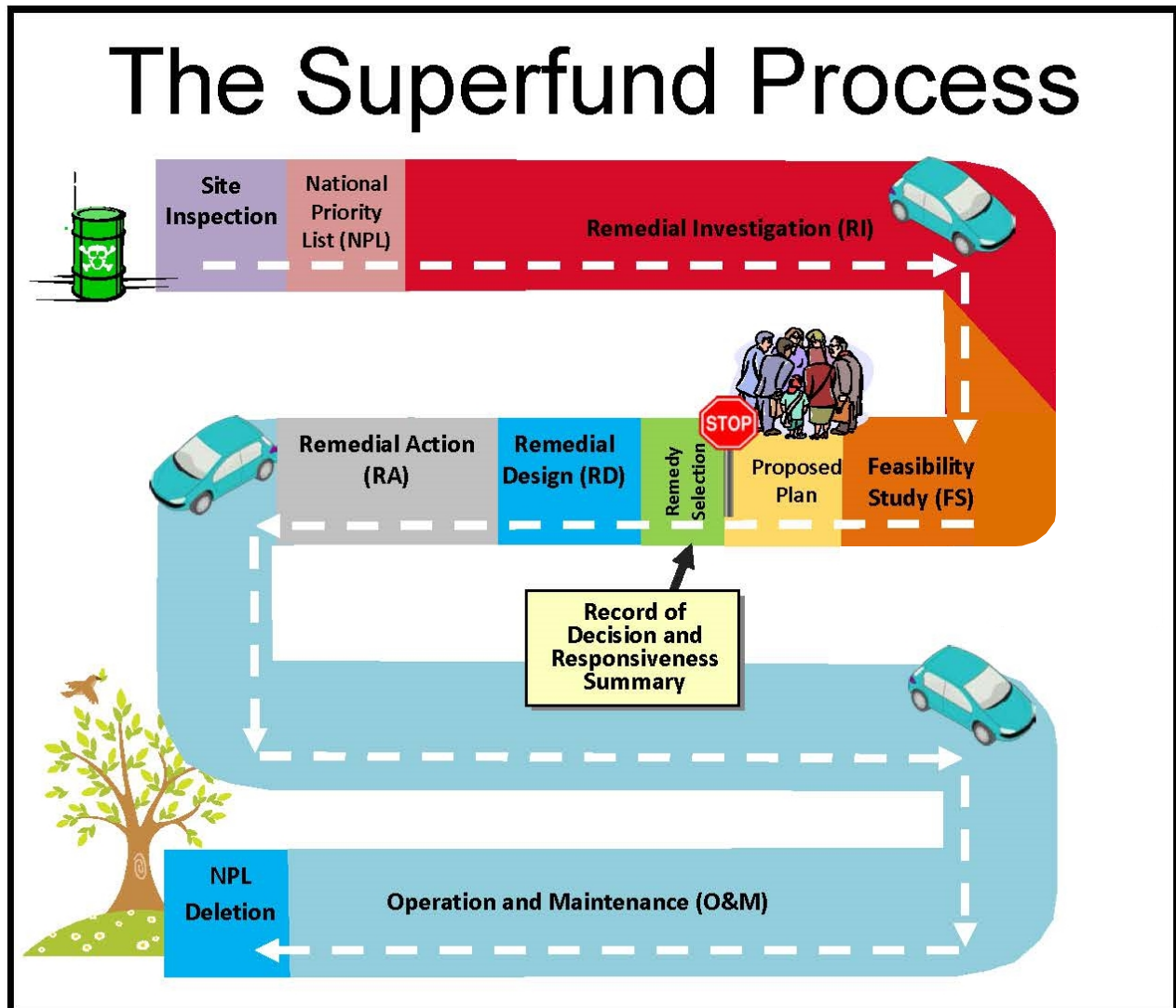


Figure 2.15. The Superfund Process

- **Record of decision (ROD).** The ROD documents EPA's final decision on cleanup and is made after review of all comments received on the proposed plan. It is expected to be issued in late 2020.
- **Remedial design.** The remedial design follows the ROD and includes development of engineering drawings and specifications for cleanup, as specified in the ROD. It is anticipated to take 3 to 5 years to complete.
- **Remedial action.** Remedial action is the actual construction period in which the plan specified in the remedial design is implemented.

2.6 Site Exposure Information

The public health assessment conducted by the NYDOH and ATSDR evaluated environmental sampling of chemical contamination of underwater creek sediments and biological contamination data for surface water. Based on this information and reports that people use Newtown Creek for boating tours, scuba diving and that some catch and eat fish and crab from the Creek, these agencies have the following health advice:

- **Women under 50 years old and children under 15 years old should not eat fish or crabs from these waters.** Others should follow NYDOH health advisories for eating fish and crabs taken from this and other waterways.
- **Swimming, scuba diving, and wind surfing (with full body immersion) could harm people's health** due to biological contaminants and physical hazards.
- **Canoeing, kayaking, boat touring, and catch-and-release fishing are not expected to harm people's health** if people use precautions (properly wash their hands) to avoid swallowing biological contaminants from surface water.

A brochure titled New York City Area: Health Advice on Eating Fish You Catch is available in three languages (English, Spanish and Chinese) and includes a map showing Newtown Creek. Copies of both the full Newtown Creek public health assessment report (NYDOH 2014) and the brochure are available from the NYDOH website at: www.health.ny.gov/environmental/investigations/newtown. Or, people can call the NYDOH with questions at 518-402-7860 or 800-458-1158.

2.7 Contaminated Sediments Technical Advisory Group Review

2.7.1 Review Process

In 2002, EPA established the CSTAG as a technical advisory group to "monitor the progress of and provide advice regarding a small number of large, complex, or controversial contaminated sediment Superfund sites" nationwide.

The goals of the CSTAG are:

- To help EPA to appropriately investigate and manage these sites in accordance with the 11 principles for managing contaminated sediments risks.
- To encourage national consistency in the management of sediment sites by providing a forum for exchange of technical and policy information.
- To provide a mechanism for monitoring and evaluating the progress at a number of the largest or most complex contaminated sediment sites.

CSTAG reviews active sediment sites and selects those it believes would benefit from a review. The review includes an initial meeting and site visit. Sites are reviewed in accordance with 11 risk management principles found in *Principles for Managing Contaminated Sediment Risks at Hazardous Waste Sites* (EPA 2002). Recommendations are provided in writing and follow up is

conducted. Key stakeholder groups with significant site involvement can give a short presentation during the initial meeting.

At the Newtown site, CSTAG held the initial site meeting on May 19 and 20, 2015. Stakeholders who presented at the meeting included NCG, NYCDEP, NYSDEC, Newtown Creek Community Advisory Group (CAG), and NOAA (on behalf of itself and FWS). Results from the review were provided to EPA in a July 9, 2015 letter (EPA 2015a).

CSTAG had recommendations for 8 of the 11 principles reviewed:

1. Control sources early.
2. Involve the community early and often.
3. Coordinate with states, local governments, tribes, and natural resources trustees.
4. Develop and refine a conceptual model that considers sediment stability.
5. Use an iterative approach in a risk-based framework.
6. Carefully evaluate the assumptions and uncertainties associated with site characterization data and site models.
7. Select site-, project-, and sediment-specific risk management approaches that will achieve risk-based goals.
8. Monitor during and after sediment remediation to assess and document remedy effectiveness.

Additional work based on these recommendations is described in Section 2.5.

2.7.2 Results Related to Community Involvement

CSTAG's recommendation for principle number 2 (involve the community early and often) was that EPA *should continue its efforts to ensure meaningful community involvement and to consider additional opportunities to make the investigation and any potential cleanup more transparent to the affected communities. EPA should also evaluate whether outreach materials should be developed in additional languages such as Spanish and Polish.*

EPA responded to the CSTAG recommendations in writing on October 7, 2015 (EPA 2015b). Both the CSTAG letter and EPA's response are provided in Appendix J.

EPA's response to the CSTAG recommendation for principle number 2 was:

Following careful review of this recommendation, the Region has planned for and initiated several new components to community outreach efforts. The Region recognizes that an informed and engaged community is essential to the success of any major remedial activity and is fully committed to maintaining meaningful community involvement. The Region is also always looking to identify opportunities for improved interaction with the community stakeholders. The following additional/improved community involvement activities are

being considered by the Region or have already been initiated as a result of the recommendation.

- *Improving the Newtown Creek Group's (NCG's) website, specifically making the document repository more user friendly and improving download speeds*
- *Updating the EPA website regularly to provide the community with the most recent information and documents*
- *Finding opportunities for more frequent update meetings and/or calls with the Community Advisory Group and the greater community*
- *Providing a streamlined path for community reviews and comments on major deliverables*
- *Providing the community with access to validated data in a more timely fashion*
- *Providing outreach materials in multiple languages*

The CSTAG recommendation for community involvement was also used as additional input to develop the community concerns and issues in Section 4, and EPA's response items have been incorporated into the action plan (Section 5).

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Section 3

Community Profile

Newtown Creek forms the border between the boroughs of Brooklyn and Queens (Community District 1 in Brooklyn and Community Districts 2 and 5 in Queens). The upland sites along the creek are almost exclusively heavy industrial or commercial land use, with a few greenways, undeveloped parcels, and cemeteries. Based on review of aerial imagery (Google Earth 2016), the residential areas nearest the creek are in the Greenpoint and Hunters Point neighborhoods, which are separated from the creek by industrial property but are within 300 yards of the shore. Distances from the creek are greatest in Maspeth and Sunnyside, Queens (600 to >1,200 yards).

The community profile below includes information on the demographics and neighborhood characteristics of the population and areas in and adjacent to the Site.

3.1 Demographics

Demographic data are available for the three major population units that encompass the general area of Newtown Creek and the surrounding neighborhoods (Figure 3-1). These are:

- **Brooklyn Community District 1.** Neighborhoods adjacent to the Site include Greenpoint and East Williamsburg.
- **Queens Community District 2.** Neighborhoods adjacent to the Site include Hunters Point, Sunnyside, and East Maspeth.
- **Queens Community District 5.** The neighborhoods adjacent to the Site are Maspeth (south of the Long Island Expressway) and Ridgewood (west of Greene Avenue).

The selection of these geographical areas is based on their proximity to the creek and the availability of demographic data. There is no firm boundary that would exclude another nearby neighborhood from being added to the CIP. Demographic and other data for these areas are summarized in Tables 3-1 through 3-3 and come primarily from neighborhood reports, planning documents, and other data available online, including *Brooklyn Neighborhoods Report 2012, Community district 1* (Brooklyn Neighborhood Reports [BNR] 2012); *Queens Community District 2 Profile* (QCD2 2010); and *Queens Community District 5 Profile* (QCD5 2010). Because of the Brooklyn neighborhood reports initiative, significantly more data are available to describe the communities surrounding the Site in Brooklyn than in Queens.

3.1.1 Brooklyn, NY

Brooklyn Community District 1 is the area of interest in Brooklyn for this CIP. It is one of 18 community districts in Brooklyn, and it the closest to the Site (Figure 3-1). It includes the neighborhoods of Greenpoint and Williamsburg and, as of the 2010 census, had a population of 173,083. A comparison of demographic data from 2000 versus 2007/2009 (BNR 2012) shows a district that has seen significant increases in employment rate, income, and educational attainment. English has outpaced Spanish as the most common language spoken in the home.

About a quarter of the population is foreign born (Poland, Puerto Rico, the Dominican Republic, and Mexico are the most common). The top 5 ethnicities reported are “religious responses” (16 percent), Polish (13 percent), Puerto Rican (10 percent), Italian (6 percent), and Dominican (6 percent).



(NYC 2014a) Google-Generated with MapTiler

Figure 3.1. Layout of neighborhoods within the Site

The median sales price per unit in 2-to 4-family buildings increased from \$139,899 in 2000 to \$262,500 (88 percent) in 2010 (BNR 2012). The index of housing prices' appreciation since 2000 for this district in 2010 (216) is much higher than in Brooklyn (137). Median gross rent in 2007/2009 was \$1,057 (BNR 2012). There are 11 community gardens and 16 miles of bike lanes in this district (BNR 2012). The district is part of New York's 12th congressional district, State Senate Districts 17 and 25, State Assembly Districts 50 and 53, City Council Districts 33 and 34, and Brooklyn Community Board 1. The neighborhood is served by the New York Police Department's 94th Precinct (Wikipedia 2016).

Table 3.1. Brooklyn Community District 1 demographics

Education		Race		Places of Birth		Top 5 Languages Spoken at Home		Household Information*	
<High school or GED	25%	White	64%	New York State	54%	English	37%	Number	65,842
BS or higher	36%	Black	4%	Poland	26%	Spanish	25%	Average size	2.61
		Latino	25%	Puerto Rico	4%	Yiddish	19%	Family size	3.54
		Asian	5%	Dominican Rep.	4%	Polish	10%	Income	\$33,630
				Mexico	2%	Chinese	2%	Unemployment rate	5.2%
				Foreign born	26%				

*From 2010 Census (NYC 2016b)

Greenpoint, Brooklyn

Greenpoint is the northernmost neighborhood in Brooklyn and is bordered by Williamsburg, the Brooklyn-Queens Expressway, Newtown Creek and Long Island City, and the East River. In the 19th century, *rope factories and lumber yards lined the East River to the west while the northeastern section along the Newtown Creek through East Williamsburg became an industrial maritime area* (Wikipedia 2016). Deindustrialization in the 1970s and 1980s left many abandoned industrial buildings. Under the 2005 Greenpoint-Williamsburg Land Use and Waterfront Plan, industrial and mixed-use areas on and near the waterfront were re-zoned to permit residential development. This resulted in significant residential growth.

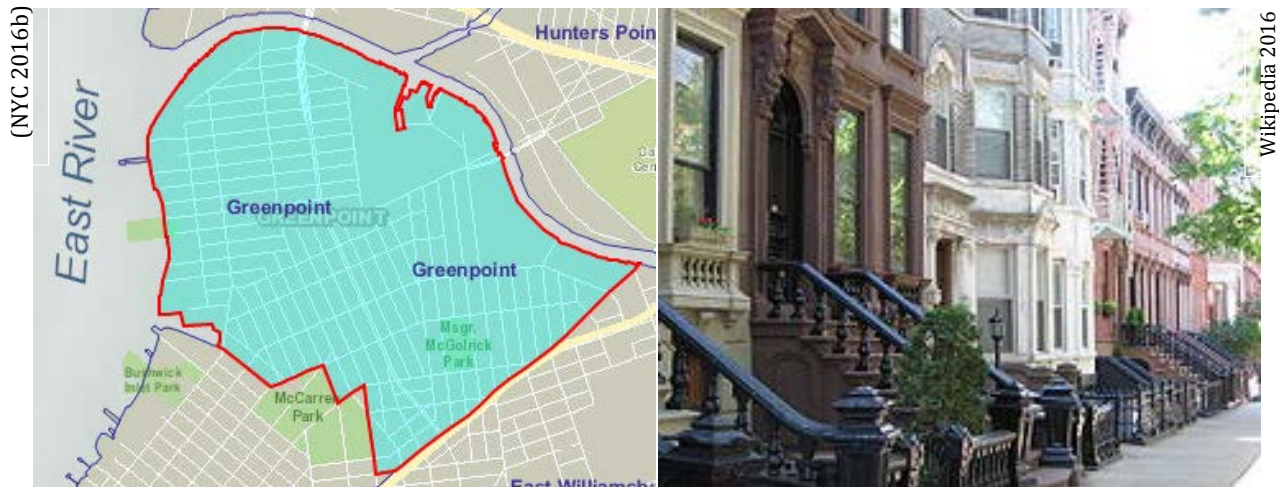


Figure 3.2. Map of Greenpoint, Brooklyn and photo of historic district

Per Wikipedia, *Greenpoint's population is working class and multi-generational, and it is common to find three generations of family members living in the community. The neighborhood is sometimes referred to as "Little Poland" due to its large population of Polish immigrants, reportedly the second largest concentration in the United States after Chicago. Although Polish immigrants and people of Polish descent are present in force, there is a significant Latino population living mostly north of Greenpoint Avenue, and Greenpoint has a significant number of South Asian and North African residents.*

The percentage of white non-Hispanic people in origin (77 percent [Table 3.2]) is the highest of all the neighborhoods profiled. A significant percentage of that group is of Polish origin. The percentage of people of black/African American non-Hispanic origin is 1 percent. People of Hispanic origin make up 15 percent of the population (primarily from Puerto Rico (33 percent), Mexico (20 percent), and South America (20 percent)). The Asian population is 5 percent, with the primary contributions being from China (21 percent), India (17 percent), Korea (11 percent), and Japan (10 percent).

Table 3.2. Greenpoint demographics

Race		Age (years)		Household Information*	
White non-Hispanic	77%	< 20	13%	Total population	34,719
Black/African American non-Hispanic	1%	20 to 39	50%	In family households	56%
Asian non-Hispanic	5%	40 to 59	24%	Average household size	2.2
Some other non-Hispanic	1%	60 to 79	12%	Average family size	2.9
Hispanic	15%	80+	3%	Population below poverty line	18%

*From 2010 Census (NYC 2016b)

A substantial portion of residents (30 percent are foreign born), and 16 percent of people report that they speak English “not well or not at all” (City-Data 2016). About 31 percent of residents have less than a high school diploma, and 14 percent live below the poverty level.

Greenpoint has some neighborhood-specific health and environment data available (BNR 2012) that is not available for the other neighborhoods. The rate of cigarette smoking (16 percent), overall mortality (7 percent), and infant mortality (3 percent) are falling, and 75 percent of Greenpoint residents rate their health as good to excellent. Roughly 25 percent of residents are obese, and 10 percent have diabetes, which is similar to Brooklyn as a whole. Asthma rates have increased significantly (11 percent in 2001 to 15 percent in 2009), and the number of children with elevated blood lead levels dropped (20 to 13 percent) during that same time.

East Williamsburg, Brooklyn

East Williamsburg (Figure 3-3) is also in Brooklyn Community District 1. Per Wikipedia, the term East Williamsburg has fallen out of use since the 1990s. *East Williamsburg consists roughly of what was the 3rd District of the Village of Williamsburg and what is now called the East Williamsburg In-Place Industrial Park, bounded by the neighborhoods of Northside and Southside Williamsburg to the west, Greenpoint to the north, Bushwick to the south and southeast, and both Maspeth and Ridgewood in Queens to the east* (Wikipedia 2016).

The eastern half of East Williamsburg, roughly bounded by the Newtown Creek on the east and by I-278 and Flushing Avenue on the north and south, respectively, is mostly zoned for industry, with some residential housing mixed among the warehouses and factories. The section is currently referred to by the city as the East Williamsburg Industrial Park (EWIP). The EWIP is one of eight In-Place Industrial Parks in New York City and is managed by the East Williamsburg Valley Industrial Development Corporation (EWVIDCO), a company founded in 1982 with the goal of revitalizing East Williamsburg by attracting new businesses, providing business assistance to existing firms, and growing overall job opportunities in the neighborhood.

The neighborhood is reported to have a thriving arts community centered along Bedford Avenue. Most immigrants are from Italy, Puerto Rico, or other Latin American countries. The south end of Graham Avenue is also known as “Avenue of Puerto Rico,” and this area has been the center of a Latin American immigrant neighborhood since the 1950s. The area further north on Graham Avenue (also referred to as “Via Vespucci”) has been inhabited by Italian immigrants since the 1880s. A second wave of Italian immigration occurred from World War II until the 1970s. While the neighborhood has changed significantly, the established Italian community still thrives. *Since the 1990s, the area has seen a great influx of young artists, professionals, students and “hipsters,” mainly due to its proximity to Manhattan and major universities (e.g., Pratt Institute, New York University, School of Visual Arts, Fashion Institute of Technology, The New School) and the relatively inexpensive rent (Wikipedia 2016).*

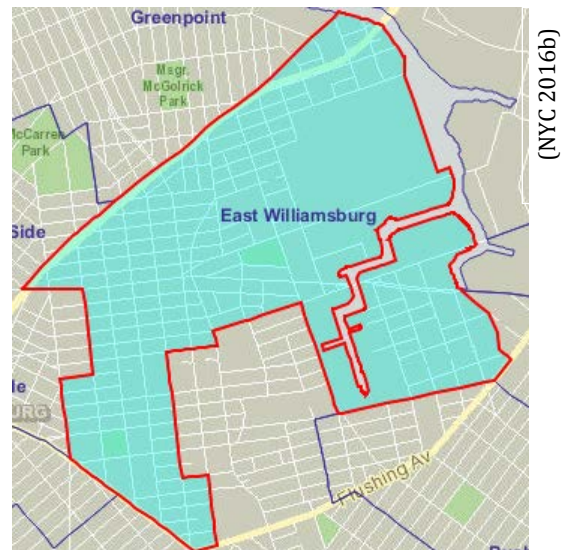


Figure 3.3. Map of East Williamsburg, Brooklyn

People of white non-Hispanic origin make up 43 percent of the neighborhood (Table 3-3). People of Black/African American non-Hispanic origin comprise 9 percent. People of Hispanic origin make up a third of the population and, within that group, 50 percent report they are of Puerto Rican origin, followed by Dominican (16 percent), Mexican (11 percent), and South American (11 percent). The Asian population represents 13 percent of neighborhood residents, with the primary origin being Chinese (70 percent). The percentage of foreign born residents is 37 percent, and the percentage of people who report that they speak English “not well or not at all” is 20 percent (City-Data 2016). About 40 percent of residents have less than a high school diploma, and 24 percent of residents live below the poverty level.

Table 3.3. East Williamsburg demographics

Race		Age (years)		Household Information *	
White non-Hispanic	43%	< 20	16%	Total population	34,158
Black/African American non-Hispanic	9%	20 to 39	46%	In family households	38%
Asian non-Hispanic	13%	40 to 59	21%	Average household size	2.3
Some other non-Hispanic	1%	60 to 79	13%	Average family size	3
Hispanic	33%	80+	3%		

*From 2010 Census (NYC 2016b)

3.1.2 Queens, NY

Queens Community Districts 2 and 5 are the districts closest to the Site (Figure 3-1). They include the neighborhoods of Hunters Point, Blissville, Long Island City, Sunnyside, and Woodside (District 2) and Maspeth, Middle Village and Ridgewood (District 5). As of the 2010 census, the population was 113,200 in District 2 and 169,190 in District 5 (Table 3-4). In District 5, neighborhoods relevant to the CIP are Maspeth (south of the Long Island Expressway) and

Ridgewood (west of Greene Avenue). This area is industrial adjacent to the creek but becomes residential north of Rust Street or east of Flushing Avenue.

These districts are part of New York's 14th Congressional District, State Senate Districts 12 and 15, State Assembly Districts 30 and 37, and City Council Districts 26 and 30. They are served by the New York Police Department's 104th and 108th Precincts.

There is no breakdown for languages spoken in Queens (as for Brooklyn District 1). However, the top 5 languages are reported to be English (>50 percent) and Spanish (23 percent), followed by Chinese, Korean, and Italian (AboutTravel 2016). The percentage of residents who speak English less than "very well" is given as 28 percent.

Table 3.4. Queens Community Districts 2 and 5 demographics

Queens District 2				Queens District 5			
Race		Household Information*		Race		Household Information*	
White	64%	Number	43,352	White	64%	Number	61,762
Black	4%	Average size	2.59	Black	4%	Average size	2.73
Latino	25%	Family size	3.28	Latino	25%	Family size	3.25
Asian	5%	Income	\$33,630	Asian	5%	Income	NA
		Unemployment rate	5.2%			Unemployment rate	NA

*From 2010 Census (NYC 2016b)

Hunters Point-Sunnyside-West Maspeth, Queens

Hunters Point (Figure 3.4) is in southernmost Long Island City in Queens, District 2. It is a peninsula, bounded by Newtown Creek and the East River. *It contains the Hunters Point Historic District, a national historic district that includes 19 contributing buildings along 45th Avenue between 21st and 23rd Streets. They are a set of townhouses built in the late-19th century* (Wikipedia 2016).

Hunters Point was a highly industrialized area in the 1800s. Deindustrialization in the 1970s and 1980s left many abandoned industrial buildings and, in the 1990s, New York State began building the Queens West development along the East River Waterfront, which included the construction of several residential high rises as well as Gantry State Park. Today, the neighborhood is home to new schools, arts organizations, and restaurants. It is also experiencing a resurgence in residential development, with construction of many apartment buildings along Vernon and Jackson Avenues.

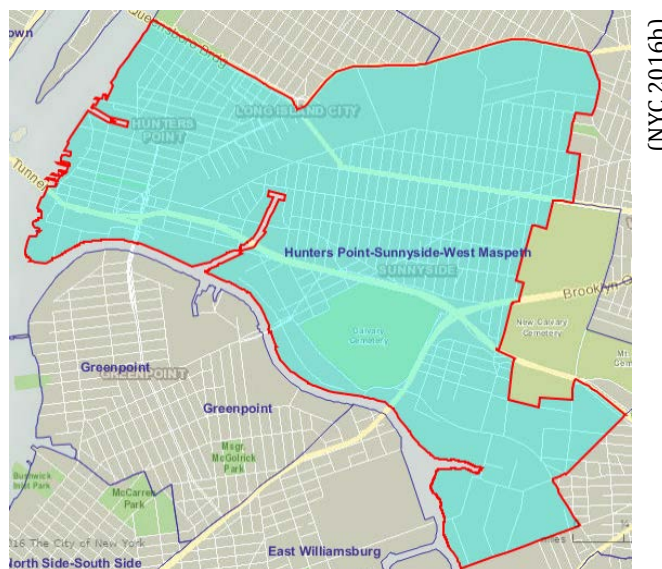


Figure 3.4. Map of Hunters Point, Queens

This neighborhood includes Sunnyside, which is described as *the unrecognized star of western Queens. A small, middle-class neighborhood, Sunnyside has a homogeneous urban look with many six-story buildings. One section, Sunnyside Gardens, has a more suburban feel. Also, it is rich with transportation and restaurants* (AboutTravel 2016). South of the Long Island Expressway, Sunnyside is sometimes still known as Blissville. Blissville is described as *an industrial neighborhood that is part of Long Island City. It is east of the main part of Long Island City and cut off from much of the borough by waterways, roadways, and a large cemetery. The neighborhood has not experienced the same level of residential development that has transformed the Hunters Point neighborhood to the west. Blissville remains a small, forgotten part of industrial and commercial New York City. There are some residences, but this area caters mostly to businesses. The movie business has a small foothold here, but it is dwarfed by the storage business.* (AboutTravel 2016)

Table 3.5. Hunters Point – Sunnyside – West Maspeth demographics

Race		Age (years)		Household Information*	
White non-Hispanic	35%	< 20	18%	Total population	63,271
Black/African American non-Hispanic	3%	20 to 39	41%	In family households	71%
Asian non-Hispanic	24%	40 to 59	26%	Average household size	2.4
Some other non-Hispanic	1%	60 to 79	12%	Average family size	3.1
Hispanic	35%	80+	3%		

*From 2010 Census (NYC 2016b)

Like East Williamsburg, the Hunters Point – Sunnyside – West Maspeth neighborhood has a much higher concentration of people of Hispanic origin than seen in Greenpoint. Within the Hispanic community, almost half (48 percent) are of South American origin (primarily Columbia and Ecuador), followed by Mexican (20 percent), Dominican (9 percent), and Puerto Rican (9 percent). The Asian population is also large in this neighborhood, with the primary contributions being from China (21 percent), Korea (15 percent), India (16 percent), and Bangladesh (11 percent).

For Hunters Point, although the percentage of foreign born residents is high (37 percent), the percentage of people who report that they speak English “not well or not at all” is relatively low (7 percent) (City-Data 2016). About 30 percent of residents have less than a high school diploma. Roughly 7 percent of Hunters Point residents are below the poverty level (City-Data 2016).

For Sunnyside, the reported percentage of foreign born residents is *extremely* high (74 percent), the percentage of people who report that they speak English “not well or not at all” is relatively low (7 percent) (City-Data 2016). About 37 percent of residents have less than a high school diploma, and 19 percent of Sunnyside residents are below the poverty level (City-Data 2016).

Maspeth, Queens

Maspeth (Figure 3.5) is in southwest Queens. East Maspeth is in Queens District 2, and the remainder of Maspeth is in Queens District 5. It has been described as *old-school Queens at its best, a neighborhood of families, small shops, and restaurants ... homey Grand Avenue's Polish delis and Irish bars. Until recently, industrial jobs in western Maspeth supported the community, but industry has declined* (AboutTravel 2016). The portion of Maspeth that is nearest the Site is heavily industrial, but it becomes residential north of Rust Street or south of Flushing Avenue.



Figure 3.5. Map of Maspeth, Queens

Maspeth was one of the first settlements in Queens County, founded by the Dutch in 1642. Following the immigration waves of the 19th century, Maspeth became home to large concentrations of German and Irish immigrants. Today, the neighborhood is made up of single and multiple dwelling homes and cemeteries that cover large parts of the neighborhood. Maspeth is home to many first and second generation Polish, Lithuanian, Slavic, Italian, Irish, German, Hispanic, and Chinese residents. About a quarter of residents (27 percent) are of Hispanic origin (South America 42 percent [primarily Ecuador and Columbia], Puerto Rico 35 percent, Mexico 11 percent, and Dominican Republic 9 percent). The Asian population is 12 percent, with the primary contributions being from China (53 percent), Philippines (15 percent), Korea (9 percent), and India (5 percent). The percentage of people under age 20 is higher than other neighborhoods, as is household size and average family size.

Like Hunters Point, the percentage of foreign born residents is high (39 percent), but there is a higher percentage of people who report that they speak English “not well or not at all” (12 percent) (City-Data 2016). About 32 percent of residents have less than a high school diploma. Roughly 10 percent of Maspeth residents live below the poverty level.

Table 3.6. Maspeth demographics

Race		Age (years)		Household Information*	
White non-Hispanic	59%	< 20	24%	Total population	30,516
Black/African American non-Hispanic	1%	20 to 39	30%	In family households	64%
Asian non-Hispanic	12%	40 to 59	29%	Average household size	2.8
Some other non-Hispanic	1%	60 to 79	14%	Average family size	3.3
Hispanic	27%	80+	4%		

*From 2010 Census (NYC 2016b)

Ridgewood, Queens

Only the easternmost corner of Ridgewood borders the Site (Figure 3.6), but the residential area east of Flushing Avenue is close enough to warrant mention of Ridgewood here. This area also contains one of the few green spaces in the area (Linden Hill Cemetery) and includes a gathering place for children (Grover Cleveland Playground).

The urban neighborhood is reportedly known for its brick and stone two-story buildings from the early 20th century, which give it a “more Brooklyn than Queens look” (AboutTravel 2016). Though high-density, Ridgewood is quiet and homey, a working-class neighborhood. Once a German and Italian enclave, its newer immigrants are mostly from Eastern Europe (especially Poland) and Latin America. Near the Site, Ridgewood is primarily industrial.

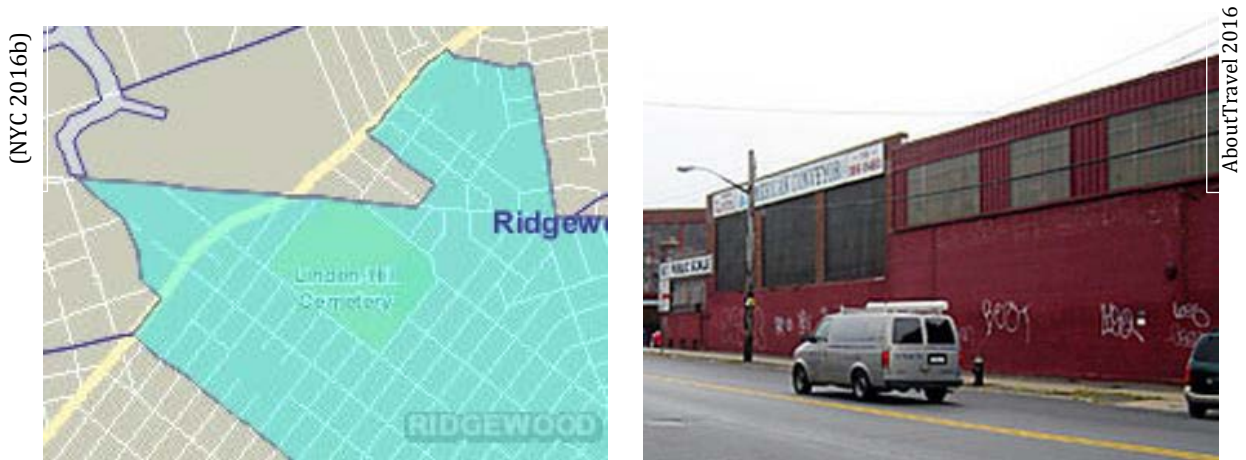


Figure 3.6. Map of Ridgewood, Queens and photo of local industrial area

Ridgewood has the highest percentage (40 percent) of people of Hispanic origin of the 5 neighborhoods reviewed for this CIP. Within the Hispanic community, almost half (35 percent) are of Puerto Rican origin, 27 percent are South American (primarily Ecuadorian), 15 percent Dominican, and 12 percent are Mexican. The Asian population is lower than several other neighborhoods, with the primary contributions being from China (48 percent), Philippines (12 percent), and India (9 percent). The percentage of people under age 20 is higher than other neighborhoods, as is household size and average family size.

The percentage of foreign born residents is very high (45 percent), and 17 percent of people report that they speak English “not well or not at all” (City-Data 2016). About 45 percent of residents have less than a high school diploma. The median age (males) is 31.2 years, which is significantly younger than the other neighborhoods profiled. Roughly 26 percent of Ridgewood residents live below the poverty level.

Table 3.7. Ridgewood demographics

Race		Age (years)		Household Information*	
White non-Hispanic	40%	< 20	26%	Total population	69,317
Black/African American non-Hispanic	2%	20 to 39	35%	In family households	86%
Asian non-Hispanic	8%	40 to 59	26%	Average household size	2.9
Some other non-Hispanic	1%	60 to 79	12%	Average family size	3.4
Hispanic	49%	80+	2%		

*From 2010 Census (NYC 2016b)

3.1.3 Environmental Justice

EPA defines environmental justice as the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies.

- Fair treatment means that no group of people should bear a disproportionate share of the negative environmental consequences resulting from industrial, governmental and commercial operations or policies.
- Meaningful involvement means that:
 - people have an opportunity to participate in decisions about activities that may affect their environment and/or health;
 - the public's contribution can influence the regulatory agency's decision;
 - their concerns will be considered in the decision-making process; and
 - the decision makers seek out and facilitate the involvement of those potentially affected.

By using readily available environmental and demographic information EPA conducts environmental justice screenings to highlight areas within a community where disproportionate environmental and health impacts may fall on a low-income and/or racial minority group. EPA's tool for conducting this initial community characterization is called EJSCREEN.

In the case of the Newtown Creek Superfund site, EPA Region 2 used the EJSCREEN tool to identify environmental justice communities based on their demographic and their environmental indicators. EPA looked at the environmental impacts currently faced by communities with environmental justice concerns within a 2-mile radius of Newtown Creek (Appendix K). Based on the analysis done using EJSCREEN, environmental justice communities were identified in the Brooklyn neighborhood of East Williamsburg and in the Queens neighborhoods of Ridgewood and Sunnyside.

3.2 Site-Related Local Groups

A number of local groups are interested in various aspects of the work being conducted at Newtown Creek. EPA welcomes their input and assistance in engaging the community on important issues. Many non-governmental community groups active at the time this plan was prepared are listed and described below. Contacts for these groups and other smaller stakeholders are provided in Appendices E and F.

3.2.1 Newtown Creek Community Advisory Group

CAGs are a common fixture at Superfund sites nationwide. They are made up of representatives of community and provide a public forum for community members to present and discuss their needs and concerns about hazardous waste cleanup processes and environmental problems. EPA provides a facilitator to the community whose assistance covers support in identifying and

selecting group members, developing a functional organization and work procedures, and conducting internal and public meetings.

The Newtown Creek CAG was established in 2012 (CAG 2016). They hold regular meetings (generally quarterly) and host a website (www.newtowncreekcag.wordpress.com) that provides meeting notes, Superfund materials, presentations, CAG materials, breaking news, and membership information. The information on their website is directly related to the Site. A list of CAG members is provided in Appendix G, including the current and past co-chairs.

3.2.2 Newtown Creek Alliance (NCA)

The Newtown Creek Alliance (NCA) describes itself as a *community-based organization dedicated to restoring, revealing and revitalizing Newtown Creek*. In their mission statement (NCA 2016), they state that the NCA:



- *Represents the interests of community residents and local businesses who are dedicated to restoring community health, water quality, habitat, access, and vibrant water-dependent commerce along Newtown Creek. Since 2002, the Alliance has served as a catalyst and channel for effective community action and our efforts have made a positive and enduring impact on the health and quality of life of Creek-side communities.*
- *Works to restore the Creek by securing mitigation and remediation of known environmental hazards – both in the neighborhoods surrounding Newtown Creek and in Newtown Creek itself – reporting ongoing sources of pollution, and preventing new pollution. To restore the ecological functions of the waterway, the Newtown Creek Alliance supports investments in green infrastructure, bioremediation, and habitat restoration.*
- *Endeavors to reveal the Creek by conducting tours by foot, bike, bus, and boat that educate the public about the history of the waterway and current activity. We also work to nurture and expand open spaces along Newtown Creek to enable public access to a waterway which has few public access points and we partner with educational institutions to teach Newtown Creek-based curricula.*
- *Helps revitalize watershed communities by playing a leadership role in area-wide brownfield redevelopment planning, creating programs that improve the environmental profile of industrial businesses, and engaging in workforce development to create local green jobs. Our work supports environmental, economic and human health.*

NCA's website is www.newtowncreekalliance.org. All of the information on their website is related to Newtown Creek and, in January 2016, this included significant amounts of information directly related to the Site. They have five members on the CAG.

3.2.3 Neighbors Aligned for Good Growth



Neighbors Aligned for Good Growth (NAG) describes itself (NAG 2016) as *Neighbors Allied for Good Growth (formerly Neighbors Against Garbage) developed out of our neighborhood's desire to recapture its waterfront, reduce local environmental hazards, and advocate for public policies promoting healthy mixed-use communities. We advocate with and for the people who live and work*

in the North Brooklyn neighborhoods of Greenpoint and Williamsburg. Our approach to these issues is guided by the principle that our entire community is entitled to participate in decision-making and negotiation processes affecting our neighborhood, leadership of local mobilization efforts, and the design of a future vision for our community.

Their website is: www.nag-brooklyn.org. In January 2016, there were few articles specifically about Newtown Creek (canoeing on Newtown Creek, the tour of the wastewater treatment plant, and a bike tour of the Queens side of Newtown Creek). However, their website could be a useful means of getting more people engaged in the work at the Site. NAG has one member on the CAG.

3.2.4 Evergreen

Evergreen describes itself (Evergreen 2016) as *the one-stop resource for industrial businesses in North Brooklyn. No matter what your firm needs to grow and stay competitive, we are your link to the resources your company needs to achieve its goals. Evergreen is a membership organization that champions manufacturing, creative production, and industrial service businesses in North Brooklyn and beyond. We connect businesses with resources and opportunities to help create and maintain high quality jobs at all skill levels.*



Their website is: www.evergreenexchange.org and could be a useful means of getting more people engaged in the work at the Site. Evergreen has two members on the CAG.

3.2.5 Newtown Creek Monitoring Committee

The Newtown Creek Monitoring Committee (NCCMC) is a committee of volunteers from the Greenpoint community of Brooklyn established in 1996 pursuant to a City Council resolution allowing the City to acquire property required for the upgrade of Newtown Creek Wastewater Treatment Plant. NCCMC members are appointed by the local City Council member, the Brooklyn Borough President and Brooklyn Community Board #1. NCCMC is one of the longest standing citizen oversight committees in New York City. (Pentacle 2013). The committee has worked closely with NYCDEP in multiple parts of the project, including the design and construction of the Visitor Center and the Nature Walk. The NCCMC does not have a website. They have one member on the CAG.

3.2.6 HarborLAB

Of its organization, HarborLAB (HarborLAB 2016) states, *“We summarize our mission as ‘LAB: Learning Adventure Boating. We provide canoeing and kayaking programs for ecological and social good.’ Below is the full educational, ecological, and social mission as stated in our New York State nonprofit incorporation:*



- *To foster estuary and NYC watershed-themed ecological and natural science education, especially for underprivileged NYC youth and underrepresented community members.*
- *To foster estuary ecological restoration and NYC watershed conservation as a justly shared legacy.*

- *To document, especially through photographs and videos, the state of New York Harbor and the Hudson-Raritan estuary and the NYC watershed.*
- *To promote safe, inclusive, and sustainable estuary and NYC watershed access by maintaining public boat fleets and access sites, and transporting boats to sites for special events;*
- *To foster partnerships that extend the missions of other social service groups onto the water;*
- *To procure and maintain scientific equipment for the above purposes;*
- *To disseminate information and conduct informational efforts; act as a catalyst and facilitator regarding the above purposes.”*

Their website is www.harborlab.org, and they have one member on the CAG.

3.2.7 North Brooklyn Boat Club

The North Brooklyn Boat Club describes itself as “... dedicated to enabling and advocating for human-powered boating on the waterways bordering Greenpoint/Williamsburg Brooklyn. The organization enables local citizens to be effective stewards of the ecology, recreation, and freedom that the waterways engender. The NBBC consists of local kayakers, canoers, sailors, environmentalists, boat builders, community leaders and activists. We are an open group and invite anyone with an interest in boating, open space, environmental education, and nautical recreation to join our public events and open meetings.” Their website is www.northbrooklynboatclub.org, and they have two members on the CAG.



3.2.8 Long Island Community Boathouse

The LIC Boathouse describes itself as “...playing a critical part in revitalizing Long Island City, and is reconnecting residents and local business people with their estuary. The mission of the all-volunteer Long Island City Community Boathouse is to provide western Queens residents, employees, and visitors with educational and recreational paddling programs. Our programs raise awareness about estuary ecology with the goal of restoring the natural beauty and health of New York Harbor for today’s and future generations.

We will achieve our mission through three primary programs:

- *Our “Weekday Paddles” provide beautiful views of Roosevelt Island, Manhattan, Queens, and Brooklyn. Paddlers will also be able to experience one of the most sensational sunsets in New York!*
- *“Weekend Paddles” open new visions of the harbor to paddlers!*
- *Free Halletts cove paddles. We host “walk-up” kayak rides in the protection of Halletts Cove, at the northern end of Socrates Sculpture Park. Children are welcome if accompanied by a parent.*
- *Free walkup paddles in our Anable Basin on weekends.”*

Their website is www.licboathouse.org, and they have one member on the CAG.

3.2.9 Open Space Alliance for North Brooklynn

The mission statement for the Open Space Alliance for North Brooklyn (OSA) (OSA 2106) reads, *“The Open Space Alliance for North Brooklyn (OSA) works with the NYC Department of Parks & Recreation, elected officials, and our community to maintain, activate, enhance, and expand parks and public spaces in North Brooklyn.”*

They were formed in 2003 to raise private funds to expand and improve open space in North Brooklyn. OSA is modeled after other successful conservancies, working with the NYC Department of Parks & Recreation, elected officials, and the community to maintain, activate, enhance, and expand local parks. Unlike traditional park conservancies, however, OSA is committed to improving ALL the parks in Community District 1 rather than focusing on a single park. In doing so, less advantaged areas of our community can be improved by leveraging resources from more affluent parts of the district. OSA’s website is www.osanb.org. They have one member on the CAG.



3.2.10 Greenpoint Waterfront Association for Parks and Planning

The Greenpoint Waterfront Association for Parks and Planning (GWAPP) (GWAPP 2016) describes itself as *a community organization dedicated to education and outreach on issues affecting the environment, waterfront and neighborhoods of North Brooklyn*. Their mission statement is *“GWAPP is a community based not-for-profit group created by community organizations, religious institutions and concerned citizens from the Greenpoint/Williamsburg communities dedicated to the development of parks and public access on the Greenpoint waterfront. Building upon its successful defeat of two power plants on the East River, GWAPP is dedicated to assisting the community in promoting and monitoring any development that impacts the Greenpoint waterfront.”*

The GWAPP website is at www.gwapp.org. It includes articles about issues relating to the Site, including hazards of swimming in Newtown Creek, cleanup settlements, dates for meetings (CAG and others), cleanup information, and nature walks. They have two members on the CAG.

3.3 Community Involvement History

EPA has conducted a variety of community involvement activities to date at the Site to meet Superfund requirements and enhance engagement. These include but are not limited to:

3.3.1 Designate a Site Contact

Since 2012, EPA and NYSDEC have each maintained one or more designated spokespersons to inform the community of actions taken, respond to inquiries, and provide information concerning the release of hazardous substances.

The EPA contacts identified for the Site (as of 2017) are:

- **Community.** Natalie Loney, loney.natalie@epa.gov, 212-637-3639
- **Media.** Elias Rodriguez, rodriguez.elias@epa.gov, 212-637-3662

These contacts and contacts from other agencies and entities are discussed in more detail in Section 5.1.

3.3.2 Notify Affected Citizens

As documented in the administrative record, EPA began notifying affected citizens in 2011 and has continued to update citizens regularly since then. EPA has also notified all county, state, and federal officials, as necessary. Contact information for specific officials is provided in the appendices. EPA has also notified members of the public, through press releases to the media (Appendix H) and notices in the newspaper, and has notified the CAG and local stakeholders (Appendices F and G).

3.3.3 Establish Administrative Record File and Information Repositories

EPA has established an administrative record and two information repositories. The administrative record is housed at the EPA Records Center in New York City. The information repositories are a subset of documents from the administrative record. The repositories contain basic information for public review, documents on site activities, technical documents, this CIP, and general information about the Superfund program. EPA has placed notices in the local newspapers that notify the public of the availability of the administrative record file and identifies the information repository locations and hours of availability. The administrative record and information repositories will continue to be updated as necessary.

The document repositories for the Site are:

- **EPA Region 2 Superfund Records Center.** 290 Broadway, 18th Floor, New York, NY 10007-1866
- **Borough of Brooklyn.** Greenpoint Public Library, 107 Norman Avenue at Leonard Street, 718-349-8504
- **Borough of Queens.** Long Island City Public Library, 37-44 21st Street, 718-752-3700

3.3.4 Conduct Community Interviews

EPA is required to conduct interviews to identify specific information needs and concerns, best methods of communicating with residents and interested parties, and how the community would like to become involved in the Superfund process. EPA conducted the original interviews for this CIP in 2012 and conducted follow-up interviews in 2016.

3.3.5 Prepare a CIP

Preparation of the CIP began in 2012 with EPA interviews within the community and was drafted with the support of the NCG and NYC. Delegation for the preparation of the CIP was given to the NCG at that time but given the complexities of the project and to conform more closely to EPA's guidelines and return to the mission of being a communication tool for EPA to use to maximize community engagement efforts, EPA chose to have the CIP redrafted with support from its contractor CDM Smith.

3.3.6 Prepare a Website

EPA's [website for the Site](#) was established in 2012. It includes information on EPA's involvement, the site status, what is being done to protect human health and the environment, how to stay informed, what the risks are, and potential for redevelopment activity. It also houses many reports and documents that can be downloaded for viewing, lists public information repositories, and provides information on public meetings. The website includes Site Updates in English, Chinese, Polish, and Spanish.

3.3.7 Hold Public Meetings

EPA assisted in the development of the CAG in May 2012 and facilitates the monthly meetings. EPA has occasionally made special presentations at these meetings. These meetings are advertised well in advance. Public meetings to date have included:

- EPA has held public meeting at various milestones and at the request of the community. The meetings are organized to convey site information via presentations and discussions and to answer questions from the community. Meetings have been held with the public since before the site was listed on the NPL to facilitate communication between EPA and the communities affected by and interested in the Newtown Creek starting in 2009.
- A public availability session that offered the public a chance to talk with EPA's scientific experts in an open house setting was held in October 2011 in both Brooklyn and Queens.
- EPA also attended public meetings conducted by the ATSDR.

3.3.8 Develop Fact Sheets/Community Updates

Since 2012, EPA has prepared and distributed two community updates about the Site. These are:

- **September 2014.** EPA Newtown Creek Remedial Investigation, *Brooklyn and Queens, New York, Community Update*. One-page update with information on site background, RI activities, next steps, and site contacts.
- **October 2011.** *EPA Starts Remedial Investigation at Newtown Creek, Community Update*. Two-page update with information on the first phase of field work, public participation, opportunities, site history, and site contacts.

These materials were distributed at meetings held with the community.

3.3.9 Set Up an Email Group

EPA maintains an email group with an email list that is updated regularly. It is used to distribute fact sheets, community updates, and meeting notices. EPA appreciates the willingness of our community partners to make this information available to an even wider audience by posting it on their websites.

3.3.10 Support the CAG

As described in Section 3.3.1, the CAG is an important tool for the EPA to provide two-way communication with the public and, create understanding of EPA programs and related actions. A CAG is a self-forming, self-governing stakeholder group that meets regularly to learn about the

Superfund cleanup process, discusses issues and concerns, and provide feedback to EPA. The EPA provides support to the CAG by attending meetings, providing technical support, and ensuring that the Agency is aware and responsive to public concerns. In 2012, with the inception of the CAG, EPA has been proactively working to keep the community informed and updated on Superfund activities. This includes monthly status calls with the CAG Steering committee to give them updates on the Site and to discuss topics of discussion for upcoming CAG meetings.

The Newtown CAG was established by EPA and stakeholders in 2012 to represent the interests of the impacted communities and stakeholders, receive and share information, and provide advice and input regarding the remediation of the Creek. It consists of approximately 30 members whose goals and objectives are to develop a thorough and objective understanding of the Creek from the standpoint of environmental and health implications, remediation options, and overall community objectives and to offer EPA and other pertinent agencies informed realistic recommendations on actions to be taken regarding the cleanup of the creek.

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Section 4

Community Concerns and Issues

Input on community concerns and issues came mainly from 16 interviews conducted with CAG members in early 2016. Other sources of community input included initial interviews conducted by EPA in 2011 and ongoing community input received through face-to-face interaction between EPA and the community at various meetings. EPA also received input from the CSTAG review in May 2015.

The input from these sources is summarized into three categories:

1. Public outreach and education requests
2. Specific investigation-related requests
3. Remedy issues

The 2016 interviews also included questions about communication preferences to assist EPA in getting project information to the community. As at any site, concerns are expected to vary as the project progresses from investigation and evaluation through remediation. EPA's plan for addressing these concerns and issues using the community's communication preferences is provided in Section 5.

4.1 Public Outreach and Education Issues

This category covers interviewee responses that could be classified as requests or desires for additional information from EPA (or other sources in situations where EPA is not the responsible agency) throughout the Superfund process. People were *generally* not expressing a particular opinion but wanted more information on a topic.

4.1.1 Human Health

Almost all of the interviewees listed human health (current and future) as a primary concern. Information that interviewees stated they would like to receive related to human health (residents or workers) included:

- Are people who live or work near the creek and access the water at unacceptable risk?
- Are there guidelines for exposure that can be distributed and followed?
- What are the long-term health risks for people who have been exposed over a period of years? Who is responsible for developing a list of those risks?
- Will there be long-term community health issues beyond those of people who directly contact the water?

- How can EPA do an adequate assessment of contamination with the data available? Studies on human contact with water are inadequate, including a DOH study that uses old sources that do not “connect the dots.”

Some areas surrounding Newtown Creek (particularly those closest to the East River) were reported to be “booming” with planned residential development. Also, the creek is currently used by at least two boat clubs for recreational boating, primarily in kayaks and canoes. Interviewees stated that as the waterway becomes less industrial and as planned residential developments are completed, there will be more of an interest in adults and children accessing the creek, and more people will come in contact with the water. It was believed this would happen before the creek had been fully investigated or contamination had been addressed.

Interviewees thought EPA had a responsibility to make relevant exposure and best management practices available to the public in a manner that was easy to read and non-technical. This information should cover issues such as:

- Are there potential personal health impacts for boaters?
- What can boaters do to avoid bringing contamination home with them?
- What should someone do if they fall in the creek?
- How can people use the waterfront safely?
- Is swimming allowed now or will it be in the future?

4.1.2 Environmental Health

Many interviewees cited environmental health as a major concern. They believed the creek needs to be treated with “proper attention and recognition of the resource that it is – a significant waterway in one of the largest metro areas.” It was stated that the creek’s industrial past leads people to believe that it is a lost cause, so it does not get the same attention or respect as it would if it were in a park or a more pristine environment.

Several people stated that mammals and birds living in the creek migrate and spread the effects of contamination, which has the potential to damage a wider ecosystem than the footprint of the creek. Some interviewees had specific requests for additional sampling to be conducted, for biota mapping, and for correction of mistakes in the BERA (see Section 4.2).

Information that interviewees said they would like to get from EPA included:

- What are EPA’s goals for the environmental health of the creek? What can be expected or hoped for?
- How does Newtown Creek compare to other industrially impacted creeks in the NYC area?
- What is the status of the biota on the creek, and is it improving or degrading?
- Although it is early in the process, what are various cleanup options that might be used, and have they been used successfully elsewhere?

4.1.3 Superfund Process Issues

Many of the interviewees had concerns or interests and wanted more information about how the Superfund process was playing out at the Site. These are summarized below:

- **Synergy with other sites.** Several people stated that there should be more synergies with the Gowanus Superfund process. EPA needs to explain why things are being done differently. Bulkheads should be repaired the same way.
- **EPA oversight.** A few people noted that the PRP groups are responsible for creating the contamination, and EPA should be the leader of the group of agencies in dealing with the PRPs. There was concern that Anchor is the same contractor used by GE at a nearby site, and the EPA-approved models used there severely underestimated fish toxicity and overestimated expulsion and degradation of PCBs. Up to 60 percent of PCBs are still there, and GE is gone. How will this be prevented at Newtown?
- **EPA's scope.** One person wanted to know why EPA is focusing only on the surface water and sediment. Why didn't they do shorelines or air quality as well?
- **Information sources.** One person said that the CAG steering committee gets more information from the PRPs than EPA. People wanted to know how they could be sure that results are not skewed toward the PRPs (especially when EPA is not at the meetings to ask).
- **PRP shortcuts.** One person asked how the city and state agencies could be kept from meeting federal requirements with the least amount of effort and money possible using shortcuts. As an example, they cited the NYCDEP aeration system that uses 10s of millions of dollars on a band aid that is not going to fix anything but is just designed to get oxygen levels up to federal standards. It might harm public health.
- **Combined Sewer Outfalls (CSOs).** Several people were concerned about making sure that CSOs are addressed adequately. They wanted assurance that the state's plan for Clean Water Act enforcement over the next 20 years would be substantial. They were concerned that the city will argue that chemical constituents are low compared to biological.
- **Liability.** One person stated that smaller local businesses want to know if they will be held liable for cleanup by EPA or by other PRPs.

4.1.4 Issues of Concern Outside of EPA's Mandate

People also had concerns about air quality and fish advisories – neither of which are within EPA's jurisdiction at the Site. The concerns are documented here and will be passed on to the responsible agencies. Contacts for those agencies are presented below and in Appendices C and D.

4.1.4.1 Air Quality on the Creek

Six interviewees cited concerns with air quality associated with the creek. Specifically, with the aeration system that the city has installed to add oxygen to the creek. People wondered if the air being released from the system presents a danger to human health as it has a chemical odor. There is concern that the aeration creates dangerous concentrations in air, if not for residents, than for recreational users who are on the water and workers on the creek banks. One person

was also concerned about the way the aeration system shakes the water when it turns on and the impact for splashing or capsizing of kayaks or canoes that may be nearby.

The appropriate contact is the NYSDEC who is handling air issues as part of their response to the Greenpoint Petroleum Remediation Project: Randy Whitcher, Project Manager, 518-402-9553, randy.whitcher@dec.ny.gov.

4.1.4.2 Fish Advisories/Use Restrictions

Five interviewees specifically mentioned concerns with ingestion of fish on the creek. They stated that people are known to fish from the creek, and it was important that those people be warned not to eat the fish that they catch. They believed that the concerns were greater for ethnic groups whose culture might encourage a higher level of fish consumption and who might not be aware of the hazards of eating fish due to language or literacy issues. One person believed that subsistence fishing was an environmental justice issue related to the Superfund site as some people fished for survival and had no place to do so other than the creek.

Advising the public about the hazards of eating resident fish from the creek is the responsibility of NYDOH (See Section 2.6). EPA has completed an environmental justice analysis of the Site (Section 3.1.3).

4.2 Specific Investigation-Related Requests

Interviewees made a variety of specific requests for actions to be taken by EPA or the PRPs. These included:

- **Plant tissue sampling.** Two interviewees stated that plant tissue sampling should be conducted as part of the data collection for the baseline ecological risk assessment.
- **Biota mapping.** Three interviewees stated that EPA needs to require that a biota survey be conducted as part of the remedial investigation because populations they see in the creek are not being represented in the BERA. It was stated that there is an abundance of intertidal species in the main waterway, including ribbed mussel, softshell clam, and oysters, and that they need to be accounted for. There is a suspicion that this omission is intentional on the part of the PRPs to minimize the extent of biota present. The request was made for a baseline map of biota with a commitment for regular updates.
- **Resolution of invertebrate species in the Phase II BERA.** One interviewee stated that the Phase II BERA has omitted key native invertebrate species and has the wrong species listed. The omission must be corrected before the BERA is finalized.
- **Data.** One interviewee stated that EPA should use data that NYCDEP collects outside of the approved plan to add to the body of knowledge about the nature and extent of contamination. Another interviewee said the CSTAG review recommended use of data from outside of the approved work plan.

4.3 Remedy Issues

Although it is early in the Superfund process, interviewees thought it was important to provide EPA with input on the eventual remedy. Many people spoke of a need for a lasting remediation with a thriving ecology. The issue of timing was raised by a few people, with some people wanting cleanup as soon as possible to prevent spreading of contamination and others indicating they were more concerned about picking and implementing the *right* remedy no matter how long it took.

Specific comments on various remediation topics are summarized below:

- **Sediment.** Several people said they preferred that “toxic sediments” be dredged rather than capped due to worries about future generations. Others said they understood that dredging meant that the contamination would need to be taken somewhere else, and that had its own set of related issues. People thought that this was an issue that EPA would need to explain in detail as they got closer to making remediation decisions.
- **Soil.** It was mentioned that the remediation should address the quality of soil along the shoreline, particularly in areas where bulkheads would not be repaired and where more natural shoreline might be part of the overall remediation. The sunken boats along the shoreline should also be removed.
- **Water quality.** It was stated that water cleanliness should be a priority although it will never be cleaner than the East River. To do that, it was key to stop the migration of contamination spilled on associated land areas. It was noted that mussels are proven to improve water quality, and mussel habitat could be created in place of bulkheads in multiple locations on the shoreline. Wetlands could also be created where there are no bulkheads. All of this would improve water quality.
- **CSOs.** Eight interviewees said that the CSOs and the stormwater drainage from nearby industrial properties must be addressed in remediation. It was stated that, “on a daily basis, chemical contamination is not very apparent. What *is* apparent is the stuff from the CSOs. That’s what keeps people away. We don’t want a huge investment in cleanup to be tainted by floaters.” One person said they were concerned that the agencies will rationalize that CSO contamination is insignificant to overall health compared to sediment contamination. It was noted that although the city-operated wastewater treatment system has a long-term control plan, CSOs are a problem as is ongoing pollution by small industries. Also, people still just dump things in the creek. One person indicated that “EPA treats NYCDEP with kid gloves” and another person stated that the other PRPs intentionally put a lot of attention on the CSOs, and the city feels attacked and defensive. The city and the other PRPs are very intense, and the CSOs are contentious and difficult to address.
- **Climate change resiliency.** Four people cited the need for a resilient remedy that could stand the coming challenges of rising tides and storm surges. It was noted that cord grass had been planted and has shown regrowth, and there is tremendous potential to restore marshland in key locations, particularly the upper tributaries. Marshland is protective against climate-driven flooding.

- **Short-term impacts.** Three interviewees were concerned that businesses might face short-term impacts during remediation that could put them out of business or severely interrupt their regular activities. It was noted that a few businesses still barge their goods on the creek (Western Beef, NYC concrete and, occasionally, Restaurant Depot and Petro Oil).
- **Public access.** At least five interviewees spoke of the need for public access in the remediation. Several people cited boating and swimming (at least in the portion of the creek nearest the East River) to be important uses for the creek. One person was concerned that the agencies will try to use boater safety as a pretext to limit boating in the creek.
- **Working waterfront.** Six interviewees stated that it was important that the creek retain its status as a working waterway, especially farther back in the industrial zone. They felt this goal was not incompatible with restoration of environmental habitat and recreational use. It was stated that most bulkheads have collapsed, and EPA could facilitate the permitting process with other agencies to allow group renovation of bulkheads by businesses during remediation. A working waterway could reduce road traffic in this heavily used area. It was noted that Waste Management ships garbage out by rail, and there are “thousands of trucks idling and waiting to be loaded out.” Use and sources could be controlled through zoning and long-term planning. One person thought there might need to be a municipal sacrifice zone that would focus industry in one place in the creek.
- **Remedy costs.** One interviewee stated that it was unfortunate that EPA’s cost calculations for remedy will not consider the increase in value that a thorough cleanup brings (actual economic value plus health benefit values [e.g., lower medical costs]).
- **Redevelopment.** One interviewee said that NYC needs to step up and designate an agency to be responsible for redevelopment. NYCDEP and NYSDEC could be responsible for natural habitat improvement/restoration. EPA could provide information and funding.

4.4 Communication Preferences

4.4.1 Providing Information

4.4.1.1 Updates

Interviewees were asked if they thought a regular update from EPA would be useful and would improve communication. All the interviewees were in favor of the update, and the requested frequency ranged from monthly to semiannually. They thought 2 to 3 pages would provide the information needed, and suggestions for content included schedule, recent activities, upcoming activities, contacts, potential problems, release of new documents, and maybe answers to some frequently asked questions.

Interviewees thought that the update could be posted on the EPA website and emailed to the CAG members. Various CAG members could ensure that it got posted on other websites. If the update were prepared on a regular basis, it would develop a habit of turning to a particular place at a particular time to get new information. Older updates would serve as an easy to check resource of past activities.

4.4.1.2 Answering Requests

When asked about past interactions with EPA, interviewees were generally positive in their responses. The one area where there was consistent room for improvement was that of responding to information requests. People felt they were often told that they would receive information that then either did not arrive without repeated requests or was not sufficient to fulfill the request. The interviews were not intended to judge the validity of the complaint but merely to identify the *perception* of a problem.

Suggestions for improving the perception of EPA's responsiveness in this area included:

- Establish an expected date of delivery for the information.
- Follow up before that date to let the requester know if the delivery is on track or if more time will be needed.
- If more time is needed, explain why.
- Ask follow-up questions about whether the information was what was requested.
- Educate the CAG about why certain things often take longer than expected (e.g., explain the data validation process and the value it brings to the overall assessment).

4.4.2 Communication Methods

A variety of communication methods were suggested by interviewees, including posting a small sign at the East River and in English Kills with a scannable code that directs people to the EPA website for more information. Other suggestions are summarized below.

4.4.2.1 Email

All people interviewed said that the best way for EPA to contact them directly was via email. It was mentioned by at least one person that, if there were something of size for them to read, they would prefer having a link to that document, rather than an attachment.

4.4.2.2 Newspapers

All interviewees were asked if there was a newspaper that they felt was convenient and useful for getting information to the public. Seven interviewees thought that placing notices in local newspapers or giving interviews with reporters was a good way to distribute information.

Newspapers that were mentioned were:

- Greenpoint Gazette (4)
- Brooklyn Star (1)
- W/G paper (1)
- Ridgewood Times (1)
- Brooklyn Paper (2)
- Queens Gazette (1)

4.4.2.3 Websites

Most interviewees believed that most of the public had access to a computer and that putting information on various websites, some of which were connected to the Site, was a good way to distribute information to a wider audience.

Websites that were suggested were:

- Brooklyn Paper. www.brooklynpaper.com
- DNA Info New York. www.dnainfo.com/new-york
- El Puente. www.elpuente.us
- Evergreen. www.evergreenexchange.org.
- Gothamist. www.Gothamist.com
- Greenpointer (weekly blog). www.greenpointers.com
- HarborLab. www.harborlab.org
- Neighbors Aligned for Good Growth. www.nag-brooklyn.org
- Newtown Creek Alliance. www.newtowncreekalliance.org
- Newtown Creek Community Advisory Group. www.newtowncreekcag.wordpress.com
- Newtown Creek Sailing Club. www.newtowncreeksailingclub.org
- North Brooklyn Boat Club. www.northbrooklynboatclub.org
- North Brooklyn Development Corporation. www.northbrooklyn.org
- Organization United for Trash Reduction & Garbage Equity. www.outragebk.org
- Riverkeeper. www.riverkeeper.org
- Waterfront Alliance. www.waterfrontalliance.org

Many of these websites and their associated groups are discussed in Section 3.3.

4.4.2.4 Social Media

Several people thought that EPA could build interest in work at Newtown Creek and upcoming milestones by taking advantage of social media (e.g., Facebook and Twitter). They thought this would be a low-cost and effective way to get out notices and updates such as times and places for upcoming meetings and the availability of analytical results. One person stated that “the City DOT does Facebook and the Pulaski Bridge Facebook page is great.” Another person said “There is no EPA group or fan page for the creek. EPA needs to use social media more effectively. Try Tumbler, Instagram, or Flickr to show activities. Set up a Facebook page where people can interact.”

4.4.2.5 Community Outreach

Some interviewees believed that EPA was missing an opportunity to build interest in and engagement with the Site by not reaching out to local schools and other educational resources. They felt that local schools would welcome an opportunity for a field trip, talk by a project team

member, a small project (like learning about habitat), or even something as simple as a coloring page of an animal that lives in the creek.

It was also noted that elected officials can be an excellent resource for distributing information to their constituents. One person said “Speak to local elected officials. There are great ones on both sides of creek.” Another noted that EPA should “put info in flyers that local officials send out.”

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Section 5

Community Involvement Action Plan



The most important objective of a CIP is to ensure that community members and others are aware of their opportunities for involvement in response action selection and implementation activities, including understanding how EPA got to that point in the process. Community members should be able to use this section to track what community involvement activities are planned as well as when and how to participate in them.

This section is organized as follows:

- **Section 5.1 – Planned Actions.** Provides specific steps that will be taken to address community concerns outlined in Section 4 over the remainder of the project.
- **Section 5.2 – Schedule of Community Involvement Activities.** Provides a table of specific outreach activities and the general times for implementation. Identifies which are required by Superfund law and which are additional efforts on EPA’s part at this Site.
- **Section 5.3 – Measurement of Success.** Why and how EPA will measure the success of activities.

This CIP will be used as a blueprint for work that EPA intends to implement based on current knowledge of outreach needs. It is a living document and will change as work progresses.

5.1 Planned Actions

Planned actions consist of individual activities that EPA intends to implement or continue implementing, as needed, to inform the community of project progress and to engage the community so that they can actively participate at appropriate project milestones (e.g., the public comment period for the proposed plan). The scope of these actions is based on CERCLA requirements and on feedback from the community (Section 4) and the CAG.

For ease of reading, these actions have been divided as follows:

- Points of contact, information repositories, and administrative record
- Face-to-face interactions
- Written materials
- Electronic media and sources of information

5.1.1 Points of Contact, Information Repositories, and Administrative Record

Two CERCLA-mandated outreach activities for outreach (designate a point of contact for information about the Site and establish an administrative record and information repositories) have already been conducted and are described briefly below.

Points of Contact

EPA has designated points of contact for the Site and has provided this information for other entities relevant to the Site. **The complete list of contact information for these agencies is provided in the appendices** to assist the public in better determining who to contact. Table 5.1 summarizes the types of issues that are addressed by each agency or entity and provides the contact name and the appendix in which the contact information (address, telephone number, and email) can be found.

Table 5.1. Contact information by issue and agency or group

Agency or Group	Area Covered by Agency or Group	Community and Press Contact*
U.S. Environmental Protection Agency	<ul style="list-style-type: none"> ▪ Status of work related to creek water and sediments ▪ PRP issues ▪ Legal issues related to the AOC ▪ Protectiveness issues related to water and sediments ▪ Specifics on sampling activities, including schedule ▪ Summary of activities ▪ Plans, reports, and other technical documents 	See Appendix A
		<ul style="list-style-type: none"> ▪ Natalie Loney, CIC (community) ▪ Elias Rodriguez (press)
New York State Dept. of Env. Conservation	<ul style="list-style-type: none"> ▪ Contaminated upland source issues (such as status and risk) 	See Appendix D
		<ul style="list-style-type: none"> ▪ Ian Beilby
New York City Department of Environmental Protection	<ul style="list-style-type: none"> ▪ Status and risk information relating to contamination from municipal wastewater treatment plant and sewer lines. 	Appendix D
		<ul style="list-style-type: none"> ▪ Mikelle Adgate (community) ▪ Chris Gilbride (press)
Newtown Community Advisory Group	<ul style="list-style-type: none"> ▪ Meeting times and locations ▪ Opportunities for public involvement ▪ Overview of work done to date and outstanding issues 	Appendix G
		<ul style="list-style-type: none"> ▪ Willis Elkins ▪ Ryan Kuonen
Newtown Creek Alliance	<ul style="list-style-type: none"> ▪ General information about Newtown Creek ▪ General information about the Site ▪ Tours, photos, and opportunities to volunteer or learn more 	Appendix F
		<ul style="list-style-type: none"> ▪ Willis Elkins

*Contacts for other topics (e.g., risk, legal, management) are provided in the appendix noted, where applicable.

Administrative Record and Information Repositories

EPA will continue to make information available to the public in the administrative record and the information repositories.



The administrative record is housed at:

- **EPA Region 2 Superfund Records Center.** 290 Broadway, 18th Floor, NY, New York

The information repositories for the Site are located at:

- **EPA Region 2 Superfund Records Center.** 290 Broadway, 18th Floor, New York, NY
- **Borough of Brooklyn.** Greenpoint Public Library, 107 Norman Avenue, NY, New York 718-349-8504

- **Borough of Queens.** Long Island City Public Library, 37-44 21st Street, NY, New York 718-752-3700

The administrative record holds the documents that EPA considers or relies upon in selecting the response action at a Superfund site, culminating in the ROD for remedial action. The information repositories contain documents useful to the public such as: the AOC, this document, fact sheets, work plans and reports, the proposed plan, the ROD, and other materials (e.g., information sheets, notices). In some cases, a summary will be provided with technical reports to relay the facts in simple terms and to enhance understanding. It is important that technical reports provide a realistic and understandable view of the work being done and the findings; however, it is also important that a community can understand the issues in lay terms.

5.2.1 Face-to-Face Interactions

These interactions are meetings or other exchanges between EPA and stakeholders or EPA and the community. They are effective in educating and fostering relationships that increase trust and understanding about work being conducted at the Site. These relationships help to avoid surprises as the project progresses to the post-RI/FS phase.

These interactions are described below and include but are not limited to:

- Public meetings
- CAG meetings and interaction
- Open communication with key stakeholders
- Community networking
- Briefings of elected officials
- Community visits, tours, and open houses
- Technical Assistance Grants and Technical Assistance Services for Communities



Public Meetings

EPA will sponsor public meetings/open houses at appropriate times during the Superfund process at the Site. These will include:

- Annual update meetings
- Proposed plan public comment period meeting (with a 30-day minimum comment period)
- Remedial design/remedial action meetings



Meetings will be held at facilities in the neighborhood of the Site (Appendix I) that meet the accessibility requirements of the American with Disabilities Act at times and days that are judged to be the most convenient for local residents and business owners (with CAG input).

Meetings will include handouts and visual aids to explain the topics in an easily accessible language and will include translations of materials, where appropriate. Advance notice of the meetings will be provided in the form of notices/ads in the local newspapers (to be selected from Appendix H), announcements at CAG meetings, emails, and placement of announcements on websites of the groups identified in Section 3.3. The proposed plan meeting will be recorded by a stenographer.

CAG Meetings and Interaction

EPA recognizes the value of the CAG in helping to engage and inform the community and will continue to work with the CAG throughout the Superfund process.

EPA will:

- At the request of the CAG, continue to attend regular CAG meetings and/or provide information for distribution at the meetings
- Work to find opportunities for additional update meetings or calls with CAG
- Use the resource of the CAG members to broaden awareness in the community



It is important that EPA and the CAG agree that CAG input is needed to enhance communication. Both EPA and the CAG should work to finalize a brief list of needs. These could include a timeline of expected activities, including notations for the best opportunities for public participation and a checklist of “things to do” prior to those opportunities to engage the community and get them ready to participate (e.g., post notices in paper and websites, prepare a flyer, present at one or more meetings).

Technical Assistance Grants (TAGs) and Technical Assistance Services for Communities (TASC) are community resources that are available for communities affected by the Site. A TAG is a federal grant (\$50,000 initially) awarded to an incorporated nonprofit organization for independent review of cleanup documents. TASC are services provided through a neutral contractor that can be used for a variety of needs such as answering questions about exposure to hazardous waste, community education, explanation of the cleanup process, and other services. Additional information about these tools is available from EPA’s Community Involvement Coordinator for the Site, Natalie Loney.

Open Communication with Key Stakeholders

In addition to our interactions with the CAG, EPA will continue to coordinate with key stakeholders to keep them informed of project activities and obtain feedback on their concerns. This will foster ongoing communication with local health agencies and clarify roles. Stakeholders will help disseminate information to groups with whom they are associated.

EPA’s communication efforts will include:

- Holding small group meetings on a regular basis to stay in touch
- Periodic (but regular) conversations



Any one of these settings will provide a relaxed atmosphere, conducive to effective dialog, thus, maximizing two-way communication between EPA and the stakeholders. EPA has no set schedule for this communication and will rely on input from the stakeholders as to how often and what form is preferred.



Community Networking

Additional networking events will be considered. For example:

- Partnering with existing programs of public education such as local schools, community organizations, and youth organizations
- Partnering with environmental and civic organizations to announce project updates, meetings, and involvement opportunities
- Participating in local cultural and civic events and project area activities.
- Partnering with faith-based and immigrant organizations



Briefings of Elected Officials

Briefings to elected officials will be scheduled, as needed or requested, to communicate significant events during the RI and FS. EPA anticipates these briefings would be conducted semi-annually.

These briefings will keep leaders involved and informed on Site progress and will provide an opportunity for questions or resolution of concerns. Briefing packages may also be provided to assist officials in responding to public inquiries and could include site history and status and copies of any print media released to the public (e.g., fact sheets, newsletters, media releases, media articles).

Community Visits, Tours, and Open Houses

Tours and visits provide the public access to portions of the Site that may be of interest due to work activities or other issues. This can demystify the project in people's minds. Tours would be coordinated through the official points of contact but do not have to be led by EPA. A "tour guidebook" could be a tool developed from materials already generated for the RI such as briefings, fact sheets, and newsletters.

The open house is an opportunity for posters to be displayed. Stations with multiple posters are used and staffed with technical and resource personnel assigned to guide people and answer questions. This format often increases small group and one-on-one communication and can build relationships and educate people about environmental issues. EPA anticipates holding an annual open house in conjunction with the NCG to update the community on project status. The open house could be conducted immediately prior to the annual update public meeting.



5.1.2 Written Materials

Written materials include a wide variety of tools that may help to expand understanding and engagement, including, but not limited to:

- CIP
- Fact sheets, flyers, posters, and other materials
- Advertisements and notifications
- Press releases
- Mailing list
- Project technical documents



Community Involvement Plan

This CIP is a living document that will be reviewed periodically to ensure it is up to date, particularly the contacts lists in the appendices. EPA will also obtain feedback from organizations and individuals on how successful they believe the actions in the CIP are in engaging and informing the community at the Site (Section 5.3).

Prior to the start of the remedial action, EPA will review the CIP and update it as warranted by site conditions. Additional community interviews may be conducted in this effort.

Fact Sheets, Flyers, Posters, and Other Materials

EPA will continue to prepare written materials specific to the Site to increase community awareness and knowledge of the project and its status. These will include:

- Annual update fact sheets, proposed plan fact sheet, ROD, and remedial action fact sheet
- Topic-specific flyers for meetings or other events
- Posters or other displays for events
- Proposed plan for cleanup
- Responsiveness summary for the ROD (summarizing comments received and EPA's responses to those comments)



EPA will also work to provide written materials to address the concerns listed in Sections 4.1 and 4.2. These may include fact sheets on a topic (e.g., health concerns or financial issues) or individual flyers. These materials will be developed in collaboration with the CAG.

All written materials will continue to be written in language that is understandable to an audience that is not trained in environmental issues, with graphics and text that are as non-technical as possible. Content may include updates on project status, listings of recent documents, names of individuals to contact for more information, and descriptions of study techniques or technologies or project milestones.

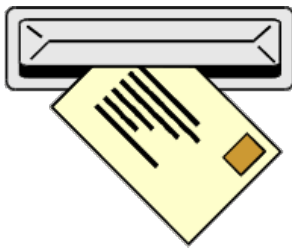
As appropriate, these materials may be available in translations (determined in consultation with the CAG). The neighborhoods surrounding the Site are very diverse. Brooklyn Community District 1 (Greenpoint and East Williamsburg) reports the top 5 languages spoken in the home in that

district are: English (37 percent), Spanish (25 percent), Yiddish (19 percent), Polish (10 percent), and Chinese (2 percent). No similar language breakdown was readily available for the neighborhoods in Queens. However, a summary of information related to ethnicity, education, income, and language from the community profile (Section 3.1) is provided in Table 5.2. At present, EPA is in the process of making available Spanish, Polish, and Chinese translations of the EPA website for the Site.

Table 5.2. Initial information relative to translation issues

Area	% foreign born	% speak English <"well"	<high school diploma	% below poverty line	Top 5 ethnicities
Greenpoint	30%	16%	31%	14%	<ul style="list-style-type: none"> ▪ Polish ▪ 15% Hispanic (P.R., Mexico, S.A.) ▪ 5% Asian (China, India, Korea, Japan)
E. Williamsburg	26%	24%	24%	21%	<ul style="list-style-type: none"> ▪ Italian ▪ 33% Hispanic (P.R., Mexico, S.A.) ▪ 13% Asian (China)
Hunters Point	34%	7%	30%	7%	<ul style="list-style-type: none"> ▪ 35% Hispanic (S.A., Mexico, D.R., P.R.) ▪ 24% Asian (China, Korea, India)
Sunnyside	74%	7%	37%	19%	
Maspeth	39%	12%	32%	10%	<ul style="list-style-type: none"> ▪ 27% Hispanic (S.A., P.R., Mexico, D.R.) ▪ 12% Asian (China, Philippines, Korea, India)
Ridgewood	45%	27%	45%	26%	<ul style="list-style-type: none"> ▪ 49% Hispanic (P.R., S.A., D.R., Mexico) ▪ 8% Asian (China, Philippines, India)

P.R. = Puerto Rico, D.R. = Dominican Republic, S.A. = South America



Mailing List

EPA will continue to update the mailing list for the Site. This list is limited to those individuals and organizations identified in the appendices and to people who indicated interest on sign-in sheets at public meetings or otherwise requested to be added to the list. EPA will add anyone to the Site mailing list, if requested. EPA will also keep an email list specifically for notification of upcoming meetings and opportunities for public involvement.

Advertisements/Notifications

Notifications will be placed in the appropriate newspapers (selected from Appendix H) as documents become available for public review and at opportunities for public involvement.

These include:

- Issuance of the proposed plan and start of the public comment period
- ROD signing
- Public meetings/open houses

Additionally, public notices will be published to inform stakeholders and community members of significant events during the project. The notices will also be provided to local officials prior to

their appearance in the newspapers so that these officials may anticipate questions from other community members. As with written materials, the ads and notices will be as easy to read as possible and will be shown to the CAG prior to placement. Electronic copies of the ads will also be provided to those CAG members who may want to place them on their group's website.

Press Releases

EPA will provide press releases and develop media contacts with local newspapers, as recommended by the CAG and other groups. Media contacts are listed in Appendix H. Media briefings can also be arranged if media representatives have the need for additional background information on the Site, the specific issues of concern, or the status of the project.

Project Technical Documents

EPA will work with the PRPs and the various regulatory agencies to provide a streamlined path for community reviews and comments on major deliverables. This will include providing:

- Notice of documents in preparation with at least a 30-day lead time on when they will be available for review
- Links to electronic copies of the documents
- Clear direction on what input is needed, how it should be provided, and when it must be received



EPA will also work with the CAG to ensure they can assist others with questions related to community review.

5.1.3 Electronic Media and Information Sources

Electronic media and document repositories are the last category of outreach tools identified in this action plan. They include:

- Social media and websites
- Email group
- Telephone "hotline"



Social Media and Websites

The primary websites related to the Site are (in alphabetical order):

- **City of New York.** www.nyc.gov/html/dep
- **EPA.** www.epa.gov/superfund/newtown-creek
- **NCA.** Newtown Creek Alliance (local citizen's group). www.newtowncreekalliance.org
- **NCG.** Newtown Creek Group (the PRP group). www.newtowncreek.info
- **Newtown CAG.** Newtown Creek Community Advisory Group. www.newtowncreekcag.wordpress.com

Other websites of interest are listed in the discussion of active groups in Section 3.3. EPA will continue to use social media and websites in the following ways:

- EPA will explore the use of social media, such as Twitter and Facebook, in notifying the community of upcoming meetings, available documents, and opportunities for involvement at the Site.
- EPA will ensure the EPA website is up to date.
- EPA will also work with NCG to ensure that the document repository on the NCG website is more user friendly and validated data can be downloaded in a timely fashion at appropriate speeds. The determination as to whether the NCG website meets these criteria will be made by EPA in consultation with the CAG.

EPA will encourage members of the CAG who are also representatives of the groups listed in Section 3.3 to post information about the Site that may be of interest to their group on their respective websites. This will include, but not be limited to, the written materials described in Section 5.1.2 and the notifications described in Section 5.1.1. This should help to disseminate information to people in the neighborhood who might not be aware of the Site or how to obtain information.

Websites outside of EPA's own website are not formally reviewed or approved by EPA, but EPA believes that they still provide a means for enhancing communication at the Site and encourages the public to visit them and follow-up with any questions.

Email Group

EPA will continue to maintain an email group for distribution of information on certain topics. To be added to the list, please contact Natalie Loney, EPA, Community Involvement Coordinator (Appendix A) or go to [EPA's website](#) and sign up.



Telephone "Hotline"

A telephone hotline is often established to enable citizens to obtain the latest information available when they want it, rather than having to wait for a meeting or a fact sheet, and without cost. The hotline can also be used at any time to leave a message asking questions or requesting information about the project. The EPA telephone hotline is 800-346-5009, for community concerns and questions about the Site or the Superfund program. The Newtown Creek Group has also established a hotline for the people living near Newtown Creek to call (Appendix E).



5.2 Schedule of Community Involvement Activities

Table 5.3 lists EPA's responsibilities for community involvement under CERCLA and includes additional activities EPA has or will undertake to engage the impacted communities at the Site.

Table 5.3. Summary of CERCLA-mandated outreach and additional outreach proposed by EPA

When	Community Involvement Action
Throughout the Superfund process	<ul style="list-style-type: none"> ✓ Update CAG at monthly meetings <ul style="list-style-type: none"> ▪ Ensure EPA and NGC websites are updated with the latest information ▪ Find opportunities for update meetings/calls with CAG and community ▪ Provide a streamlined path for community reviews and comments on major deliverables ▪ Provide the community with access to validated data in a timely fashion ▪ Provide outreach materials in multiple languages ✓ Prepare an annual update fact sheet on Site progress <ul style="list-style-type: none"> ▪ Send fact sheets, updates, notes, etc. to stakeholder groups who can get the word out ✓ Use written materials and meetings to address the issues in Section 4 ✓ Hold an annual update public meeting/open house <ul style="list-style-type: none"> ▪ Brief elected officials semi-annually
Prior to commencing fieldwork for the remedial investigation	<ul style="list-style-type: none"> ✓ Establish two information repositories and an administrative record file ✓ Publish notice of availability in a major local newspaper ✓ Conduct community interviews ✓ Prepare and issue a CIP
During the RI and FS	<ul style="list-style-type: none"> ✓ Evaluate the need for translations of public documents ✓ Conduct additional interviews for the CIP and issue a final version <ul style="list-style-type: none"> ▪ Improve NCG website (document repository more user friendly + improved download speeds)
Upon publication of proposed plan	<ul style="list-style-type: none"> ▪ Publish a notice for the proposed plan in a major local newspaper ▪ Prepare a fact sheet that summarizes the proposed plan and describes where the plan can be obtained and the time and location of the public meeting ▪ Make the proposed plan and supporting information available in the administrative record ▪ Provide a public comment period of at least 30 days for written and oral comments ▪ Conduct a public meeting at or near the Site during the public comment period ▪ Have the meeting transcribed and make transcript available in the administrative record
After comment period	<ul style="list-style-type: none"> ▪ Prepare written summary of significant comments and EPA's response to each issue (responsiveness summary) and make it available with the ROD
After ROD signing/prior to remedial action	<ul style="list-style-type: none"> ▪ Make ROD available for public inspection at or near the Site and in the administrative record ▪ Publish a notice of availability for the ROD in a major local newspaper ▪ Prepare a ROD fact sheet
Prior to remedial design	<ul style="list-style-type: none"> ▪ Review the CIP ▪ Revise CIP if further activities are needed during remedial design/remedial action
Prior to remedial action (cleanup)	<ul style="list-style-type: none"> ▪ Issue a fact sheet on the remedial action ▪ As appropriate, provide a public briefing on the remedial action

Red text is outreach mandated by CERCLA

Green text is outreach proposed as a result of the CSTAG recommendation

Black text is additional outreach conducted and/or proposed by EPA

✓ Task complete. ✓ In progress, including multiple events

5.3 Measurement of Success

EPA is undertaking the activities listed in Table 5.3 with the intention of building on and improving engagement with the community in and around the Site to achieve our goals for this CIP. Those goals were listed in Section 1 and are shown again below:



- **Ensure the public appropriate opportunities for involvement in a wide variety of site-related decisions, including site analysis and characterization, alternatives analysis, and selection of response action**
- **Determine appropriate activities to ensure such public involvement**
- **Provide appropriate opportunities for the community to learn about the Site**

We want to ensure that the outreach work we are doing is effort well-spent and helps to achieve these goals. To that end, we will be doing periodic monitoring of our work to determine if our actions are functioning as planned or if we need to adjust what we are doing.

The specific measurement methods will be determined as work progresses, but they all entail asking for feedback and are likely to include surveys, interviews, and/or tracking of project progress milestones.

Benefits to asking for feedback include:

- Offers one more chance for contact, helping to build and strengthen relationships
- Helps determine if project dollars are being spent efficiently and if goals are being met
- Positive feedback shows success and helps motivate a project team that might otherwise only hear bad news
- Negative comments focus efforts on areas that need improvement and alert team to concerns so they can be addressed
- Asking for input helps people reflect on the complexity of the work and focuses them on outcome rather than on minor annoyances

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Section 6

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Appendix A

EPA Regional Contacts

U.S. EPA – Region 2

290 Broadway
New York, NY 10007-1866



Project Management

Caroline Kwan, Remedial Project Manager

212-637-4275

Kwan.Caroline@epa.gov

Mark Schmidt, Remedial Project Manager

212-637-3886

Schmidt.mark@epa.gov

Public Affairs

Natalie Loney, Community Involvement Coordinator

212-637-3639

loney.natalie@epa.gov

Elias Rodriguez, Press Officer

212-637-3664

rodriguez.elias@epa.gov

Legal

Michael Mintzer, Site Attorney

212-637-3168

Mintzer.michael@epa.gov

EPA's Newtown Creek Superfund Site Website

www.epa.gov/superfund/newtown-creek

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Appendix B

Federal Elected Officials and Contacts

U.S. Senate

Senator Kristen E. Gillibrand www.gillibrand.senate.gov

- *Washington, DC Office.* 478 Russell Senate Office Building, Washington, DC 20510, 202-224-4451
- *New York City Office.* 780 Third Avenue, Suite 2601, New York, NY 10017, 212-688-6262

Senator Charles E. Schumer www.schumer.senate.gov

- *Washington, DC Office.* 313 Hart Senate Office Building, Washington, DC 20510, 202-224-6542
- *New York City Office.* 757 Third Avenue, Room 17-02, New York, NY 10017, 212-486-4430

U.S. House of Representatives

Rep. Carolyn B. Maloney (12th District) www.maloney.house.gov

- *Washington, DC Office.* 2308 Rayburn HOB, Washington, DC 20515-3214, 202-225-7944
- *Queens Office.* 31-19 Newtown Avenue, Rm 403 Astoria, NY 11102-1933, 718-932-1804
- *Manhattan Office.* 1651 3rd Avenue Suite 311, New York, NY 10128-3679, 212-860-0606

Rep. Nydia M. Velázquez (7th District) www.house.gov/velazquez

- *Washington, DC Office.* 2302 Rayburn House Office Building, Washington, DC 20515, 202-225-2361
- *Brooklyn Office.* 266 Broadway, Suite 201, Brooklyn, NY 11211, 718-599-3658

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Appendix C

State and Local Elected Officials

New York State Senate

State Senator Martin Malavé Dilan (18th District)

- *District Office.* 718 Knickerbocker Avenue, Brooklyn, NY 11207, 718-573-1726, www.nysenate.gov/senator/martin-malavedilan
- *Albany Office.* 188 State Street, Room 711B, Legislative Office Building, Albany, NY 12247, 518-455-2177

State Senator Michael Gianaris (12th District)

- *District Office.* 31-19 Newtown Avenue, Suite 402, Astoria, NY 11102, 718-728-0960, www.nysenate.gov/senator/michaelgianaris

State Senator Joseph P. Addabbo Jr. (15th District)

- *District Office.* 159-53 102nd Street, Howard Beach, NY 11414, 718-738-1111, www.nysenate.gov/senator/joseph-p-addabbo-jr/

New York State Senate

Assemblywoman Catherine Nolan (District 37)

- *District Office.* 61-08 Linden Street, Ridgewood, NY 11385, 718-784-3194, nolanc@assembly.state.ny.us

Assemblyman Joseph R. Lentol (District 50)

- *District Office.* 619 Lorimer Street, Brooklyn, NY 11211, 718-383-7474, lentolj@assembly.state.ny.us

Assemblyman Brian Barnwell (District 30)

- *District Office.* 55-19 69th Street, Maspeth, NY 12248. barnwellb@assembly.state.ny.us

Assemblywoman Maritza Davila (District 53)

- *District Office.* 249 Wilson Avenue, Brooklyn, NY 11237, 718-443-1205, davilam@assembly.state.ny.us

New York City Borough Officials

Council Member Antonio Reynoso (District 34)

- 244 Union Avenue, Brooklyn, NY 11206, 718- 963-3141, areynoso@council.nyc.gov

Council Member Stephen Levin (District 33)

- 410 Atlantic Avenue, Brooklyn, NY 11217, 718-875-5200, slevin@council.nyc.gov

Council Member Jimmy Van Bramer (District 26)

- 47-01 Queens Boulevard, Suite 205, Sunnyside, NY 11104, 718-383-9566, jvanbramer@council.nyc.gov

Brooklyn Borough President Eric Adams

- 209 Joralemon Street, Brooklyn, NY 11201, 718-802-3700, askeric@brooklynbp.nyc.gov

Queens Borough President Melinda Katz

- 120-55 Queens Boulevard, Kew Gardens, NY 11424, 718-286-3000

Appendix D

New York City and State Contacts



New York City

- **Mikelle Adgate**, Community Outreach Staff – Newtown Creek
Ojar@dep.nyc.gov, 718-595-4148
- **Christopher Gilbride**, Media Coordinator – Newtown Creek
CGilbride@dep.nyc.gov, 718-595-6600
- **Nilda Mesa, Director**, NYC Mayor’s Office of Sustainability, 253 Broadway, 10th Floor, New York, NY 10007, 212-788-9956, nmesa@cityhall.nyc.gov
- **Vincent Sapienza, Acting Commissioner**, NYC City Department of Environmental Protection, 59-17 Junction Boulevard, 13th Floor, Flushing, NY 11373, 718-595-6565
- **Polly Trottenberg, Commissioner**, NYC Department of Transportation, 55 Water Street, New York, NY 10041, 212-839-6453

New York State

- **Ian Beilby**, Department of Environmental Remediation, 625 Broadway, Albany, New York 12233, 518-402-9767, ian.beilby@dec.ny.gov

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Appendix E

Newtown Creek Group Contacts

The points of contact for the Newtown Creek Group are:

Community

- Tyquana Henderson-Parsons, 347-928-5407, Tyquana@connectivestrategies.com
- Marc Lavaia, 917-697-5728, marc@connectivestrategies.com

Media

- Janet Dickerson, 646-770-3276, janet@connectivestrategies.com

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Appendix F

Stakeholder Group Contacts

Leah Archibald, Executive Director, Evergreen

2Kingsland Avenue, Brooklyn, NY 11211, 718-388-7287 ext. 168

Brian Coleman, Director, Greenpoint Design and Manufacturing Center

1205 Manhattan Avenue, 5th Floor, Brooklyn, NY 11222, 718-383-3935, info@gmdc.online.org

Joseph Conley, Chair, Queens Community Board No. 2,

43-22 50th Street, 2nd Floor, Woodside, NY 11377, 718-533-8773, qn02@cb.nyc.gov

Willis Elkins, Program Manager, Newtown Creek Alliance

welkins@newtowncreekalliance.org

Gerald Esposito, District Manager, Brooklyn Community Board No. 1

435 Graham Avenue, Brooklyn, NY 11211, 718-389-0009, Bk01@cb.nyc.gov

Dealice Fuller, Chair, Brooklyn Community Board No. 1

435 Graham Avenue, Brooklyn, NY 11211, 718-389-0009, Bk01@cb.nyc.gov

Peter Gillespie, Executive Director, Neighbors Allied for Good Growth

101 Kent Avenue, Brooklyn, NY 11211, 718-384-2248, info.bklyn@gmail.com

Keith Hicks, Executive Director, Greenpoint YMCA

99 Meserole Avenue, Brooklyn, NY 11222, 718-389-3700

Steve Hindy, Board Chairman, Open Space Alliance

181 North 11th Street, Brooklyn, NY 11211, 718-383-1278

Christine Holowacz, Community Liaison, Newtown Creek Monitoring Committee City of New York Superfund Chair

329 Greenpoint Avenue, Brooklyn, NY 11222

Debra Markell-Kleinert, District Manager, Queens Community Board No. 2

43-22 50th Street, 2nd Floor, Woodside, NY 11377, 718-538-8773, qn02@cb.nyc.gov

Richard Mazur, Executive Director, North Brooklyn Development Corp.

148 Huron Street, Brooklyn, NY 11222, 718-389-9044 Ext. 11

Carlo Scissura, President, Brooklyn Chamber of Commerce

25 Elm Place, Suite 200, Brooklyn, NY 11201-5826, 718-875-1000

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Appendix G

Newtown Creek Community Advisory Group

Members

- Alice Baker, Tanya Bley, Michael Leete, and Teresa Toro, *Residents*
- Ryan Kuonen, *Community Board #1*
- Dorothy Morehead, *Community Board #2*
- James Curcuru and Dewey Thompson, *Greenpoint Waterfront Association for Parks and Planning*
- Sean Dixon and Josh Verleun, *Riverkeeper*
- Lori Raphael, *Brooklyn Chamber of Commerce*
- Jack Friedman, *Queens Chamber of Commerce*
- James Maleady, *Greenpoint Business Alliance*
- Rich Mazur, *North Brooklyn Development Corporation*
- Deb Mesloh and Jean Tanler, *Queens Business Outreach Center*
- Willis Elkins, Michael Heimbinder, Jan Mun, and Mitch Waxman, *Newtown Creek Alliance*
- Leah Archibald and Stephen Fabian, *Evergreen*
- Laura Hofmann and Michael Hofmann, *Barge Park Pals*
- Christine Holowacz, *Newtown Creek Monitoring Committee*
- Steve Lang, *LaGuardia-CUNY*
- Marice Love, *Row New York*
- Paul Pullo, *Metro Terminals*
- Mike Schade, *Safer Chemicals, Healthy Families*
- Lillit Genovesi, *Trout Unlimited*
- Ted Gruber, *LIC Community Boathouse*
- Louis Kleinman, *Metropolitan Waterfront Alliance*
- Ed Kelly, *Maritime Association of the Port of NY/NJ*
- Erik Baard, *HarborLAB*
- Mae Emerick, *Parsons*
- Sarah Durand, *LaGuardia-CUNY*

Current Co-Chairs

- Ryan Kuonen and Mike Schade

Steering Committee Members

- Leah Archibald
- Sean Dixon
- Sarah Durand
- Willis Elkins
- Lillit Genovesi
- Christine Holowacz
- Ed Kelly
- Ryan Kuonen
- Rich Mazur
- Deb Mesloh
- Paul Pullo
- Lori Raphael
- Mike Schade
- Jean Tanler
- Mitch Waxman

Appendix H

Local Media Contacts

Brooklyn Daily Eagle

30 Henry Street
Brooklyn, NY 11201
718-422-7421

Brooklyn Paper, Aaron Short

55 Washington Street, Suite 624
Brooklyn, NY 11201
718-834-9350

DNAinfo New York, Meredith Hoffman

810 7th Avenue, Suite 800
New York, NY 10019
646-435-9100
mhoffman@dnainfo.com

El Correo de Queens

3815 Bell Boulevard
Bayside, NY 11361
718-224-5863

El Diario

One Metrotech Center, 18th Floor
Brooklyn, NY 11201
212-807-4600

Greenpoint Gazette, Jeff Mann

597 Manhattan Avenue
Brooklyn, NY 11222
718-389-6067

Queens Gazette, Tony Barsamian

4216 34th Avenue
Long Island City, NY 11101
718-361-6161
qgazette@aol.com

Greenpoint Star, Kathleen Connell

6960 Grand Avenue
Maspeth, NY 11378
718-426-7200
Kconnell@queensledger.com

New York Daily News, Brooklyn

16 Court Street, Suite 503
Brooklyn, NY 11241
718-875-4455

Nowy Dziennik (Polish Paper)

333 West 38th Street
New York, NY 10018
212-594-2266

Queens Chronicle

62-33 Woodhaven Boulevard
Rego Park, NY 11374-7769
718-205-8000

Queens Courier, Victoria Schneps

3815 Bell Boulevard
Bayside, NY 11361
718-224-5863
editorial@queenscourier.com

Queens Ledger, Walter Sanchez

6960 Grand Avenue
Maspeth, NY 11378
718-426-7200

Queens Tribune, Brian Rafferty

150-50 14th Road
Whitestone, NY 11357
718-357-7400

Ridgewood Times

66-58 Fresh Pond Road
Ridgewood, NY 11385
718-821-7500

The New York Times, Mia Navarro

620 8th Avenue, 2nd Floor
New York, NY 10018
212-556-3809
minava@nytimes.com

The New York Times, Kia Gregory

620 8th Avenue, 2nd Floor

New York, NY 10018
212-556-1234
kia.gregory@nytimes.com

Times Ledger, Maureen Walthers
4102 Bell Boulevard
Bayside, NY 11361
718-229-0300

**Wall Street Journal, Brooklyn Metro
Section, Joseph DeAvila**
1211 Avenue of Americas, 4th Floor
New York, NY 10036
212-416-3627

World Journal
14107 20th Avenue
Whitestone, Queens 11357
718-746-8889

Appendix I

Meeting Locations, Information Repositories, Websites, and Hotlines

Potential Meeting Locations

- St. Stanislaus School, 607 Humboldt Street, Brooklyn, NY 11222
- St. Cecilia Gym, 24 North Henry Street, Brooklyn, NY 11222
- PS 110, 124 Monitor Street, Brooklyn, NY 11222
- Swinging 60 Senior Center, 211 Ainslie Street, Brooklyn, NY 11211
- Newtown Creek Water Treatment Plant Visitor Center, 329 Greenpoint Avenue, Brooklyn, NY 11222
- St. Mary's, 10-08 49th Avenue, Long Island City, NY 11101
- Sunnyside Community Services, 43-31 39 Street, Sunnyside, NY 11104
- Maspeth Town Hall, 53-37 72 Street, Maspeth, NY 11378
- LaGuardia Community College, 31-10 Thomson Avenue, Long Island City, NY 11101
- Greenpoint Branch, 107 Norman Avenue, Brooklyn, NY 11222
- Long Island City Public Library, 37-44 21 Street, Long Island City, NY 11101

Information Repository Locations

- **EPA Region 2 Superfund Records Center.** 290 Broadway, 18th Floor, New York, NY 10007-1866
- **Borough of Brooklyn.** Greenpoint Public Library, 107 Norman Avenue at Leonard Street, 718-349-8504
- **Borough of Queens.** Long Island City Public Library, 37-44 21st Street, 718-752-3700

Websites

- **EPA.** www.epa.gov/superfund/newtown-creek
- **NCG.** Newtown Creek Group (the PRP group). www.newtowncreek.info
- **Newtown CAG.** Newtown Creek Community Advisory Group.
www.newtowncreekcag.wordpress.com
- **NCA.** Newtown Creek Alliance (local citizen's group). www.newtowncreekalliance.org

Hotlines

- **EPA (800-346-5009).** For community concerns and questions about the Site or the Superfund program.
- **NCG (718-403-3335).** For neighbors living near Newtown Creek to call and leave a message requesting information.



Appendix J

CSTAG

CSTAG recommendations letter to Region 2 EPA – July 9, 2015

Region 2 EPA response letter to CSTAG – October 7, 2015

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
SOLID WASTE AND
EMERGENCY RESPONSE

July 9, 2015

MEMORANDUM

SUBJECT: CSTAG Recommendations on the Newtown Creek Contaminated Sediment Superfund Site

FROM: Stephen J. Ells, Chair 
Contaminated Sediments Technical Advisory Group

TO: Caroline Kwan, Remedial Project Manager
Region 2

Background

OSWER Directive 9285.6-08, *Principles for Managing Contaminated Sediment Risks at Hazardous Waste Sites* (February 12, 2002), established the Contaminated Sediments Technical Advisory Group (CSTAG) to "monitor the progress of and provide advice regarding a small number of large, complex, or controversial contaminated sediment Superfund sites." One purpose of the CSTAG is to guide site project managers to appropriately manage their sites throughout the Superfund process in accordance with the 11 risk management principles described in the OSWER Directive and with the recommendations in the 2005 *Contaminated Sediment Remediation Guidance for Hazardous Waste Sites*. CSTAG membership consists of eight regional representatives, two from the Office of Research and Development, two from the U.S. Army Corps of Engineers' Engineer Research Development Center, and three from the Office of Superfund Remediation and Technology Innovation. The CSTAG visited Newtown Creek and met with the EPA project team on May 19 and 20, 2015. Several stakeholders also made presentations to the CSTAG, including the Newtown Creek Group (NCG), New York City Department of Environmental Protection (NYCDEP), the New York State Department of Environmental Conservation (NYSDEC), the Community Advisory Group, and the National Oceanic and Atmospheric Administration (NOAA), on behalf of itself and the U.S. Fish and Wildlife Service.

Site Description

Newtown Creek (The Creek) is 3.8 miles long and includes five short tributaries. It forms part of the boundary between Brooklyn and Queens in New York City. Except for the wider turning basin, the typical width is 200 to 300 feet and the waterbody has a tidal range of four to six feet. Almost all of the shoreline is bulk-headed or rip-rapped.

Since the 1800s, the Newtown Creek Superfund Site (Site) has been industrially developed. Industrial wastes were typically discharged directly to Newtown Creek and its tributaries without treatment in the early twentieth century, and spills and releases of various contaminants on upland properties seeped into Newtown Creek and its tributaries. The second largest oil spill in United States history, first discovered in the late 1970s, occurred immediately upland of Newtown Creek and is believed to have leaked between 17 and 30 million gallons of oil and petroleum products over more than 50 years. In addition, New York City (NYC) began dumping raw sewage directly into the Creek in 1856 and continued into the twentieth century. Several state-sponsored cleanups have taken place at properties in the upland areas of the Site.

In September 2010, Newtown Creek was listed on the National Priorities List. In July 2011, EPA signed an administrative order on consent (AOC) for the remedial investigation (RI) and feasibility study (FS) of the sediments and waters of Newtown Creek and its tributaries (defined in the AOC as the “Study Area”) with six potentially responsible parties. The respondents to the AOC are NYC and five individual members of the NCG: ExxonMobil, Phelps Dodge, Texaco, BP, and National Grid. The NCG is conducting the RI activities under EPA oversight, and NYC, as a significant respondent, is afforded the opportunity to review and comment on draft deliverables and documents and to participate in meetings between EPA and the NCG.

The RI/FS is being conducted in phases. The Phase 1 RI field investigation began in February 2012 and was completed in March 2013. The Phase 2 RI field investigation intends to (1) collect information to address Phase 1 data gaps, (2) refine the contaminant fate and transport evaluation, and (3) assess risks to human health and the environment. Phase 2 began in May 2014 and is expected to be completed in September 2015.

The primary contaminants of potential concern (COPCs) identified during Phase 1 include polychlorinated biphenyls (PCBs), polycyclic hydrocarbons (PAHs) and metals. These contaminants were found in surface sediments, subsurface sediments, and in the water column. Contaminant concentrations are generally higher in the Turning Basin, English Kills and Dutch Kills, and lower in other portions of the main channel of Newtown Creek, especially near the mouth. The results of the Phase 1 RI indicated the following concentration ranges of contaminants in the surface sediment (top 15 centimeters): 0.12 to 22 mg/kg of PCB congeners; 9.5 to 780 mg/kg of PAHs; 94 to 3,100mg/kg of lead; and 91 to 23,000 mg/kg of copper. The Phase 1 RI indicated the following concentration ranges of contaminants in subsurface sediment, representing the riverine sediments (15 cm to depth of native sediments) and the native sediments: 0.058 to 170 mg/kg of PCB congeners; 11 to 15,000, mg/kg of PAHs; 1.5 to 3,200 (J) mg/kg of lead; and 3.6 to 28,000 mg/kg of copper. The Phase 1 RI indicated the following concentration ranges of key contaminants in surface water: 0.46 to 91 ng/L of PCB congeners; 1.3 to 1,200 ng/L of PAHs; 0.5 to 16 µg/L of lead; and 1 (J) to 90 µg/L of copper.

Recommendations

Principle 1 - Control Sources Early

1 - CSTAG recommends that Region 2 identify all piped conveyances and estimate their contributions to contaminant loading and any potential risk. CSTAG is concerned about potential recontamination following any remedial action that is undertaken before sources are adequately controlled. The Region should also evaluate if loadings from CSOs may increase because of new planned residential developments. CSTAG recommends that the Region work with the appropriate regulatory authorities to develop a plan to eliminate any unpermitted, piped discharges, minimize impacts from CSOs, and address groundwater discharges that may re-contaminate the Creek.

Principle 2 - Involve the Community Early and Often

2 - CSTAG recommends that Region 2 continue its efforts to ensure meaningful community involvement and to consider additional opportunities to make the investigation and any potential cleanup more transparent to the affected communities. The Region should also evaluate whether outreach materials should be developed in additional languages such as Spanish and Polish.

Principle 3 - Coordinate with States, Local Governments, Tribes, and Natural Resource Trustees

3 - CSTAG understands that the State is primarily responsible for evaluating and controlling upland sources to the Creek, and EPA is responsible for all in-water investigations and cleanup. This separation makes it challenging for EPA to fully evaluate and understand the relationship between contaminated groundwater discharges and the sediment contamination in the Creek. As recommended in the recent EPA memo, *Promoting Water, Superfund and Enforcement Collaboration on Contaminated Sediments*, Region 2 should increase its coordination with the State's Clean Water Act program to enhance collaboration on restoring this waterbody.

As discussed in *A Primer for Remedial Project Managers on Water Quality Standards and the Regulation of Combined Sewage Overflows under the Clean Water Act* (OSWER Directive 9200.1-116-FS), the CSTAG recommends that Region 2 encourage the State to consider the following recommendations included in the above Directive: 1) review and revise the Water Quality Standards for the Creek and develop additional decreases in allowable discharges, 2) require NPDES permittees to monitor their discharges for contaminants such as copper, PAHs, and PCBs, and 3) for any outfalls discharging a potentially significant load of hazardous substances, issue a new NPDES permit with stricter controls.¹

¹ Promoting Water, Superfund, and Enforcement Collaboration on Contaminated Sediments. February 12, 2015. <http://water.epa.gov/scitech/swguidance/standards/library/upload/promoting-water-sediments-memo.pdf> Sediment Assessment and Monitoring Sheet #4: A Primer for Remedial Project Managers on Water Quality Standards and the Regulation of Combined Sewage Overflows under the Clean Water Act. December 2013. OSWER Directive 9200.1-116-FS. http://www.epa.gov/superfund/health/conmedia/sediment/pdfs/CWA_Primer_Final_-_SAMS_4_-_Dec_10_2013__508.pdf

Principle 4 - Develop and Refine a Conceptual Site Model that Considers Sediment Stability

4 - CSTAG recommends that Region 2 refine the conceptual site model to more accurately quantify the relative significance of erosional shorelines, groundwater, and leaking bulkheads as contaminant sources to the Creek.

The modeling system under development by Anchor QEA (AQ) on behalf of the Newtown Creek Group appears comprehensive. While CSTAG would not *a priori* recommend that such a complex modeling system be used for remedy selection at the Site, Region 2 is currently reviewing AQ's modeling system to determine if the model outputs may be useful in refining the CSM. The Region is also considering whether a less sophisticated model may be more appropriate. However, CSTAG questions why such a complex modeling system is under development for a site at this stage in the process, where neither unacceptable ecological or human health risks have yet been determined, and it has not been established how the model could be used to evaluate remedial alternatives. It is essential that the administrative record include a description of how any models used in remedy selection were reviewed, calibrated, validated, and how the uncertainties in model predictions were considered.

5 - The Newtown Creek estuarine system was described as net depositional, but the CSTAG noted that the Creek has maintained navigational depths without maintenance dredging since the 1940s. CSTAG recommends that the net deposition rate be more accurately quantified, including its spatial variability throughout the Site. Region 2 should use multiple lines of evidence, such as repeat bathymetric surveys and geochronological and stratigraphic analyses of the sediment bed to support this analysis.

Principle 5 - Use an Iterative Approach in a Risk-Based Framework

6 - If the Region's evaluation of Phase 2 data shows that unacceptable risks are likely, the Region should consider using removal actions in order to more quickly remediate the non-aqueous phase liquid (NAPL) sources near the manufactured gas plants, upland source areas not addressed by the State, and discrete hot spots of COPCs in the sediment bed that present clearly unacceptable risks.

7 - As part of the baseline ecological risk assessment, CSTAG recommends that Region 2 develop a decision process that describes how they intend to use the multiple lines of evidence (e.g., benthic toxicity, COPC concentrations compared to benchmarks, species diversity index) to make ecological risk decisions. It is often difficult to obtain dose-response relationships from standard sediment toxicity studies as toxicity often is not correlated with bulk sediment concentrations of COPCs. For PAH toxicity, the Region should consider using passive sampling devices to directly measure the dissolved PAH concentration in sediment porewater and then deriving toxic units as outlined in EPA's "Procedures for the Derivation of Equilibrium Partitioning Sediment Benchmarks (ESBs) for the Protection of Benthic Organisms: PAH Mixtures" (EPA-600-R-02-013).

8 - CSTAG recommends that the Region 2 project team develop a data management plan for the Region to receive, store, and manage data. One expected advantage of developing and working

such a plan is that it will be easier to access and use the data for technical analysis and to facilitate more rapid responses to queries from other audiences such as the public.

9 - CSTAG recommends that Region 2 consider reviewing the CSO data collected by NYCDEP to assist in assessing loadings to the Creek from the major CSOs at the ends of Maspeth Creek, Dutch Kills, English Kills, Whale Creek, and the East Branch. One challenge is that the NYCDEP data exist and are collected outside of the EPA RI/FS and the quality assurance project plan. Therefore, the CSTAG recommends that Region 2 develop a plan for evaluating information that was not generated under an EPA-approved workplan, yet might be useful for site characterization.

Principle 6 - Carefully Evaluate the Assumptions and Uncertainties Associated with Site Characterization Data and Site Models

10 - The determination of background concentrations for primary contaminants of concern is an important consideration for remedy selection at many sites. The CSTAG recommends that Region 2 evaluate whether the current RI sampling and modeling will be sufficient to support a background determination, and if it is not sufficient, determine what additional actions are necessary to define background. If the screening risk assessments clearly indicate unacceptable human health or ecological risks from PAHs, the CSTAG recommends that Region 2 evaluate the background study done by the NYSDEC to assess the recommendation that 71 ppm PAHs in sediment is an appropriate background concentration.

11 - The CSTAG was surprised that no fish tissue contaminant data, although collected in summer 2014, were available for the CSTAG meeting, given the likely significance of these data, the presence of PCB contamination at the Site and the human health effects usually associated with the consumption of PCB-contaminated fish. The CSTAG understands that biota have been sampled and recommends that at least two sets of biota tissue from different years be collected and evaluated to reliably evaluate risks prior to making remedy decisions.

Principle 7 - Select Site-specific, Project-specific, and Sediment-specific Risk Management Approaches that will Achieve Risk-based Goals

12 - CSTAG recommends that Region 2 consider whether it is appropriate to divide the study area into smaller decision units in order to refine site characterization and remedy evaluation (e.g., tributaries to the creek, the confluence with the East River, the turning basin). This approach may be beneficial should decision units exhibit different risk levels or site characteristics that may warrant a different remedy or combination of remedies.

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entering the Creek and its tributaries. Understanding how the coal tar is entering the Creek will be critically important for evaluating effective remedies in the FS to contain, treat, or remove it. CSTAG recommends that Region 2 identify where the mobile fraction of coal tar is located in the subsurface. Technologies that can evaluate the mobile fraction of coal tar have been found to be useful at some sites and should be considered.

Principle 11 - Monitor During and After Sediment Remediation to Assess and Document Remedy Effectiveness

15 - The CSTAG recommends that Region 2 determine if sampling conducted during the RI will provide adequate baseline data to assess whether the RAOs will be achieved after remediation. Although CSTAG understands that the concept of building a baseline was incorporated into the planning process leading up to the approved RI work plan, it is important to evaluate the adequacy of the baseline data if remediation is required. Ideally, results from several sampling episodes over several years should be available. This is especially important for fish sampling where it is common to have highly variable data.

Regional Response

Please provide a response to me for each recommendation within 90 days. If you need a clarification on any recommendation, please give me a call at 703 603-8822.

cc: Joseph Battipaglia, Region 2
Michael Sivak, Region 2
John Prince, Region 2
Walter Mugdan, Region 2
Michael Scozzafava, OSRTI
Doug Ammon, OSRTI
Dana Stalcup, OSRTI
James Woolford, OSRTI
CSTAG Members

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION II

DATE: October 7, 2015

SUBJECT: Region 2 Responses to CSTAG Recommendations on the
Newtown Creek Contaminated Sediment Superfund Site

FROM: Caroline Kwan, Remedial Project Manager
Joseph Battipaglia, Remedial Project Manager

TO: Stephen J. Ells, Chair
Contaminated Sediment Technical Advisory Group

The EPA Region 2 Newtown Creek Remedial Investigation/Feasibility Study (RI/FS) project team (the Region) appreciates the efforts of the Contaminated Sediment Technical Advisory Group (CSTAG) in connection with the Newtown Creek Superfund site (the Site). The recommendations provided by the CSTAG in its July 9, 2015 Memorandum will assist the Region in addressing the eleven principles identified by EPA for managing contaminated sediment risks at hazardous waste sites. By this Memorandum to the CSTAG, the Region provides its responses to the CSTAG's recommendations. The Region will continue to implement, whenever possible, the CSTAG recommendations as we move forward with the RI/FS and remedy selection for the Site. As the Site is still early in the RI/FS process, the Region will have ample opportunities going forward to incorporate many of the CSTAG's recommendations.

Principle 1 - Control Sources Early

- 1. Recommendation:** CSTAG recommends that Region 2 identify all piped conveyances and estimate their contributions to contaminant loading and any potential risk. CSTAG is concerned about potential recontamination following any remedial action that is undertaken before sources are adequately controlled. The Region should also evaluate if loadings from Combined Sewer Overflows (CSOs) may increase because of new planned residential developments. CSTAG recommends that the Region work with the appropriate regulatory authorities to develop a plan to eliminate any unpermitted, piped discharges, minimize impacts from CSOs, and address groundwater discharges that may re-contaminate the Creek.

Response: The Region appreciates this recommendation and recognizes the importance of identifying potential ongoing contaminant sources to Newtown Creek, including point source discharges (discharges from piped conveyances and overland flows that discharge at specific points along the Creek) and groundwater discharges, characterizing these contaminant inputs and their human health and environmental risks and impacts, and identifying the appropriate remedies to address them, if necessary.

The Region would like to clarify the ongoing efforts to characterize these potentially significant inputs. For assessing point sources to the Site, the Phase 2 RI/FS Work Plan includes:

- reviewing information on known point sources,
- conducting field surveys to confirm the reviewed information and to identify previously unknown point sources,
- categorizing and sampling the representative point sources and their associated contaminant loads, and

- developing a methodology to extrapolate the findings from the sampled point sources so that loadings from all point source discharges can be estimated based on their respective drainage areas.

The Phase 2 point source sampling is currently ongoing. Planning tasks for the point sources investigation included a detailed review of existing point source surveys and permit records, as well as dry- and wet-weather field surveys of the entire Creek to identify point source discharges. The Draft Sources Sampling Approach Memorandum summarized these efforts and identified over 300 discharge points to Newtown Creek, some of which have been closed or are no longer used. While the flows and loadings of many of the smaller conveyances are unknown, an extensive field effort to quantify the chemical loading associated with discharges to Newtown Creek is currently ongoing.

The point source sampling program includes collection of up to four samples at each of 30 point source discharges representing approximately 84 percent of the point source discharge volume to Newtown Creek. Samples are being collected from various types of point sources including CSOs, stormwater discharges, individually permitted (State Pollutant Discharge Elimination System [SPDES]) discharges, overland flow discharges, wastewater treatment plant discharges, highway drains, and general permit discharges. Overland flow discharges were included in the point source sampling program because the discharges are well defined and discharge at discrete points. Leaking bulkheads and eroding shorelines are being considered for further evaluation.

The sampling data will be used to estimate contaminant loading to Newtown Creek from point source discharges. As of October 7, 2015, approximately 75 point source samples have been collected from storms of varying intensity, rainfall amounts, and storm durations. The data collected during the point source program will capture the majority of the significant sources identified in the point sources inventory and will be sufficient to extrapolate loading estimates for the relatively small portion of the discharge volume not captured by the point sources sampling program. The Region believes that the forthcoming point source data will be sufficient to characterize contaminant loading to Newtown Creek and support remedy selection.

A groundwater investigation program was also conducted, to identify non-point source contaminant loads to the Creek from groundwater discharge and to support groundwater modeling. In-creek groundwater, porewater and seepage rate data were collected to characterize contaminant loading to Newtown Creek via groundwater discharge to the sediment bed and underlying native materials, including groundwater discharged under, around or through bulkheads and other shoreline structures. Completed in August 2015, the groundwater assessment also included the installation of upland wells, groundwater profiling and sampling in native materials and sediments, long-term water level monitoring, and hydraulic testing. Again, the Region believes this information will be sufficient to characterize contaminant loading from groundwater discharge and seepage into the Creek and support remedy selection, which is consistent with the goal of this CSTAG recommendation.

This recommendation also suggests that the Region further consider potential impacts from planned residential development along the Creek. In response to this recommendation's concern

that loadings from CSOs may increase because of newly planned residential developments, the Region will review available documents, such as the New York City CSO Long Term Control Plan, site plans, permit applications and other documents, as identified by New York City to identify and evaluate potential increased loadings to Newtown Creek.

Principle 2 - Involve the Community Early and Often

- 2. Recommendation:** CSTAG recommends that Region 2 continue its efforts to ensure meaningful community involvement and to consider additional opportunities to make the investigation and any potential cleanup more transparent to the affected communities. The Region should also evaluate whether outreach materials should be developed in additional languages such as Spanish and Polish.

Response: Following careful review of this recommendation, the Region has planned for and initiated several new components to community outreach efforts. The Region recognizes that an informed and engaged community is essential to the success of any major remedial activity, and is fully committed to maintaining meaningful community involvement. The Region is also always looking to identify opportunities for improved interaction with the community stakeholders. The following additional/improved community involvement activities are being considered by the Region or have already been initiated as a result of the recommendation.

- Improving the Newtown Creek Group's (NCG's) website, specifically making the document repository more user-friendly and improving download speeds
- Updating the EPA website regularly to provide the community with the most recent information and documents
- Finding opportunities for more frequent update meetings and/or calls with the Community Advisory Group (CAG) and the greater community
- Providing a streamlined path for community reviews and comments on major deliverables
- Providing the community with access to validated data in a more timely fashion
- Providing outreach materials in multiple languages

Principle 3 - Coordinate with States, Local Governments, Tribes and Natural Resource Trustees

- 3. Recommendation:** CSTAG understands that the State is primarily responsible for evaluating and controlling upland sources to the Creek, and EPA is responsible for all in-water investigations and cleanup. This separation makes it challenging for EPA to fully evaluate and understand the relationship between contaminated groundwater discharges and sediment contamination in the Creek. As recommended in the recent EPA memo, Promoting Water, Superfund and Enforcement Collaboration on Contaminated Sediments, Region 2 should increase its coordination with the State's Clean Water Act program to enhance collaboration on restoring this waterbody.

As discussed in "A Primer for Remedial Project Managers on Water Quality Standards and the Regulation of Combined Sewage Overflows under the Clean Water Act" (OSWER Directive 9200.1-116-FS), the CSTAG recommends that Region 2 encourage the State to consider the following recommendations included in the above Directive: 1) review and revise the Water

Quality Standards for the Creek and develop additional decreases in allowable discharges, 2) require NPDES permittees to monitor their discharges for contaminants such as copper, PAHs, and PCBs , and 3) for any outfalls discharging a potentially significant load of hazardous substances, issue a new NPDES permit with stricter controls.¹

Response: This CSTAG recommendation is appreciated, as communication and collaboration on these issues is a critical component towards the goal of restoring the Creek. As a follow up to this recommendation, the Region has carefully assessed our current communication with the State regarding this issue and is developing several follow up actions for further evaluation. While the Administrative Order on Consent (AOC)-defined “Study Area”, which largely limits the remedial investigation under the AOC to the Creek itself, can present certain challenges, the relationship and high level of coordination between the Region and the New York State Department of Environmental Conservation (NYSDEC) has been helpful in addressing a number of issues. To date, the Region has worked collaboratively with NYSDEC on various Site investigation plan reviews for upland sources, proposed revised water quality standards for the Site, current upgrades to CSOs, and required actions being taken by the City of New York to attain compliance with the Clean Water Act (CWA) at Newtown Creek. The Region also intends to continue this coordination on the Superfund selected remedies and early source control measures, including eliminating/permitting existing point sources to the Site.

As mentioned above, the Region is in the process of developing several follow up actions to improve collaboration and coordination with NYSDEC. As an example, one plan under consideration includes the scheduling of regular meetings and/or teleconferences with NYSDEC CWA personnel, as well as EPA CWA personnel, to discuss/coordinate data collection and analysis, and to continue to identify potential actions for the reduction of point source discharges to the Site. In addition, the Region is considering additional communication and coordination with NYSDEC concerning State Superfund, Brownfield Cleanup and Petroleum Spill Sites which are located upland of the Study Area.

Principle 4 - Develop and Refine a Conceptual Site Model that Considers Sediment Stability

- 4. Recommendation:** CSTAG recommends that Region 2 refine the conceptual site model to more accurately quantify the relative significance of erosional shorelines, groundwater, and leaking bulkheads as contaminant sources to the Creek.

The modeling system under development by EA (AQ) on behalf of the Newtown Creek Group appears comprehensive. While CSTAG would not *a priori* recommend that such a complex modeling system be used for remedy selection at the Site, Region 2 is currently reviewing AQ's modeling system to determine if the model outputs may be useful in refining the Conceptual Site Model (CSM). The Region is also considering whether a less sophisticated model may be

¹ Promoting Water, Superfund, and Enforcement Collaboration on Contaminated Sediment. February 12, 2015. <http://water.epa.gov/scitech/swguidance/standards/library/upload/promoting-water-sediments-memo.pdf> Sediment Assessment and Monitoring Sheet #4: A Primer for Remedial Project Managers on Water Quality Standards and the Regulation of Combined Sewage Overflows under the Clean Water Act. December 2013. OSWER Directive 9200.1-116-FS. http://www.epa.gov/superfund/health/conmedia/sediment/pdfs/CWA_Primer_Final_-_SAMS_4-Dec_10_2013_508.pdf

more appropriate. However, CSTAG questions why such a complex modeling system is under development for a site at this stage in the process, where neither unacceptable ecological or human health risks have yet been determined, and it has not been established how the model could be used to evaluate remedial alternatives. It is essential that the administrative record include a description of how any models used in remedy selection were reviewed, calibrated, validated, and how the uncertainties in model predictions were considered.

Response: CSTAG's insight and comments on this topic are appreciated, and in response to the recommendation, the Region is reviewing the various models that have been proposed for the Site under consideration of the comments and points raised in the recommendation. The Region recognizes that shoreline erosion, groundwater discharge, and leaking bulkheads (including groundwater flow underneath bulkheads) can all contribute contaminants to Newtown Creek. The Region has had initial discussions with the NCG, New York City and NYSDEC regarding eroding shorelines as a potential contaminant source, and will consider additional data collection in these areas following further discussions with the NCG, New York City and NYSDEC (also see Response to Recommendation 13). As part of the groundwater investigation program, groundwater flow and chemical characterization data were collected that is relevant to the assessment of contaminated groundwater discharge via bulkheads, other shoreline structures, and the Newtown Creek sediment bed. Furthermore, the Region is evaluating any further assessment needs as part of the Region's ongoing data gaps analysis and will continue to do so as the project progresses.

Regarding modeling efforts, the Region has an ongoing process in place to conduct reviews of the models. This process includes workshops amongst the Region, the NCG, and New York City, and their respective consultants to discuss technical issues, next steps in the process, and a formal model review process. The Region's model review process includes maintaining records of all reviews that are conducted, as these reviews are essential to showing that model development, calibration and verification have been properly reviewed and that the models can effectively support decision making by the Region. These reviews have been presented in modeling approach memos and modeling result memos and will be included in the administrative record. In response to the CSTAG recommendation, the Region will continue to assess if the process described above is adequate and appropriate to allow for a robust review of how the models will be constructed, calibrated, and validated and how the uncertainties will be identified.

5. **Recommendation:** The Newtown Creek estuarine system was described as net depositional, but the CSTAG noted that the Creek has maintained navigational depths without maintenance dredging since the 1940s. CSTAG recommends that the net deposition rate be more accurately quantified, including its spatial variability throughout the Site. Region 2 should use multiple lines of evidence, such as repeat bathymetric surveys and geochronological and stratigraphic analyses of the sediment bed to support this analysis.

Response: The Region recognizes the importance of determining sedimentation rates and the CSTAG's concern with the classification of the Creek as net depositional given the absence of maintenance dredging since the 1940s. The Region is following up on this recommendation, and as part of the follow up, has reviewed the existing information and recognizes that there are strengths and weaknesses associated with the various data types available for determining net deposition/erosion rates. As such, a multiple lines of evidence approach will be used to support a more robust assessment of sediment deposition/erosion rates at the Site, including spatial variability. The Region has worked with the Office of Research and Development to identify experts to examine existing data used to estimate deposition/erosion rates in Newtown Creek, including geochronology data, sediment core logs, and multiple bathymetric survey data (one survey conducted prior to and one survey conducted following Superstorm Sandy). EPA has also requested that these experts identify any data gaps in the sediment deposition/erosion data and provide recommendations for additional work, if necessary. The report is currently being prepared and is expected in fall 2015. The Region will review the conclusions of the report and evaluate what additional information may be necessary to address the CSTAG recommendation to more clearly understand the depositional rates of the Creek.

Principle 5 - Use an Iterative Approach in a Risk-Based Framework

- 6. Recommendation:** If the Region's evaluation of Phase 2 data shows that unacceptable risks are likely, the Region should consider using removal actions in order to more quickly remediate the non-aqueous phase liquid (NAPL) sources near the manufactured gas plants, upland source areas not addressed by the State, and discrete hot spots of COPCs in the sediment bed that present clearly unacceptable risks.

Response: The CSTAG recommendation is acknowledged, and the Region understands the importance of early actions, when appropriate. The CSTAG's examples of potential early actions are especially helpful and will allow the Region to review the data with these considerations in mind. EPA has discussed with NYSDEC, the NCG and New York City, the need to identify potential early action areas within the Study Area, particularly regarding areas of NAPL and/or significantly elevated concentrations of contaminants of potential concern (COPCs). The Region is confident that the data collected as part of the Phase 1 and Phase 2 RI, such as NAPL and sediment data, will be useful in identifying any areas which clearly present unacceptable risks and require an early action. The identification of potential early action areas is a priority for the Region, and we will continue to discuss this important issue with NYSDEC, the NCG and New York City as more data have been reviewed and the CSM is refined.

- 7. Recommendation:** As part of the baseline ecological risk assessment, CSTAG recommends that Region 2 develop a decision process that describes how they intend to use the multiple lines of evidence (e.g., benthic toxicity, COPC concentrations compared to benchmarks, species diversity index) to make ecological risk decisions. It is often difficult to obtain dose-response relationships from standard sediment toxicity studies as toxicity often is not correlated with bulk sediment concentrations of COPCs. For polycyclic aromatic hydrocarbons (PAH) toxicity, the Region should consider using passive sampling devices to directly measure the dissolved PAH concentration in sediment porewater and then deriving toxic units as outlined in EPA's "Procedures for the

Derivation of Equilibrium Partitioning Sediment Benchmarks (ESBs) for the Protection of Benthic Organisms: PAH Mixtures" (EPA-600-R-02-013).

Response: Region 2 is working with the respondents and other stakeholders to develop a more detailed approach for evaluating the sediment quality triad (SQT) data that was collected as part of the remedial investigation. The framework for this approach, which was developed following EPA guidance, was presented in the Risk Analysis Plan section of the Problem Formulation Document and in Chapter 3 of the BERA Work Plan. In addition to the standard sediment quality triad, which incorporates benthic toxicity, sediment chemistry and benthic invertebrate metrics, pore water samples are also being collected at each SQT station for inclusion in the benthic evaluation. The pore water sampling includes using passive sampling devices, such as solid phase microextraction samplers and peepers to collect porewater samples as part of the risk sampling program. Toxic units following the guideline listed in the recommendation will be calculated and presented in the Baseline Ecological Risk Assessment report. The advice provided to the Region by CSTAG regarding the use of a multiple lines of evidence approach and identification of associated guidance will be helpful to the Region as we develop a more detailed decision process.

8. **Recommendation:** CSTAG recommends that the Region 2 project team develop a data management plan for the Region to receive, store, and manage data. One expected advantage of developing and working such a plan is that it will be easier to access and use the data for technical analysis and to facilitate more rapid responses to queries from other audiences such as the public.

Response: The Region agrees with CSTAG's recommendation to develop a robust data management plan in order to readily access and use the RI data for technical analysis, refining the CSM and facilitating response to stakeholders, particularly members of the public. A data management plan was developed by the NCG and approved by the Region in 2011. A separate data management plan was also developed by the NCG for the Region's split-sample data and was approved by the Region in 2014. These data management plans specify laboratory sample data formats, data deliverables formats, and data storage and management requirements. In addition, the EPA-approved Quality Assurance Project Plan (QAPP) identifies the collection, preparation, analytical and validation methods for all samples collected pursuant to the RI Work Plan. The EPA-approved QAPP also includes procedures for the collection and analysis of split samples for the EPA. The data collected under the EPA-approved QAPP will be used in the development of the RI.

Any data submitted to the Region that was collected by other parties outside of the EPA-approved QAPP and without EPA oversight will be reviewed by the Region. Data not collected under the EPA-approved QAPP and under Region oversight will be considered on a case-by-case basis for usability in or comparison with the Region-approved RI/FS.

In late July 2015, the Region discussed a more user-friendly approach with the CAG for the evaluation of data, including a series of presentations with interpretation and evaluation of the data as they become available.

9. Recommendation: CSTAG recommends that Region 2 consider reviewing the CSO data collected by the New York City Department of Environmental Protection (NYCDEP) to assist in assessing loadings to the Creek from the major CSOs at the ends of Maspeth Creek, Dutch Kills, English Kills, Whale Creek, and the East Branch. One challenge is that the NYCDEP data exist and are collected outside of the EPA RI/FS and the quality assurance project plan. Therefore, the CSTAG recommends that Region 2 develop a plan for evaluating information that was not generated under an EPA-approved work plan, yet might be useful for site characterization.

Response: As recommended by CSTAG, the Region is actively considering the scope of its future review of CSO data collected by the City outside of the approved work plan and, most recently, on September 28, 2015, met with representatives of the City to discuss this issue. The Region will continue to address CSTAG's recommendation to consider reviewing data collected outside of the EPA RI/FS and develop a plan for evaluating such data.

A comprehensive sampling program has been developed and implemented to characterize CSOs and other point sources (see response to Recommendation No. 1). This program was developed with input from both New York City and the NCG, including CSO flow information provided by New York City. The field sampling effort is being implemented by the NCG in coordination with both the NCG and New York City.

The Region is aware that both New York City and the NCG have collected data at-risk outside of the Region-approved QAPP and without Region oversight. Data collected outside of the EPA-approved work plan that is provided to the Region for consideration will be evaluated on a case-by-case basis, as indicated in the Region's response to Recommendation No. 8. The Region met with representative of New York City, at their request on September 28, 2015 to discuss several issues, including the City's request that their data be included in the RI/FS and/or administrative record. The Region advised the City that it would consider their at-risk data to the extent that such data may provide support for or diverge from data collected by the respondents' contractor pursuant to the approved work plan and under EPA oversight. However, the Region is confident that the multiple rounds of data collected under the EPA-approved work plan will accurately characterize contamination at the Site.

Principle 6 - Carefully Evaluate the Assumptions and Uncertainties Associated with Site Characterization Data and Site Models

10. Recommendation: The determination of background concentrations for primary contaminants of concern is an important consideration for remedy selection at many sites. The CSTAG recommends that Region 2 evaluate whether the current RI sampling and modeling will be sufficient to support a background determination, and if it is not sufficient, determine what additional actions are necessary to define background. If the screening risk assessments clearly indicate unacceptable human health or ecological risks from PAHs, the CSTAG recommends that Region 2 evaluate the background study done by the NYSDEC to assess the recommendation that 71 ppm PAHs in sediment is an appropriate background concentration.

Response: The Region agrees with this CSTAG recommendation on the importance of developing accurate background concentrations for the primary contaminants of concern, especially given

their significance in informing remedy decisions. To provide more background on the Region's efforts to follow up with this recommendation, the following activities are being conducted. Currently, the Region is reviewing the data collected from 14 site-specific background areas identified for this RI to determine if additional data are needed to characterize background. In addition, the Region will review the referenced study to determine if its conclusions are appropriate for use in the RI/FS, and will also be reviewing similar investigations in the Region to develop a comprehensive understanding of potential background concentrations for the RI/FS. To clarify, the background study referenced in this recommendation was performed by consultants to Con Edison, not by the NYSDEC. As an example, the Region will be reviewing the Con Edison background study for the East River (accepted by NYSDEC to establish remedial goals for East River manufactured gas plants) to determine if, and how, it can be used to support determination of background concentrations for Newtown Creek. Any background studies in which data were not collected under a Region-approved QAPP will be evaluated for usability at the Site as outlined in the Response to Recommendation 8.

- 11. Recommendation:** The CSTAG was surprised that no fish tissue contaminant data, although collected in summer 2014, were available for the CSTAG meeting, given the likely significance of these data, the presence of PCB contamination at the Site and the human health effects usually associated with the consumption of PCB-contaminated fish. The CSTAG understands that biota have been sampled and recommends that at least two sets of biota tissue from different years be collected and evaluated to reliably evaluate risks prior to making remedy decisions.

Response: The Region agrees with CSTAG's identification of the potential significance of fish tissue contaminant data given the presence of PCB contamination at the Site, and recognizes its influence on human health risks. To date, biota data have been collected through a sampling event that spanned several months over the course of one summer, June – August 2014. The Region recently completed an evaluation of the existing biota tissue data sets as part of its ongoing data gaps analysis. Following the completion of our review of this data set in October 2015 and in consideration of this CSTAG recommendation, EPA directed the respondents to collect additional tissue data in order to reliably evaluate risks prior to the Region making remedy decisions. The Region continues to have discussions on how to develop and implement this effort in a manner that most efficiently utilizes the resources of both the respondents and the Region.

Principle 7 - Select Site-specific, Project-specific, and Sediment-specific Risk Management Approaches that will Achieve Risk-based Goals

- 12. Recommendation:** CSTAG recommends that Region 2 consider whether it is appropriate to divide the Study Area into smaller decision units in order to refine site characterization and remedy evaluation (e.g., tributaries to the creek, the confluence with the East River, the turning basin). This approach may be beneficial should decision units exhibit different risk levels or site characteristics that may warrant a different remedy or combination of remedies.

Response: The Region appreciates the recommendation and recognizes that this approach has been successfully implemented at other sediment sites. Some basic divisions of the Study Area, including tributaries, the turning basin, and the mouth of Newtown Creek have already been identified. As a result of the recommendation, the Region is investigating further division of the Site into smaller decision units on the basis of various site characteristics, including site geomorphology, sedimentation characteristics, risk, and contaminant distribution. The creation of smaller decision units during the data evaluation process may also be helpful in the determination of any early actions at the Site.

- 13. Recommendation:** Region 2 should consider whether bulkhead upgrades are necessary as part of any remedy and work with property owners to ensure such upgrades are completed.

Response: As a follow up to this recommendation, the Region has reviewed the project activities that are focused on characterizing bulkheads to assess if the current scope is adequate. The Region recognizes the potential importance of bulkheads as part of any comprehensive remedy, and the resulting need to work collaboratively with the respective property owners. The groundwater investigation program will provide data to assess the potential contaminant discharge to the Site both under and through leaking bulkheads and other shoreline structures (also see Response to Recommendation 4). As data from these investigations become available and are reviewed, the Region will continue to assess how bulkheads may contribute to contamination in the Creek and whether improvements may be included in any remedy.

- 14. Recommendation:** CSTAG recommends that ebullition be further evaluated as a potential significant transport mechanism for hydrophobic contaminants present as NAPL. It is important to determine where the coal tar/NAPL is located within the Study Area (i.e., behind the bulkhead, under the sediments, upland pools), what phase it is in, the location of any pressure gradients, and how it is entering the Creek and its tributaries. Understanding how the coal tar is entering the Creek will be critically important for evaluating effective remedies in the FS to contain, treat, or remove it. CSTAG recommends that Region 2 identify where the mobile fraction of coal tar is located in the subsurface. Technologies that can evaluate the mobile fraction of coal tar have been found to be useful at some sites and should be considered.

Response: The Region recognizes that ebullition may be a significant contaminant transport mechanism at the Site. Following receipt of this recommendation, the Region requested that a qualitative ebullition field survey program be conducted as part of the Phase 2 RI. The ebullition field survey program was completed in August 2015 and identified several potential areas of ebullition within the Creek. The ebullition survey included areas where NAPL has been identified in sediment and areas where NAPL is known to be present in upland sites adjacent to Newtown Creek. Based on the preliminary findings of the survey, the Region has notified the NCG and New York City that a more robust quantitative assessment of ebullition and ebullition-facilitated contaminant transport will be required. EPA will complete a full review of the NCG's findings and conclusions following a presentation of the results by the NCG on October 22, 2015.

NAPL distribution was also investigated as part of the Phase 2 RI. The NAPL investigation

included use of a standardized methodology for visual characterization and logging of all cores and the performance of shake tests on 152 cores where visual observations such as sheens, coating, or staining indicated the potential presence of NAPL. As part of the Region's continued and more frequent coordination with NYSDEC, the Region will also coordinate with NYSDEC to ensure that upland facilities known to contain NAPL contamination do not serve as long-term sources of contamination to the Site.

Principle 11 - Monitor During and After Sediment Remediation to Assess and Document Remedy Effectiveness

15. Recommendation: The CSTAG recommends that Region 2 determine if sampling conducted during the RI will provide adequate baseline data to assess whether the RAOs will be achieved after remediation. Although CSTAG understands that the concept of building a baseline was incorporated into the planning process leading up to the approved RI work plan, it is important to evaluate the adequacy of the baseline data if remediation is required. Ideally, results from several sampling episodes over several years should be available. This is especially important for fish sampling where it is common to have highly variable data.

Response: As a follow up to this CSTAG recommendation, the Region has evaluated the data review process following the completion of most of the Phase 2 field work (with the exception of the point source investigation, the Phase 2 field work is complete). The Region has requested that Anchor QEA develop a series of presentations on various key aspects of the investigation, including NAPL, ebullition, human health and ecological risk assessment data, groundwater, and background, to be delivered to the Region over the next few months. The purpose of these presentations is to provide the Region with a summary of the data and an interpretation of the data so that the Region can determine if the data are robust enough to allow for the development of an RI, the first step in moving towards the development of RAOs and remedial goals and, ultimately, remedy selection. Any data gaps identified during this process will be evaluated to determine if the data gaps are sufficiently significant that further RI sampling is needed, or if the data gaps can be filled during later efforts, such as through sampling conducted as part of the FS or during any pre-design investigations that are conducted post-remedy selection. This effort was developed, as a follow up to the CSTAG recommendation, in an effort to develop a plan that most efficiently utilizes both staffing and economic resources of both the Region and the respondents.

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Appendix K

Results of Environmental Justice Screening

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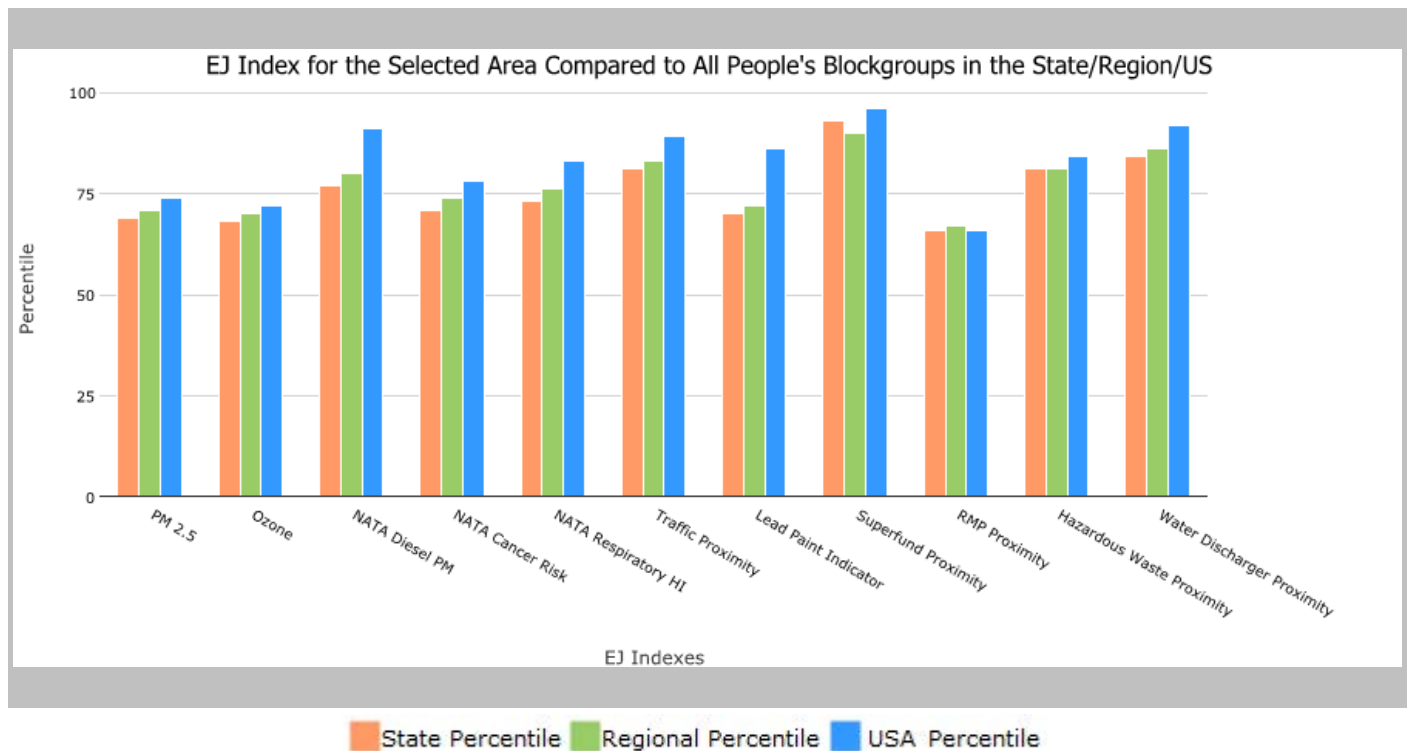
2 mile Ring Centered at 40.728160,-73.930401, NEW YORK, EPA Region 2

Approximate Population: 318,477

Input Area (sq. miles): 12.56

Newtown Creek Superfund Site (The study area contains 5 blockgroup(s) with zero population.)

Selected Variables	State Percentile	EPA Region Percentile	USA Percentile
EJ Indexes			
EJ Index for PM2.5	69	71	74
EJ Index for Ozone	68	70	72
EJ Index for NATA* Diesel PM	77	80	91
EJ Index for NATA* Air Toxics Cancer Risk	71	74	78
EJ Index for NATA* Respiratory Hazard Index	73	76	83
EJ Index for Traffic Proximity and Volume	81	83	89
EJ Index for Lead Paint Indicator	70	72	86
EJ Index for Superfund Proximity	93	90	96
EJ Index for RMP Proximity	66	67	66
EJ Index for Hazardous Waste Proximity ⁺	81	81	84
EJ Index for Water Discharger Proximity	84	86	92



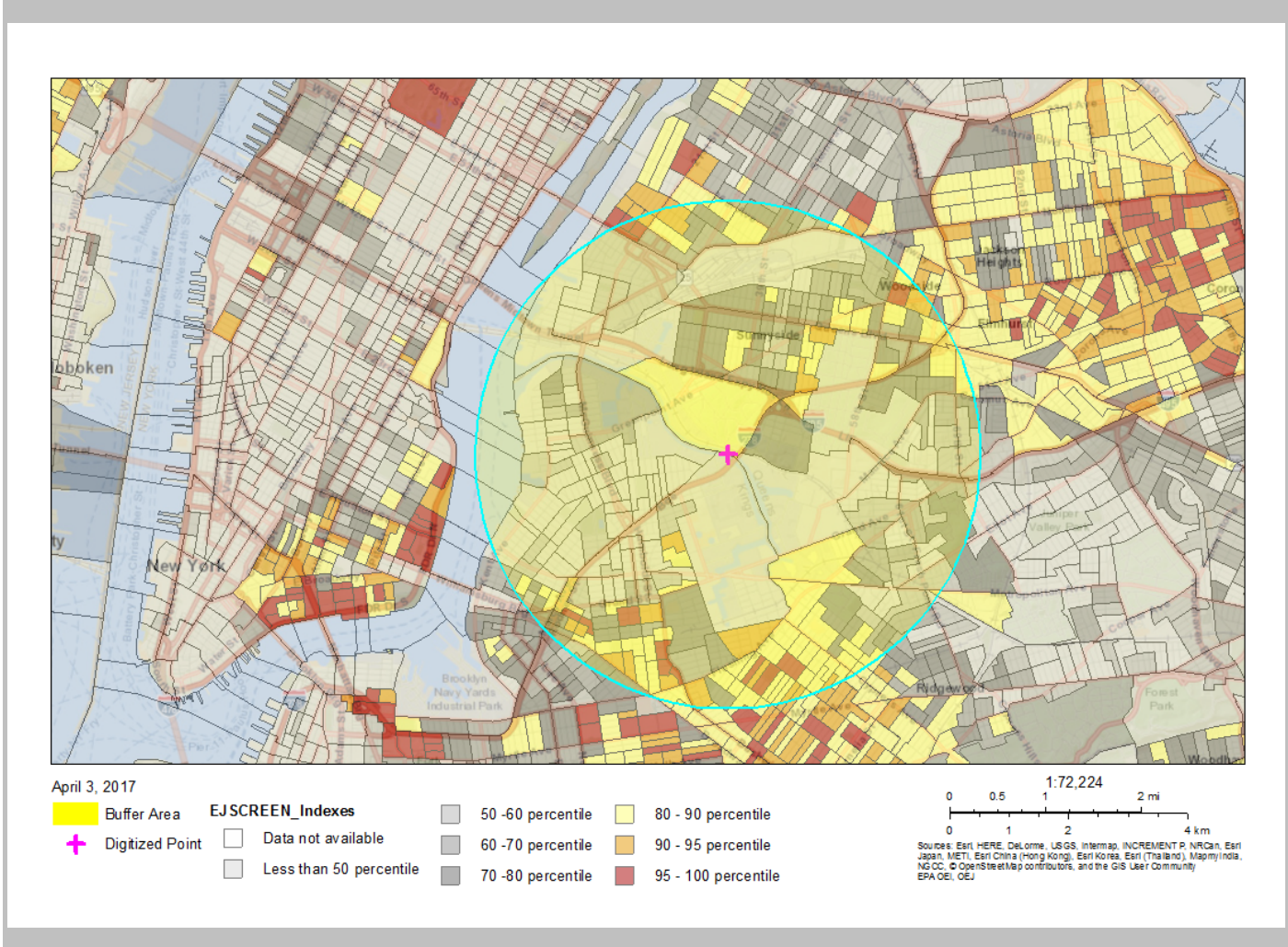
This report shows the values for environmental and demographic indicators and EJSCREEN indexes. It shows environmental and demographic raw data (e.g., the estimated concentration of ozone in the air), and also shows what percentile each raw data value represents. These percentiles provide perspective on how the selected block group or buffer area compares to the entire state, EPA region, or nation. For example, if a given location is at the 95th percentile nationwide, this means that only 5 percent of the US population has a higher block group value than the average person in the location being analyzed. The years for which the data are available, and the methods used, vary across these indicators. Important caveats and uncertainties apply to this screening-level information, so it is essential to understand the limitations on appropriate interpretations and applications of these indicators. Please see EJSCREEN documentation for discussion of these issues before using reports.

2 mile Ring Centered at 40.728160,-73.930401, NEW YORK, EPA Region 2

Approximate Population: 318,477

Input Area (sq. miles): 12.56

Newtown Creek Superfund Site (The study area contains 5 blockgroup(s) with zero population.)



Sites reporting to EPA	
Superfund NPL	1
Hazardous Waste Treatment, Storage, and Disposal Facilities (TSDF)	0
National Pollutant Discharge Elimination System (NPDES)	1

EJSCREEN Report (Version 2016)

2 mile Ring Centered at 40.728160,-73.930401, NEW YORK, EPA Region 2

Approximate Population: 318,477

Input Area (sq. miles): 12.56

Newtown Creek Superfund Site (The study area contains 5 blockgroup(s) with zero population.)

Selected Variables	Value	State Avg.	%ile in State	EPA Region Avg.	%ile in EPA Region	USA Avg.	%ile in USA
Environmental Indicators							
Particulate Matter (PM 2.5 in $\mu\text{g}/\text{m}^3$)	10.1	9.07	87	9.13	88	9.32	65
Ozone (ppb)	45	45.6	36	46.2	32	47.4	32
NATA* Diesel PM ($\mu\text{g}/\text{m}^3$)	4.02	2.13	85	1.87	80-90th	0.937	95-100th
NATA* Cancer Risk (lifetime risk per million)	65	45	86	44	90-95th	40	95-100th
NATA* Respiratory Hazard Index	4.2	2.5	84	2.4	80-90th	1.8	95-100th
Traffic Proximity and Volume (daily traffic count/distance to road)	6500	2300	89	1800	92	590	98
Lead Paint Indicator (% Pre-1960 Housing)	0.69	0.57	60	0.52	65	0.3	86
Superfund Proximity (site count/km distance)	0.68	0.22	93	0.29	89	0.13	96
RMP Proximity (facility count/km distance)	0.082	0.2	37	0.24	33	0.43	20
Hazardous Waste Proximity* (facility count/km distance)	0.21	0.13	89	0.13	88	0.11	89
Water Discharger Proximity (facility count/km distance)	1.4	0.59	87	0.53	89	0.31	96
Demographic Indicators							
Demographic Index	49%	38%	66	36%	69	36%	73
Minority Population	59%	43%	66	43%	67	37%	73
Low Income Population	40%	33%	67	30%	70	35%	63
Linguistically Isolated Population	19%	8%	83	8%	84	5%	92
Population With Less Than High School Education	21%	15%	73	14%	76	14%	76
Population Under 5 years of age	6%	6%	53	6%	53	6%	48
Population over 64 years of age	9%	14%	28	14%	29	14%	33

* The National-Scale Air Toxics Assessment (NATA) is EPA's ongoing, comprehensive evaluation of air toxics in the United States. EPA developed the NATA to prioritize air toxics, emission sources, and locations of interest for further study. It is important to remember that NATA provides broad estimates of health risks over geographic areas of the country, not definitive risks to specific individuals or locations. More information on the NATA analysis can be found at: <https://www.epa.gov/national-air-toxics-assessment>.

+ The hazardous waste environmental indicator and the corresponding EJ index will appear as N/A if there are no hazardous waste facilities within 50 km of a selected location.

For additional information, see: www.epa.gov/environmentaljustice

EJSCREEN is a screening tool for pre-decisional use only. It can help identify areas that may warrant additional consideration, analysis, or outreach. It does not provide a basis for decision-making, but it may help identify potential areas of EJ concern. Users should keep in mind that screening tools are subject to substantial uncertainty in their demographic and environmental data, particularly when looking at small geographic areas. Important caveats and uncertainties apply to this screening-level information, so it is essential to understand the limitations on appropriate interpretations and applications of these indicators. Please see EJSCREEN documentation for discussion of these issues before using reports. This screening tool does not provide data on every environmental impact and demographic factor that may be relevant to a particular location. EJSCREEN outputs should be supplemented with additional information and local knowledge before taking any action to address potential EJ concerns.

Location: User-specified point center at 40.728160, -73.930401
 Ring (buffer): 2-mile radius
 Description:

Summary of ACS Estimates		2010 - 2014
Population		318,477
Population Density (per sq. mile)		27,007
Minority Population		187,694
% Minority		59%
Households		128,781
Housing Units		139,857
Housing Units Built Before 1950		83,512
Per Capita Income		29,573
Land Area (sq. miles) (Source: SF1)		11.79
% Land Area		100%
Water Area (sq. miles) (Source: SF1)		0.00
% Water Area		0%

	2010 - 2014 ACS Estimates	Percent	MOE (±)
Population by Race			
Total	318,477	100%	739
Population Reporting One Race	309,022	97%	2,381
White	201,485	63%	645
Black	19,929	6%	389
American Indian	1,309	0%	143
Asian	46,074	14%	578
Pacific Islander	5	0%	16
Some Other Race	40,221	13%	610
Population Reporting Two or More Races	9,455	3%	460
Total Hispanic Population	122,133	38%	693
Total Non-Hispanic Population	196,344		
White Alone	130,783	41%	472
Black Alone	13,396	4%	363
American Indian Alone	439	0%	133
Non-Hispanic Asian Alone	45,653	14%	578
Pacific Islander Alone	5	0%	16
Other Race Alone	1,229	0%	117
Two or More Races Alone	4,841	2%	199
Population by Sex			
Male	157,579	49%	591
Female	160,898	51%	408
Population by Age			
Age 0-4	18,385	6%	220
Age 0-17	55,277	17%	280
Age 18+	263,200	83%	534
Age 65+	29,437	9%	222

Data Note: Detail may not sum to totals due to rounding. Hispanic population can be of any race. N/A means not available.

Source: U.S. Census Bureau, American Community Survey (ACS) 2010 - 2014.

Location: User-specified point center at 40.728160, -73.930401

Ring (buffer): 2-mile radius

Description:

	2010 - 2014 ACS Estimates	Percent	MOE (±)
Population 25+ by Educational Attainment			
Total	232,355	100%	549
Less than 9th Grade	27,723	12%	188
9th - 12th Grade, No Diploma	20,626	9%	159
High School Graduate	51,164	22%	294
Some College, No Degree	44,317	19%	218
Associate Degree	13,971	6%	173
Bachelor's Degree or more	88,525	38%	442
Population Age 5+ Years by Ability to Speak English			
Total	300,092	100%	677
Speak only English	122,352	41%	459
Non-English at Home ¹⁺²⁺³⁺⁴	177,740	59%	677
¹ Speak English "very well"	89,471	30%	377
² Speak English "well"	37,673	13%	286
³ Speak English "not well"	36,153	12%	316
⁴ Speak English "not at all"	14,443	5%	233
³⁺⁴ Speak English "less than well"	50,596	17%	379
²⁺³⁺⁴ Speak English "less than very well"	88,269	29%	417
Linguistically Isolated Households*			
Total	24,783	100%	152
Speak Spanish	14,145	57%	138
Speak Other Indo-European Languages	6,091	25%	96
Speak Asian-Pacific Island Languages	4,153	17%	105
Speak Other Languages	395	2%	54
Households by Household Income			
Household Income Base	128,781	100%	184
< \$15,000	18,916	15%	196
\$15,000 - \$25,000	13,559	11%	150
\$25,000 - \$50,000	27,652	21%	158
\$50,000 - \$75,000	21,481	17%	177
\$75,000 +	47,173	37%	290
Occupied Housing Units by Tenure			
Total	128,781	100%	184
Owner Occupied	26,728	21%	159
Renter Occupied	102,053	79%	183
Employed Population Age 16+ Years			
Total	268,965	100%	584
In Labor Force	188,355	70%	450
Civilian Unemployed in Labor Force	15,387	6%	167
Not In Labor Force	80,610	30%	419

Data Note: Detail may not sum to totals due to rounding. Hispanic population can be of any race. N/A means not available. **Source:** U.S. Census Bureau, American Community Survey (ACS) 2010 - 2014.

*Households in which no one 14 and over speaks English "very well" or speaks English only.