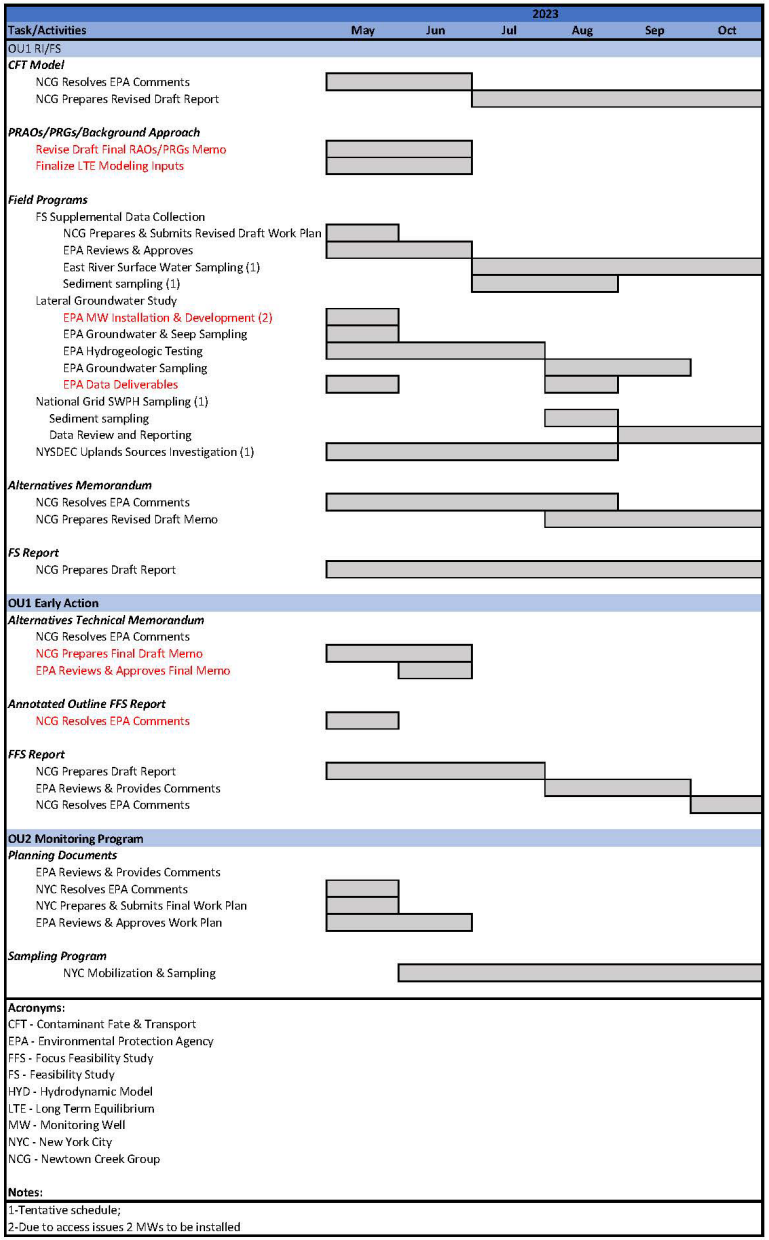
Community Advisory Group Meeting
Newtown Creek Superfund Site
Queens and Brooklyn
New York City
May 17, 2023

Agenda

- Brief Overview of 6-month schedule
- Remedial Action Objectives and Background Approach
- East Branch Early Action Focused Feasibility Update

Brief Overview of 6-Month Schedule

NEWTOWN CREEK
DRAFT SIX MONTH SCHEDULE



Acronyms:
CFT - Contaminant Fate & Transport
EPA - Environmental Protection Agency
FFS - Focus Feasibility Study
FS - Feasibility Study
HYD - Hydrodynamic Model
LTE - Long Term Equilibrium
MW - Monitoring Well
NYC - New York City
NCG - Newtown Creek Group

Notes:
1-Tentative schedule;
2-Due to access issues 2 MWs to be installed

Remedial Action Objectives
and
Background Approach

Some Definitions….

- Remedial Action Objectives, or RAOs
  - Very simply, they are the goals of a cleanup
  - What do we want to achieve?
- Preliminary Remediation Goals
  - Concentrations of the contaminants of concern at a site that will allow us to achieve the RAOs
  - They become “remediation goals” once a Record of Decision is signed (i.e., once a remedy is selected)
- Role of Background in Superfund
  - In general, sites are not cleaned up to below background concentrations
  - Often used to assess what contamination levels would be at a site “were it not for” the Superfund site
  - Several guidance documents available on this topic

Adaptive Management

- Adaptive Management Framework
  - Adaptive management is a formalized process to manage risks from contaminated sediment sites. Sediment sites are typically much more complex, with higher levels on uncertainty about the effectiveness of different cleanups.
  - A site-specific adaptive management plan is developed to guide iterations of remediation, monitoring, and progress evaluations.
  - The plan establishes the goals of the project, sets expectations, uses monitoring data to evaluate progress towards those expectations, and adapts the remedy as necessary based on those evaluations.

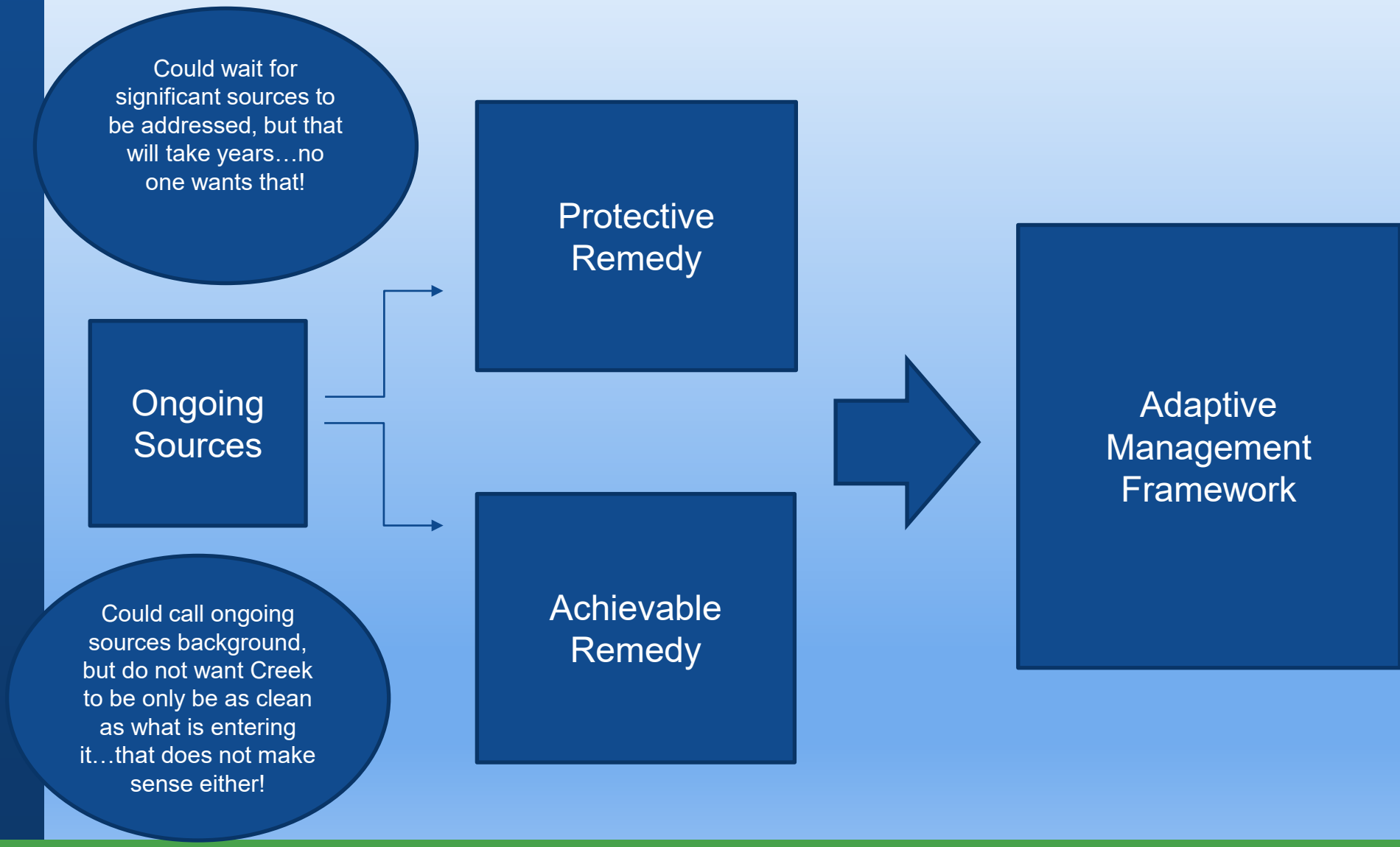
Ongoing Sources of Contamination at Newtown Creek

- 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

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

The Dilemma


Could wait for significant sources to be addressed, but that will take years…no one wants that!
Ongoing Sources
Protective Remedy
Achievable Remedy
Adaptive Management Framework
Could call ongoing sources background, but do not want Creek to be only be as clean as what is entering it…that does not make sense either!

General Outline of Plan

Set long-term cleanup goals equal to long-term risk-based human health and ecological endpoints

Determine interim performance measures using empirical data

Develop a robust long-term monitoring program that covers both the Creek itself and the ongoing inputs

- Expectation: contamination from external ongoing sources will decrease over time
- Decrease could be due to upland cleanup actions, additional regulatory control and/or improved best management practices

If concentrations do not continue trending towards long-term, risk-based goals, consider additional source control measures

- Both internal and external sources of contamination would be evaluated
- Appropriate entity to control the source would be decided on a situation-specific basis

Reassess performance measures, continue monitoring and address concerns as needed

Hypothetical Example

- Suppose a section of the Creek is dredged and capped
  - the surface of the sediment will be clean immediately following cleanup
- Surface sediment concentrations will be impacted over time by the ongoing sources, eventually reaching new equilibrium concentrations
  - Initial performance measures will be developed considering the anticipated equilibrium concentrations
  - Surface sediment concentrations at any particular location should start to trend down over time after equilibrium is reached
  - If concentrations at any particular location do not follow the expected pattern, then additional source control may be needed in that area
  - Both internal and external sources of contamination will be evaluated
  - Federal or State enforcement authorities would be used to address any issues
- Continue monitoring and update performance measures as needed

Preliminary Remedial Action Objectives

- Exposure-based RAOs
  - Reduce human exposure to fish and crab ingestion risks above protective levels by reducing the concentrations of contaminants of concern in contaminated sediment to protective preliminary remediation goals
  - Reduce ecological exposure to site contaminants of concern in sediment to protective preliminary remediation goals
- Source-Control RAOs
  - Reduce migration of site-related non-aqueous phase liquid (NAPL) and other sources within the Study Area to sediment and surface water above levels that are protective of human health and the environment

➢ Note:

- There are many ongoing sources of contamination that may impact the protectiveness of the remedy.
- 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.

Preliminary Remediation Goals

- Risk-based preliminary remediation goals for sediment have been developed for the six Superfund contaminants of concern for Newtown Creek:
  - Total Polychlorinated Biphenyls (PCBs)
  - Total Polycyclic Aromatic Hydrocarbons (PAHs)
  - Petroleum Hydrocarbons (C19 to C36)
  - Copper
  - Lead
  - Dioxins/Furans

- The details of how the cleanup goals were developed, what they are and what they mean can be discussed at a future meeting.
- We are also developing a memorandum covering all of this which we intend to share prior to the East Branch Early Action CSTAG meeting in July….

East Branch Early Action Update

Tentative Schedule for East Branch Early Action

- CSTAG meeting to be held July 11, 12 and 13, in-person
  - Invitations to meeting should be sent by end of May
  - Supporting material should be sent by early to mid-June
  - July 11 (morning) – boat and walking tour of Newtown Creek for CSTAG members
  - July 12 (afternoon) – PRP and CAG presentations, likely in EPA's NYC office
- Supporting materials still being developed and compiled
- Alternatives Memorandum- Final Draft version is being prepared
  - We plan to discuss the Alternatives Memo at the June CAG meeting
- Draft Focused Feasibility Study report to be submitted in August
- Another CSTAG meeting to be held prior to release of Proposed Plan (tentatively in October/November)

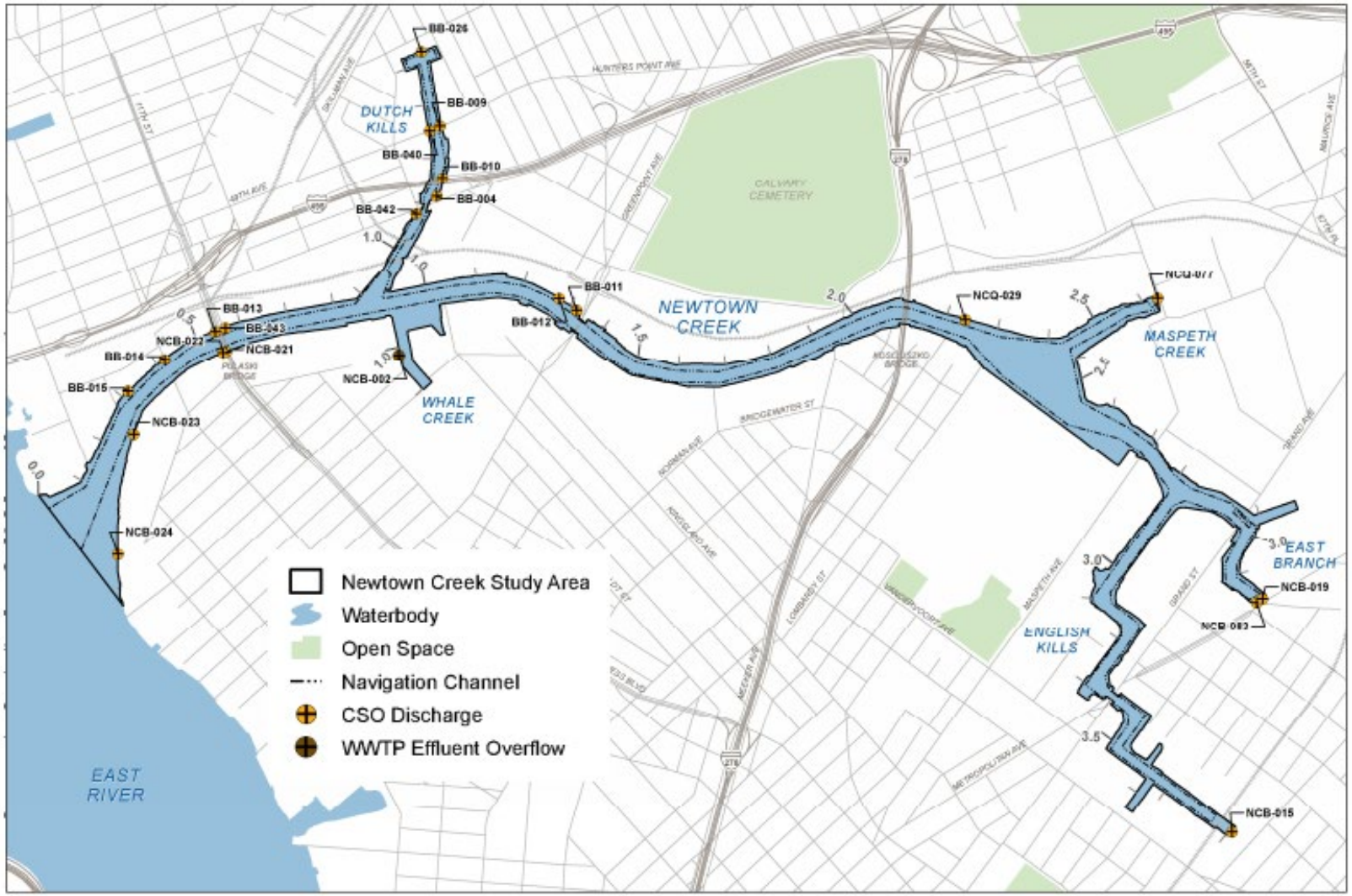
Questions

Thank You!

- For further information, please contact:
  - Caroline Kwan, Remedial Project Manager, 212-637-4275 or kwan.caroline@epa.gov
  - Mark Schmidt, Remedial Project Manager, 212-637-3886 or schmidt.mark@epa.gov
  - Rupika Ketu, Remedial Project Manager, 212-637-3258 or ketu.rupika@epa.gov
  - Natalie Loney, Community Involvement Coordinator,212-637-3639 or loney.natalie@epa.gov
- Or visit EPA's Site Profile Page for Newtown Creek at

  www.epa.gov/superfund/newtown-creek

Study Area


BB-026
BB-009
BB-040
BB-010
BB-004
BB-042
DUTCH KILLS
BB-011
BB-012
NEWTOWN CREEK
NCQ-029
NCQ-077
MASPETH CREEK
BB-013
BB-043
NCB-022
NCB-021
BB-014
BB-015
NCB-023
NCB-024
NCB-002
WHALE CREEK
EAST BRANCH
NCB-019
NCB-083
ENGLISH KILLS
NCB-015
CALVARY CEMETERY
EAST RIVER
Newtown Creek Study Area
Waterbody
Open Space
Navigation Channel
CSO Discharge
WWTP Effluent Overflow