

Community Meeting

Update on Penobscot Estuary Mercury Remediation Activities



Greenfield Penobscot Estuary Remediation Trust
Trustee of the Penobscot Estuary Mercury Remediation Trust

Bucksport, Maine – The Alamo Theatre
October 29, 2025



Greenfield Penobscot Estuary Remediation Trust LLC
Trustee of the Penobscot Estuary Mercury Remediation Trust

Today's Talk

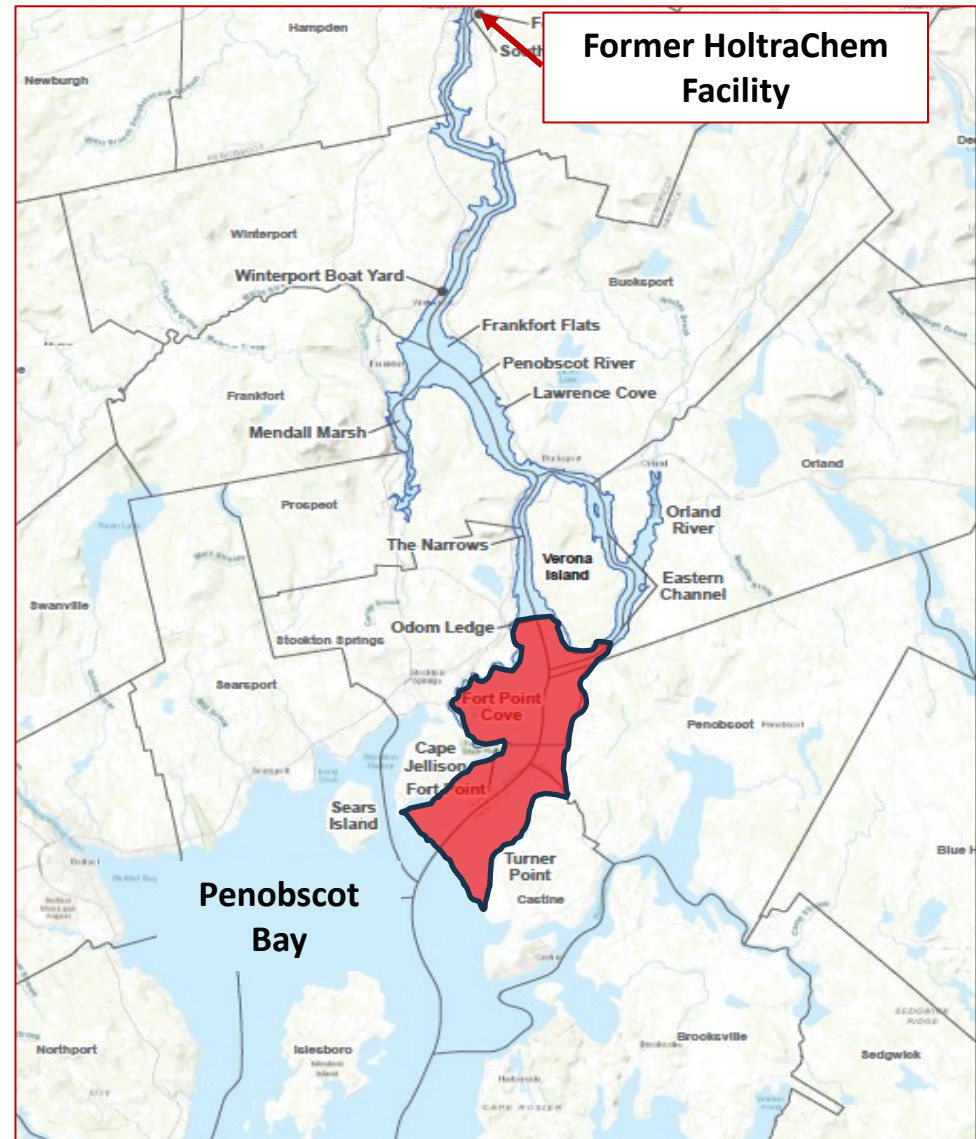
- ✓ Mercury in Maine and the environment
- ✓ Overview of Consent Decree
- ✓ Remediation plans and progress
- ✓ Questions and discussion



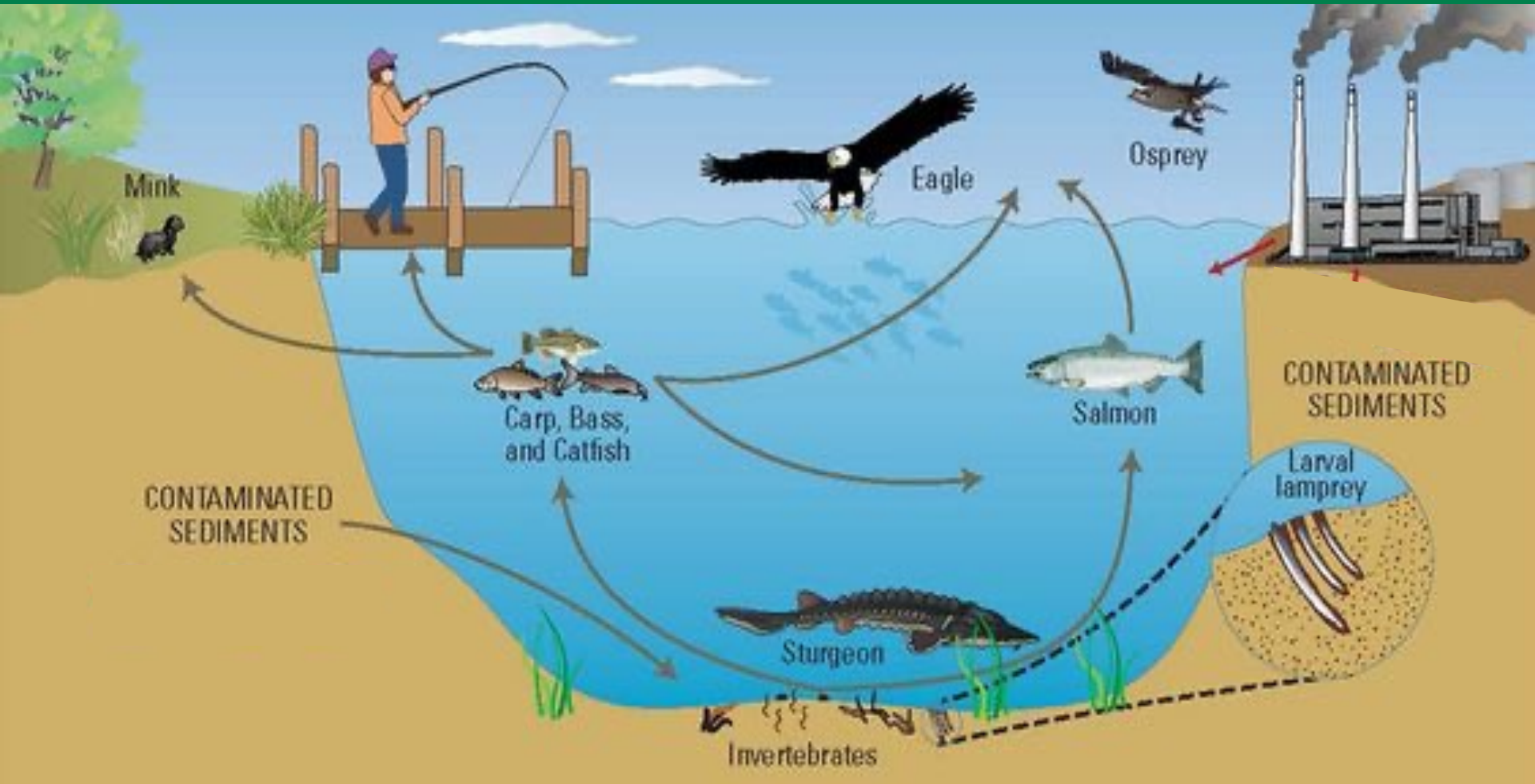
Mercury in Maine

- ✓ Present and persistent in environment
- ✓ Breaks down to highly toxic methylmercury
- ✓ Mercury levels in Maine fish, loons, and eagles among highest in North America
- ✓ **Statewide advisory** on fish consumption
- ✓ Estuary lobster and crab fishing closures

<https://www.maine.gov/dep/mercury/>
for more information



Mercury in Environment and Food Chain



Natural recovery of Estuary may take more than 100 years

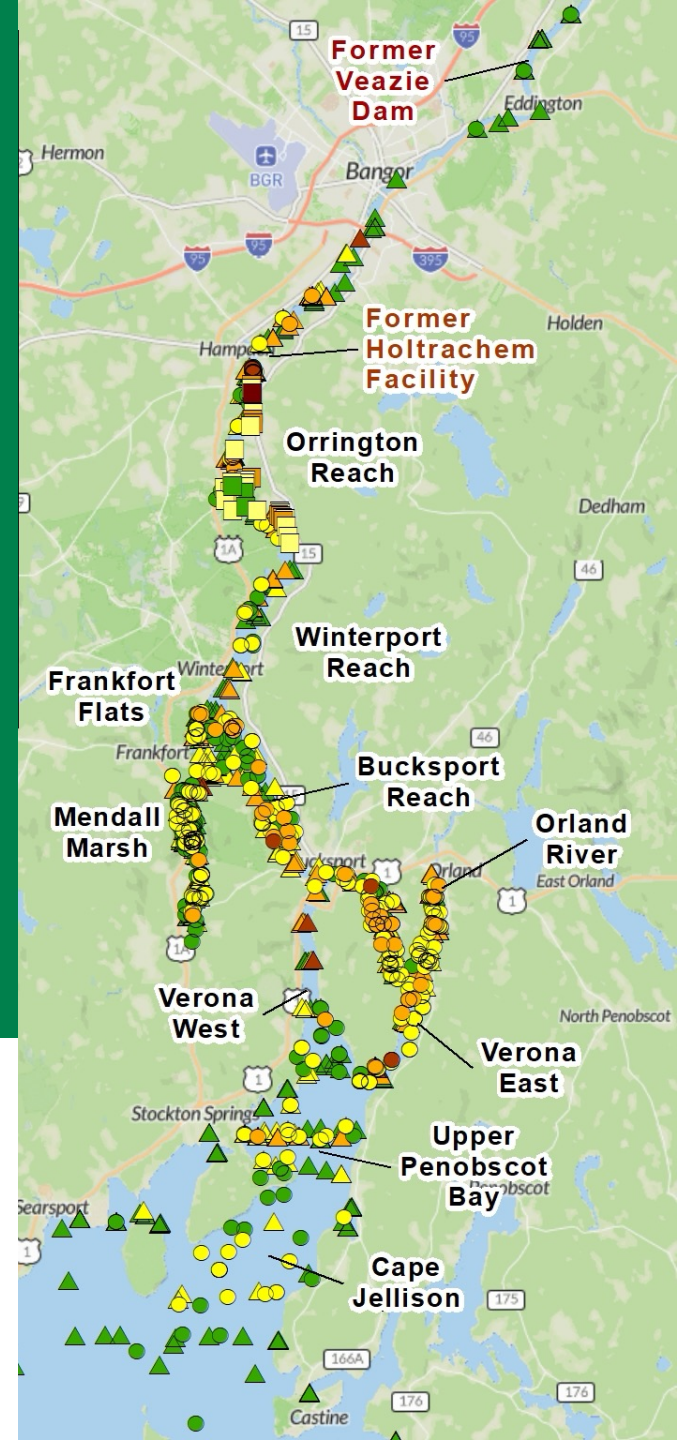


Mercury discharged from HoltraChem in late 1960s and early 1970s has contaminated sediment throughout Penobscot River Estuary

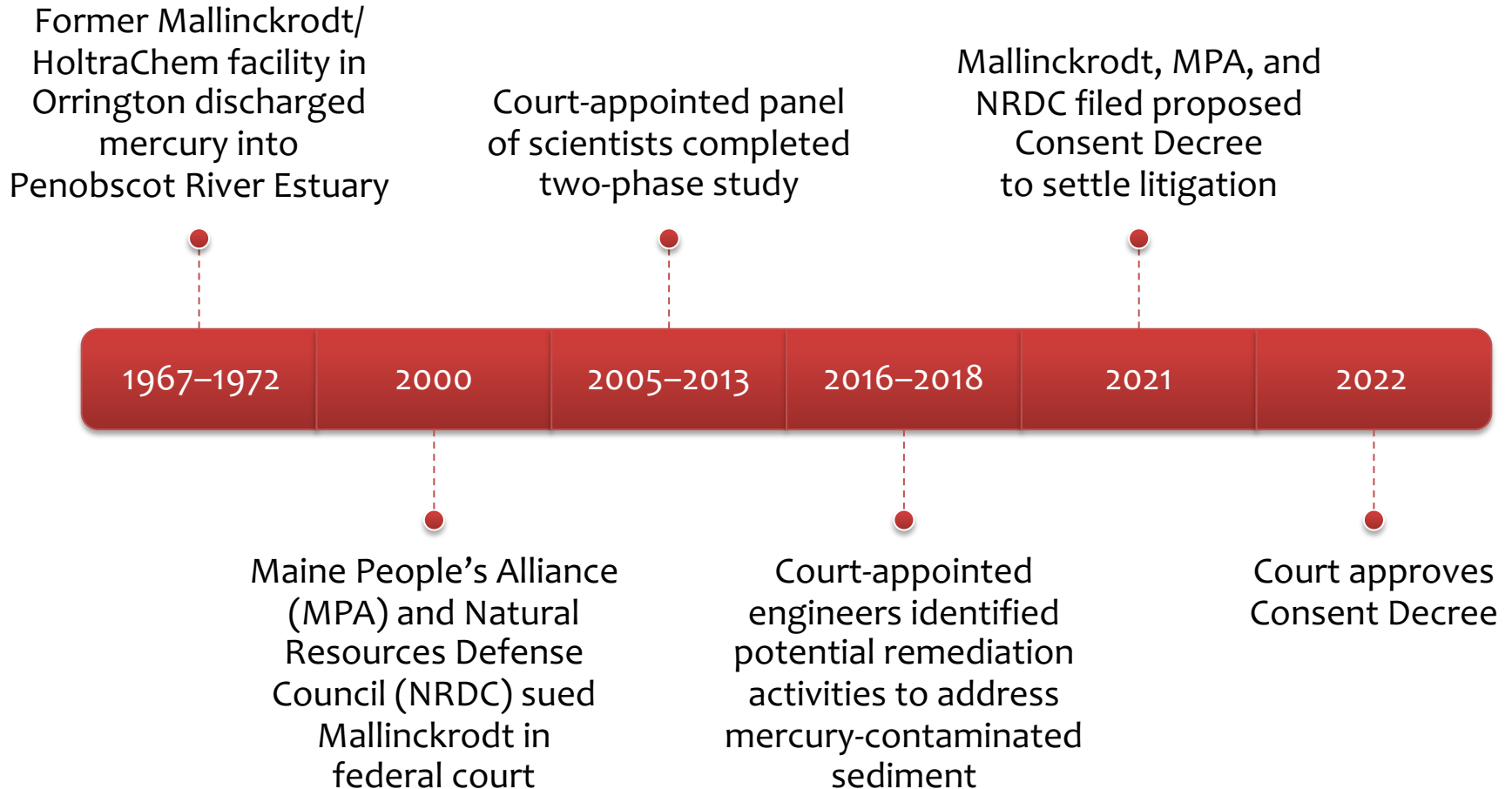
Surface Sediment Maximum Mercury Result (ng/g)

- < 500
- 500 - 1,000
- 1,000 - 2,000
- > 2,000

1,000 nanograms/gram (ng/g)
equals
1 part per million (ppm)



Timeline



Overview of Consent Decree

Site:
Tidal Portions of
Penobscot River Estuary
from Former Veazie Dam
to Upper Penobscot Bay



- ✓ Mallinckrodt to provide:
 - \$187 million for remedies, monitoring, and beneficial projects
 - Additional \$80 million in potential, contingent funds
 - Total funding: \$267 million
- ✓ Specifies remedies to:
 - Reduce mercury exposure
 - Accelerate recovery
- ✓ Creates two independent trusts
 - Mercury Remediation Trust
 - Beneficial Environmental Projects Trust
- ✓ Named Beneficiaries of Trusts:
NRDC/MPA and Mallinckrodt
- ✓ Larger Beneficiaries: Public, Citizens of Maine,
and Penobscot River Estuary

Greenfield Penobscot Estuary Remediation Trust LLC

- ✓ Independent Trustee for Remediation Trust
- ✓ Responsible for overseeing, managing, and performing Work required by Consent Decree
- ✓ Greenfield has 35 years of experience
 - Serving as court-approved environmental response and custodial trustee
 - Managing complex environmental cleanups around country



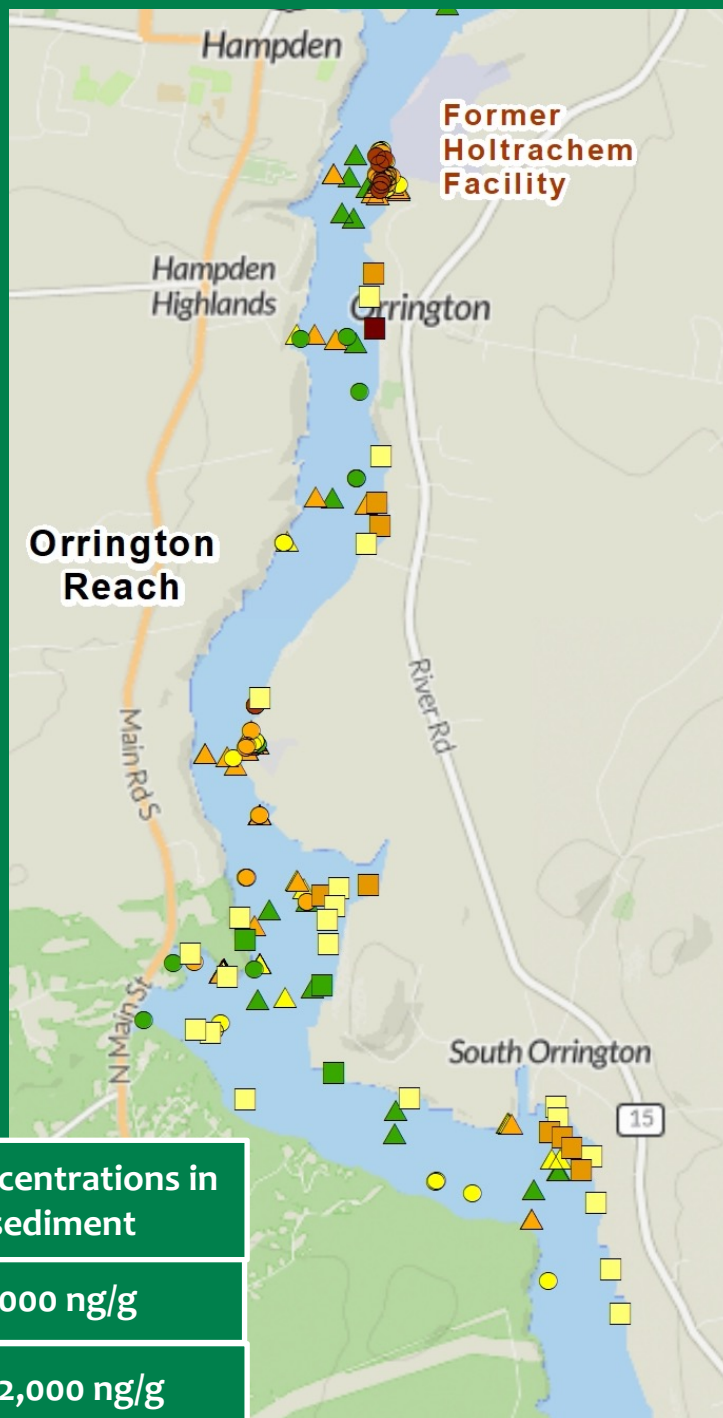
Orrington Reach Remedy

\$50 Million to Cap ±130 Acres of Intertidal Flats
\$10 Million in Contingent Funding

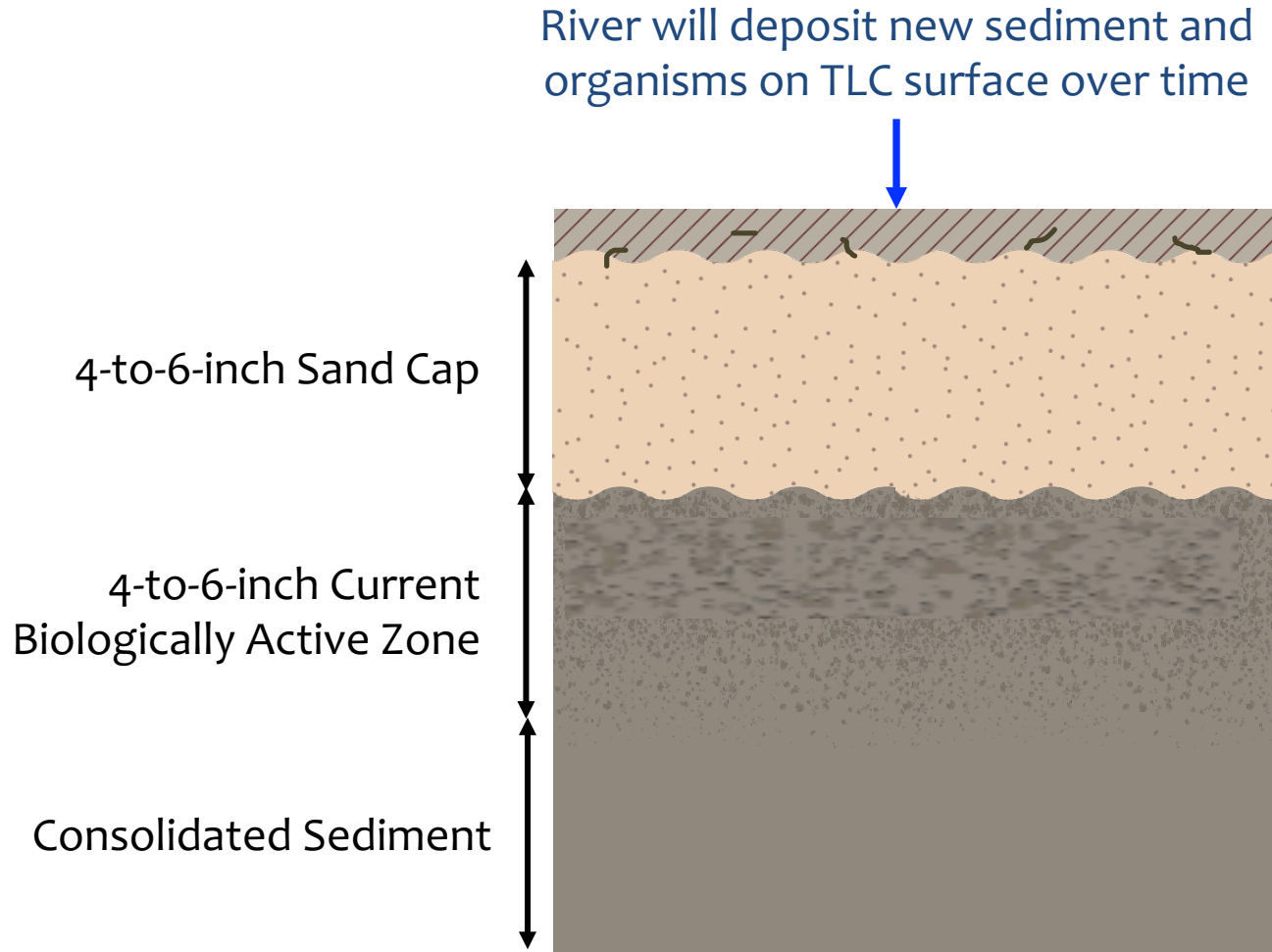


Thin Layer Cap (TLC): Purpose

- ✓ Reduce exposure to mercury
- ✓ Enhance recovery
 - Mercury concentrations remain elevated
 - River deposits ± 0.2 inch of new sediment yearly
 - TLC adds 4 to 6 inches of clean sand immediately

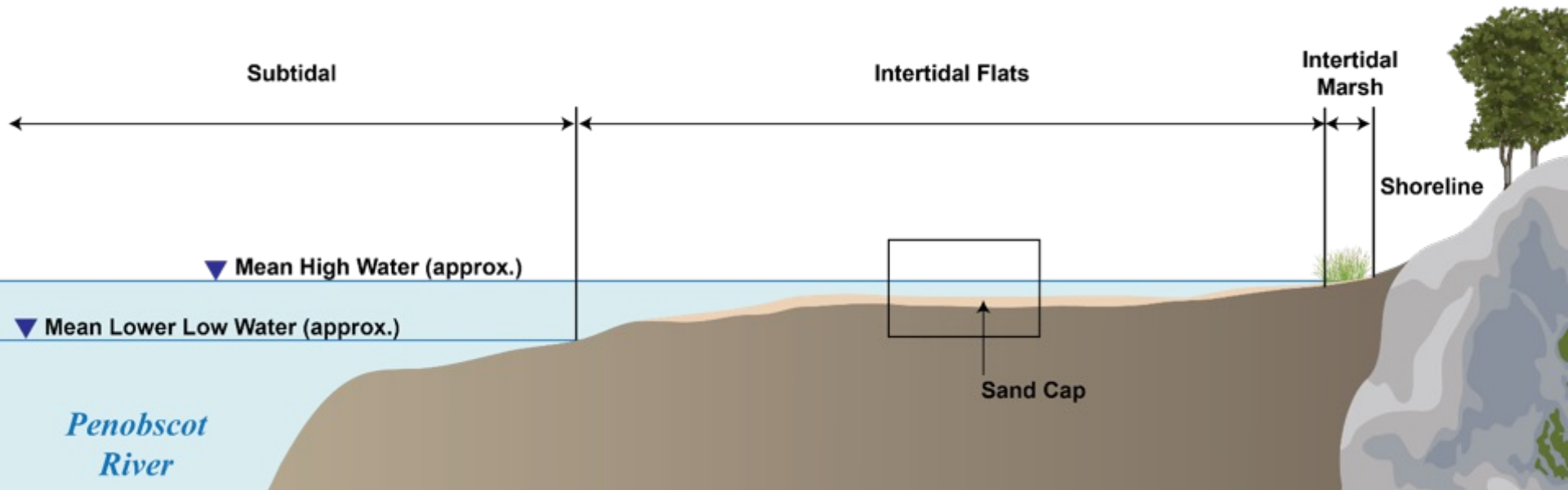


Thin Layer Cap (TLC) Proposed to Enhance Recovery

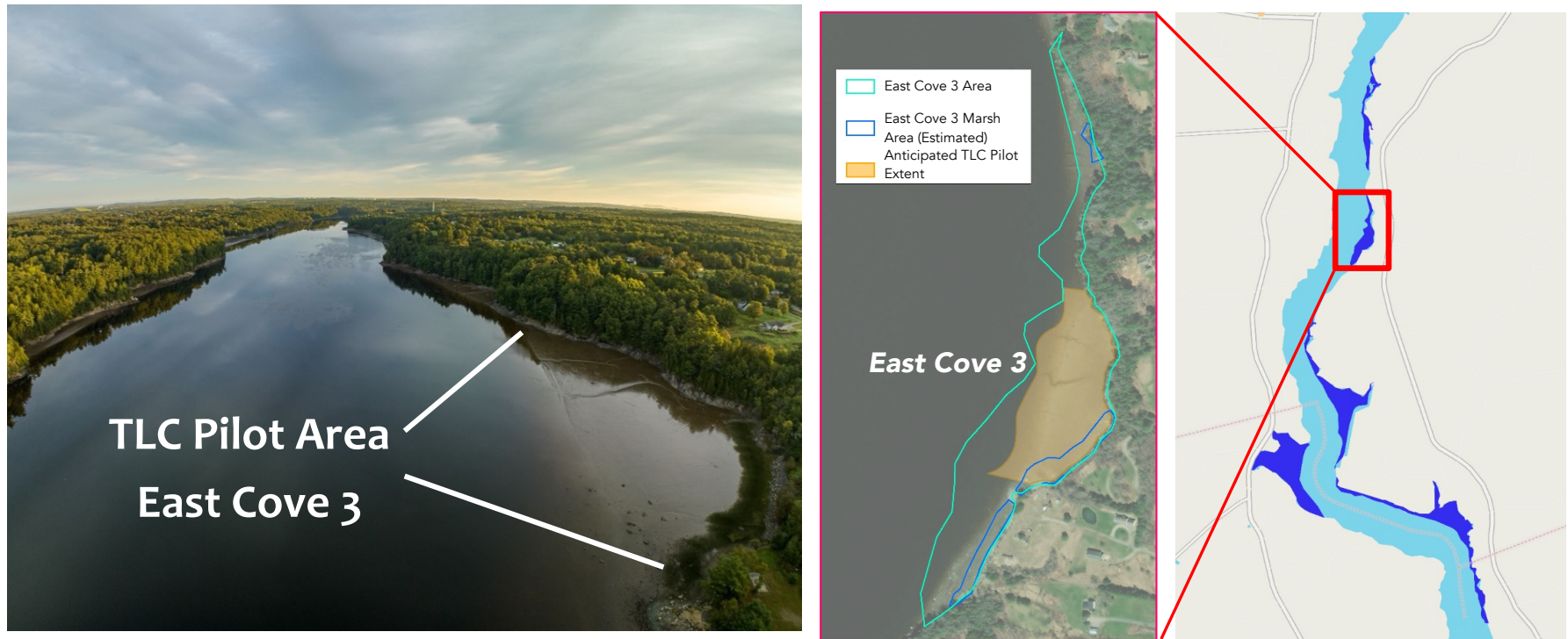


Thin Layer Cap (TLC) Pilot Objectives

- ✓ Evaluate stability and effectiveness in Penobscot River Estuary
- ✓ Demonstrate TLC is protective of natural resources



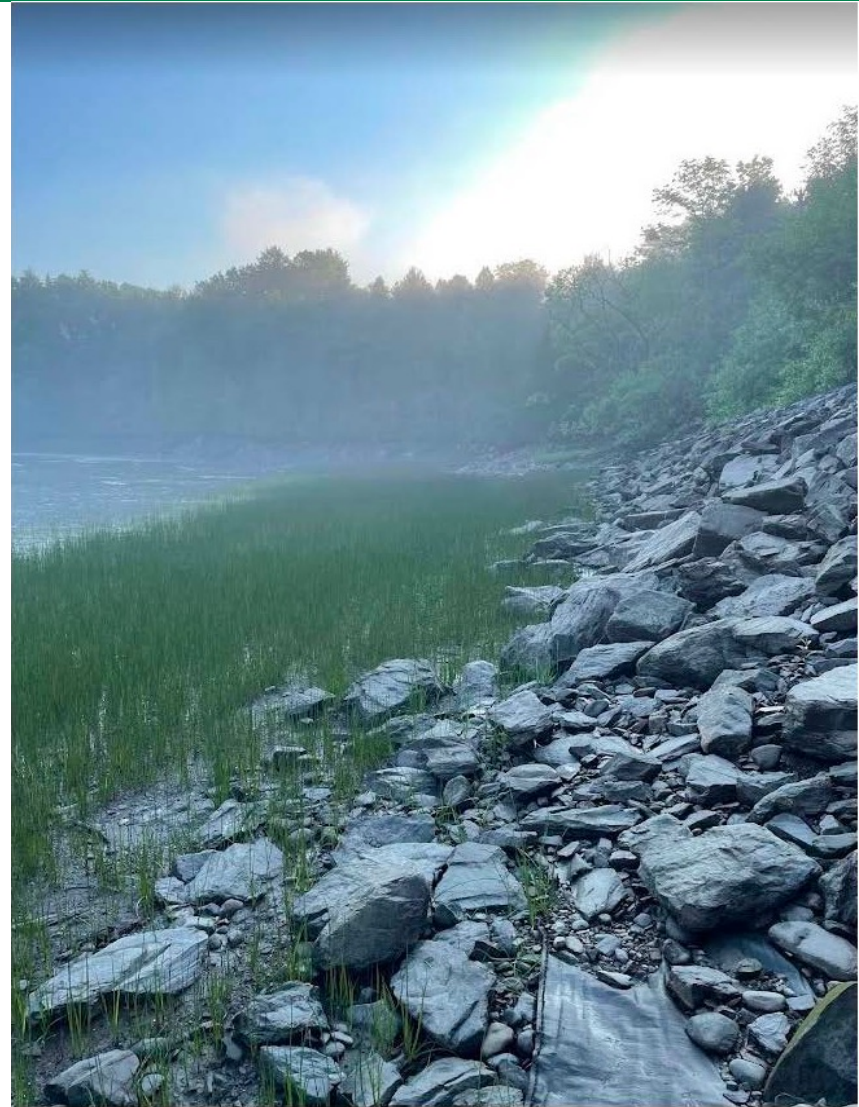
Information from Thin Layer Cap (TLC) Pilot



- ✓ Cap stability
- ✓ Effects on natural resources
- ✓ Sediment accumulation
- ✓ Feasibility of full-scale capping

Pilot To Evaluate Potential Environmental Impacts

- ✓ Water quality
- ✓ Benthic community and foraging habitat
- ✓ Low marsh vegetation
- ✓ Shoreline erosion and tidal effects



Permitting Process Ensures Remedies Are Reviewed and Protective

- ✓ State Natural Resources Protection Act (NRPA) permit
 - Issued by Maine Department of Environmental Protection
 - Reviewed by multiple state agencies
- ✓ Federal regulations
 - Clean Water Act
 - Rivers and Harbors Act
 - U.S. Army Corps of Engineers lead
- ✓ Local regulations
 - Stormwater Management Rules
 - Solid Waste Rules, Beneficial Reuse
 - Planning Board/Select Board
 - Shoreland Zoning

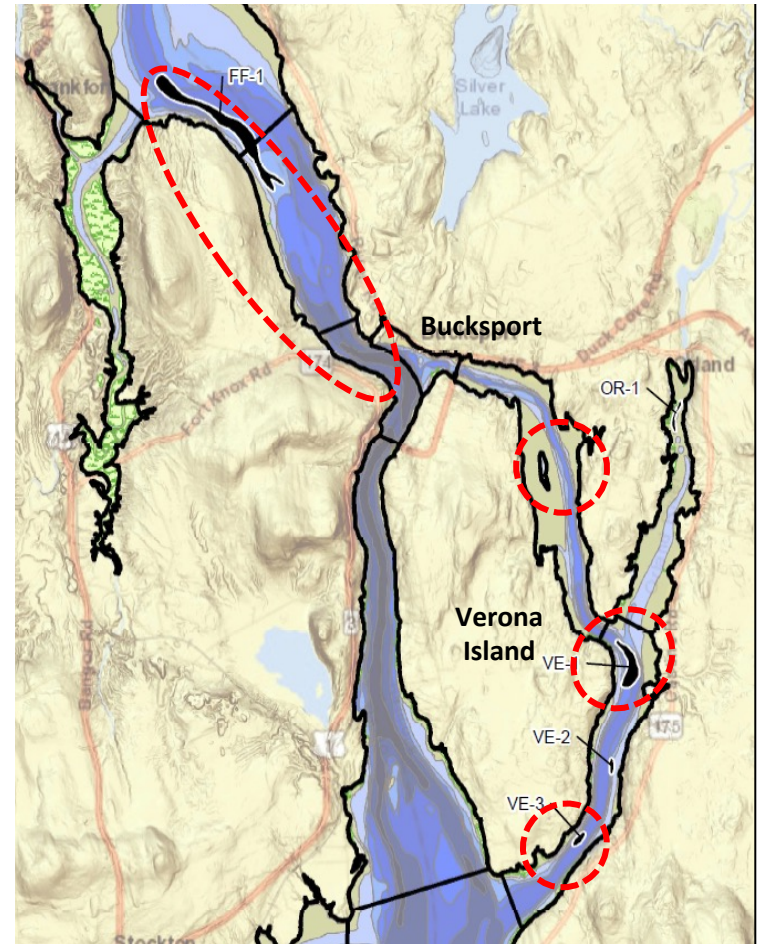


Mobile Sediment and Surface Deposits Remedy

\$70 Million for Removal and Beneficial Reuse

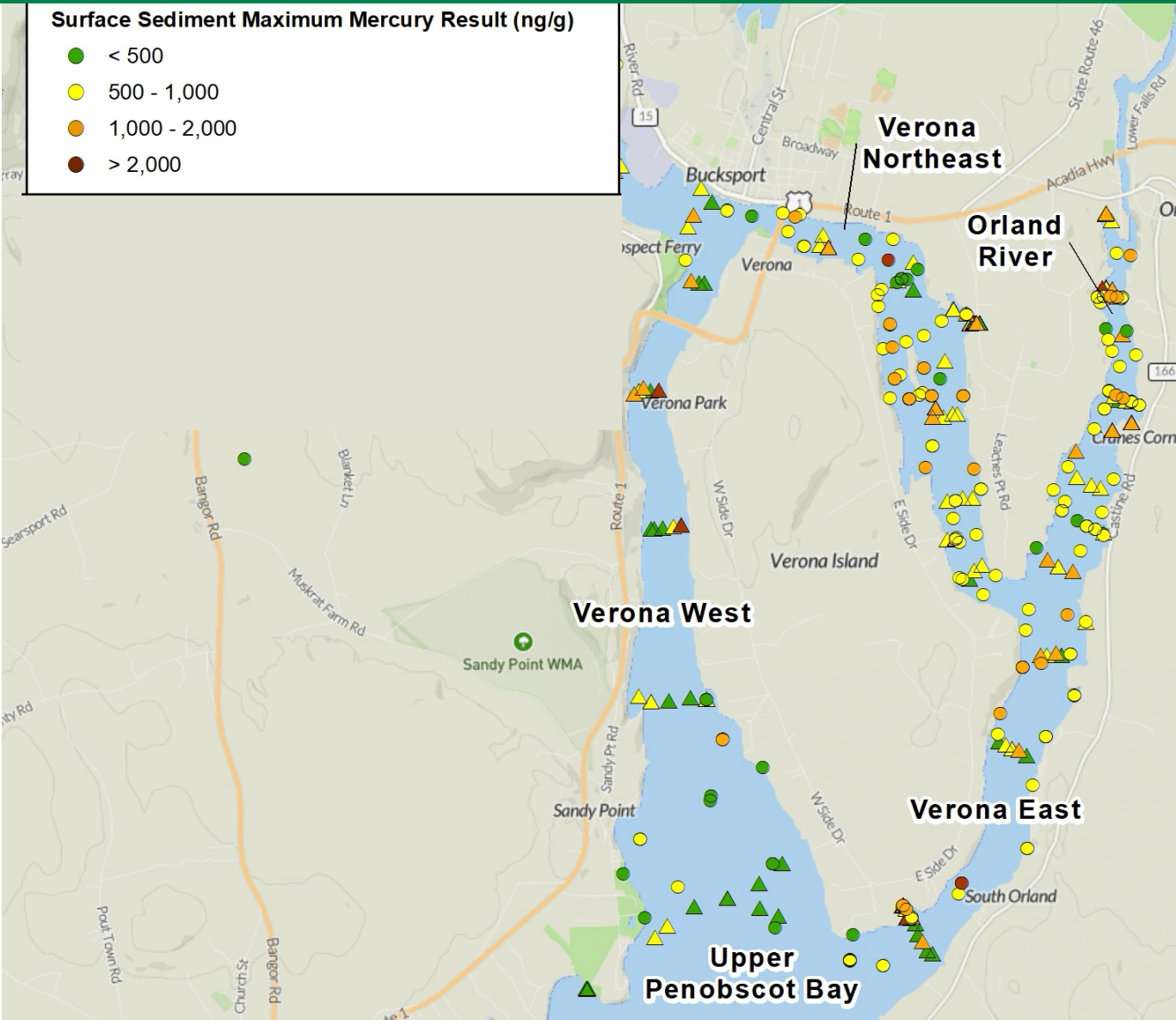
\$50 Million in Contingent Funds for Disposal

- ✓ Goal - Reduce volume of contaminated sediment moving within Estuary
- ✓ Preliminary removal targets
 - Sediment that can become mobile
 - Deposition areas
 - Areas with higher mercury levels
- ✓ Investigations planned for 2026



Orland River and East Channel Around Verona Island Remedy

\$30 Million to Select and Implement Remedy



- ✓ Remedy not specified
- ✓ Evaluating capping and removal

Long-term Monitoring

\$10 Million to Monitor Fish and Wildlife for 30–45 Years

\$10 Million in Contingent Funding



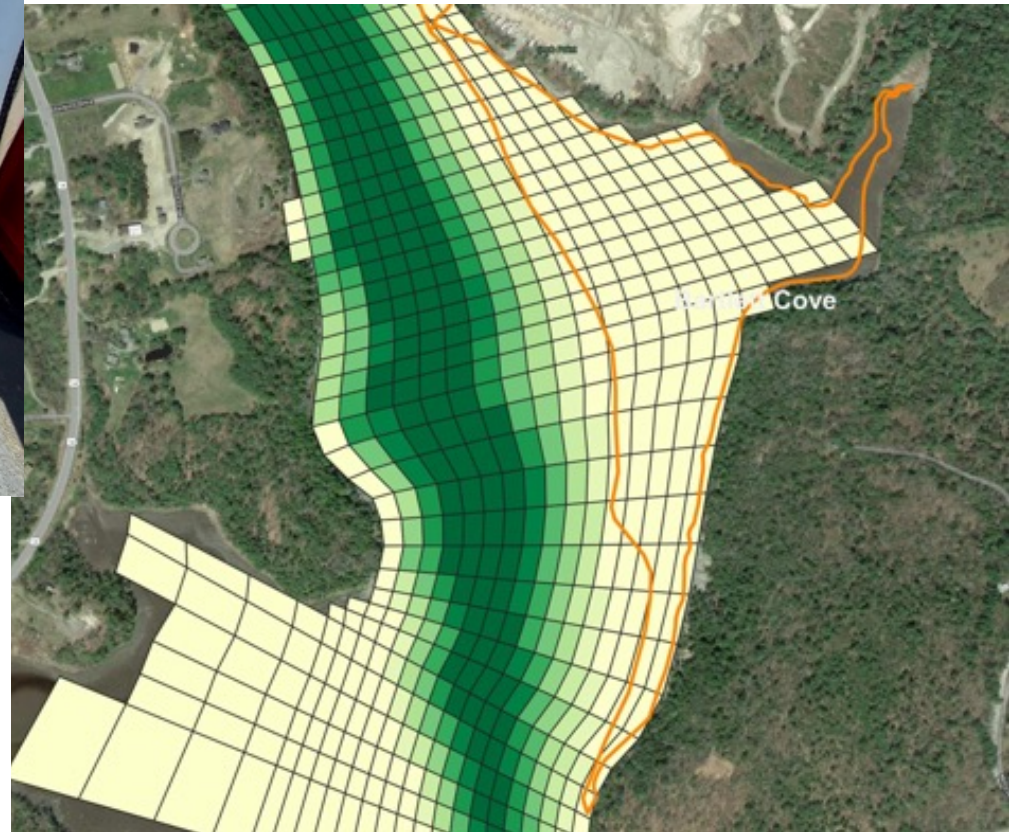
Long-Term Monitoring: A Snapshot in Time

- ✓ Monitoring mercury concentrations in Estuary and reference locations
- ✓ Sediment and surface water
- ✓ Organisms living in sediment
- ✓ Fish and lobster
- ✓ Birds
- ✓ 2023–2024 data show mixed results
- ✓ Next sampling event in 2026



Investigations Completed to Model River Flow

Hydrodynamic Model Grids



✓ Model Inputs

- River Flow Velocity Monitoring
- Bathymetric Survey



Field Investigations Completed to Date

- ✓ Coastal Wetland Assessments
- ✓ Sediment Pre-design Investigations
- ✓ Benthic Survey
- ✓ Ice Scour Monitoring
- ✓ 2023–24 Long-term Monitoring



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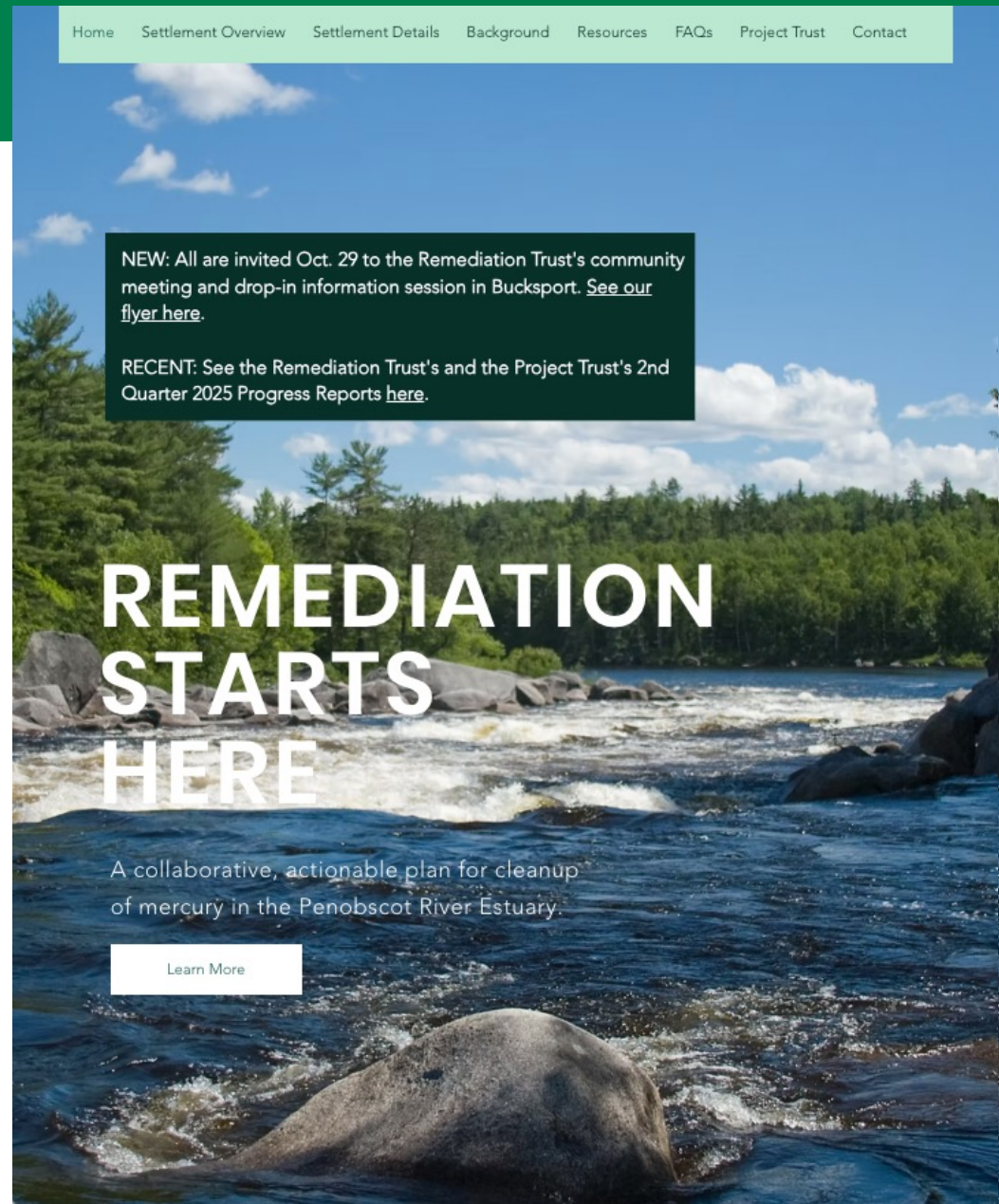
Beneficial Environmental Projects

\$20 Million to Offset Harm
Caused By Mercury



For More Information

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<https://www.penobscotriverremediation.com>



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A wide river flows between forested banks under a dramatic, cloudy sky. The water is calm, reflecting the sky and the surrounding greenery. The sky is filled with large, white, fluffy clouds, and the sun is shining through them, creating a bright, hazy atmosphere. The banks are covered in dense, green trees and shrubs. The overall scene is peaceful and scenic.

**We have the honor, and the once-in-a-generation opportunity,
to enhance recovery of the Penobscot River Estuary.**

– Greenfield Penobscot Estuary Remediation Trust LLC

Questions and Discussion

