Newtown Creek Community Advisory Group (CAG)
Technical Meeting Summary

October 30, 2019
Brooklyn, NY

Summary of Presentations and Discussion[1]

- Questions and discussion regarding the material presented are included in bullets in the sections below.
    - *Direct responses from EPA are in italics.*

Remedial Investigation Update

EPA provided an update on the progress of the revised Remedial Investigation (RI). After making over 1000 comments on the first draft, EPA received a revised draft from Newtown Creek Group (NCG) respondents in April 2019. EPA provided a summary of general comments it made on the revised RI, which it submitted to NCG in September 2019:

Selection of contaminants for in-depth evaluation:

Discussion and evaluation of additional contaminants beyond TPAHs, TPCBs, and Cu are needed. The purpose of the RI is to understand the nature and extent of the contamination, and therefore should not be limited only to the known contaminants of concern (COCs). Though the likely COCs are known, this analysis could find something unexpected, so it should include a comprehensive discussion of contaminants before narrowing in.

- Are there some contaminants that EPA does not feel need to be remediated? What about mercury?
    - *When media was sampled, we looked for the full lists of VOCs, SVOCs, pesticides, PCBs, and metal. The risk assessment (RA) showed that PAHs, PCBs, and coppers were the primary drivers, with other contaminants – such as lead – also of concern.*
    - *Mercury was detected, but the RA did not find any of a high enough concentration to be of concern.*
- Though COCs are drivers of the cleanup, might you still decide to clean up other things that are not COCs?
    - *Right now, we are discussing COCs and contaminants of potential ecological concern. At the cleanup stage, we will certainly clean up more than just the primary risk drivers. For example, regarding dioxin, EPA commented that a discussion of colocation needs to be expanded in the RI. By addressing PCBs, PAHs, and copper, the cleanup would be addressing most of the risks associated with dioxin and lead. However, in some places that is not the case and additional action will be needed to address dioxin.*

[1]For additional detail of the presentations, refer to the slides found at https://newtowncreekcag.wordpress.com/presentation-slides/.

Background

Background is used to define things in the Superfund context that might re-contaminate the site. References to background discussed in the report have not been defined, and site-specific background concentrations have not been determined. The revised draft RI uses the terms "reference" and "background" more than it should at this point until there those are better defined and agreed upon. These are not simple to establish since there are multiple ongoing inputs to the Creek that will not go away. For example, there is atmospheric deposition of contaminants. There are metals present naturally in soil, so soils will be collected at the site and up gradient to determine what local metal concentrations are.

Feasibility study and risk management

The purpose of the RI is to determine the risks, which the feasibility study (FS) will then propose methods to address. This RI in some places goes to far discussing risk management.

Lateral groundwater discharge loading

Groundwater is coming in from the Creek, but also from the sides of the Creek. The influence of the lateral discharge is harder to quantify. Some statements in the RI characterize the extent of lateral discharge as less than from within the Creek, but there is not enough evidence to state this. The way to determine this is to look at the contaminant fate and transport model. The FS will do some evaluation of this, and the RI should not discount this influence at this stage.

Sources – sediment COPC attribution

The RI focuses a lot on combined sewer overflows (CSOs) and municipal separate storm sewer systems (MS4s) as sources. There are other current and historical sources that should be discussed more.

Non-aqueous phase liquid (NAPL) seeps and sheens

The report acknowledges that NAPL seeps have occurred. These and sheens observed should be discussed more in the report.

- Has there been an effort to quantify the seepage?
    - *There was opportunistic site sampling. When the tide went down, there were seeps observed and these were sampled as part of the RI. The data looked like it could have come from bank storage, so it was difficult to determine if it was really a seep or just water coming back in as the tide went down. The data was inconclusive. It was not described as a source of contamination, and has been difficult to quantify.*
- Is EPA saying there is still seepage coming into the Creek?
    - *Yes. It is difficult to quantify. There have been observations of seeps, though it is hard to quantify if they are seeps or just a result of the tide going down. Even sampling may not tell you what the source is—whether it is in the soils there or coming from farther away. Even without specific data, we know they are there, and it needs to be acknowledge that they may need to be addressed at some point.*

Potential unidentified sources

The potential exists, as it does for all sites, that some sources remain unidentified following RI/FS activities. The report should acknowledge this, and state that this concern will be addressed during the remedial design.

- How do you address something you don't know?

- *The potential for other sources has to be acknowledged. After we select a remedy, there is a pre-design investigation. There, the data is much more comprehensive than for the RI, so at that point it is possible to find a chemical that was not expected, which could change the design parameters, for example.*

Conceptual site model (CSM)

The data provided in the RI were used to develop and refine the current CSM. The CSM will continue to be revised and updated as more data and information become available throughout the RI/FS process.

Timeline

- What is the timeline for the RI?
  - *NCG is currently preparing responses to the comments matrix. The report will be updated in January 2020. When it is finalized depends on how the comments are addressed.*

Update on proposed Early Action

Work continues to evaluate the efficacy of conducting the proposed early action on the lower two miles of the Creek. The Newtown Creek Group (NCG) has completed sampling of Creek sediment to see if the results that had been found during the remedial investigation (RI) still looked consistent. After EPA reviews these results, NCG should submit a draft focused feasibility study (FFS) by the end of the year. The FFS will include sampling results and initial data-based evaluations of NCG's hypotheses regarding the conceptual site model of the site and its reasoning for proposing an early action. NCG is also moving forward with a treatability study, beginning sampling in November.

- If upland areas are found to be contributing contamination into the Creek, will those upland areas then need remediation to stop recontamination? Are you drilling in upland areas to determine if there is contamination originating from there?
  - *The goal would be to have upland areas that could recontaminate the Creek addressed before the cleanup occurs. The RI/FS is focused on the Creek itself up to the main highwater line. Upland properties may be under the purview of the State. EPA is working with the State to determine which upland sources need to be addressed. Those investigations would be primarily State purview.*
- How will EPA determine if sites are contributing contamination without core sampling? Is the Superfund boundary the highwater line?
  - *This is a complex issue that requires coordination with the State. The boundary is the nature and extent of the contamination.*
- Has the aeration system affected the water and oxygen system of the Creek?
  - *That would be more under the City's purview.*

Update on Focused Feasibility Study of Long-term Control Plan

EPA is working to finalize the FFS report and proposed plan, which will be released before the end of the calendar year. These documents will outline EPA's evaluation of whether New York City's long-term control plan (LTCP) to address combined sewer overflows (CSOs) into the Creek is adequate to meet Superfund needs. The LTCP was approved by the New York State Department of Environmental Conservation (NYSDEC) and is projected to reduce CSO discharges to the Creek by 62.5%. The City is under orders to implement the plan under the Clean Water Act.

The FFS that the City prepared includes three alternatives: 1) no action, 2) implementation of the LTCP as ordered ("no further action"), and 3) a 100% CSO control scenario. EPA is using multiple lines of evidence to evaluate the three scenarios and assess the volume of contaminants of potential concern (COPCs) coming into the Creek. The analysis is focused on concentration and volume of the risk drivers of PCBs, PAHs, copper, lead, and dioxin from CSOs.

The process once the report and proposed plan are released is as follows: The public comment period will last for a minimum of 30 days. Sometime in that period there will be a public meeting: likely one in Brooklyn and one in Queens. Any comments made there or in writing will become part of the official record. In this formal period, EPA should not have conversations separately with the CAG about the proposed plan.

- Is the analysis of all outfalls into the Creek, or just the four covered by the LTCP, which cover the large majority of contributions from CSOs?
    - *The third line of evidence examining how CSOs are impacting all areas of the Creek. The four outfalls under the LTCP contribute 98% of the volume of CSOs, but modeling does cover surface mass and recontamination issues.*
- EPA will not necessarily recommend one of those three scenarios, correct?
    - *Correct. 100%, for example, would likely be infeasible. There is a continuum. Early on in the FFS process we had to determine whether we needed to explore something in between these or could investigate the bookend scenarios.*

Cases of Early Action uses at other sites[2]

Background on Early Actions in the Superfund Program

EPA described a several examples of early actions (EAs) at other sites and lessons learned from them. EAs are a part of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) law that lays out the Superfund process. EAs may be final or interim. The action being contemplated for the Creek is an Early *Interim* Action, meaning it must be followed by a final Record of Decision (ROD). EPA's guidance encourages the use of EAs to advance cleanup iteratively and give opportunity to test hypotheses and conclusions, fostering re-evaluation of site assumptions as new information is gathered. Recent guidance from the EPA Superfund Task Force suggests EAs as a useful tool in advancing adaptive management strategies for site cleanup.

- Suggestions to do site cleanup as fast as possible as suspect. Faster could mean cheaper and lighter. What benefit to the responsible parties does an early action provide?
    - *EAs were encouraged prior to this latest Task Force guidance as well.*

Examples of early, interim, and removal actions at other sites

What follows are examples of large contaminated sediment Superfund sites in the country that have had EAs. EAs can take many forms administratively and technically. Every site is unique, and none of these examples are a perfect parallel to Newtown Creek.

Lower Duwamish Waterway Superfund Site

- Location: Seattle, Washington
- Listed on NPL in 2001
- Five-mile segment of the Duwamish River. Major industrial corridor since early 1900s

[2] See additional detail on each of these sites in the presentation slides, found here: https://newtowncreekcag.wordpress.com/presentation-slides/

- Primary Contaminants: PCBs, arsenic, PAHs, dioxins/furans
- Site-Wide Record of Decision signed November 2014

By the end of 2015, through EAs, including some removals, 50% of the PCB contamination in the river bottom was removed through a focus on sediment hotspot removals. These were interim actions, including a non-time-critical removal action, after which the whole system needs to be evaluated and a final action has to occur.

Portland Harbor Superfund Site

- Location: Portland, Oregon
- Listed on the National Priorities List in 2001
- Site includes in-river and upland portion of the lower Willamette River
- Primary contaminants: PCBs, PAHs, dioxins/ furans and pesticides
- Site-Wide Record of Decision signed January 2017

Several EAs were considered for the site; not all went forward. The experiences conducting EAs informed the design of the final action.

Kalamazoo and Tittabawassee Rivers

Kalamazoo

- Officially called the Allied Paper Inc./Portage Creek/Kalamazoo River Superfund site located in Allegan and Kalamazoo Counties, Michigan
- 80-mile stretch of river contaminated primarily with PCBs
- Has been divided into seven areas, each separated by dams and requiring its
- own cleanup
- A phased approach to cleanup, including interim actions, is being taken to
- address this very long stretch of river
- The remedial and removal programs are working in tandem

Tittabawassee

- Officially called the Tittabawassee River, Saginaw River & Bay Superfund site
- located in Midland, MI
- 50-mile stretch of contaminated primarily with dioxins
- River divided into 7 segments, and work being conducted from upstream to
- downstream (phased), generally through removal actions
- Work on Segment 1 started in 2012, and at this point work is complete or
- nearly complete through Segment 5.
- Lessons learned from each phase help inform the next
- Long-term monitoring will help inform the selection of a final remedy

Both of these long rivers are contaminated with PCBs and dioxins. Remediation work on both is occurring in phases, starting at the top of the rivers and proceeding through sections with different remedies. Ultimately both will need final RODs to evaluate the sites once the phased actions are taken.

Berry's Creek Study Area

- Operable Unit 2 of Ventron/Velsicol Site in Wood-Ridge and Carlstadt, New Jersey
- 6.5-mile tributary of the Hackensack River
- Also impacted by two other Superfund sites
- Primary contaminants are mercury and PCBs
- Record of Decision for an interim source-control remedy for OU2 signed September 2018

Three Superfund sites feed into the Creek, which is a 6.5-mile tributary of the Hackensack River in a heavily developed and industrialized area. In 2017, an interim source control action was signed as part of an adaptive, phased approach. Bank to bank removal of the top two feet of sediment was performed in the upper and middle Creek waterways with backfill and capping. The future ROD will determine the final remedy. Though it was a large action, it was called "interim." It did not select clean up goals, but wanted to begin removal as early as possible.

- Without determining clean up goas, how was an adequate depth of removal determined? How were "hot spots" identified?
    - *The risk was driven by exposure to sediment. With two feet of removal, the exposure for the ecology and human would be interrupted if caps function properly. One foot with capping was not thought to be sufficient. After doing bank-to-bank removal, there will be testing to see if the contamination is addressed. It was also considered that the remedy should avoid disturbing the bathimetry of the water body.*

Diamond Alkali Passaic River Site

Site listed on the National Priorities List in 1984

- 80-120 Lister Avenue (Operable Unit 1)
- Lower 8.3 miles of the Lower Passaic River (Operable Unit 2)
- Newark Bay Study Area (Operable Unit 3)
- 17-Mile Lower Passaic River Study Area (Operable Unit 4)
- Site may be one of the most contaminated rivers anywhere. The former Diamond Alkali facility manufactured agent orange and dumped dioxin into the river. Dioxin is the primary contaminant of concern (COC).

Time-critical and non-time-critical removal actions were conducted at various parts of the site. Through these actions, much was learned to help inform broader site-wide design, including issues of how to transport the contaminated waste via barge on the river under multiple bridges, addressing challenges of the water utility near contamination, placing caps in a tidal environment, and preventing recontamination through the capping.

- What type of monitoring was in place while removal was taking place?
    - *There were 24-hour dust monitors, with cannisters collected twice daily. There was no exceedance of the criteria in the air. In the river, there were turbidity monitors close to the area and further afield to monitor if dredging was causing turbidity, which could cause recontamination by stirring up sediment.*
- What community groups did you work with?
    - *There was an active CAG, Riverkeeper, Iron Bow Community Corporation*
- Were the EAs proposed by EPA or proposed by the potentially responsible parties (PRPs)?
    - *These EAs were proposed by the PRPs, though EPA could propose an EA. In the case of one of the time-critical removals, both EPA and the PRPs identified the need to do something to address high risk.*
- How is capping done?
    - *A layer of carbon may be placed to sorb some contamination, then sand is placed to keep it weighed down, then a semipermeable membrane is placed to keep everything in place, and then another layer of something is put to help reestablish habitat.*
- Did part of the cap on the Passaic fail?
    - *There was an issue where some large rocks that had been placed to help fix the geotextile layer were poking out too much. This was not a contamination issue but a design issue.*

- Some of these sites had multiple EAs. Is that possible for Newtown Creek as well? For example, why is an interim action not being considered for places where there are hot spots, e.g. Turning Basin or Dutch Kills.
    - *Currently no other EAs are being discussed. The reason miles 0-2 is being put forward as a potential EA is that it is the easiest area to understand and have the greatest certainty about the potential effectiveness of an EA. There is a concern that doing an EA anywhere else could be recontaminated.*

The meeting was adjourned at 8:30 PM.