



Site Update and Adaptive Site Management Update
Newtown Creek Superfund Site CAG Meeting
October 15, 2025

Agenda

- Brief Overview of 6-month schedule
- Adaptive Site Management Update

EPA Updates (October 2025)

- End of Year Tasks
 - Finalize the Lateral GW Investigation Data Summary Report (CDM, Nov. 2025)
 - Finalize Enforcement Instrument and SOW for OU4 RD (EPA, Dec. 2025)
 - Adaptive Site Mgmt. Plan – ASM, Preliminary Draft (EPA)
 - Hypothesis and Key Questions; Flow Chart
 - Review Saltwater Pump House Data Summary Report (EPA, Nov. 2025)
 - Data Evaluation Report for Data Collected in East River and CM 0-2 (NCG, Fall 2025)
 - NYC Continue to Collect CSO and Point Source Samples for OU2 (On-Going)

ADAPTIVE SITE MANAGEMENT UPDATE

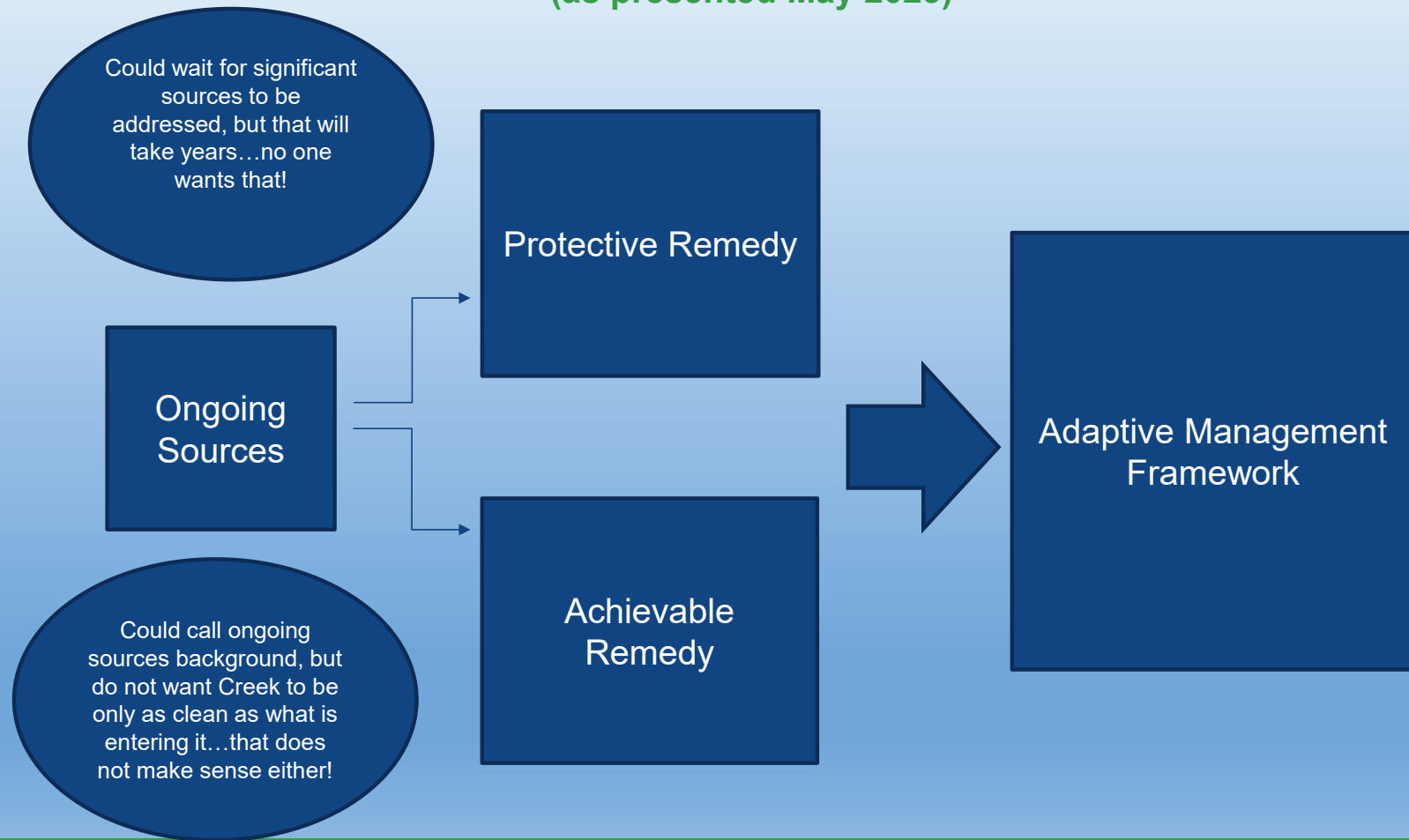
Review of Previous Presentations

- We started talking in detail with the CAG about the use of Adaptive Site Management for Newtown Creek in May 2023
 - Adaptive management is a formalized process that can be used to manage risks from contaminated sediment sites. Sediment sites are typically much more complex than other sites, with higher levels of uncertainty about the effectiveness of different cleanup approaches.
 - A site-specific adaptive management plan can be developed to guide iterations of remediation, monitoring, and progress evaluations to determine if adjustments are needed.
 - The plan establishes the goals of the project, sets expectations, uses monitoring data to evaluate progress towards meeting those expectations, and adapts the remedy as necessary based on those evaluations.

Ongoing Sources of Contamination at Newtown Creek

- There are many direct sources of hazardous substances, pollutants or contaminants to the Creek
- Internal sources include (but are not necessarily limited to)
 - Contaminated sediment resuspension
 - Ebullition
 - NAPL migration, dissolution, etc.
 - Vertical groundwater flow
- External sources include (but are not necessarily limited to)
 - Permitted and non-permitted discharges
 - Lateral Groundwater – including discharge/seeps from upland properties
 - CSOs and MS4s
 - Bank erosion
 - Direct overland flow
 - East river
 - Atmospheric deposition

Recall...the Dilemma (as presented May 2023)

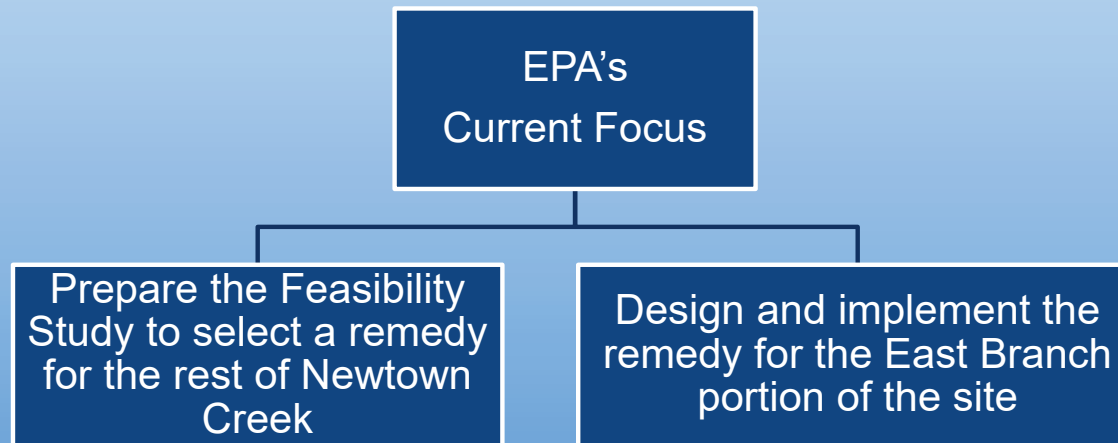


Focus on External Sources of Contamination

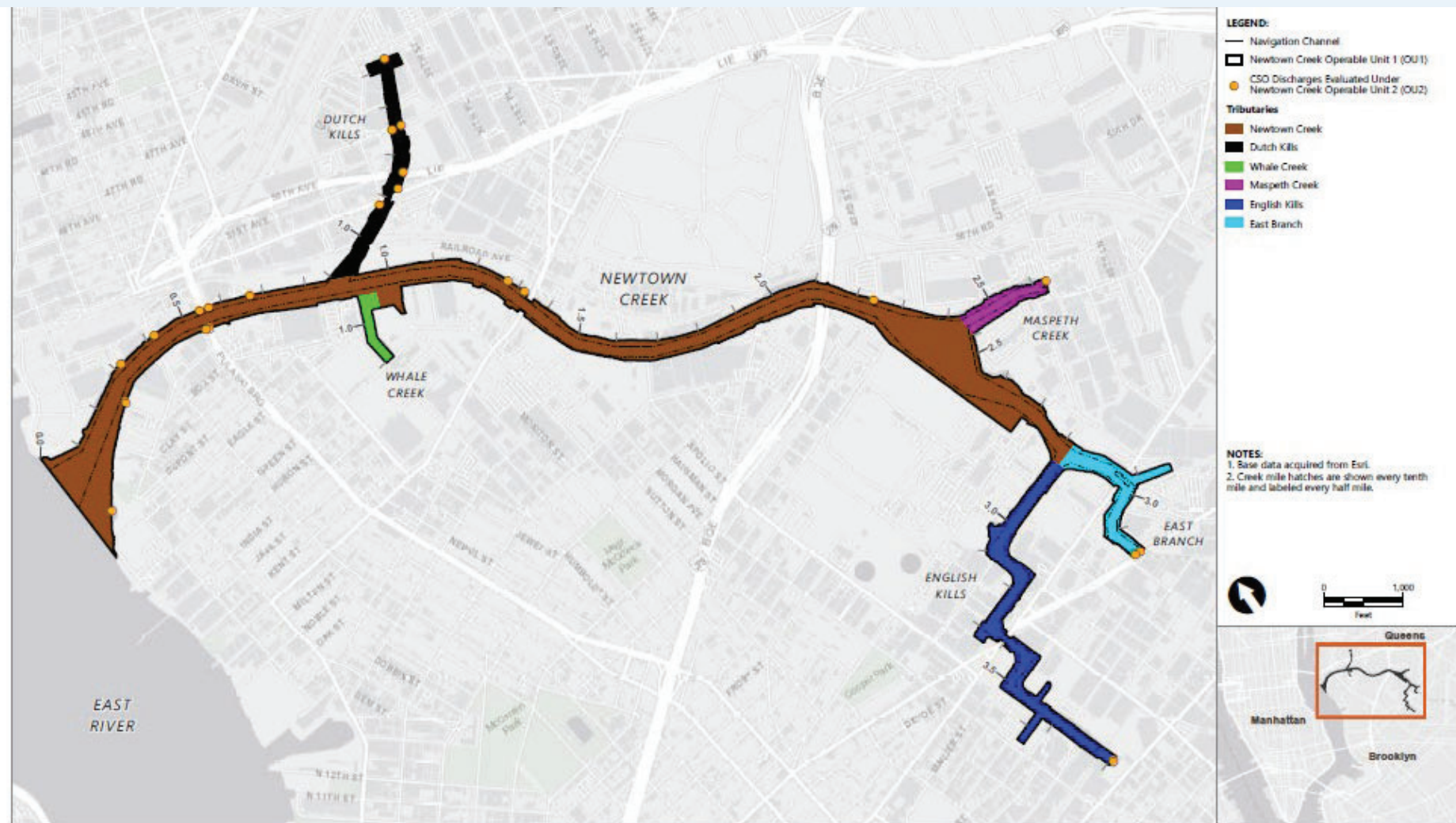
- Contamination entering from many external sources can be reduced at least to some extent over time. For example:
 - Contamination from upland properties could be addressed through cleanup actions
 - Contamination entering from permitted discharges could be reduced through changes in environmental regulation, such as through stricter permits
 - Contamination from general runoff that could be reduced through the use of best management practices and engineering controls, such as green infrastructure and bulkheads
- The appropriate entity to put these reductions into effect might vary
- The **rate** of reduction and **time frame** is unknown at this time
 - We do have knowledge of current conditions
- As part of an Adaptive Management approach, identification and mitigation of ongoing sources that impact the protectiveness of the remedy may occur at any time in the Superfund process, including during and after cleanup.

East Branch Early Action and Next Steps

- In January 2025, EPA selected a remedy for the East Branch portion of the Newtown Creek site
- This remedy is consistent with an Adaptive Management Approach.



- Now is the time to formalize the Adaptive Site Management Plan for Newtown Creek



Goals of Adaptive Site Management

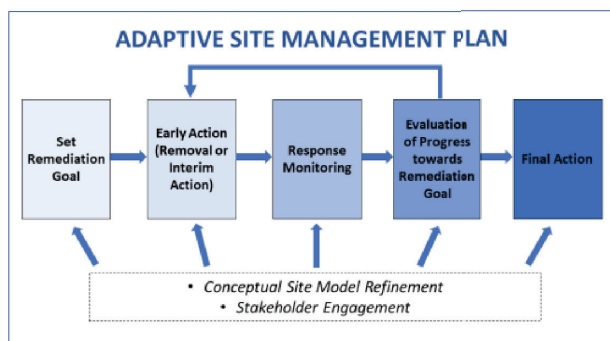


OLEM Directive Number 9200.1-166

Office of Superfund Remediation and Technology
Innovation, and Office of Research and
Development

Sediment Assessment and Monitoring Sheet (SAMS)

Adaptive Site Management – A Framework for Implementing Adaptive Management at Contaminated Sediment Superfund Sites



June 2022

- Describes how the Superfund processes will be assembled/used to address a site
 - Execute early actions (removal or interim) followed by a final action guided by an Adaptive Site Management Plan focused on evaluating progress towards and attainment of remediation goals.
 - Combines iterations of remediation and monitoring to:
 - Determine progress towards meeting RAOs and RGs
 - Inform Uncertainties
 - Make decisions on need for additional action
 - Describes the relationship between operable units and the use of interim actions to achieve RAOs and RGs.
- It is a long-term site management strategy

Site-Specific Elements of an ASM Strategy

Goals

- RAOs and RGs
- Measurable and Specific
- Developed in consideration of CSM, ARARs, Technical Limitations, Uncertainty, and "other pertinent information."

Actions

- Consistent with CSM
- Achieve interim RAOs
- Make Progress towards final RAOs
- Interim or Removal Actions

Monitoring

- Set Evaluation Timepoints
- Set Decision Timepoints
- Specify Key Indicators
- Specify Trigger Criteria
- Specify Trigger Actions

Evaluation

- Start with strong baseline
- What condition is expected to be achieved (concentrations or level of toxicity)?
 - In what media?
 - In what area?
- Multiple iterations of data collection likely needed
- > Adapt as necessary

Initial Key Aspects of the ASM Plan for Newtown Creek

■ **Develop a List of Hypotheses**

- Assumptions about what is achievable and how the system will function over time
- Based on the current Conceptual Site Model and sound science
- Relevant to the remedy design/implementation, short-term monitoring, and/or long-term monitoring

■ **Develop a List of Key Questions to Test the Hypotheses**

- Intended to guide information collection, evaluation approaches, and adaptive responses to information at key decision points.

■ **Next Steps**

- Uncertainties and Data Needs – Decision Points
- Diagnostic Evaluations – Specific Causations/Influences
- Adaptive Responses – What Would Be Done

The East Branch Remedy is Consistent with this Approach

- For example, the OU4 ROD states directly (on Page 27):
 - It is EPA's expectation that the selected remedy, once constructed, will successfully address these RAOs for sources located within the East Branch portion of the OU1 Study Area and that the post-remedy implementation monitoring program will ensure that the RAOs are met and that the remedy remains protective over time.
 - The ROD goes on to say that, after remedy implementation, the RAOs may be impacted broadly by "impacts from within or adjacent to" the Study Area or by "ongoing sources of contamination outside the constructed portions of" the remedy and originating "outside the OU1 Study Area."
- These are broad hypotheses that we have made about the site, how the remedy will function, and how the system will recover, based on the existing CSM and our current understanding based on empirical data.
- The ASM plan EPA is developing will provide a systematic method for evaluating these hypotheses over time and, if necessary, making adjustments.

Newtown Creek ASM Plan

- Everyone has many questions about the Superfund process at Newtown Creek
 - Will the remedy be effective in the long term?
 - What will be the influence of ongoing sources of contamination?
 - How long will it take to reach the remedial action objectives?
 - What are the key concerns for the Creek?
 - What role does NAPL play at the Creek and how can it be addressed?
 - And more....
- EPA is using the ASM framework to develop a systematic way to
 - Answer the relevant questions
 - Adapt the path forward as needed
 - Achieve long-term goals in an efficient and proactive manner
 - Proceed in a transparent manner with community input

Preliminary List of Hypotheses

- We know there are lots of questions – we all have them
- The OU4 Record of Decision specifically calls some of the big ones out
- We have a preliminary list of hypotheses
- We want to hear your thoughts
 - What is missing?
 - What is most important to you?
 - Any suggestions?

Some Initial Hypotheses

	Risk-based concentrations will be achieved in the long-term.
	Risk-based concentrations will be attained in a reasonable time frame.
	The Conceptual Site Model and Model Projections reliably describe the system response to the remedy.
	Contaminants targeted by the construction of the remedy (for example, in-creek contamination) will be addressed by the remedy.
	NAPL targeted by the construction of the remedy will be addressed by the remedy.
	Potential inputs of contamination, including NAPL, not directly addressed by the construction of the remedy that may impact the protectiveness of the remedy over time can be identified and addressed (through state and/or federal enforcement authorities) before they impact the protectiveness of the remedy.
	Interim remedies will meet the objectives and attain the cleanup goals of the interim remedy within the footprint of the interim remedy at time of construction completion.
	Contamination entering the site from external sources of contamination will decrease over time.
	Taking interim actions along the Creek will accelerate the overall cleanup of the Creek.
	An accurate and continually updated Conceptual Site Model will lead to informed decision making and effective remedial actions.