

**Thin Layer Cap Pilot Project
Natural Resources Protection Act Permit Application**



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

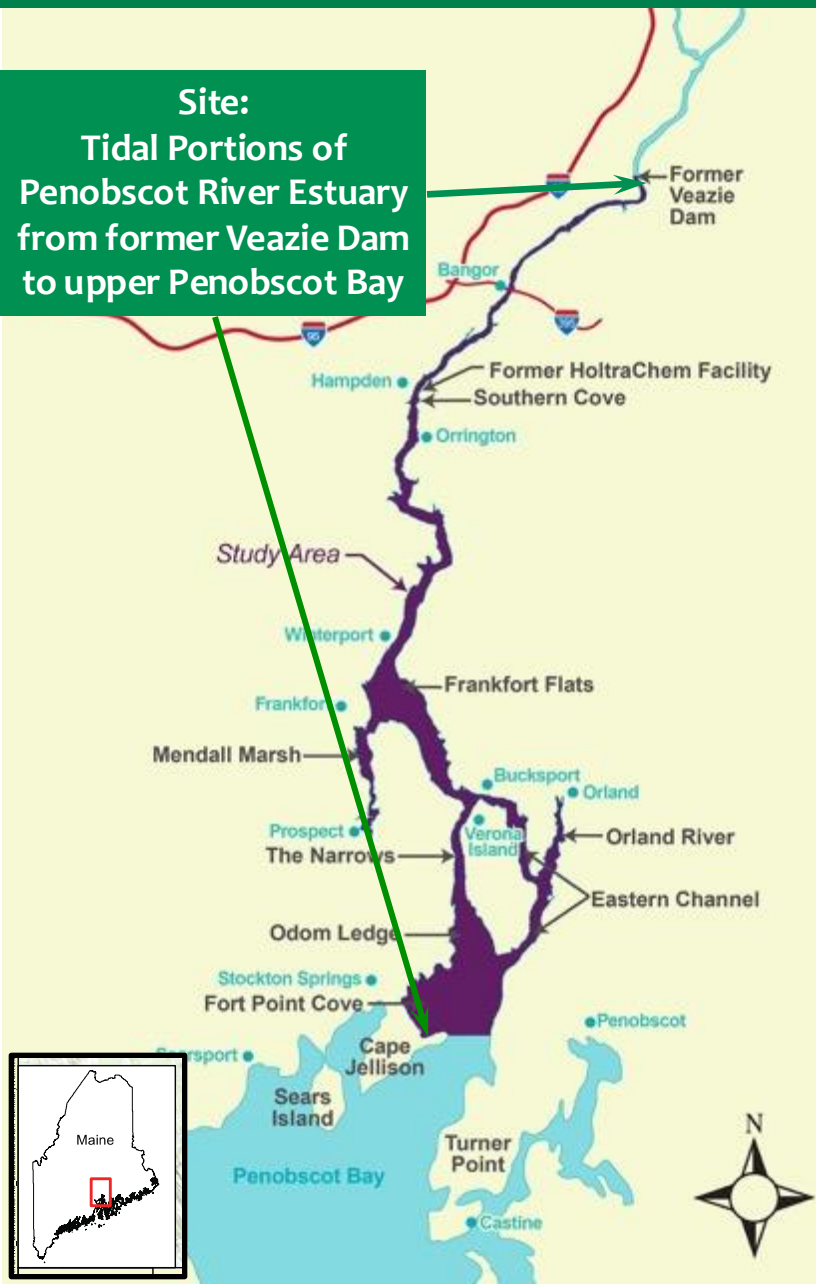
**Public Informational Meeting
February 5, 2025
Town of Orrington, Town Hall Annex, Maine**

Meeting Purpose: Inform Public

- ✓ Describe Thin Layer Cap (TLC) Pilot project
- ✓ Identify anticipated environmental impacts
- ✓ Review Natural Resources Protection Act (NRPA) permit application
- ✓ Identify state and federal permits required
- ✓ Outline DEP public participation process
- ✓ Provide opportunity for questions and comments



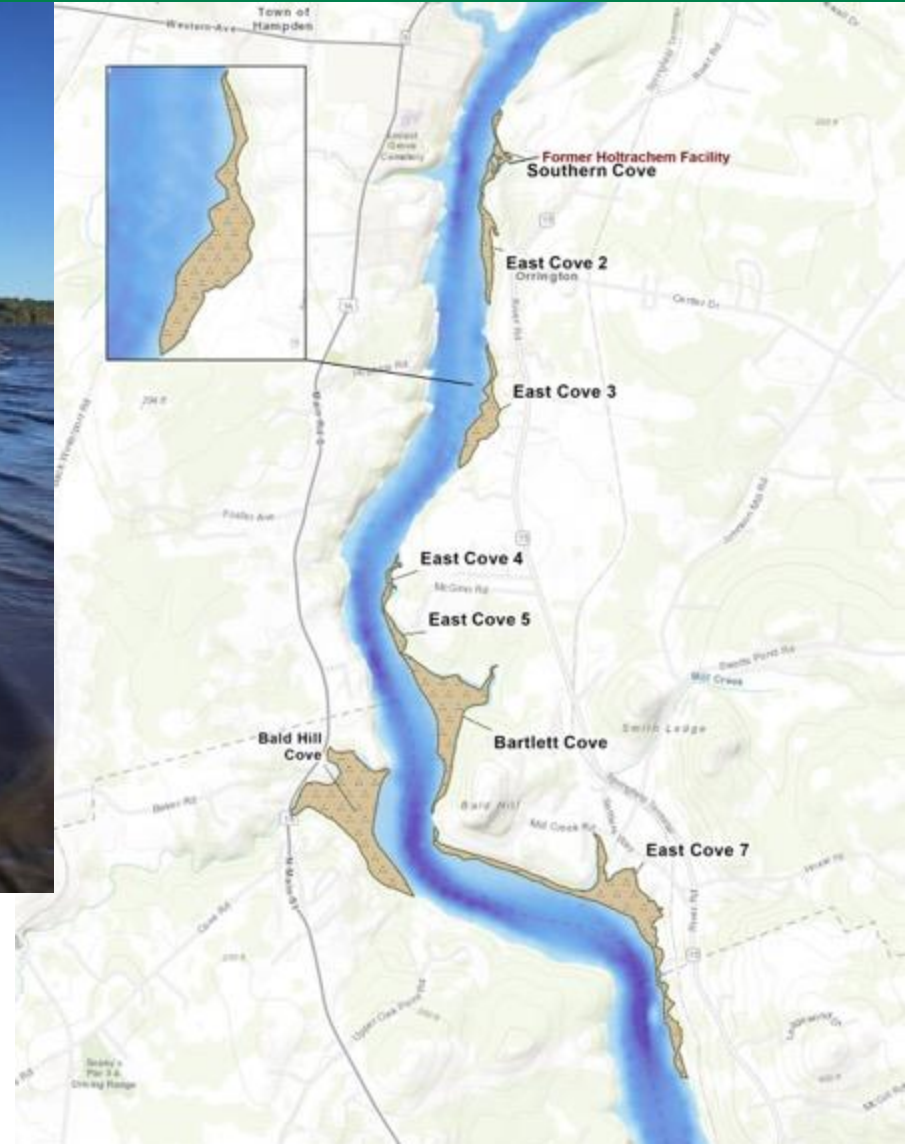
Consent Decree: Background

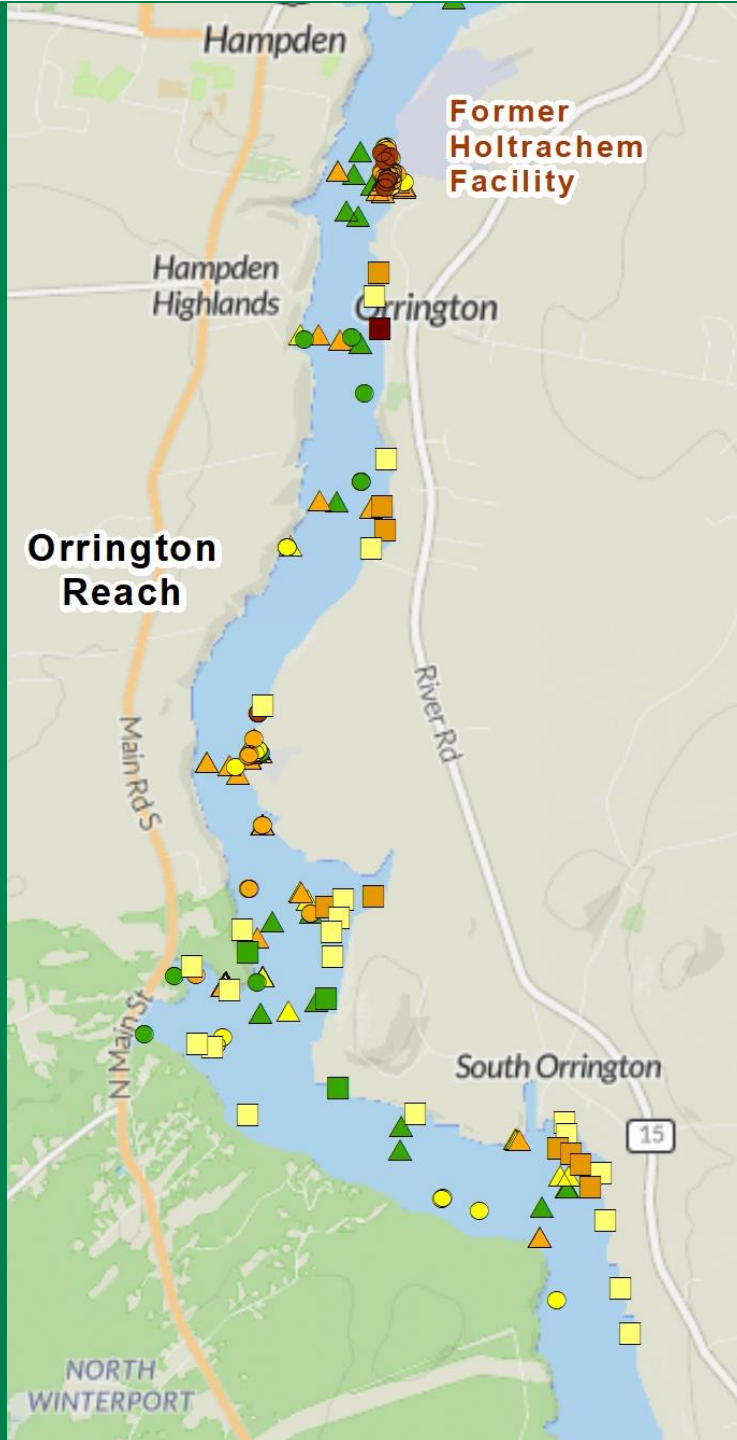


- ✓ Mallinckrodt to provide:
 - \$187 million for remedies and monitoring
 - Additional \$80 million in potential, contingent funds
 - Total: \$267 million
- ✓ Remedies include targeted removal, capping, beneficial projects, and long-term monitoring
- ✓ Created two independent trusts:
 - Remediation Trust
 - Beneficial Environmental Projects Trust
- ✓ Named Beneficiaries: NRDC/MPA and Mallinckrodt
- ✓ Larger Beneficiaries: public, citizens of Maine, and Penobscot River Estuary

Orrington Reach Remedy

\$50 Million for Capping ±130 Acres of Intertidal Flats
\$10 Million in Added Contingent Funding





Thin Layer Cap (TLC) Purpose

- ✓ Reduce exposure to mercury
- ✓ Accelerate recovery
 - River deposits ± 0.2 inch of new sediment yearly
 - TLC adds 4 to 6 inches of clean sand

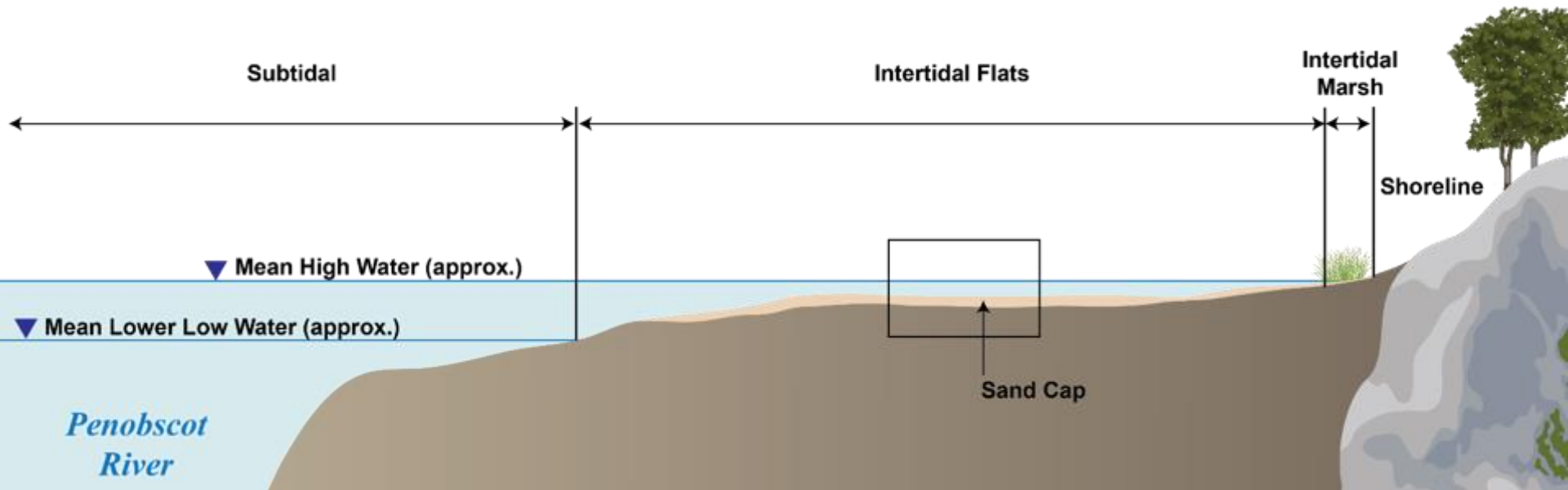
2024 Mercury Levels in Surface Sediment

● 500–1,000 ng/g

● 1,000–2,000 ng/g

Thin Layer Cap Pilot Objectives

- ✓ Evaluate stability and effectiveness
- ✓ Demonstrate TLC is protective of natural resources

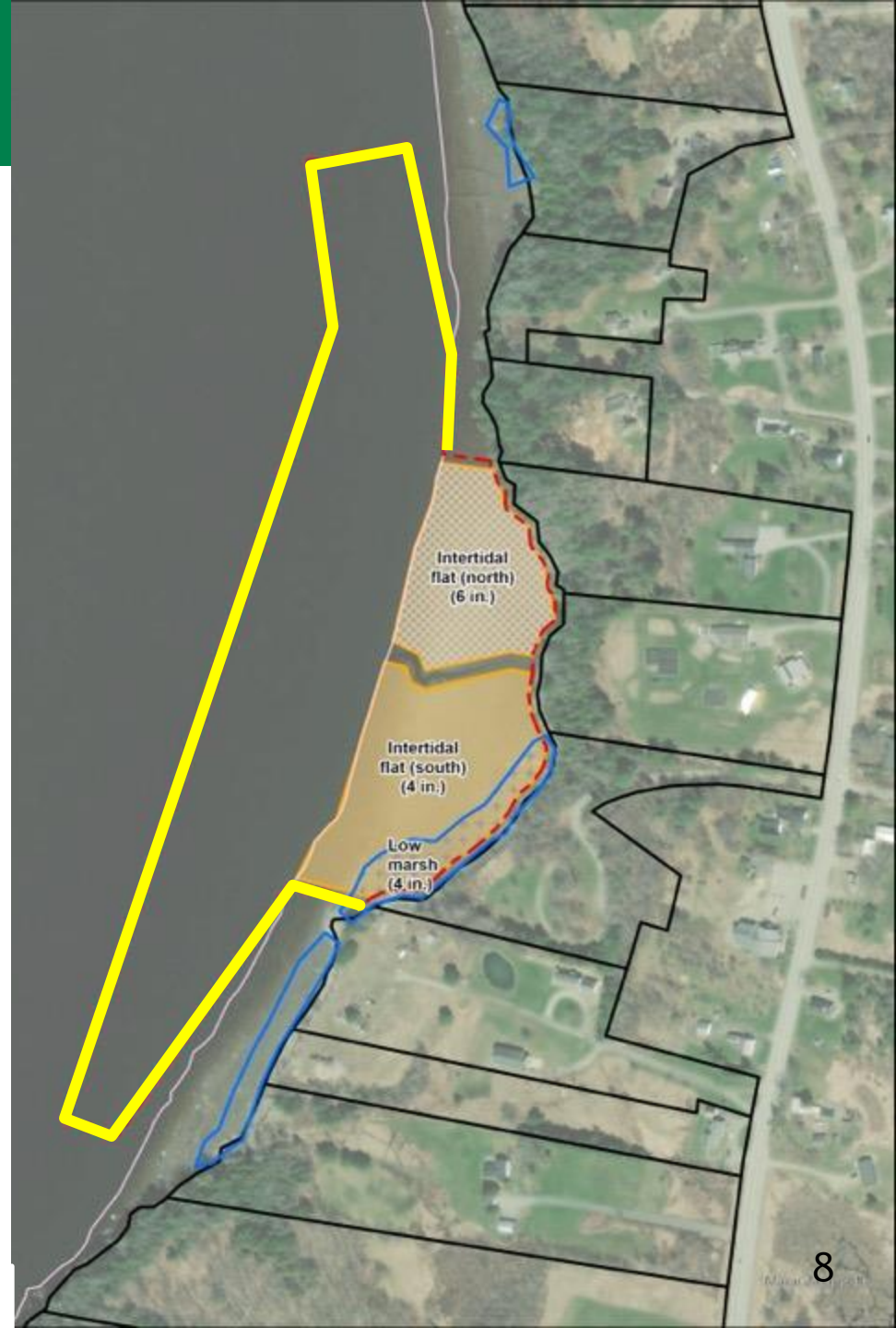


An aerial photograph of a wide river flowing through a dense forest. The river is dark and reflects the sky. The surrounding land is covered in lush green trees. A white bracket is drawn on the right side of the river, pointing to a specific area. The text 'TLC Pilot Area in East Cove 3' is overlaid on the left side of the river.

**TLC Pilot Area
in
East Cove 3**

TLC Pilot: Design

- ✓ Overall Pilot project area ± 22.4 acres
- ✓ TLC Area ± 6.3 acres
- ✓ ± 20 -foot buffer from property lines
- ✓ Cap material
 - Clean sand
 - Locally sourced
- ✓ Approximate cap thickness
 - North area – 6 inches
 - South area – 4 inches
 - Portion of low marsh – 4 inches



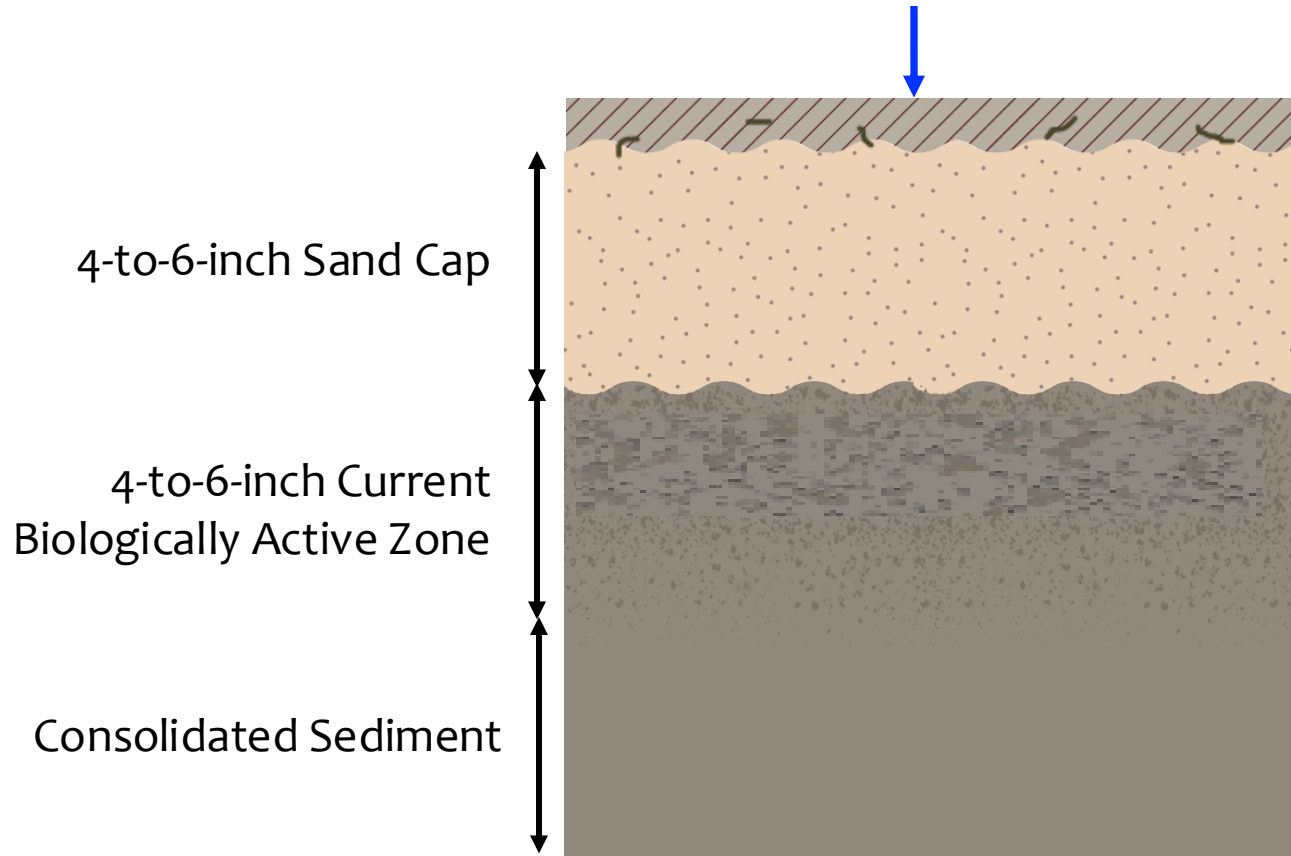
TLC Pilot Will Evaluate Construction Methods

- ✓ All work done from water
- ✓ Typical construction equipment
 - Barges transport sand and equipment
 - Equipment to place and spread sand
 - “Telecaster”
 - Crane buckets
 - Spray sand as “slurry”
- ✓ Environmental controls as needed
- ✓ Monitoring instruments



Enhanced Natural Recovery

River will deposit new sediment and organisms on TLC surface over time



Environmental Information Evaluated

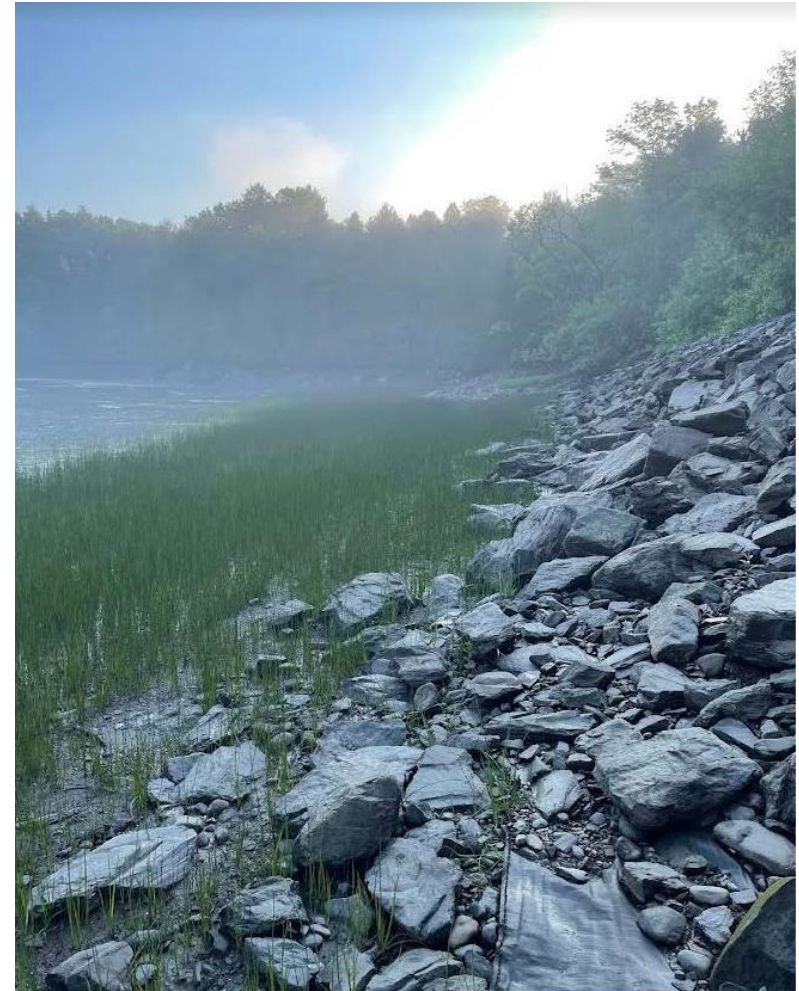
- ✓ Preliminary wetland assessments and field surveys
- ✓ Existing scientific reports
- ✓ State and federal agency documentation and regulations
- ✓ Observations of people familiar with the river



Evaluation of Potential Environmental Impacts

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

East Cove 3



Federally Protected Species and Habitat

✓ Identified 3 protected species

- Atlantic salmon
- Shortnose sturgeon
- Atlantic sturgeon

✓ Project area includes

- Critical habitat
- Essential Fish Habitat

✓ Proposed work window

- Starts September 1
- Avoids spawning season
- Fish may move through Pilot area



Shortnose sturgeon



Anticipated Environmental Impacts

- ✓ Short-term disturbances
 - Water quality
 - Worms, other benthic organisms
 - Transitory foraging
 - Bird and wildlife habitat
 - Low marsh vegetation

- ✓ Post-construction monitoring to document recovery of natural environment

- ✓ Minimal, if any, effect on shoreline erosion or tidal effects

- ✓ Long-term environmental benefits expected



East Cove 3



Controls and Monitoring to Protect Natural Resources

- ✓ Water quality monitoring
- ✓ Turbidity controls, if needed
- ✓ Nesting bird survey and, if needed, avoidance measures
- ✓ Wetland assessments pre- and post-construction
- ✓ Work window
- ✓ Environmental awareness training for contractors



Evaluation of TLC Performance and Protectiveness

- ✓ Post-construction monitoring for at least 2 years
 - Mercury concentrations in TLC
 - Benthic population and mercury concentrations
 - TLC thickness
- ✓ Evidence of ice scour and cap erosion
- ✓ Benthic recovery and evidence of foraging
- ✓ Shoreline stability



NRPA Permit Application: Components

- ✓ Cover Letter
 - Project overview
 - Location
 - Impact Summary
 - Protected Species Effects Summary
- ✓ Attachment 1. Detailed Project Description and Construction Plan
- ✓ Attachment 2. Alternatives Analysis
- ✓ Attachment 3. USGS Topographical Map
- ✓ Attachment 4. Color Photographs
- ✓ Attachment 5. Project Plans



NRPA Permit Application: Attachments

- ✓ Attachment 9. Wetland Delineation Report and Functional Assessment (spring before construction)
- ✓ Attachment 10. Notice of Intent to File and Public Notice Filing Certification
- ✓ Attachment 11. Evidence that Maine Historic Protection Council (MHPC) was Provided
- ✓ Attachment 13. Performance Monitoring Plan
- ✓ Attachment 14. Certificate of Good Standing
- ✓ Attachment 15. Title, Right, or Interest Documentation
- ✓ Attachment 16. Biological and Essential Fish Habitat Assessment, National Marine Fisheries Service



NRPA Application: Attachments Not Provided

- ✓ Attachment 6. Additional Plans (not applicable)
- ✓ Attachment 7. Construction Plan (in Attachment 1)
- ✓ Attachment 8. Erosion Control Plan (Attachment 1)
- ✓ Attachment 12. Functional Assessment (Attachment 9)



Local, State, and Federal Licenses Required

	Agency	Authorities	License / Permit Type
State	Department of Environmental Protection (DEP)	<ul style="list-style-type: none">- Resources Protection Act (NRPA)- Section 401 Clean Water Act<ul style="list-style-type: none">- Stormwater Rules	Individual permit
Federal	U.S. Army Corps of Engineers (USACE)	<ul style="list-style-type: none">- Section 404 Clean Water Act- Section 10 Rivers and Harbors Act	Individual Permit



DEP Public Participation in Licensing Process

- ✓ Commissioner of Department of Environmental Protection (DEP) evaluates license applications for activities that affect Maine's environment
- ✓ Individuals and legal entities may participate at various points during license application processing
- ✓ Commissioner's charge may, under certain circumstances, be overtaken by the Board of Environmental Protection (Board)
- ✓ If person fails to participate during licensing process, only option for influence over that license decision is filing of an appeal



DEP Public Participation in Licensing Process

- ✓ Public Access to Information
 - Records submitted to DEP generally available to the public under Maine's Freedom of Access Act, 1 M.R.S. §§ 400-414.
 - All license application materials are available for review and copying at DEP offices in Augusta, Portland, Bangor, and Presque Isle.
- ✓ Public Notice
 - Maine law requires applicants to publicly make known their intent to submit an application to DEP
 - It is the responsibility of an individual who is interested in following or participating in the license decision-making process to act after seeking out that notice or, if you are an abutter, to act when noticed directly by mail.
- ✓ Public Informational Meetings
- ✓ Prior Notice to Application Filing
 - Abutters to the project location receive notice in the mail.
 - Also published in newspapers serving the area of the project.



DEP Public Participation in Licensing Process

- ✓ “Interested Persons” may
 - Acquire materials submitted to DEP
 - Attend public informational meetings
 - Request that a public hearing be held on a filed application
 - Provide comments on an application or a draft decision
- ✓ Maximum Participation
 - Pre-application and Pre-Submission Meetings
 - Application Comments
 - Draft Order Comments
 - Public Hearing Requests



Materials Available at Meeting

- ✓ Fact sheet: TLC Pilot project
- ✓ Fact sheet: anticipated environmental impacts
- ✓ Fact sheet: DEP public participation in licensing process

Visit www.penobscotriverremediation.com for materials and permit updates



Contact

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www.penobscotrивerremediation.com



Questions?

A wide, calm river flows through a lush, forested landscape. The sky is filled with large, white, fluffy clouds, and the water reflects the light. The banks are covered in dense green trees, and a small white house is visible on the right bank.

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