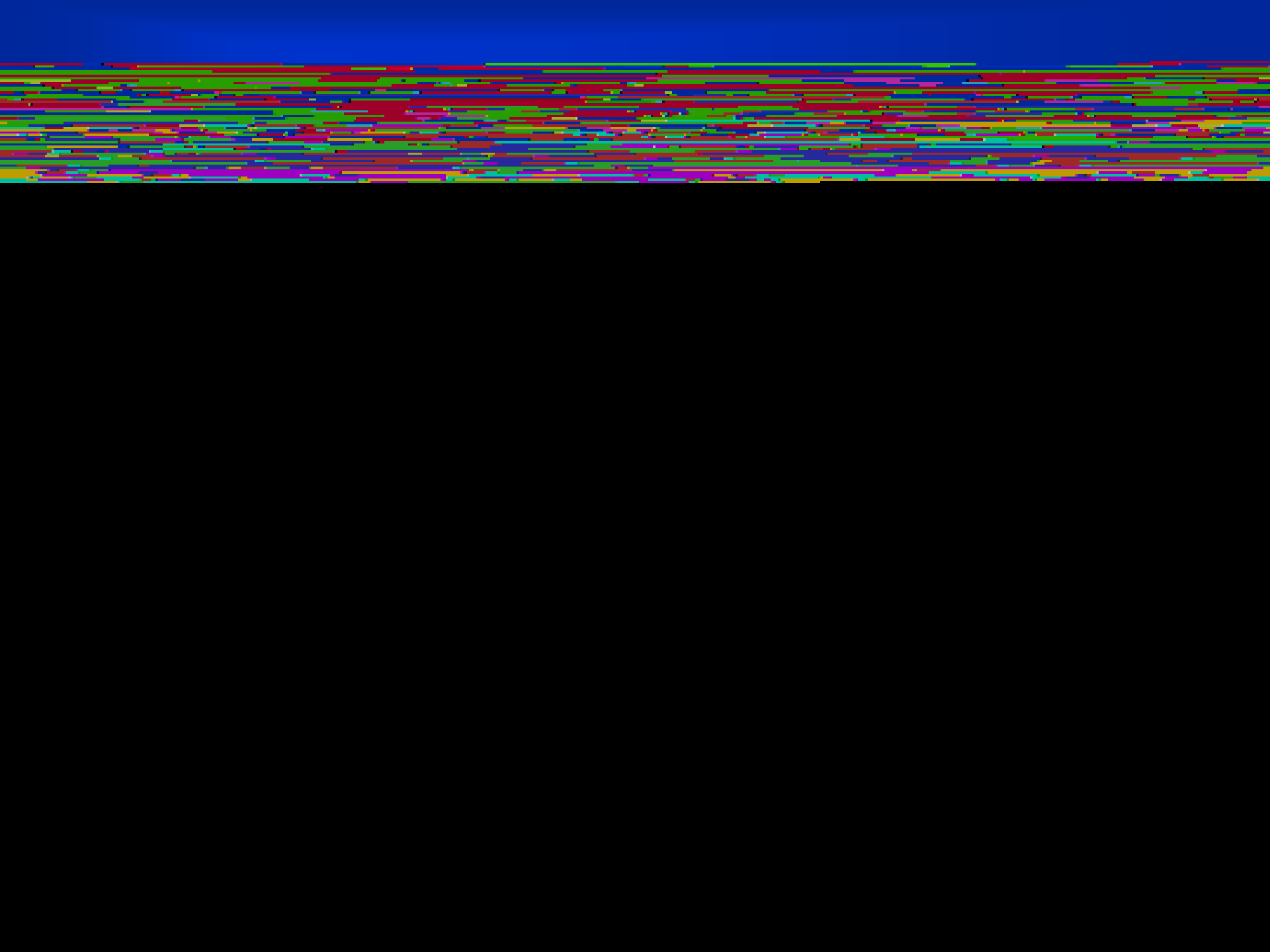
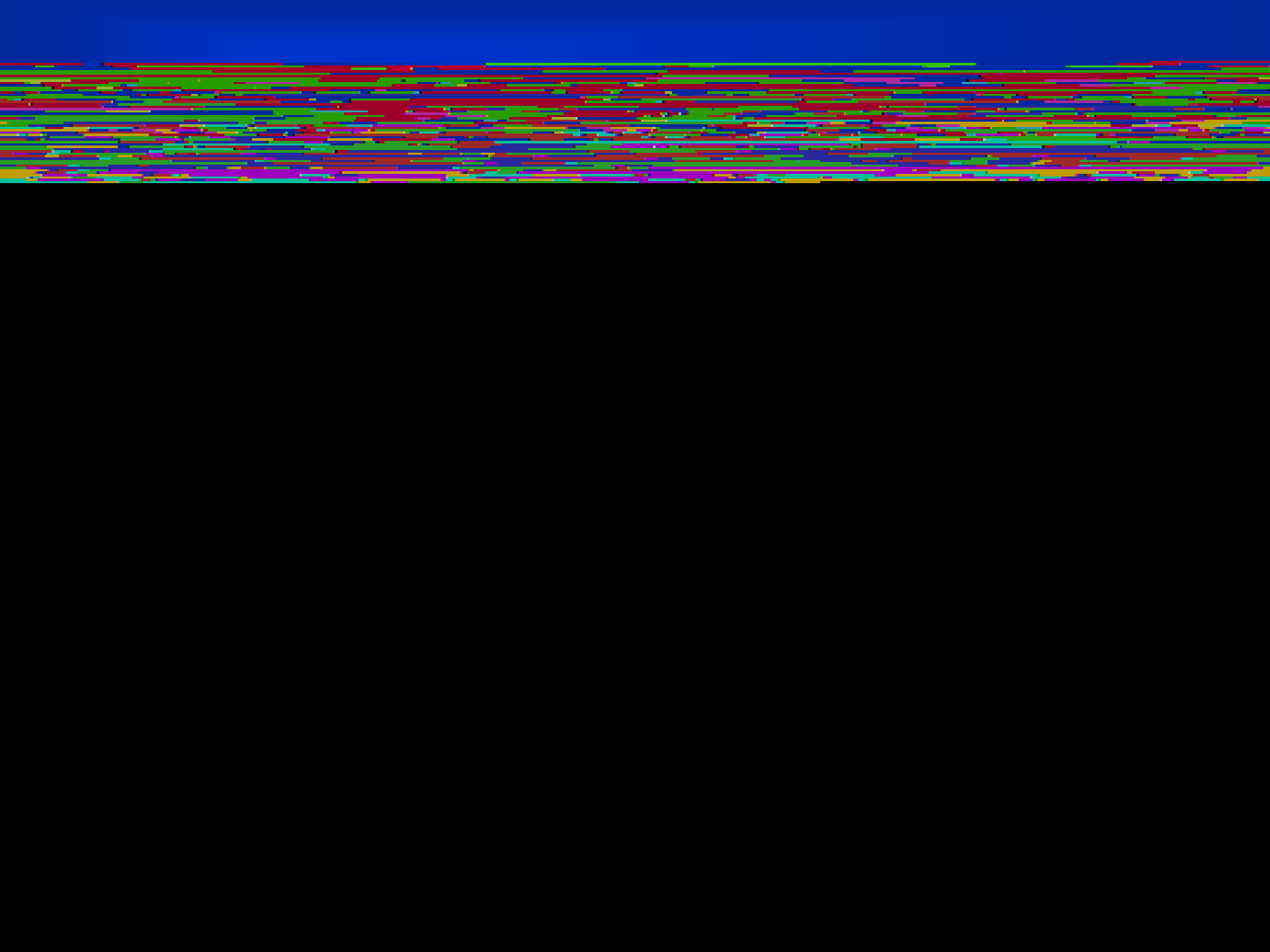




Middle River Complex Sediment Remediation

**Information Session
Marshy Point Nature Center
January 18, 2012**





What we want you to take away from

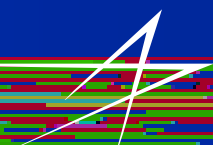


- ” Sediments next to the Middle River Complex:
 - . Are not a severe or short-term exposure problem

Local Area Surface Water Bodies



Middle River Complex (MRC) Setting



**Middle River
Complex**

Environmental Setting & Reference Areas



**Marshy
Point**



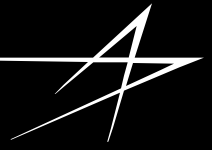
**Bowleys
Quarters**



Middle River



Recent Sediment Data Collection



“ Samples

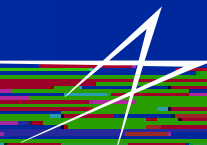
- Sediment samples for chemical testing & risk assessment
- Samples for bioavailability testing (what organisms get exposed to)
- Bulk sediment for sediment dewatering tests
- Fish tissue sampling



“ Additional Analyses

- Sediment Community Assessment - (what kind and how many critters)
- Sediment Core Age Dating - (how old and how much new)
- Bathymetric Survey - (water depth and shape of the bottom)
- Hydraulic Analyses - (modeling effects of a big storm)

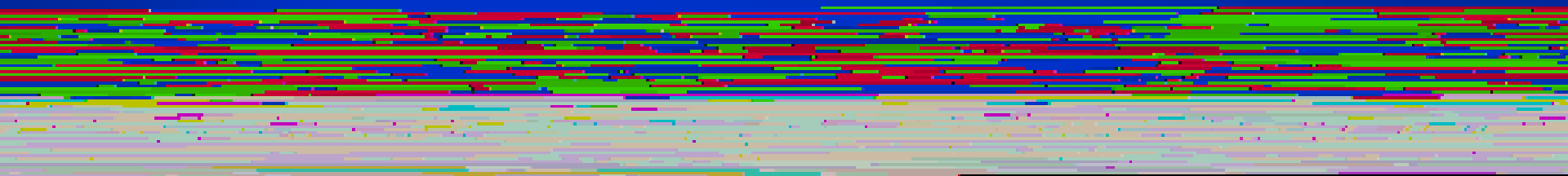
Sample Locations



Dark Head Cove and Creek



Cow Pen Creek & Dark Head Cove





2011 Ecological Risk Assessment Findings



- “ No predicted impacts to fish, birds or mammals
- “ Potential impacts to benthic macroinvertebrates (e.g., worms)
- “ Local area sediment community assessment indicates
 - . More pollution tolerant species present near MRC than at Marshy Point (a less developed reference area)
 - . Similar to other developed areas (Bowleys Quarters)
 - . Benthic macroinvertebrates (worms) more abundant near MRC

Sediment in this area shows some stress, similar to other developed areas; it does NOT appear to be severely stressed

Investigations, Evaluations & Decisions



Investigation

- ” Characterization and Risk Assessment
- ” Remedial Action Objectives, Preliminary Remedial Goals, Remedial Action Levels

Feasibility Study

- ” Screen Remedial Technologies
- ” Develop Remedial Alternatives
- ” Evaluate Remedial Alternatives

Record of Decision

- ” Recommend Remedial Action
- ” Agency Review/Comment
- ” Remedy Selection

Draft Remedial Action Objectives (RAOs)



“ RAO 1: Reduce, to the extent practicable, human health risks associated with the consumption of resident fish - by reducing bioavailable sediment*



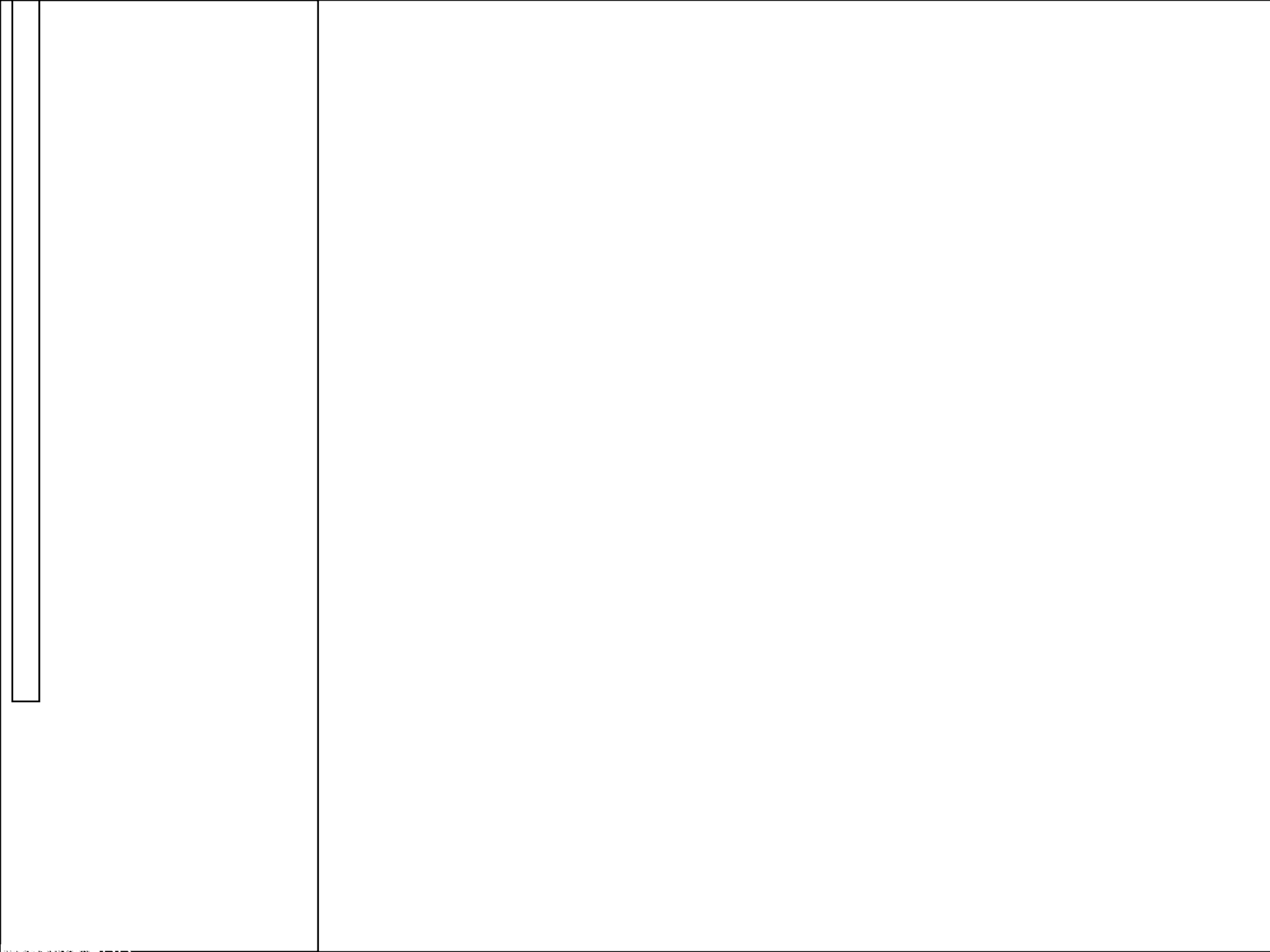
Removal by Excavation in the Dry



Excavation of sediments without overlying water (applicable to Cow Pen Creek shallow areas and shorelines)

Dredging Equipment

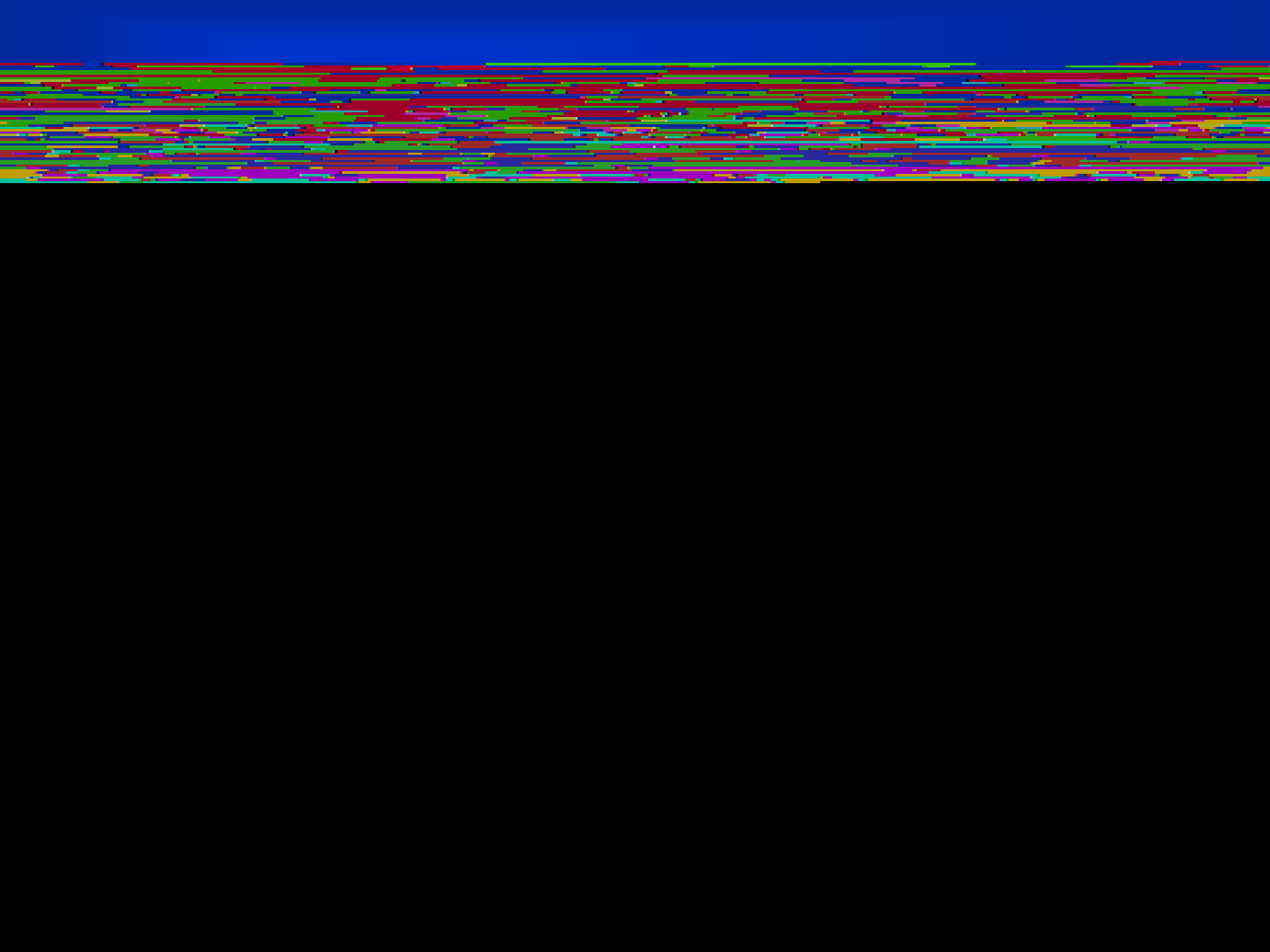




Process for Public Involvement



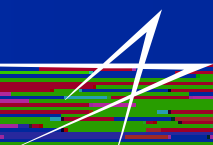
- “ A] ~ à|æ ã { !{ æã } & æçæãæããã •^••ã } (c@æç ç } ã @)
- “ Introduce the Working Group concept
- “ Hold a series of informational and educational meetings with a working group
- “ Assess preferences, considerations and concerns
- “ Obtain input and, ideally, understanding of the path forward



Schedule for Public Involvement



- “ January 18, 2012 . Public Information & Availability Session / Working Group Concept presented and participants invited
- “ January 31, Working Group formed*
- “ February .



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” **Sediments next to the Middle River Complex:**

- . Are not a severe or short-term exposure problem
- . Require some action based on long-term risk assessments

” **The scope and specifics of cleanup actions:**

- . Have not been determined yet
- . Will be selected through a Feasibility Study process
- . Will include input from community involvement
- . Must balance many considerations

” **Community involvement matters:**

- . More information is available at future meetings and online
- . The Working Group will go into more detail



Questions & Discussion

Thank you!



Thank you for your time, consideration and input.

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