STRATFORD ARMY ENGINE PLANT

PROPOSED PLAN FOR TIDAL FLATS AND OUTFALL 008

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U.S. Army Corps of Engineers
New England District
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AGENDA – PROPOSED PLAN

- Purpose and Summary of the Proposed Plan (PP)
- Site Location and History
- CERCLA Process
- Remedial Action Objectives
- Summary of the Remedial Action
- Summary of the Feasibility Study
- Preferred Remedy
- Project Timeframe

PURPOSE OF THE PROPOSED PLAN

U.S. Army Corps of Engineers, New England District

PROPOSED PLAN FOR ENVIRONMENTAL RESTORATION

Stratford Army Engine Plant, Stratford Connecticut

Contract No. W912WJ-15-D-003

November 2019

- Presents a summary of the alternatives evaluated in the Focused Feasibility Study, and recommends the preferred remedial alternative for sediment remediation to be protective of human and ecological health
- The preferred alternative may be modified, or another response action selected based on new information, including state and/or public comments.

WHAT ARE WE PROTECTING?

- To be fully protective from current conditions, the remedial action will address all human and ecological exposure, and impacts to resources, which include:
  - Human Health
    - Direct Sediment Contact
    - Consumption of Fish and Shellfish
    - Recreation
  - Ecological Health
    - Aquatic Life
      - Fish, Shellfish, Benthic Community
    - Wildlife
      - Birds, Mammals
    - Threatened & Endangered Species
  - Wetland Resources
    - Minimize impacts
    - Mitigate wetland on a 1:1 basis


Least Tern


Piping Plover


Alewife
(Alosa pseudoharengus)


Blueback Herring
(Alosa aestivalis)

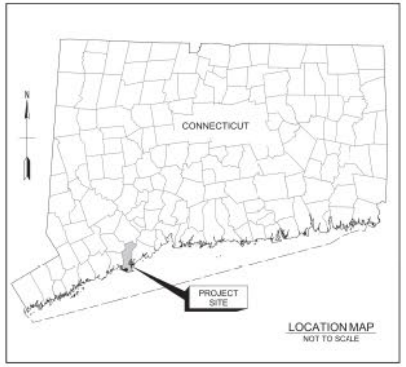

Red Knot

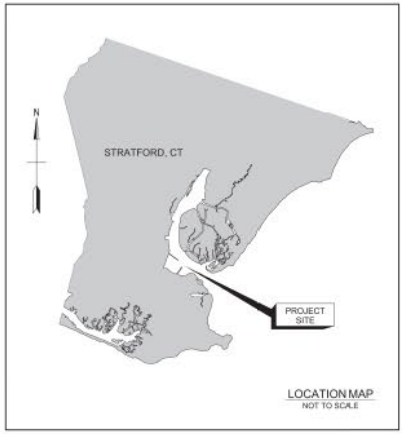
SITE LOCATION

- The former SAEP facility is located at 550 Main Street in Stratford on the Stratford Point peninsula in the southeast corner of Fairfield County.
- The PP is focused on the Tidal Flats area (located between the facility and the Housatonic River) and the Outfall 008 drainage ditch

STRATFORD ARMY ENGINE PLANT - ENVIRONMENTAL RESTORATION

Stratford, Connecticut





SAEP HISTORY – TIDAL FLATS AND OUTFALL 008

- SAEP property established and operated by Sikorsky Aircraft and then DOD from 1927 to 1997 for commercial and military applications.
- Operations required the use of oils, solvents, plating solutions, fuels and other chemicals.
- Past practices (pre-1980s) resulted in releases of site-related chemicals to the Tidal Flats through the stormwater treatment system and Outfall 007.

SAEP HISTORY – TIDAL FLATS AND OUTFALL 008

- After 1958, liquid chemical wastes were routed to the Chemical Waste Treatment Plant to undergo limited treatment, and discharged to the Outfall 008 drainage ditch.
- Resulted in contamination of the sediments in the Tidal Flats and Outfall 008 drainage ditch by metals and organic compounds, including polychlorinated biphenyls (PCBs).
- The Site was placed on the Base Realignment and Closure (BRAC) list in October 1995 and closed in 1997.
- There have been multiple environmental investigations culminating in this Proposed Plan.

CERCLA PROCESS FLOWCHART

Pre-Remedial Activities
Environmental Baseline Survey

Remedial Investigation
Site Characterization
Baseline Risk Assessment

Focused Feasibility Study
Development, Screening and Analysis of Alternatives

Identification of Preferred Alternative

Proposed Plan
Public Comment

Decision Document
Remedy Selection

Remedial Design
Draft Remedial Design

Remedial Design
Final Remedial Design

Remedial Contractor Selection

Remedial Construction

REMEDIAL ACTION OBJECTIVES

Tidal Flats

- Remove up to 4 ft of sediment to reduce ecological toxicity and achieve consistency with background conditions (PCBs and mercury) by removing sediment exceeding the following criteria:
  - Effects Range Median Quotient (ERM-Q) of 0.5 for eight Site-related metals;
  - PCBs exceeding 1 ppm; and
  - Mercury exceeding 0.55 ppm.

REMEDIAL ACTION OBJECTIVES (CONT'D)

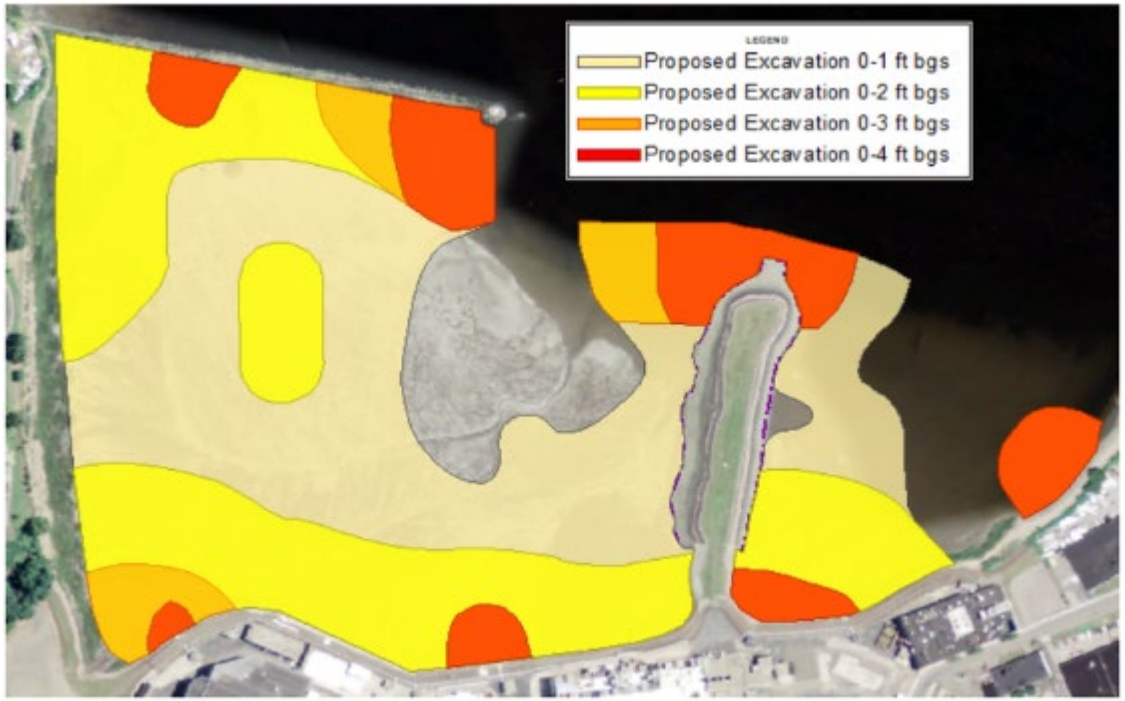
Outfall 008 Drainage Ditch

- Reduce ecological toxicity and achieve consistency with background conditions (PCBs and mercury) along the entire length of the OF-008 drainage ditch
- Remove 4 ft of sediment below 0.0 mean sea level elevation exceeding the following criteria:
  - Effects Range Median Quotient (ERM-Q) of 0.5 for eight Site-related metals;
  - PCBs exceeding 1 ppm; and
  - Mercury exceeding 0.55 ppm.

TIDAL FLATS AND OUTFALL 008 VOLUMES

Material Category	Tidal Flats (cy)	Outfall 008 (cy)
PCB <1 ppm (on-site reuse)	130,500	3,800
PCB ≥1 to <50 ppm (off-site)	8,500	1,100
PCB ≥ 50 ppm (off-site)	500	0
Total Volume	139,500	4,900

Note: Material removal is driven by ERMQ>0.5; however, material disposal/placement is primarily driven by PCB concentration



FEASIBILITY STUDY PROCESS AND REMEDIAL ALTERNATIVES

Feasibility Study Process

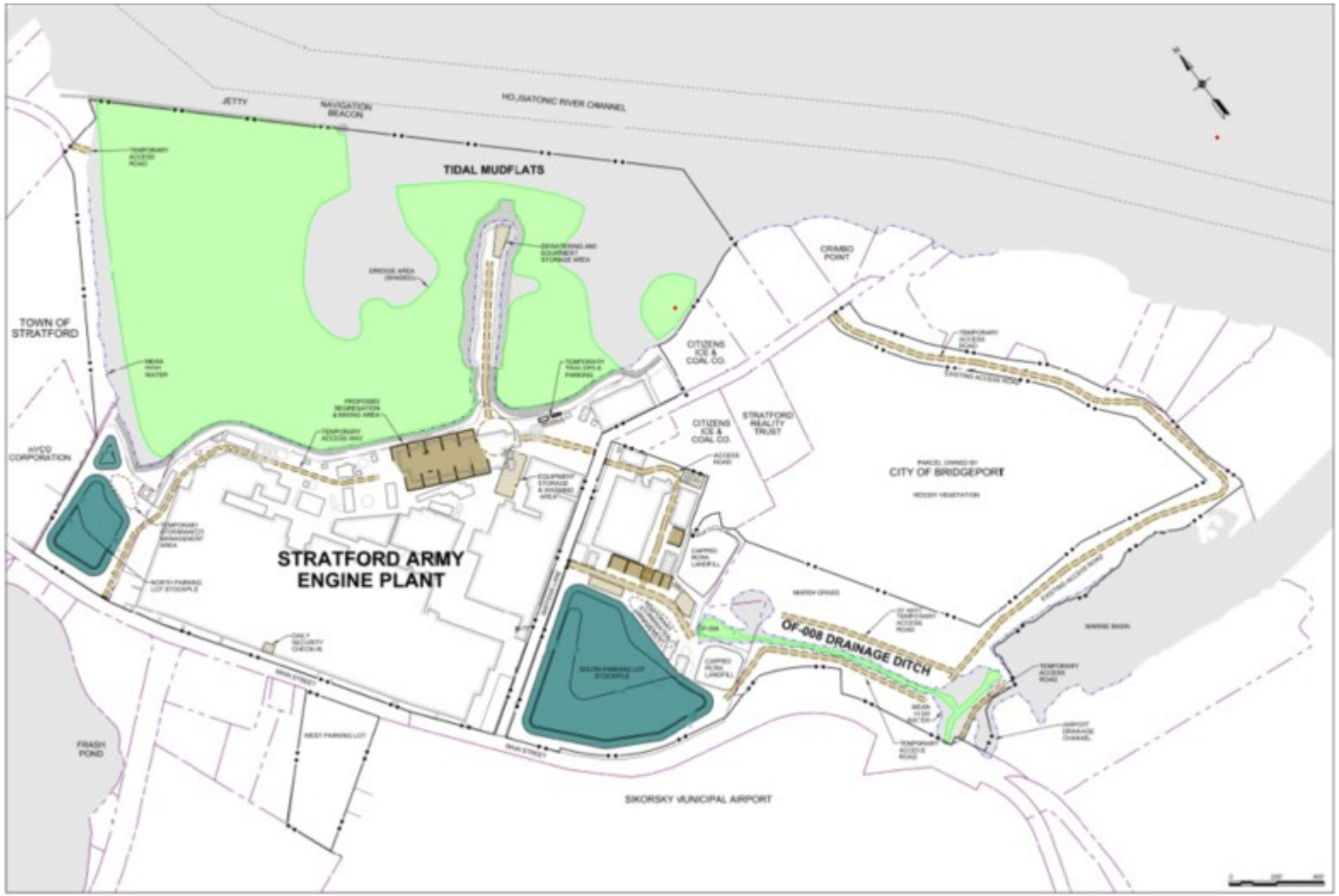
- Identify technologies needed as components to complete the remedial action
- Assemble technologies into sitewide Alternatives list (10 Alternatives)
- Screen → keep most promising (5 remained)
- Evaluate five remaining (EPA's nine criteria)
- Compare the alternatives → Rank → Select Preferred Alternative

Alternatives evaluated in detail include:

- Hydraulic dredging
- Mechanical dredging/truck transport
- Mechanical dredging/hydraulic pipeline transport
- Mechanical dredging/pneumatic pipeline transport
- Mechanical dredging/barge transport off-site

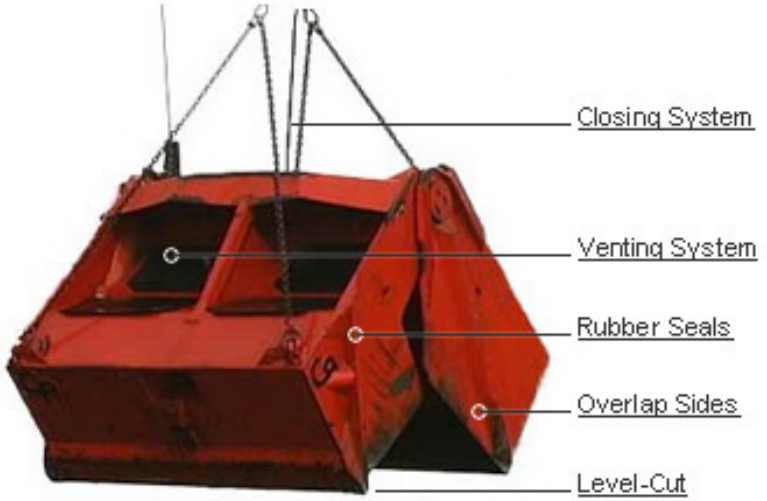
PREFERRED REMEDIAL ALTERNATIVE

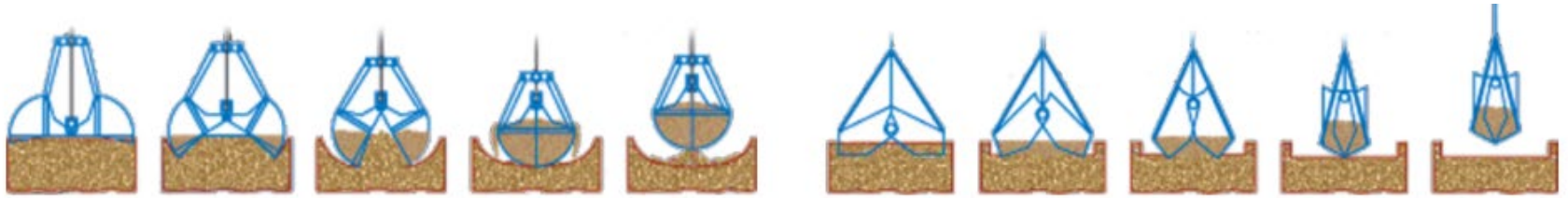
- **Protective of Human Health and the Environment**
  - Complies with ARARs
  - Cost-Effective
  - Balances criteria
- **Tidal Flats Alt 3**
  - Mechanical Dredging and Truck Transport
  - Gravity Drainage
  - Solidification
  - Beneficial Reuse (on-site)
  - Verification and Confirmation Sampling
  - Backfilling (upland or local in-water sourced)
  - Restoration
- **Outfall 008**
  - Isolate and Dewater Ditch
  - Dry Excavation and Gravity Drainage
  - Backfill
  - Solidification
  - Beneficial Reuse (on-site)



BENEFITS OF PREFERRED REMEDY

- Highest anticipated productivity rate (shortest overall schedule)
- Precision mechanical dredging, environmental clamshell bucket
- Minimizes over-dredge and re-suspension of sediments
- Minimal mixing of underlying clean sediments
- Low volume of water to treat and discharge, resulting in efficient operational footprint
- Best overall balance of costs and benefits





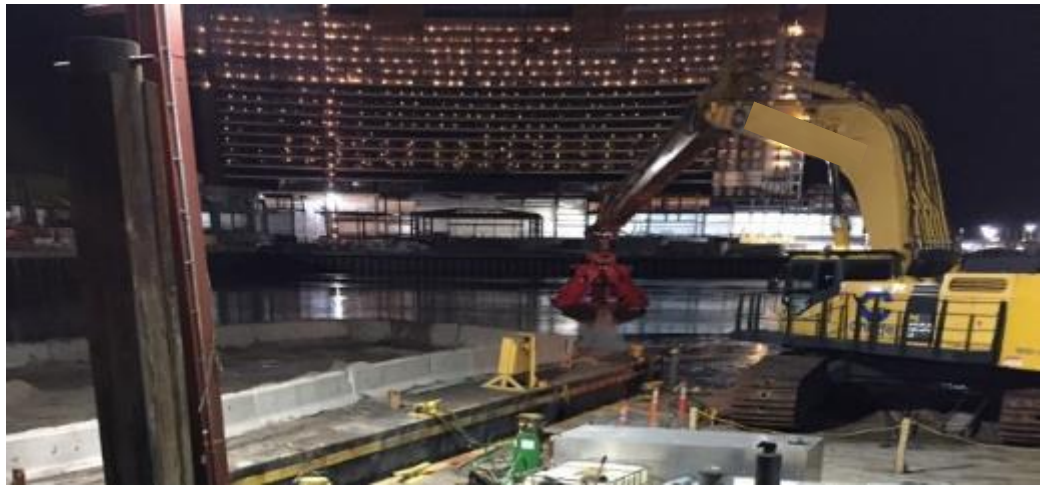
U.S. ARMY AND AGENCY COORDINATION ON REMEDIAL GOALS

- The U.S. Army emphasis is on remedial action that reduces exposure risks through removal of sediment and eliminates long-term monitoring
- The preferred remedial alternative reduces ecological and human exposures to contaminants of concern to background levels
- U.S. Army, CT DEEP, and USEPA agree this remedial approach will be protective of human and ecological health

SCHEDULE FOR PROPOSED PLAN AND RECORD OF DECISION

Event	Date
Proposed Plan Public Meeting	12/10/2019
Proposed Plan Public Comment Period Ends	12/13/2019
Submit Draft Final Record of Decision with Responsiveness Summary to Admin Record and to CT DEEP/USEPA	2/17/2020
Submit Final Record of Decision to CENAE and CT DEEP/USEPA	4/10/2020

ESTIMATED PROJECT TIMEFRAME



- **Work schedule**
  - 12 months per year
  - 24 hrs/day (dredge)
  - 7 days/week operation for (dredge)
- Minimizes time required to complete remediation
- One mobilization to the site
- In-water working time approximately 18 months
- On-land work 24 months (mob/demob)
- U.S. Army continues to work with Federal and State agencies and with the City of Stratford on the work schedule

COMMENTS

Send written comments to:

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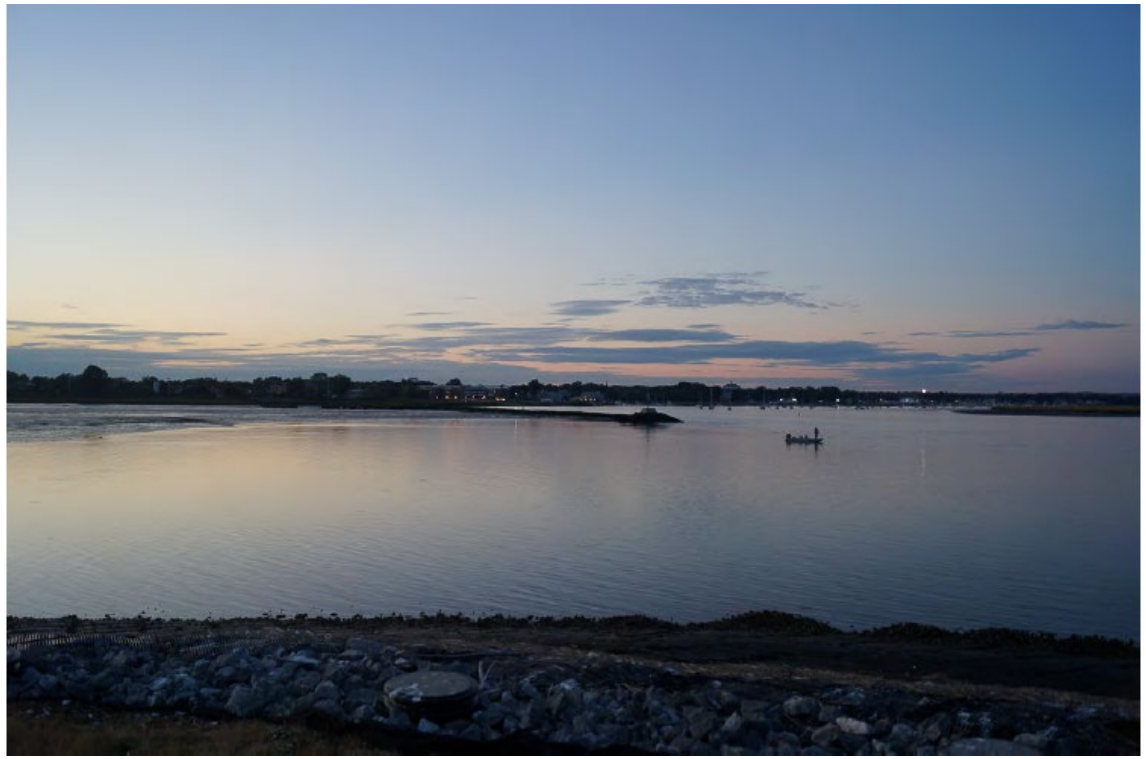
Concord, MA 01742

Email: nae-pn-nav@usace.army.mil



Project Information located at:

https://www.nae.usace.army.mil/Missions/Projects-Topics/Army-Engine-Plant-Environmental-Restoration-Project/

QUESTIONS?

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