

ORRINGTON REACH CAPPING UPDATE: THIN LAYER CAP PILOT

This fact sheet was prepared by Greenfield Penobscot Estuary Remediation Trust LLC,
Trustee of the Penobscot Estuary Mercury Remediation Trust

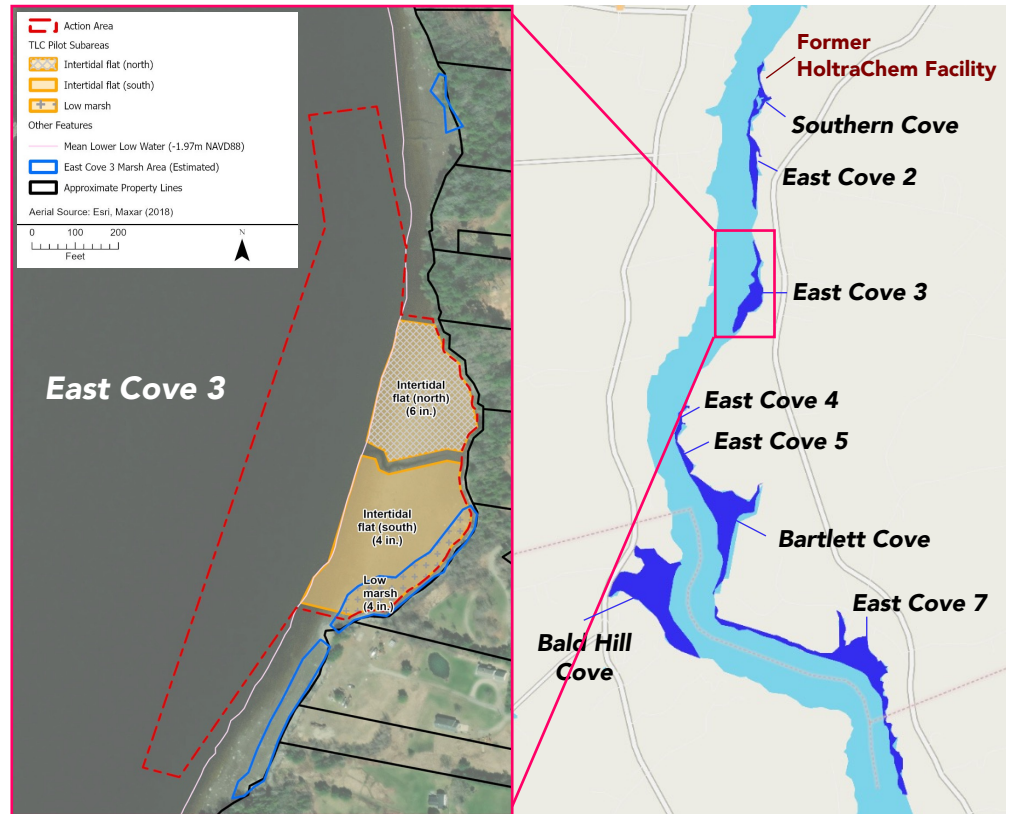
The Trustee of the Penobscot Estuary Mercury Remediation Trust is planning a small-scale pilot test to demonstrate a thin layer cap (TLC) of sand will effectively reduce exposure to mercury in intertidal flat sediments. Information from this TLC Pilot will support plans for capping ± 130 acres of coves between Orrington and North Bucksport, as required by the Consent Decree entered by the U.S. District Court for the District of Maine that resolved litigation related to mercury contamination in the Estuary.

What is the TLC Pilot?

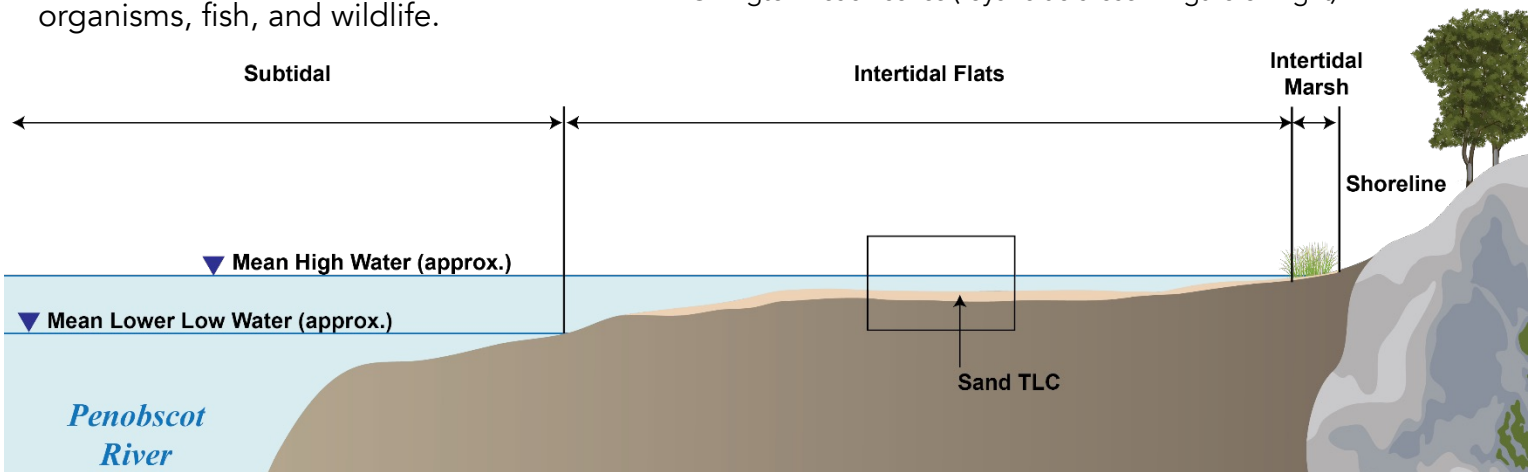
The TLC Pilot will involve placing a 4-to-6-inch layer of clean sand over ± 6.3 acres of contaminated intertidal sediment in East Cove 3 in Orrington if permits are approved.

The TLC Pilot is expected to be implemented in 3 phases over 4 to 6 years.

- **Phase 1** includes investigations, design, and submittal of draft permit applications.
- **Phase 2** entails placing the ± 6.3 -acre TLC and monitoring during construction.
- **Phase 3** will involve monitoring: TLC stability, the mercury concentrations in surface sediment, and potential impacts from the TLC on adjacent marsh areas, organisms, fish, and wildlife.



The TLC Pilot in East Cove 3 (figure on left) will inform potential future planning, design, and permitting for the capping of ± 130 acres of tidal sediments in Orrington Reach coves (royal blue areas in figure on right).



This figure shows where the 4-to-6-inch layer of sand (TLC) will be placed on ± 6.3 acres of intertidal flat surface, if permits are approved.

Phase 1: Investigations, Design, and Submittal of Draft Permit Applications (2024–2025)

The Remediation Trustee completed the following pre-design investigations in June 2024:

- Sampling sediment in the East Cove 3 pilot area for mercury levels and physical properties.
- Surveying the pilot area for the presence of “benthic organisms” (worms and other crustaceans that live in sediment and are an important food source for fish and birds).

Data from these investigations are being used to design the TLC pilot and establish pre-construction baseline conditions.

Because the TLC Pilot area is adjacent to protected natural resources in coastal wetlands and the Penobscot River, the Remediation Trust needs a Natural Resources Protection Act (NRPA) permit from the Maine Department of Environmental Protection (DEP) and the U.S. Army Corps of Engineers (USACE). Maine DEP and USACE will review the NRPA permit application with other agencies (Maine Department of Marine Resources, Maine Inland Fisheries and Wildlife, U.S. Fish and Wildlife Service, and U.S. Environmental Protection Agency) and seek public comment.



This photo shows East Cove 3 during low tide in May 2024.

Phase 2: Construction (2025–2026)

After permits are approved, the Remediation Trustee will engage a contractor experienced in sediment remediation to place the TLC on ± 6.3 acres in East Cove 3. The contractor will be required to implement and monitor controls designed to ensure people and natural resources are protected and to comply with permit conditions. Construction is expected to take 2–4 months.

Phase 3: Monitoring and Reporting

For at least 2 years following construction, the Remediation Trustee will monitor the TLC Pilot area to evaluate cap performance and the impacts on benthic organisms and other ecosystems, which will include:

- Inspecting the cap surface routinely for evidence of erosion;
- Measuring cap thickness to evaluate its stability;
- Sampling sediment periodically to track changes in mercury levels after capping;
- Surveying benthic community recovery; and
- Observing adjacent marsh and shoreline conditions.

The Remediation Trustee will report the monitoring results to the permitting agencies and will post the results on the Remediation Trust’s website at penobscotriverremediation.com.

Our Commitment to Community Involvement

The Remediation Trustee will continue to provide opportunities for public participation and comment on the TLC Pilot and proposed full-scale capping of ± 130 acres in Orrington Reach.

TLC Pilot investigation and design work plans and other documents will be available at penobscotriverremediation.com.

Remediation Trustee

The Trustee of the Remediation Trust is Greenfield Penobscot Estuary Remediation Trust LLC (Greenfield). The U.S. District Court appointed Greenfield as Trustee when it approved and entered the Consent Decree that settled the lawsuit *Maine People’s Alliance and NRDC v. Holtrachem Manufacturing Co., LLC and Mallinckrodt US LLC*.



For more information

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