

Shoreline Protection Work in the Peconic Estuary



With 450 miles of shoreline, PEP is prioritizing the protection of natural shorelines and healthy salt marshes. PEP is working closely with federal, state, and local governments to address shoreline hurdles.

Population growth on Long Island has intensified development pressure around the Peconic Estuary, leading to shoreline hardening and wetland loss. Physical alterations to the Peconic Estuary and its watershed, such as dredging, hardened structures, and clearing of land for human development, all threaten vital habitats and living resources.



**Approximately 20% of
Peconic Estuary shorelines
have been hardened.**

Shoreline hardening fails to provide communities with long-term solutions from coastal erosion and can ultimately reduce shoreline stability.

(PEP 2020 - Analysis of Hardened Shoreline Structures in the Peconic Estuary System for the Townships of Southold, Riverhead, Shelter Island, Southampton, and Easthampton)

Hardened shoreline structures frequently lead to the loss of vital salt marsh and eelgrass bed habitats. This, in turn, reduces spawning habitat for recreationally and commercially important fish species, promotes erosion, and may increase coastal flooding.

Preserving natural shorelines and implementing nature-based solutions will help maintain the physical and biological function of our environment. Natural shorelines can be more resilient and cost-effective over time. Additionally, natural shorelines improve the coastal economy by promoting the growth of fisheries and increasing shoreline access for recreation.

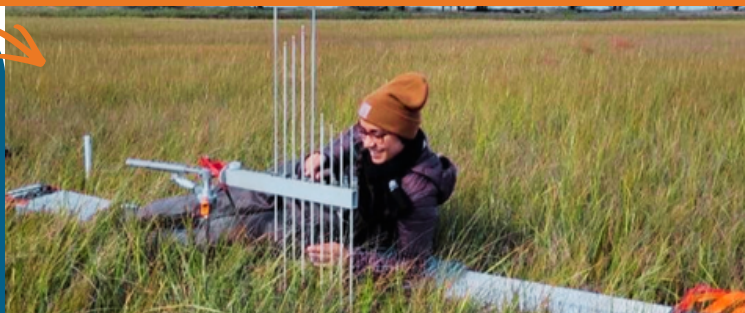
PEP is Working To Protect Shorelines Around the Estuary



Peconic Estuary
Partnership

Monitoring Trend

- SET monitoring measures elevation changes in wetland sediments. This has led to a more complete understanding of the processes controlling tidal marsh elevation changes and vulnerability.
- New York State Horseshoe Crab Monitoring Network assesses the status of and important habitat usage of horseshoe crabs in New York.
- Horseshoe crab spawning habitat data can inform decision-making around estuary hardened structures.



Analyzing Impacts

- PEP Horseshoe Crab Work Group recognized that hardened shorelines disrupt potential horseshoe crab spawning habitat. Information gathered serves as a management plan for estuary habitats and species.
- The PEP Hardened Shoreline Assessment documented the extent of hardened shoreline coverage around the Peconic Estuary to gauge human impact on the health of the coastal ecosystem.
- PEP's Shoreline Adaptation Initiative (SHADI) works to make nature-based solutions a viable option in the Peconic Estuary while also prioritizing the preservation of already occurring natural shorelines.



Creation of Resources

PEP Shoreline Advisory Group & Stakeholders guide the development of relevant resources

- [PEP Shoreline Adaptation Viability Assessment](#) identifies barriers to implementing shoreline adaptation methods by compiling information obtained through shoreline stakeholders.
- [PEP Shoreline Adaptation Site Suitability Model](#) informs, assists, and streamlines decision making on site suitability and erosion control around the estuary.
- [CLPs Tool](#) shares and evaluates environmental data layers to prioritize land protection.