

Raytheon



Public Involvement Meeting Wetland Excavation Project

October 1, 2003

Former Raytheon Facility
Wayland, Massachusetts

Presented by:
Edwin P. Madera

Purpose of Meeting

Wetland Excavation

Clean Up Goals

Permits

Removal Activities

Dewatering

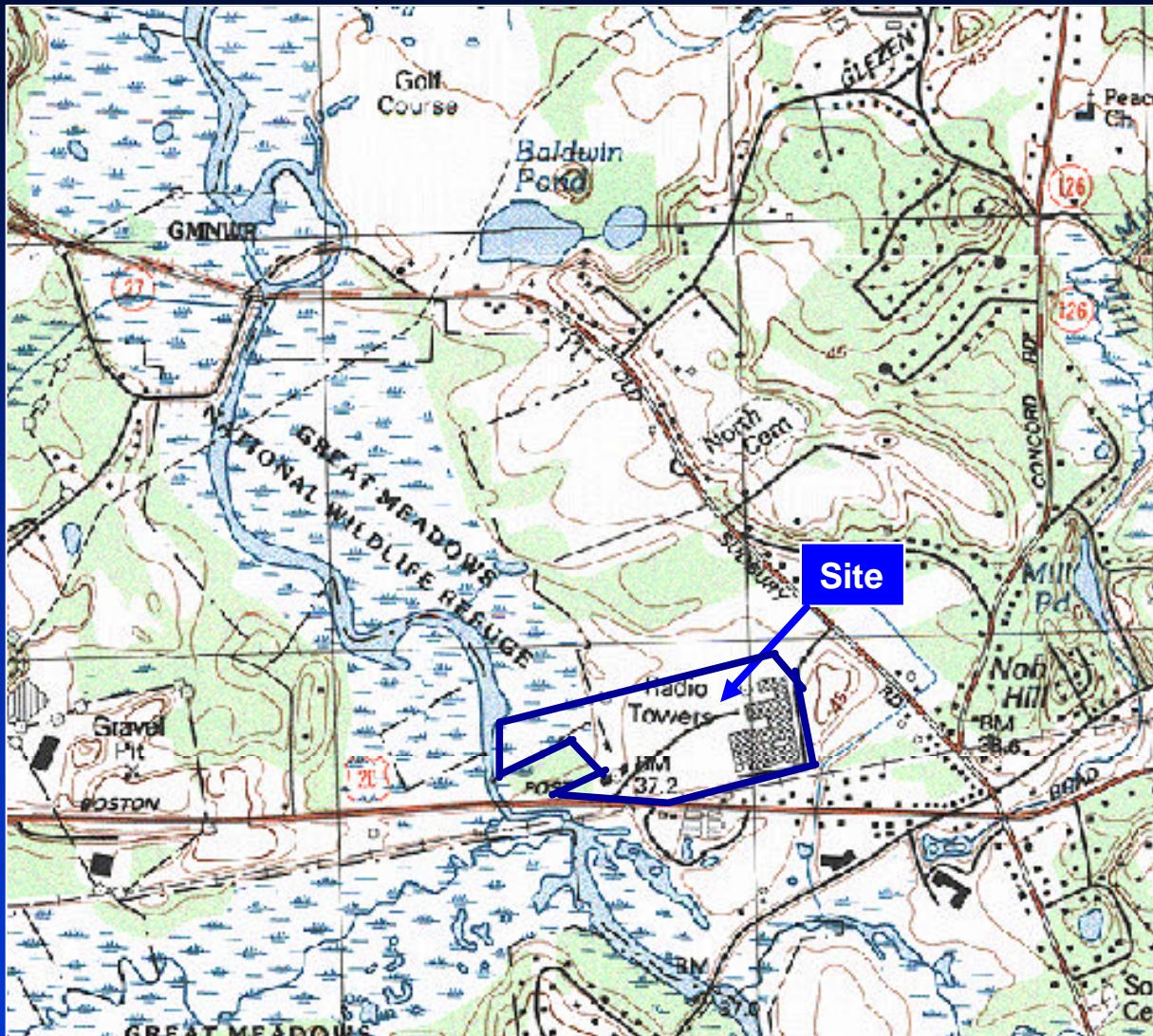
Temporary Diversion of Outfall/Redesign

Excavation/Stockpiling/T&D

Verification Sampling

Restoration Plan

Q & A



Locus Map

PCBs
PAHs
Metals



Remediation Design

Wetland Remediation

- **Approximately 1.8 acres (18 inches deep) of wetland to be remediated and restored**
- **Wetland soil/sediment impacted by:**
 - Polychlorinated Biphenyls (PCBs)
 - Polycyclic Aromatic Hydrocarbons (PAHs)
 - Chromium, Copper, Lead and Silver
- **Risk-Based Cleanup Goals**

Cleanup Goals

- **Be protective of human health and the environment**
- **Meet state and federal regulatory requirements governing wetland cleanup**

Compound	Target Cleanup Goals (ppm)
PCBs	2
PAHS	9
Chromium (III)	350
Copper	370
Lead	220
Silver	15

Permit Updates

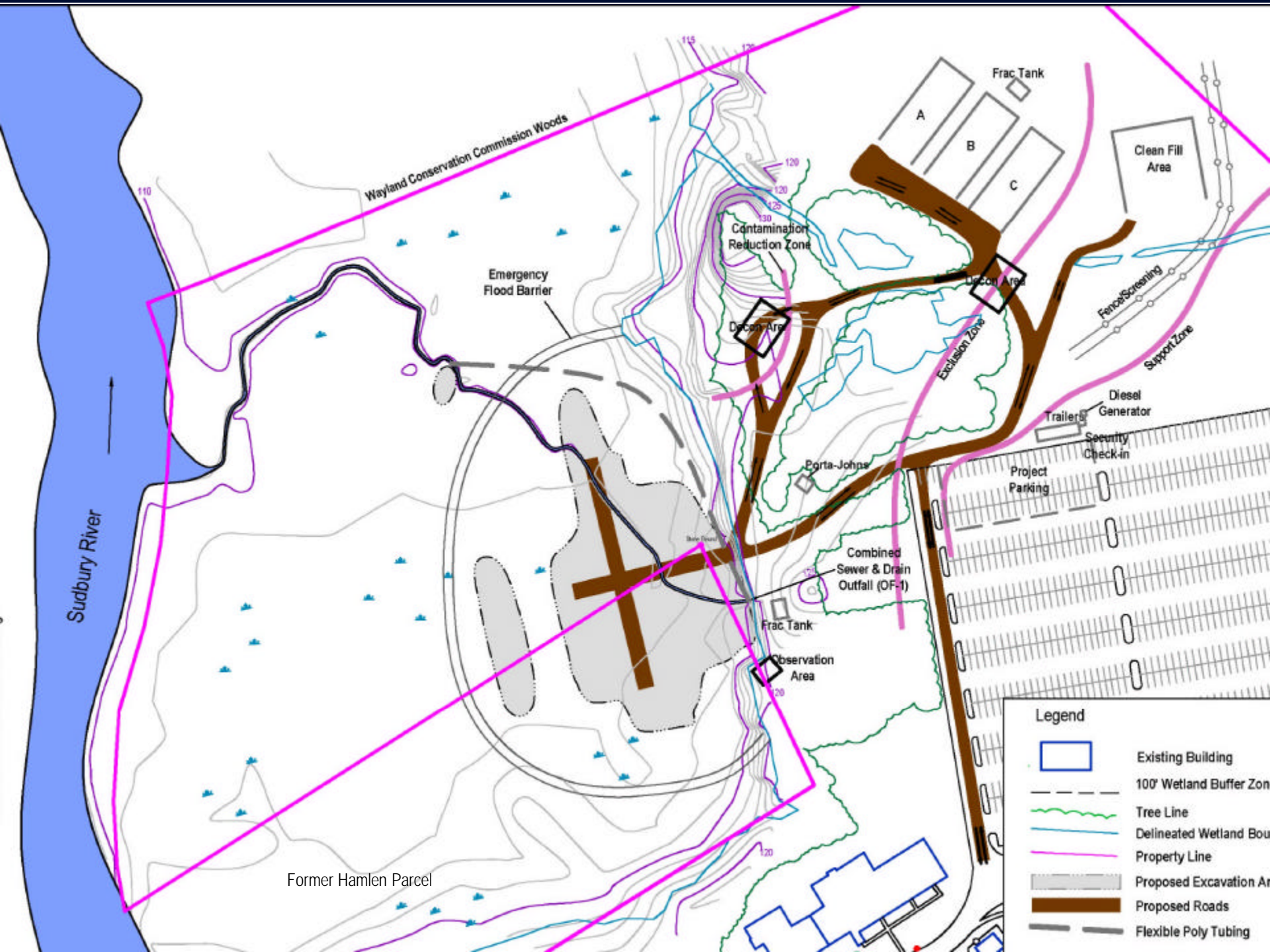
Permits

- **Chapter 91 License** ✓
- **Massachusetts Environmental Policy Act** ✓
- **401 Water Quality Certificate** ✓
- **Army Corps of Engineers Individual Permit** ✓
- **Conservation Commission – Order of Conditions** ✓
- **EPA – Draft Risk Based Disposal Approval** ✓









Removal Actions

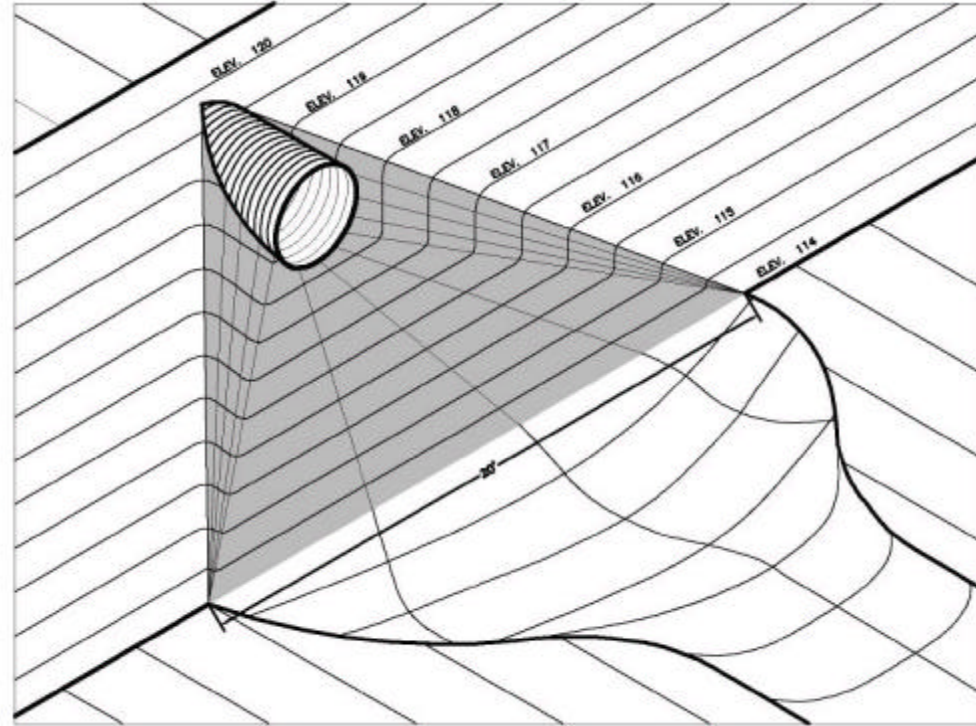
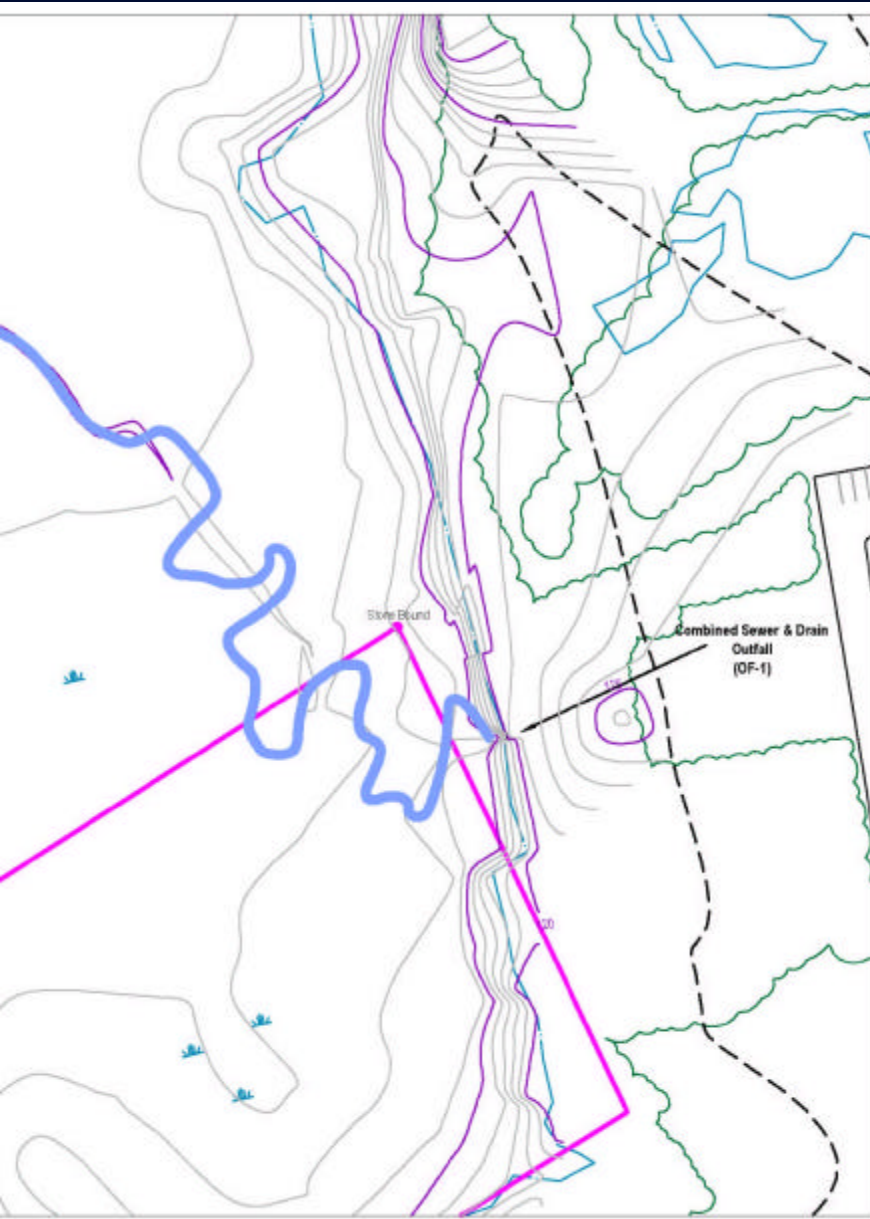
Removal Actions Planned

- **Excavation of 1.8 acres (18 inches deep) of wetland soil/sediment**
- **Temporary diversion of outfall/ Redesign outfall to minimize erosion**
- **De-watering of excavation area as necessary and collection of water for off-site disposal**
- **Stockpiling of excavated material and de-watering for transportation**
- **Transportation and disposal of remedial waste at permitted facilities**
- **Decontamination protocols will be followed**



Legend

-  Existing Building
-  100' Wetland Buffer Zone
-  Tree Line
-  Delineated Wetland Boundary
-  Property Line
-  Proposed Excavation Area
-  Proposed Roads
-  Flexible Poly Tubing



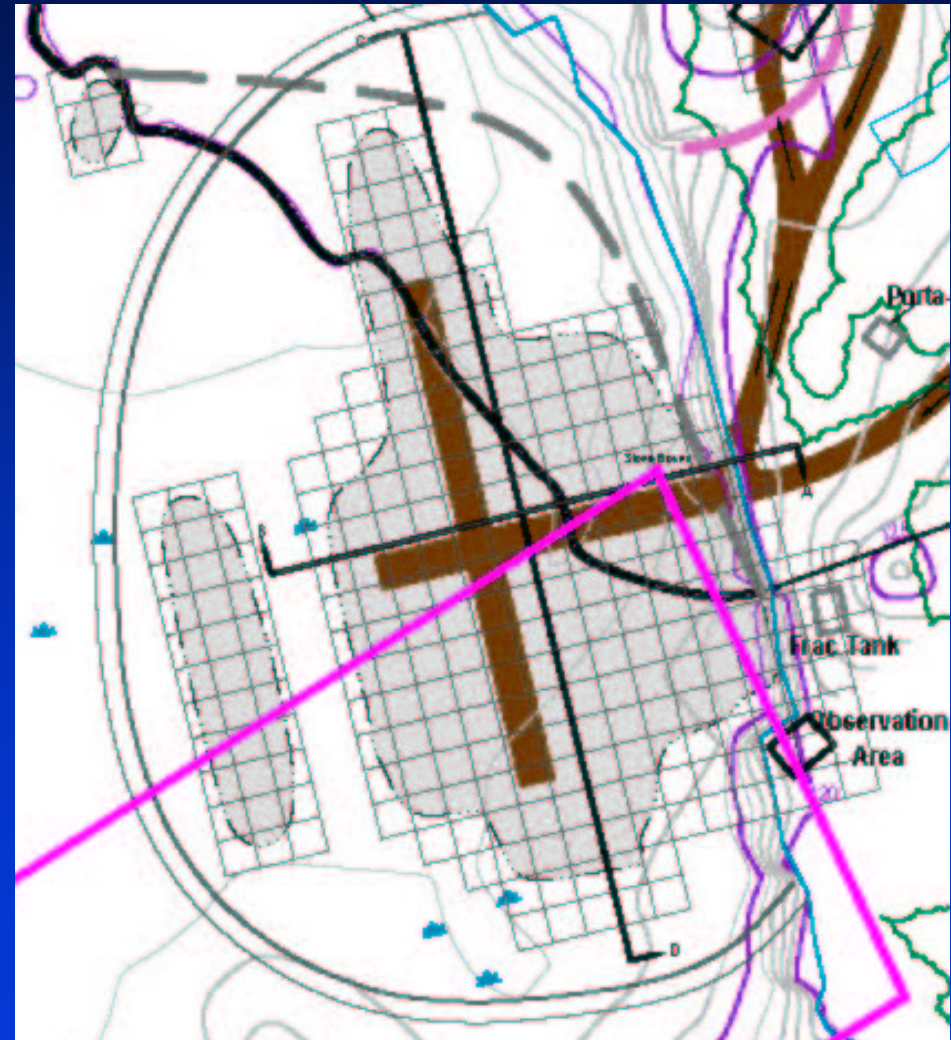
Post - Excavation Channel

Redesigned Outfall

Verification Sampling

Sampling Plan

- 20' x 20' grid pattern across excavation area
- EPA recommended 5-point composite sample from within each cell of grid
- Over 200 composite samples
- Target analytes
 - PCBs
 - PAHs
 - Metals



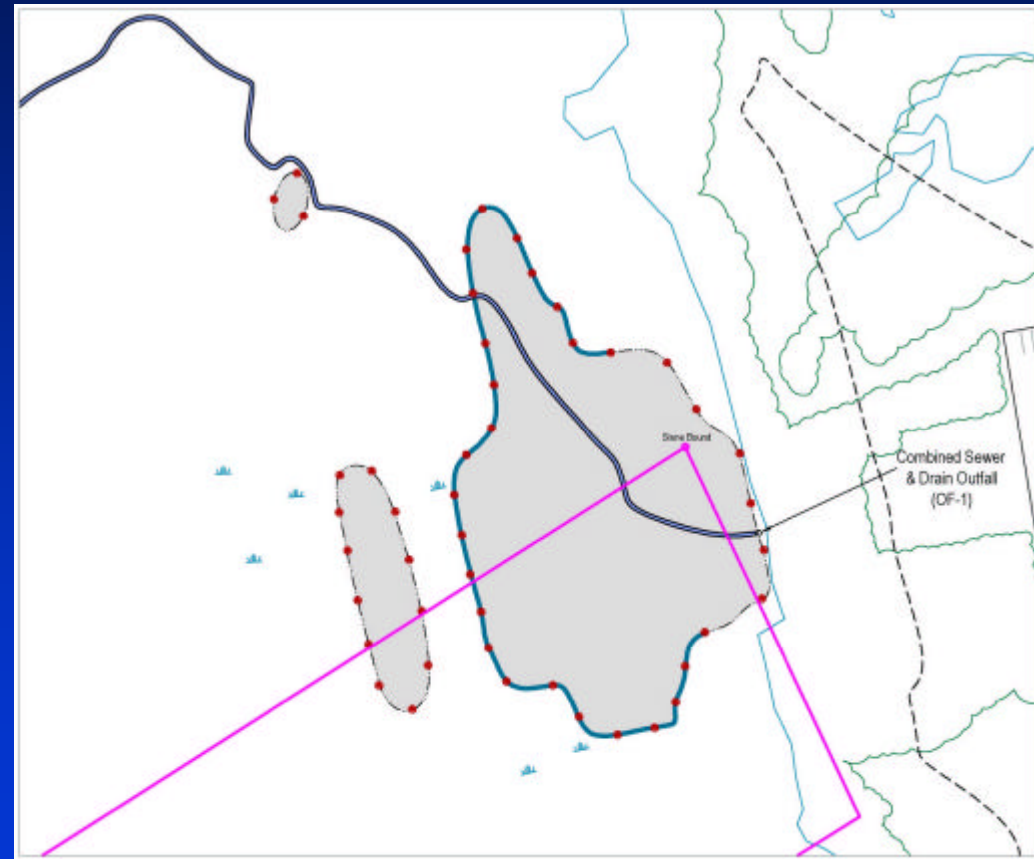
Sampling Plan (Cont.)

• Perimeter Sampling

- 47 perimeter samples
- PCBs
- PAHs
- Metals

• Individual Comparison

- Perimeter sample will be compared to adjacent western transect
- If sample exceeds value of adjacent transect, excavation will be extended and re-sampled



Restoration Plan



- Re-soiling area excavated with “engineered” soil
- Replanting with native Middlesex County species
 - Seeding
 - 2” plant plugs
 - Approx. 63,000 plantings
- Minimization of Invasive Species
- Monitor restoration progress for five years

Additional Information

- **Restoration Progress Reports (Semi-Annual)**
 - Copies will be sent to all agencies
- **Closure Documentation to EPA**
 - Copies will be sent to all agencies
- **Public Repositories/Extranet**
 - All documents will be available for public viewing

Site Visits

- **Observation Area**
- **Security - Check - In**
- **Presentations at the Site**

Three Proposed Meetings

- 1.) During Excavation
- 2.) During Excavation/Restoration
- 3.) During Restoration

Will Notify PIP through letters, legal ad and Town Board

Q & A

Contact Information

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