



Draft Remedial Action Work Plan (RAWP)

Nyanza Superfund Site OU4 - Reach 3 | Framingham, MA



Contract No. W912WJ-11-D-0009 | Task Order No. 0002



CHARTER



RAWP Presentation **Overview**

- Who's Involved?
- Project Location
- Selected Remedy
- Remedial Action Work Plan (RAWP)
- The Path Forward
- Questions & Answers
- Comments/Suggestions



RAWP Project **Team**

USEPA | United States Environmental Protection Agency

USACE | United States Army Corps of Engineers

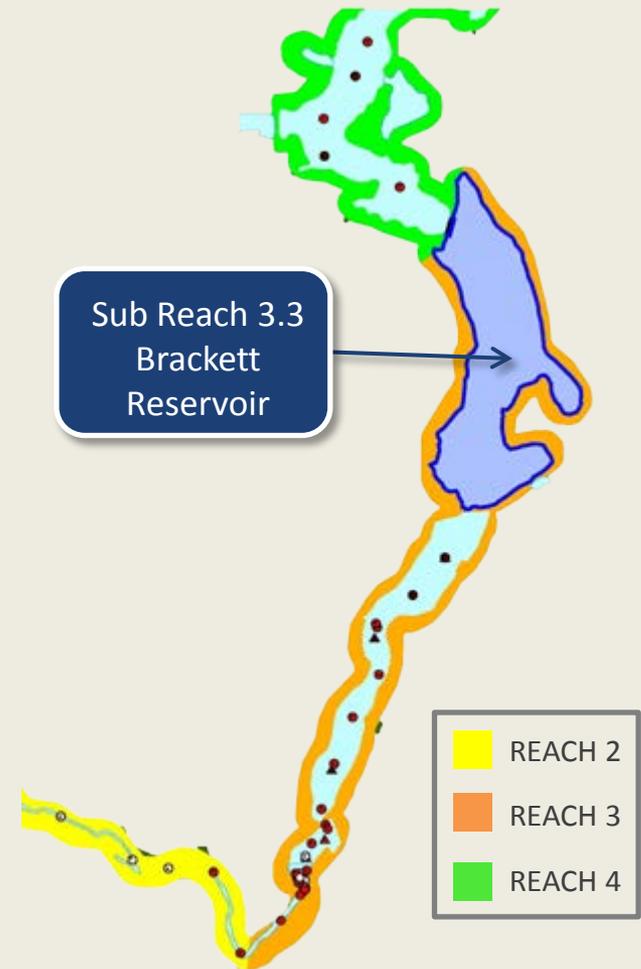
MassDEP | Massachusetts Department of Environmental Protection

Charter | Charter Environmental, Inc.



Project Location

- Operable Unit 4 (OU4) the Sudbury River
- Reach 3 - Sub Reach 3.3 (Framingham Reservoir No. 2)
- North of the Fountain Street Bridge to Dam 2



Selected **Remedy**

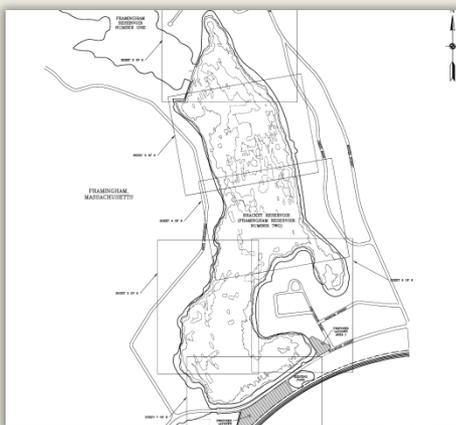
Enhanced Natural Recovery (ENR):

- Place 6 inches of sand (Thin Sand Layer or “TSL”) over the natural bottom sediments to help expedite the natural burial process.



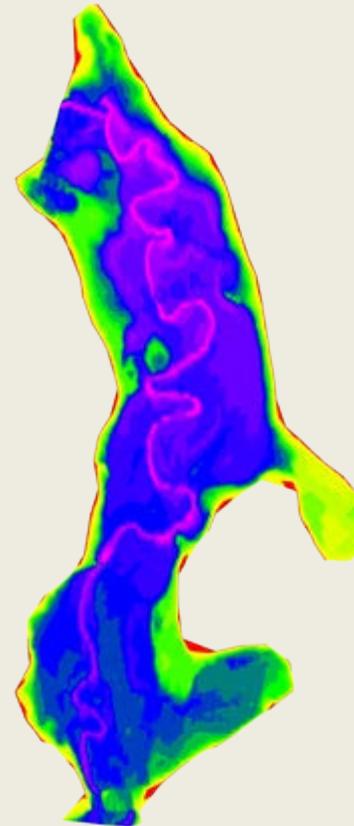
Recent **Activities**

- Pre-Design Investigation Studies
 - Bathymetric Survey (7/2012)
 - Sediment Sampling and Column Testing (9/2012)
- Design of Thin Sand Layer or “TSL”
- Development of RAWP (including selection of placement procedure for the TSL)

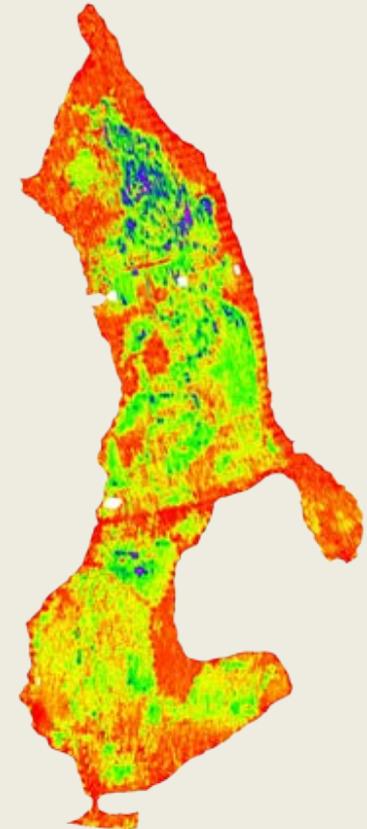


Pre-Design **Investigation Studies**

Bathymetric Survey July 2012
(by Charter)



High Frequency
Conditions



High vs. Low
Difference



Pre-Design **Investigation Studies**

Sediment Sampling and Column Testing September 2012 (by USACE)



Column
Testing



Split Core
Testing



Design of **Thin Sand Layer** (by USACE)

- Depth: 6 inches
- Material Type: MassDOT M1.04.0 Type a, “Sand Borrow”
Gradation:

Sieve Size (U.S. Standard)	Percent Passing by Dry Weight
1/4 inch	100
No. 4	90-100
No. 50	15-60
No. 200	0-5



Selected TSL Placement **Method (Hydraulic)**

Evaluation Criteria:

- Mobilization and Site Preparation
- Noise
- Dust
- Re-Suspension of Native Sediments
- Turbidity
- Schedule
- Cost

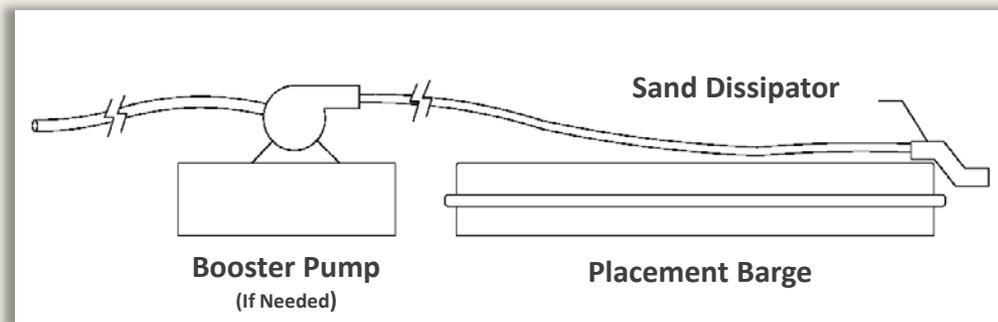


Selected TSL Placement Method (Hydraulic)

A Hydraulic Placement Method will be used to install the sand. Two lifts of approximately 3" thickness will be placed to achieve the design lift thickness of 6".

System components include:

- A land based slurry plant (Proposed Laydown Area No. 2)
- HDPE pipeline transport system for sand & water slurry mixture
- Discharge/placement barge

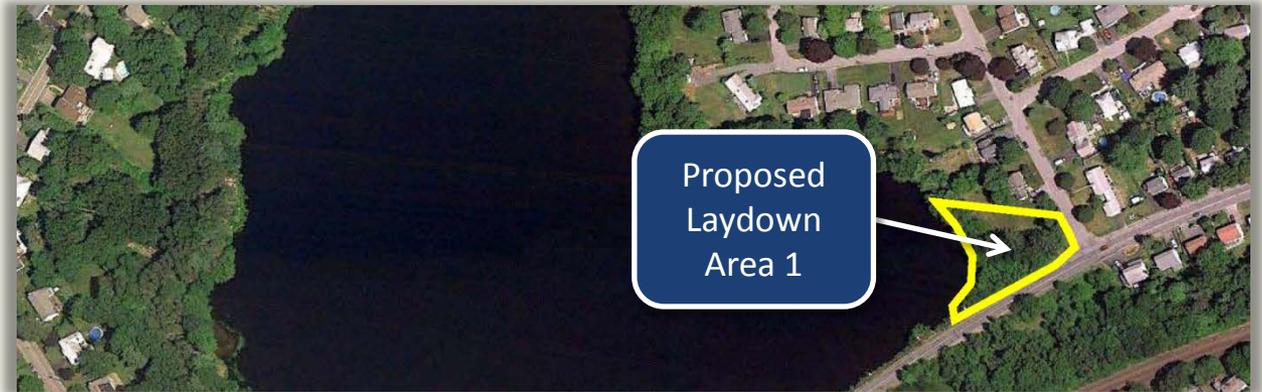


General Sequence of Operations

- Mobilization and Site Preparation
 - Proposed Laydown Area No. 1 (State-Owned Property)
 - Proposed Laydown Area No. 2 (State-Owned Property)
- Setup Slurry Plant and HDPE Pipeline Distribution System (at Proposed Laydown No. 2)
- Transportation and Stockpiling of Sand Material
 - Site Access/Egress
 - Trucking Routes
 - Traffic Impact
- Hydraulic Placement of Thin Sand Layer
- Site Restoration/Demobilization



Mobilization and **Site Preparation**



Proposed Laydown Area No. 1

- Establish Access/Egress off Fountain Street
- Clear & Grub Trees
- Install Erosion and Sediment Controls
- Perform On-Water Borings
- Construct Sheet Pile Berth



Mobilization and **Site Preparation**



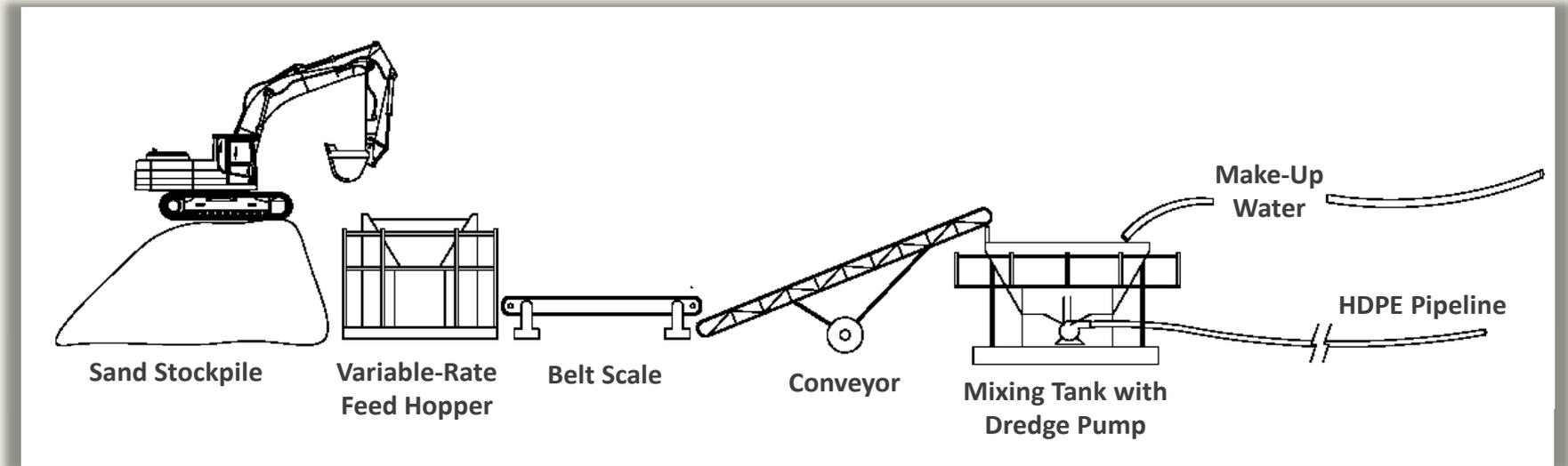
Proposed Laydown Area No. 2

- Establish Access/Egress
- Clear & Grub Trees
- Install Erosion and Sediment Controls
- Setup Slurry Plant and HDPE Pipeline Distribution System



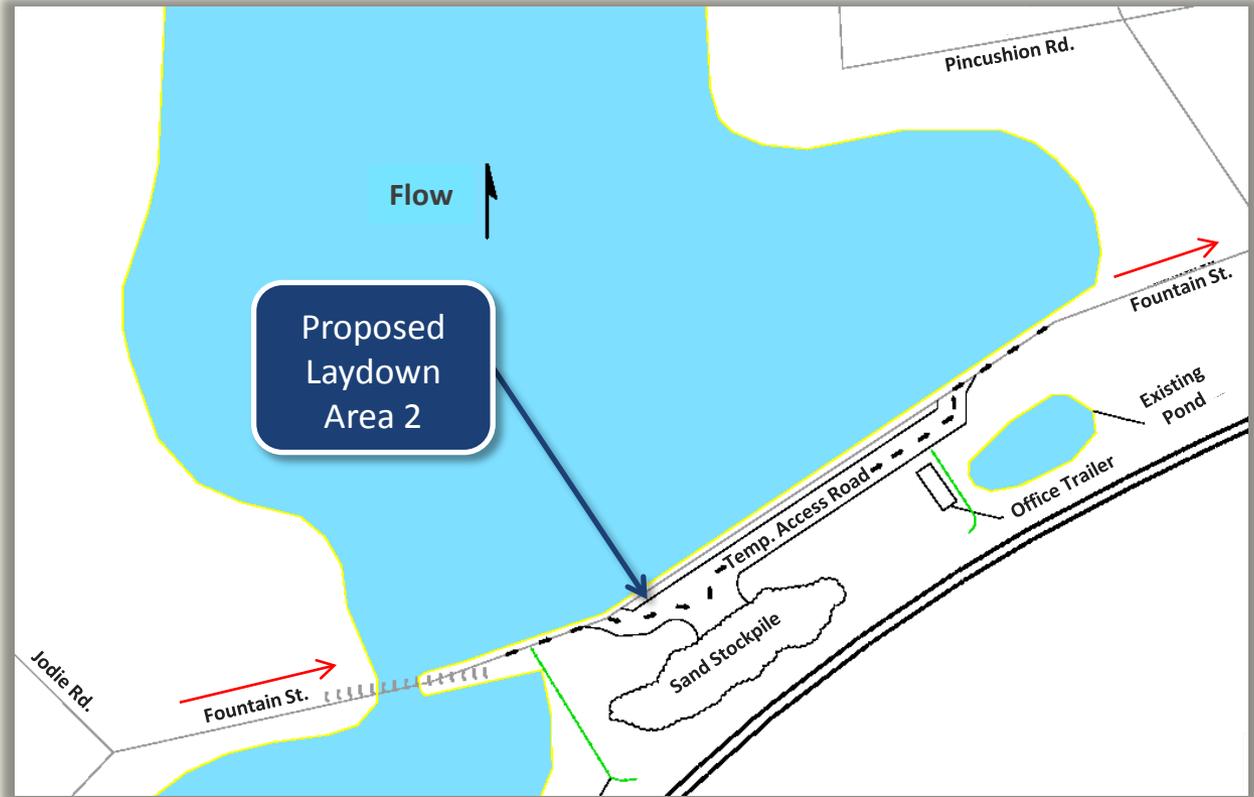
Set-up Slurry Plant and HDPE Pipe Distribution System

Equipment to be Setup Adjacent Shoreline



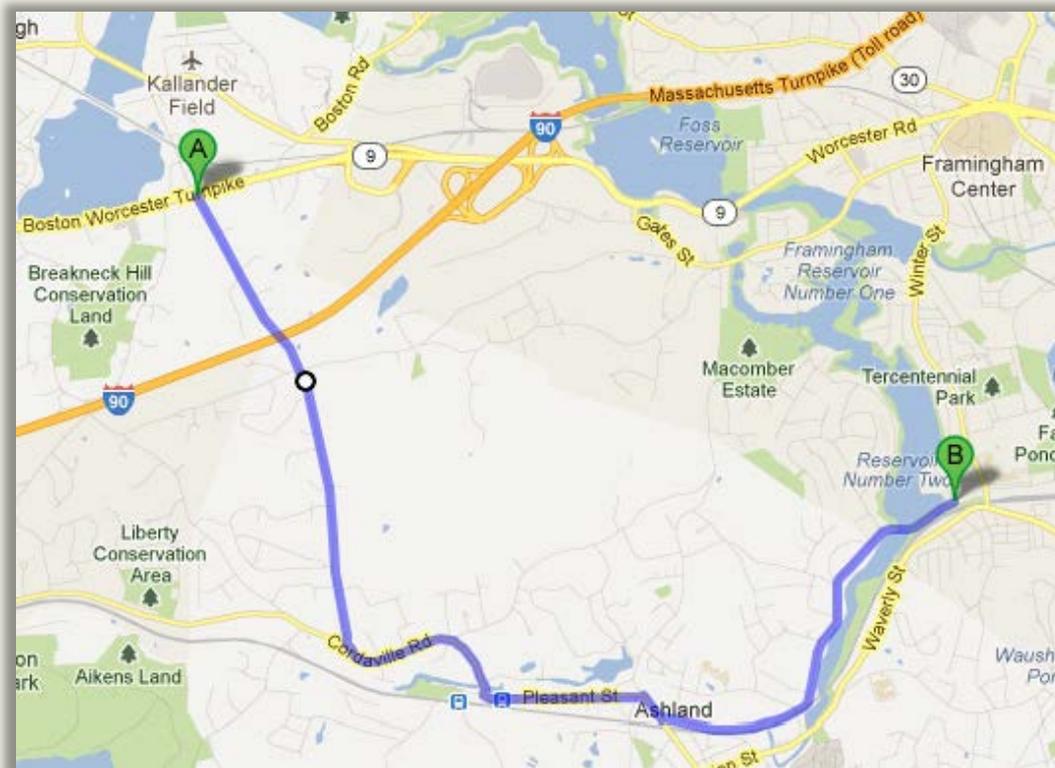
Transportation and Stockpiling of Sand Material

Site Access/Egress

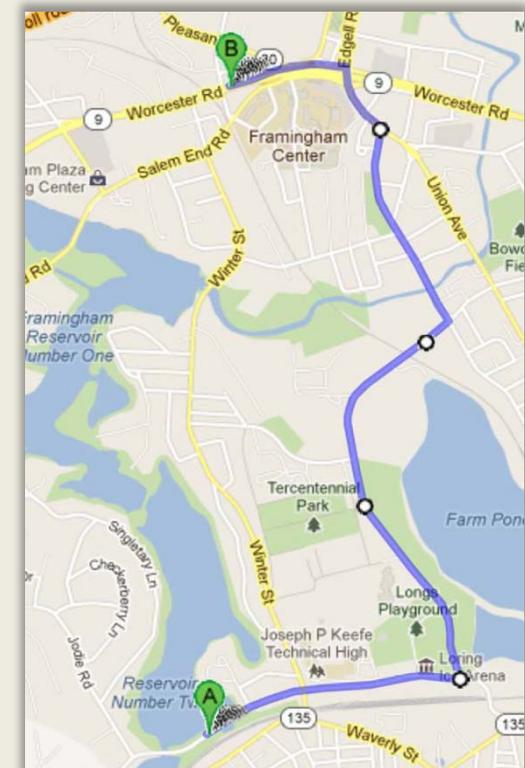


Transportation and Stockpiling of Sand Material

Trucking Routes



Approach from
MA Route 9



Departure to
MA Route 9



Transportation and Stockpiling of Sand Material

Traffic Impact

**Traffic Study Conducted 1/26/12, 1/27/12 & 1/28/12
from Jodie to Pincushion (Eastbound & Westbound):**

ADT | 8,230 Vehicles (Weekly); 5,473 Vehicles (Saturday)

Weekly Peak Travel Hours
(>100 vehicles per 15 min)

EB - 6:45 a.m. to 8:45 a.m.
WB - 3:15 p.m. to 6:15 p.m.

Saturday
(>50 vehicles per 15 min)

EB - 8:30 a.m. to 3:30 p.m.
WB - 11:00 a.m. to 6:45 p.m.

Addition Due to Trucks (Off-Peak - 9:00 a.m. to 3:00 p.m.):

1,000 Ton/100 Ton Per Truck = 10 Trucks/Day

10 Trucks x 3 Trips/Truck = 30 Truck Trips

30 Truck Trips/6 Hours = 5 Truck Trips Per Hour

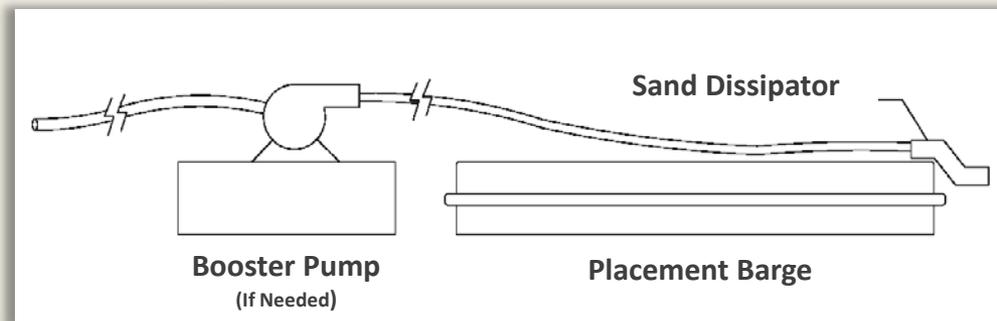


TSL Placement **Method (Hydraulic)**

A Hydraulic Placement Method will be used to install the sand. Two lifts of approximately 3" thickness will be placed to achieve the design lift thickness of 6".

Highlights:

- Aerial Extent of Sand Placement: -5 to -3 Contour (80 Acres)
- Depths: 3 to 26 Feet
- Approximate Quantity of Sand: 140,000 Tons



Site Restoration / Demobilization

Site Restoration:

- Loam and Seed Disturbed Areas
- Install Replacement Trees
- Restore Access/Egress Points
- Demobilize Equipment from Project Site



The Path Forward



- Finalize Remedial Action Work Plan
(*Charter Environmental, Inc.*)



- Secure Funding for Selected Remedy
(*EPA*)

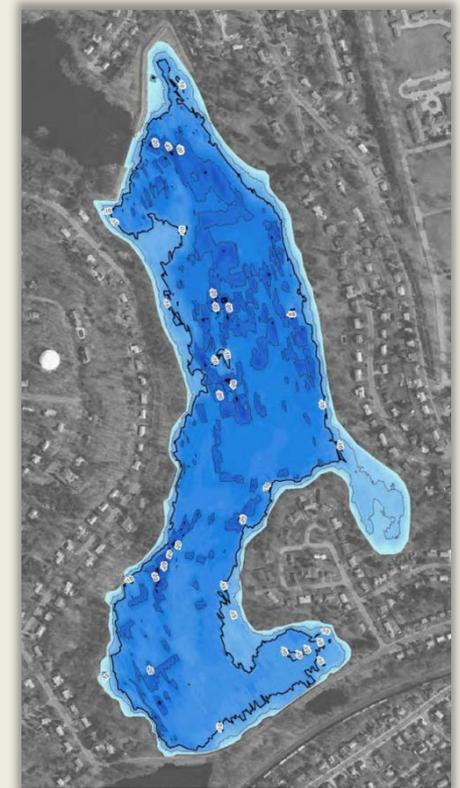


- Select Remedial Action Contractor
(*USACE*)

- Implement Selected Remedy
(*Remedial Action Contractor*)



Questions & Answers



Comments / Suggestions

Comments/suggestions toward the enhancement of this RAWP are welcomed and can be forwarded to Dan Keefe via email as listed below:

Dan Keefe (*Environmental Protection Agency*)

Email: keefe.daniel@epa.gov

Receipt of comments/suggestions by January 15, 2013 is appreciated.

A copy of this presentation is available at the EPA/Nyanza website:

<http://www.epa.gov/region1/superfund/sites/nyanza/522279.pdf>

