

**Kerr-McGee Chemical Corp.
Navassa, North Carolina
Superfund Site**

**Public Meeting
November 8, 2018**

**U.S. Environmental Protection Agency
N. C. Department of Environmental Quality
Greenfield Environmental Multistate Trust LLC,
Trustee of the Multistate Environmental Response Trust**



Public Meeting Agenda

- ✓ **Introductions**
- ✓ **Update on EPA Information Repository**
- ✓ **NCDEQ Update**
- ✓ **NCEERC Update**
- ✓ **Impact of Hurricane Florence**
- ✓ **Remediation Investigations (RI) Highlights**
- ✓ **Superfund Process and Record of Decision Update**
- ✓ **Questions and Discussion**

Introductions

Tonya Spencer, EPA

Introductions

- ✓ **Navassa Superfund Site Cleanup Team**
 - ✓ U.S. Environmental Protection Agency (EPA)
 - ✓ N.C. Department of Environmental Quality (N.C. DEQ)
 - ✓ Multistate Environmental Response Trust (Multistate Trust)
- ✓ **Navassa Town Council**
- ✓ **Navassa Community Environmental and Economic Redevelopment Corporation (NCEERC)**
- ✓ **Navassa Trustees Council – Natural Resource Damage (NRD) Restoration**
- ✓ **Other Partners**
 - ✓ N.C. Department of Health and Human Services/N.C. Division of Public Health (N.C. DPH) – Health education and outreach
 - ✓ University of North Carolina – Wilmington (UNCW) – College / Underserved Community Partnership Program (CUPP)



Update on EPA Information Repository

Public Meetings Every Quarter

Next Meeting January 29th



NCDEQ Update

David Mattison, NCDEQ



Navassa Community Environmental and Economic Redevelopment Corporation (NCEERC) Update

Chris Graham, NCEERC



Impacts from Hurricane Florence and Highlights of Remedial Investigations

Richard Elliott, Multistate Trust



Impacts from Hurricane Florence



- ✓ **Trees down/leaning around wells and on fence**
- ✓ **Flooding**
- ✓ **Debris on interior roadways**
- ✓ **No apparent damage to Southern Marsh**

Impacts from Hurricane Florence



Impacts from Hurricane Florence



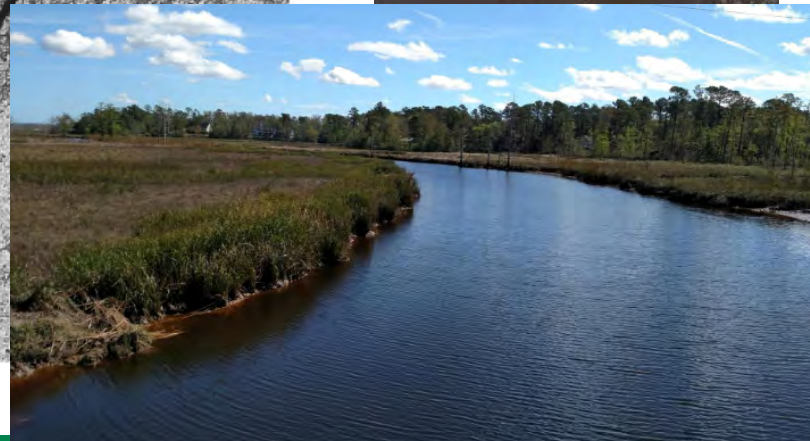
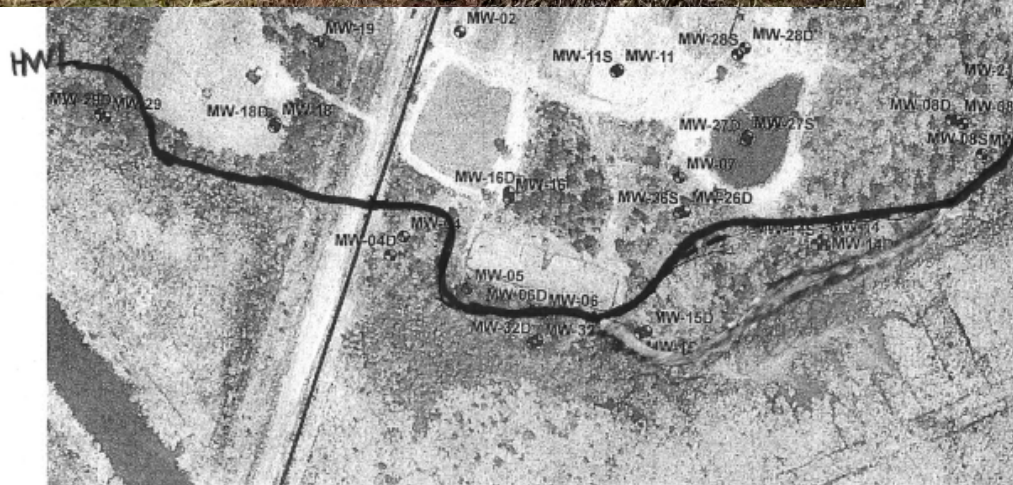
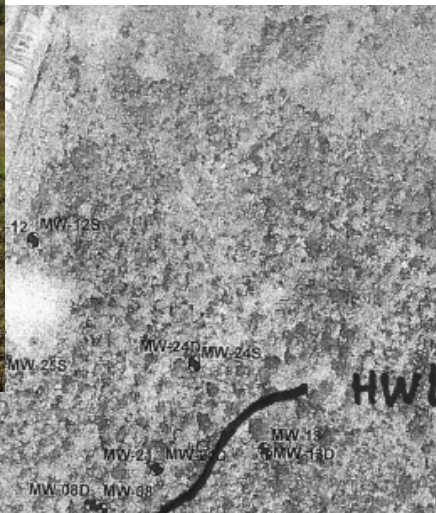
Debris Removal/Cleanup



Debris Removal/Cleanup



Site Observations, Post Hurricane Florence



Recent / Upcoming Events

- ✓ **Storm cleanup activities conducted beginning October 15, 2018**
- ✓ **Groundwater sampling event conducted week of November 5, 2018**
- ✓ **Fence repair and re-alignment conducted week of November 19, 2018**

Remedial Investigations (RI)

Purpose of Remedial Investigations (RI):

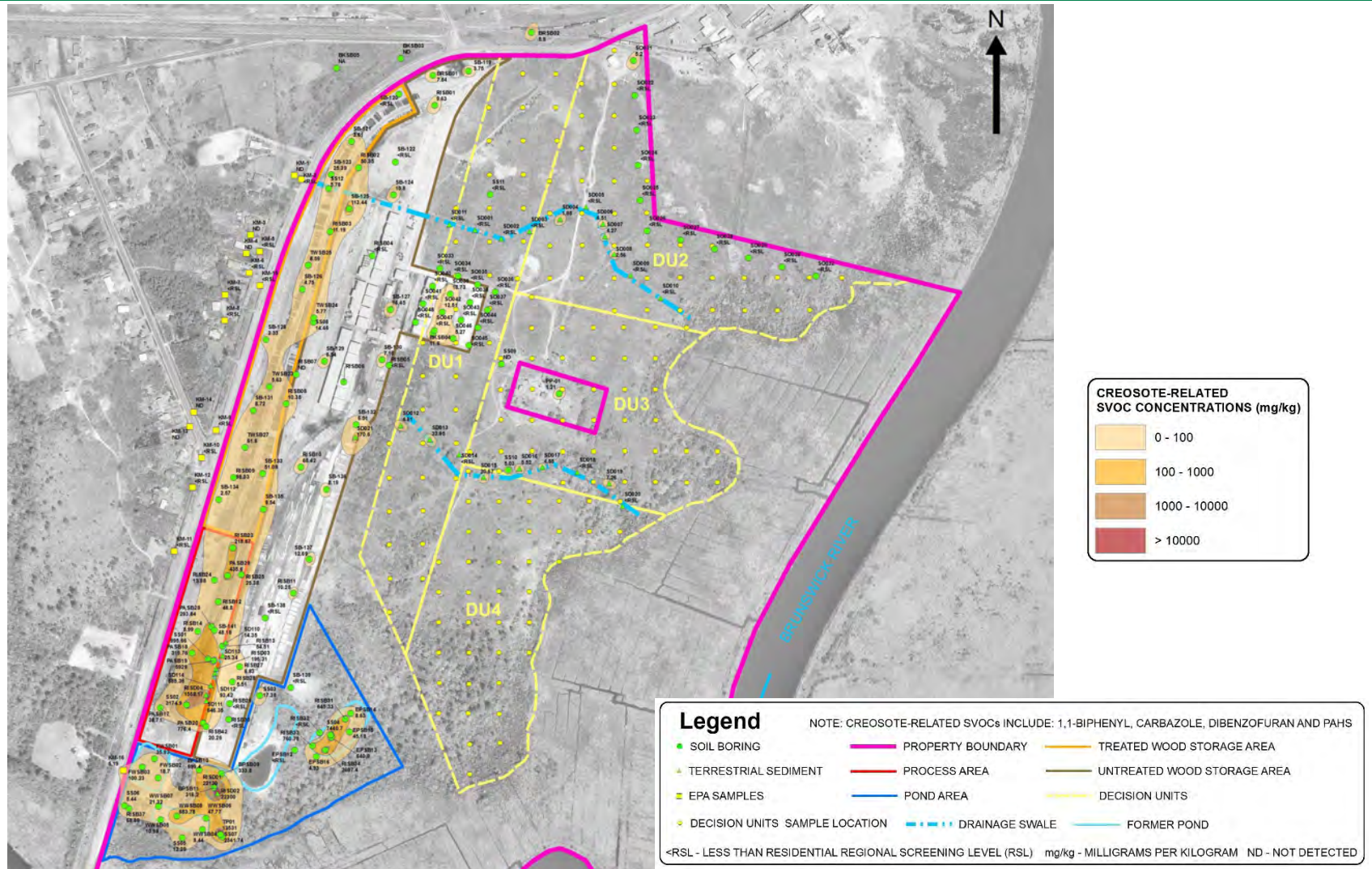
Identify areas of contamination on and around the Site that need to be remediated to protect people and the environment

- ✓ **Investigate all potentially contaminated media on- and off-Site – soil, sediment, groundwater and surface water**
- ✓ **Determine the limits and concentrations of Site contaminants**
- ✓ **Use RI results to evaluate potential risks to people and the environment and identify remediation actions (Feasibility Study)**

RI Highlights

- ✓ **Constituents of Concern (COCs)**
 - ✓ Polycyclic Aromatic Hydrocarbons (PAHs) (creosote-related SVOC contaminants)
 - ✓ Inorganics (Arsenic)
- ✓ **Extent of Contamination**
 - ✓ Surface Soils
 - ✓ Subsurface Soils
 - ✓ Terrestrial Sediment
 - ✓ Marsh Sediment
 - ✓ Groundwater
- ✓ **Human Health Risk Assessment**
- ✓ **Baseline Ecological Risk Assessment**

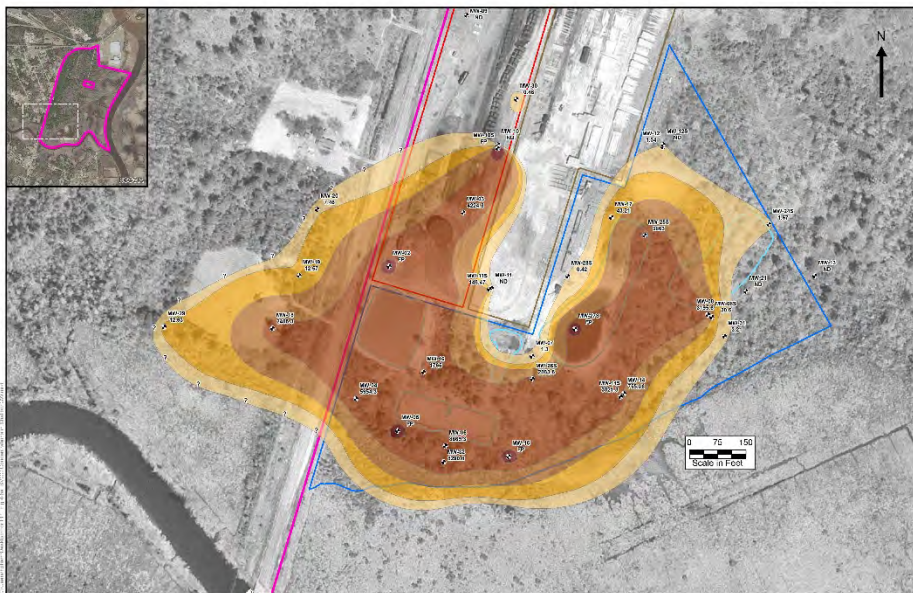
Distribution of Creosote-Related SVOCs in Surface Soil and Terrestrial Sediments



Distribution of Creosote-Related SVOCs in Groundwater

March 2017 Results

April 2018 Results

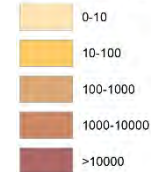


Legend

- ◆ SHALLOW MONITORING WELL
- PROPERTY BOUNDARY
- PROCESS AREA
- RSL - REGIONAL SCREENING LEVEL
- ug/L - MICROGRAMS PER LITER
- FP - FREE PRODUCT
- ND - NOT DETECTED
- UNTREATED WOOD STORAGE AREA
- POND AREA
- FORMER POND

NOTE: CREOSOTE-RELATED SVOCs INCLUDE:
1,1-BIPHENYL, CARBAZOLE, DIBENZOFURAN AND PAHS

CREOSOTE-RELATED SVOC CONCENTRATIONS (ug/L)



2018 Key Activities Progress

- **Complete Reports**
 - **RI Report**
 - Final Draft Near Complete, Target End of Year
 - Awaiting Finalization of Human Health Risk Assessment (HHRA) and Baseline Ecological Risk Assessment (BERA)
 - **HHRA**
 - Draft has been Reviewed and Commented on by EPA and NCDEQ
 - Final Draft will be Submitted to EPA and NCDEQ for Final Review by end of November 2018
 - **BERA**
 - Final Draft was Submitted to EPA and NCDEQ September 20, 2018
- **Operable Unit 1**
 - **Complete Feasibility Study and Proposed Plan**
 - Focused Feasibility Draft has been Reviewed and Commented on by the EPA and NCDEQ
 - Final Draft to be Submitted to EPA and NCDEQ, Target End of Year

2018 Key Activities Progress Continued

- **Marsh**
 - **Additional Sampling**
 - **Sampling and Analysis Completed in 2018**
 - **Additional Sampling to Support Toxicity Testing Planned for 2019**
 - **Marsh Study Plan**
 - **Draft Outline has been Reviewed with EPA and NCDEQ in a meeting held October 24, 2018**
 - **Final Draft Work Plan will be Submitted to EPA and NCDEQ by 4Q2018**
 - **Objective is to Complete Field Work in 2019**
- **Process and Pond Area**
 - **Initiate Feasibility Study**
- **Groundwater**
 - **Initial Plumb Studies are Completed, Report in Progress**
- **Marketing of the Site has Begun**

Prioritizing Areas for Remediation

Remedial Investigation (RI)



Feasibility Study (FS)



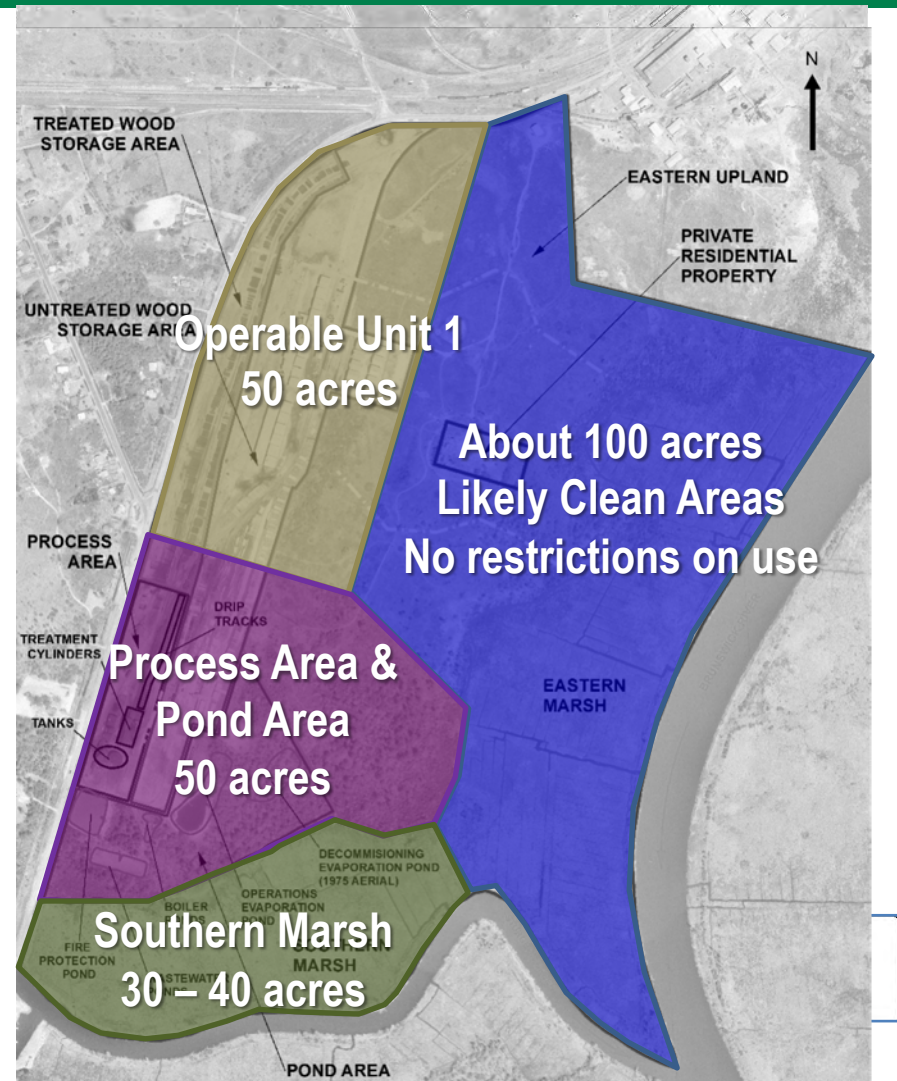
Proposed Plan
(Record of Decision)



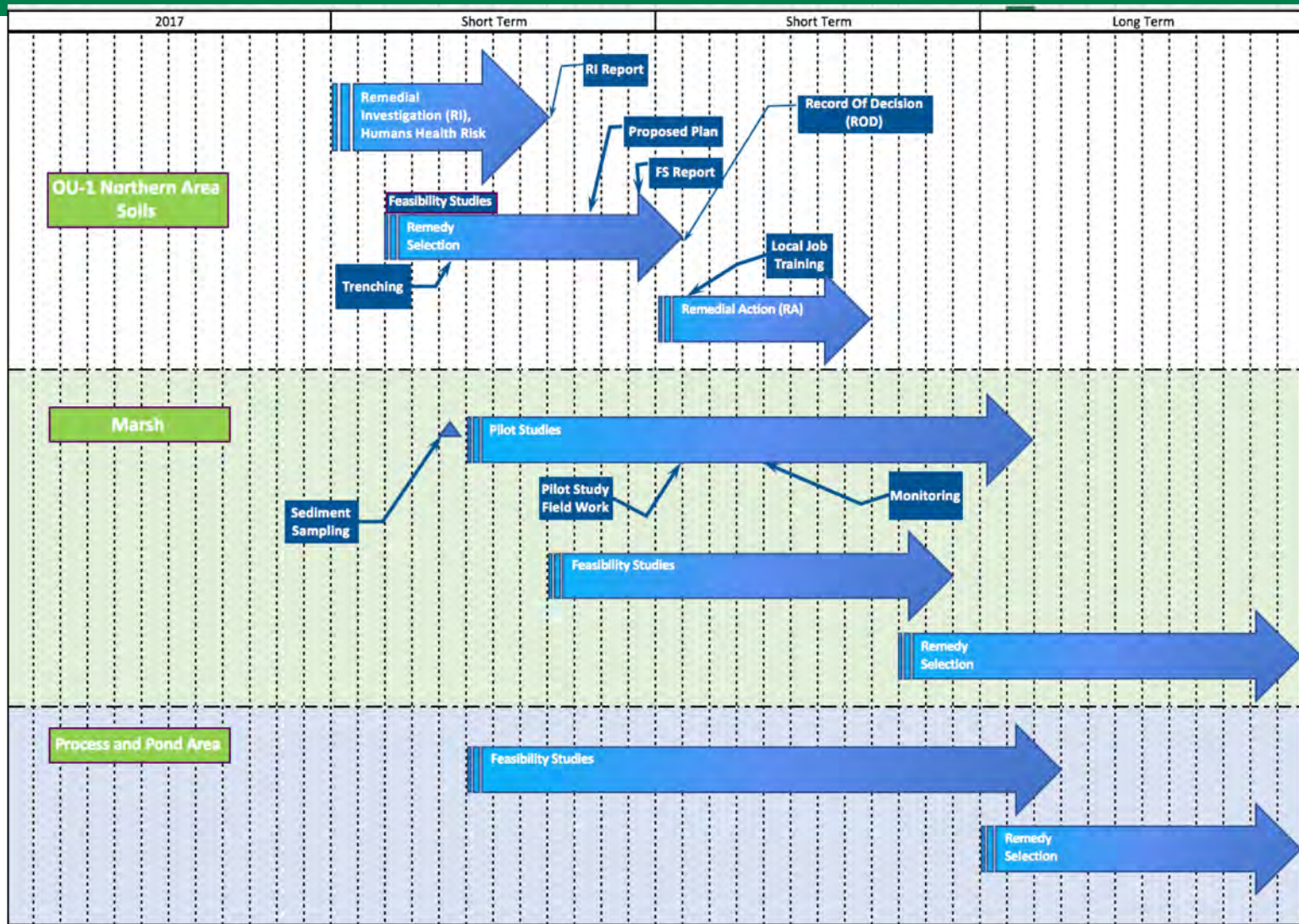
Remedial Design (RD)



Remedial Action (RA)



2018 Activities Schedule



Superfund Process and Record of Decision (ROD) Update

Erik Spalvins, EPA



How we got here

- ✓ **2005, Kerr McGee created “Tronox”, which went bankrupt in 2009**
- ✓ **EPA took over investigation in 2010**
- ✓ **Tronox Bankruptcy Settlement Agreement finalized in February 2011**
 - ✓ **Multistate Trust funds can only be used for cleanup**
 - ✓ **Navassa Trustees Council - Natural Resource Restoration by NOAA, N.C. DEQ, FWS**
- ✓ **Multistate Trust created in 2011**

Superfund Process

Remedial Investigation (RI)



Feasibility Study (FS)



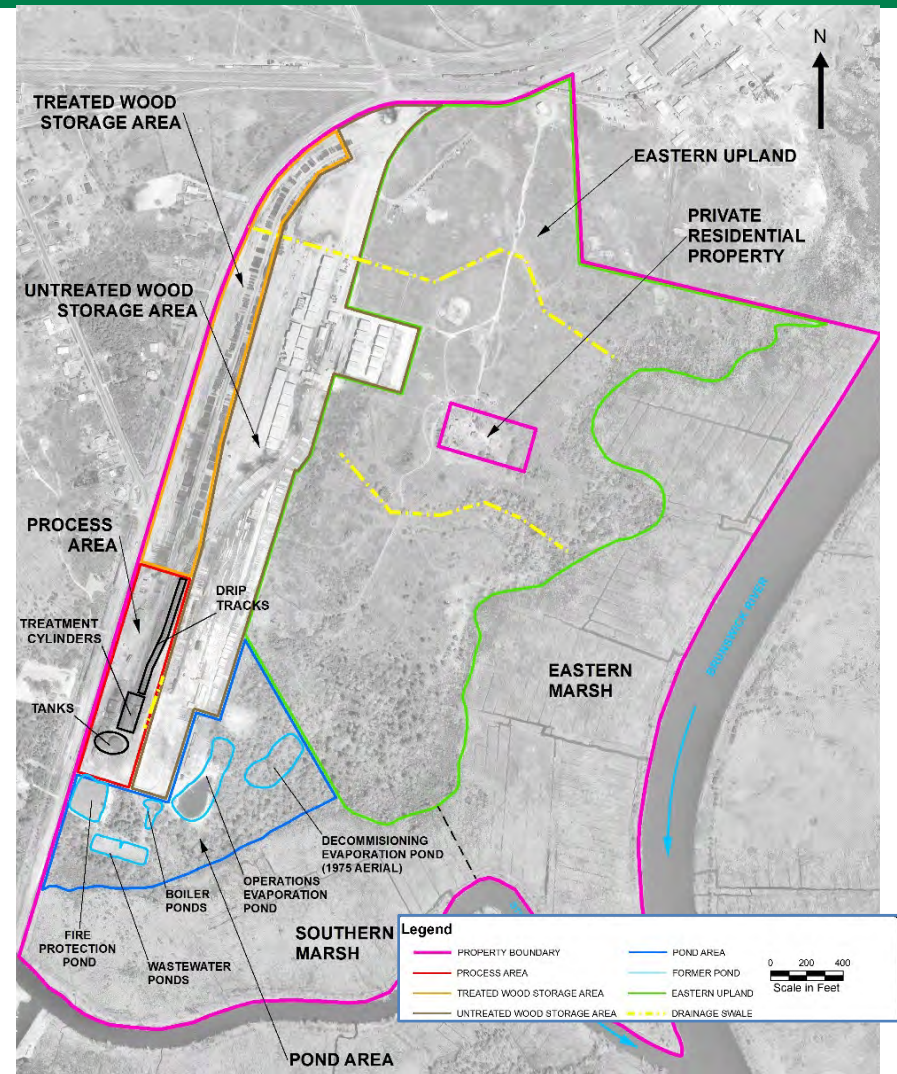
Proposed Plan
(Record of Decision)



Remedial Design (RD)



Remedial Action (RA)



Steps of Feasibility Study

- Overall goal of cleanup: Remedial Action Objectives
 - Prevent unacceptable risk to human receptors from exposure to soil with concentrations of COCs above health-based cleanup goals.
- General Response Actions
- Develop Remedial Alternatives
- Analyze and compare

Remedial Alternatives

- **Alternative 1 – No Action**
- **Alternative 2 – Institutional Controls**
- **Alternative 3 – Removal and Offsite Disposal**
- **Alternative 4 – Removal and Onsite Consolidation**

Proposed Plan

- Site Background and history
- Site Characteristics
- Summary of Site Risks
- Remedial Action Objectives
- Remedial Alternatives and Evaluation of Alternatives
- Summary of the Preferred Alternative

Contact Information

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Questions and Discussion