

Newtown Creek Superfund Site

CAG Meeting

February 19, 2025



Agenda

- East Branch Early Action (OU4) Record of Decision
- CAG Comments on East Branch Early Action

Newtown Creek



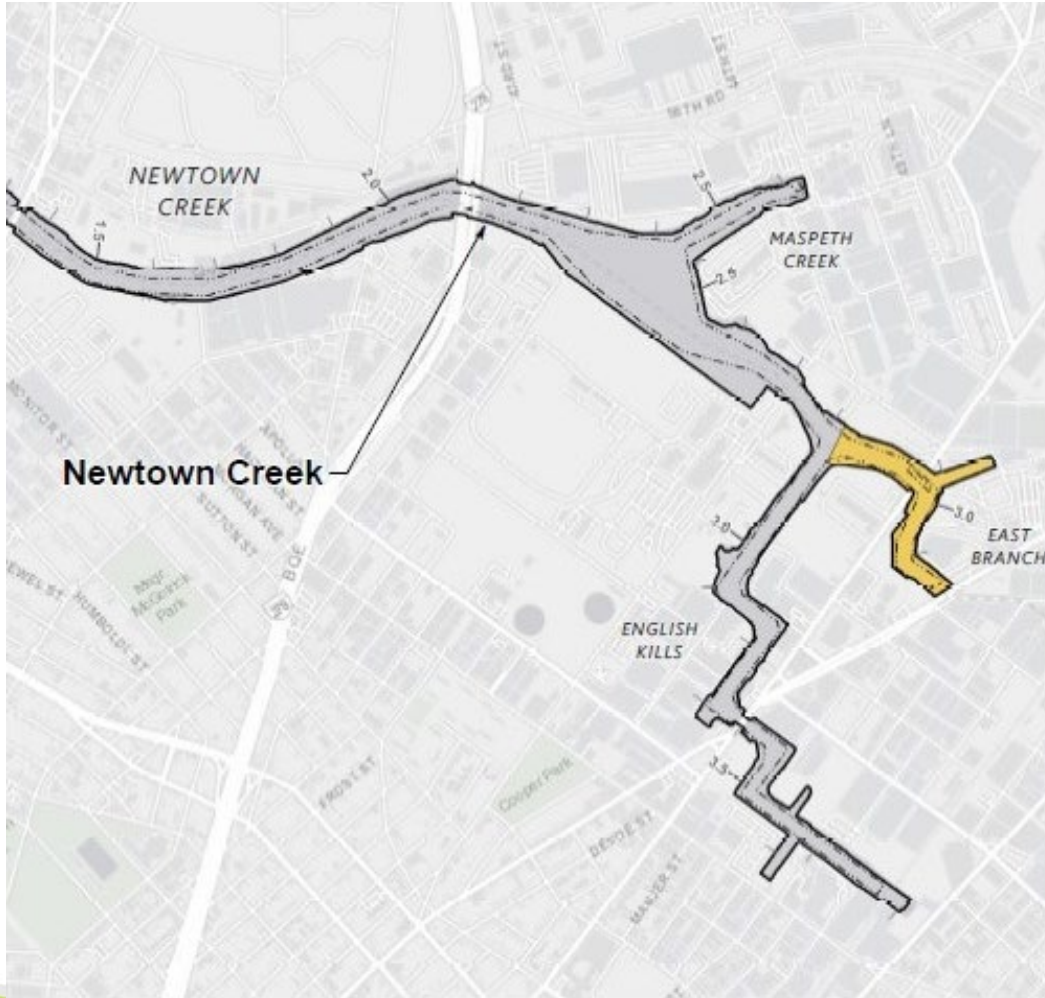
- Part of New York/New Jersey harbor estuary
- Forms a portion of the North-South Brooklyn-Queens border
- Designated by New York City as 1 of 6 Significant Maritime & Industrial Areas in the City
- 3.8 Mile Tidal Waterbody with 5 Tributaries
 - Dutch Kills
 - Maspeth Creek
 - East Branch
 - English Kills
 - Whale Creek

Newtown Creek Superfund Site Overview

The Site was added to the National Priorities List in September 2010 and has since been divided into 4 operable units (OUs):

- **OU1**: Includes the Remedial Investigation/Feasibility Study (RI/FS) of the entire Study Area. Work is being conducted as per the terms of a 2011 Administrative Order on Consent (AOC) with 6 respondents. The RI/FS is ongoing and an interim, early action remedy was recently selected for a portion of the OU1 Study Area.
- **OU2**: Evaluates current and reasonably anticipated future releases of Superfund site-related chemicals of potential concern from combined sewer overflow discharges to the Creek. Work was conducted pursuant to a 2018 AOC with the City of New York, a no further action ROD was signed in April 2021, and post-ROD monitoring is being conducted pursuant to an AOC signed in September 2022 between EPA and the City of New York.
- **OU3**: Evaluated a potential Early Action for a portion of the Operable Unit 1 Study Area; has been discontinued.
- **OU4**: Relates to an interim Early Action for the East Branch portion of Operable Unit 1. EPA released a Proposed Plan to cleanup OU4 on September 18, 2024; the public comment period ended (after extensions) on November 12, 2024 and Record of Decision (ROD) was signed on January 16, 2025.

East Branch Overview



- Tributary of Newtown Creek
- Approximately 0.5 miles in length
- Surface area ~11 acres
- Depth 10.3-16.5 ft in channel and shallower at head of tributaries
- Extensive investigations completed as part of the OU1 Remedial Investigation (RI) and Feasibility Study (FS)

Overview of Remedy for the East Branch

Selected Remedy: Dredging to allow placement of a cap to maintain existing water depth with localized deeper dredging. The remedy includes the following primary components:

- Robust pre-design investigation (PDI)
- Dredging
- In-Situ Stabilization (ISS)
- Capping
- Backfilling
- Sealed Bulkheads
- Shoreline Stabilization
- Dredged Material Management
- Restoration
- Institutional Controls
- Robust Post-Remedy Implementation Monitoring Program (PRIMP)

Pre-Design Investigation

- The PDI will be developed to help fill data gaps and further refine our understanding of the East Branch CSM. The PDI will be developed with clear data quality objectives and assessment methods and will include, at a minimum, the following activities:
 - Collect additional sediment COC data to refine the remedial footprints and depths of the various remedy components and to delineate potential principal threat waste (PTW) and Toxic Substances Control Act (TSCA) materials;
 - Collect additional porewater and/or groundwater COC data to refine cap designs;
 - Collect data to further delineate non-aqueous phase liquid (NAPL), investigate NAPL mobility, and determine the constituents present in NAPL;
 - Collect geotechnical data to support dredge design, cap design and shoreline stability evaluations;
 - Conduct investigations (e.g., systematic as well as opportunistic seep sampling) and surveys to inform decisions on the need for upland source controls [e.g., sealed bulkheads]).

Dredging and In-Situ Stabilization

- Dredging to a minimum depth to accommodate capping without decreasing water depths. FFS dredge depth estimates range from 36 inches (in deeper water areas) to 53 inches (in shallower water areas) below the current mud line
- Dredging deeper in certain areas, to be determined during the design of the remedy, based on the following considerations:
 - potential for NAPL migration from the deeper soft and/or native material;
 - potential for human and/or ecological exposure to PTW;
 - depth to uncontaminated material;
 - and comparatively higher COC concentrations in remaining sediment.
- ISS where needed to reduce migration of and/or for treating NAPL or PTW.

Summary of CAG Comment Theme #6- Upland Source Control

1. How will seeps be addressed in the long-term, and does the LTE model consider the limited effect of bulkhead sealing?
2. How will discontinuous shoreline controls be connected?
3. Can EPA provide an inventory of bulkhead status around the East Branch early action area, identifying areas that need bulkhead repairs as well as areas of concentrated inflows from potential upland sources?
4. Can EPA provide construction details on the existing bulkheads?
5. Will banks that are currently stabilized by riprap be replaced or enhanced by an impervious barrier?
6. Can EPA provide details on how bulkhead replacement will happen?

Shoreline Stabilization and Sealed Bulkheads

- Installing sealed bulkheads to address shoreline seeps, as needed based on the results of the PDI and as a **preliminary** measure while the related upland source is addressed through either state or federal enforcement authorities.
- The LTE model will continue to be updated as new data is obtained
- A detailed bulkhead evaluation will be performed as part of the PDI
- EPA lateral GW study, NYSDEC study and NYCDEP studies will be evaluated as part of PDI
- Bank stabilization methods will be evaluated during design
- The footprint of the waterway and future use of the upland property will be considered in developing options

Summary of CAG Comment Theme #7- Capping Evaluation Report

1. Are the groundwater flow rates and contaminant concentrations published in the Capping Evaluation Study only preliminary at this time? Further, if there are inaccuracies how easily can these inaccuracies serve to modify the cap recommendation?
2. The 2011 AOC for the RI/FS identified numerous upland sources that are or will be addressed under a variety of cleanup programs. Will the status of these other cleanup programs be used in future upland sources and groundwater inflow evaluations, and how will this affect the early action?
3. Has the capping evaluation study been reviewed? How will cap construction recommendations be implemented?
4. What studies have demonstrated that a cap topped with 12 to 20 inches of sand, gravel or cobbles satisfies the requirement for a biologically active zone at the top of the cap? Clarify if the cap will require a 6-inch biologically active zone layer or a 20- inch biologically active zone layer as required by NYSDEC.
5. Can EPA provide details on similar Superfund remedies that have utilized caps, including details such as depth of cap, type of cap, was the cap on native sediment or contaminated sediment, etc? Please describe the risk of cap failure in as much detail as possible so that the CAG can fully understand potential risks

CAG Comment Theme #7 is addressed by comments 67a through 67d in the Responsiveness Summary

Capping and Backfilling

- Capping will occur
 - over dredged areas where contaminated sediment is left in place
 - where the flux of COCs from groundwater is relatively high and could result in exceedance of remediation goals over time.
 - If necessary, where ISS is used to reduce migration of and/or for treating NAPL and/or PTW.
- Design of the cap will be determined after completion of the PDI and will be monitored and maintained as needed.
- The objectives of the cap are to provide:
 - (i) physical isolation of COCs in the sediment from the benthic environment
 - (ii) erosion protection to maintain cap stability against forces resulting from open water flows, propwash, vessel wakes, and other forces; and/or
 - (iii) chemical isolation to sequester COCs that could be transported from the contaminated sediment below the cap
- The remedy includes dredging of at least 3 feet of sediment, so risk-based cleanup goals will be obtained for a depth of at least 3 feet.

Summary of CAG Comment Theme #11- Future Use and Ecological Restoration

1. Why has EPA limited the definition of the BAZ to 6 inches? Given that EPA expects net deposition of sediments from the East River, the measurement of only the top 6 inches (or potentially less, as EPA has allowed GE to measure only the top 2 inches of sediment, to be representative of the top 12 inches defined as the bio-available zone in the Hudson River PCB cleanup) will almost certainly underestimate the contaminant levels in the bioavailable sediments.
2. If EPA believes that the average depth of plants in Newtown Creek are only six inches, has it considered the possibility that this reduced depth is due to the contamination?
3. How is this early action plan incorporating potential Natural Resources Damages projects and the potential for shoreline and intertidal restoration?
4. Will EPA consider bulkheads that integrate intertidal habitat into their design?
5. Will mitigation be required for any shoreline plants and trees that must be removed for remediation? If so, where will this mitigation occur?

Summary of CAG Comment Theme #11- Future Use and Ecological Restoration (cont.)


5. If in-situ stabilization is used, how will that affect restoration of that part of the Creek to more natural functions?
6. Will EPA consider the bathymetry of the East Branch and prioritize a depth that is more naturalized (shallowed in the head end areas, and deeper downstream as it connects to the navigable main channel)?
7. Can EPA weigh in on plans to temporarily or permanently remove the system as part of a proposed remedy in East Branch, and will EPA evaluate how current bathymetric conditions in East Branch contribute to stagnant water and low dissolved oxygen levels that require mechanical intervention such as an in-stream aeration system?
8. The Proposed Plan characterizes the designated use of Newtown Creek as “suitable for fish survival only,” but that is incorrect. The plan must also acknowledge that the creek is designated for primary contact recreation. As explained by EPA Region 2 Clean Water Division Director Javier Laureano, New York State Department of Environmental Conservation promulgated, and EPA approved, the recreational use in 2015 and 2016, Respectively: For the purposes of federal law, and especially for actions taken pursuant to EPA oversight, EPA must incorporate the designated use approved by its own Region 2 office.

CAG Comment Theme #11 is addressed by comments 84 through 90 in the Responsiveness Summary

Restoration

- Restoration of all impacted areas, taking into account the reasonably anticipated future uses of the East Branch and the adjacent shorelines.
- The PRIMP program will look for both top-down (like seeps, discharges, overland flow) and bottom-up (like from porewater, GW, NAPL) sources that may be impacting the protectiveness of the cap. The monitoring will not be limited to the top 6 inches of sediment.
- The remediated creek bottom will provide opportunities for the establishment of a diverse and healthy ecosystem in the East Branch.
 - Restoration plans will be developed to ensure the habitat of the East Branch is reestablished
 - Open communication with the community will continue throughout the development and implementation of the remedy.
- EPA understands that the East Branch portion of Newtown Creek, and the Creek as a whole, is an important natural resource and community asset.

Post-Remedy Implementation Monitoring Program

- Two goals
 - Assess the performance of the remedy itself within the East Branch portion of the OU1 Study Area
 - Assess the impact on the protectiveness of the remedy from ongoing sources over time
 - Provides process for evaluating these questions and, where necessary, taking additional action
 - Includes sampling, at a minimum, of surface sediment, subsurface sediment, porewater, both suspended and dissolved phase concentrations of COCs in surface water, and ongoing external sources of contamination.
 - Includes regular visual and/or fluorescence technology inspections for NAPL, with chemical analysis to confirm the composition of NAPL identified, regular bank inspections for erosion, with sampling as needed, and regular inspections for the presence of seeps, with opportunistic sampling as possible
 - Structured so that potential impacts to the protectiveness of the remedy are addressed as soon as possible, ideally before risk-based cleanup goals are exceeded
 - Any additional upland source control measures needed would be through federal (Superfund and/or non-Superfund) and/or state enforcement authorities, to be determined on a case-by-case basis.
- 



www.epa.gov/superfund/newtown-creek

Caroline Kwan

Remedial Project Manager
kwan.caroline@epa.gov
212-637-4275

Rupika Ketu

Remedial Project Manager
ketu.rupika@epa.gov
212-637-3258

John Brennan

Remedial Project Manager
Brennan.john.f@epa.gov
212-637-3881