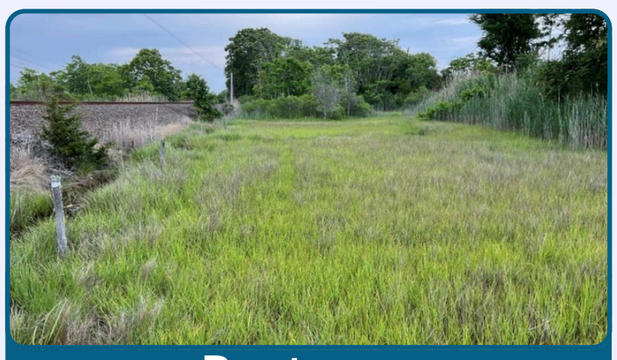
Paul Stoutenburgh Preserve Engineering Designs & Draft Permits

Overview

The Paul Stoutenburgh Preserve (PSP) in Southold, NY, is experiencing the ecological impacts of tidal restriction, leading to the dominance of Common Reed (*Phragmites australis*), a highly invasive species. These conditions are largely due to limited tidal flow from the Peconic Estuary, caused by undersized & partially obstructed culverts along the water's path into the area. **The contractor assessed several solutions aimed at restoring natural tidal dynamics to increase water flow & deter Phragmites spread. Infrastructure-based restoration uses targeted upgrades to naturally restore tidal dynamics,** offering a minimally invasive, cost-effective alternative to dredging. This approach improves wetland resilience, supports native plant communities, and emphasizes adaptive planning through interagency collaboration and engineering-informed restoration.

CCMP Actions

ACTION 28: Protect critical natural resource areas and high-priority lands in the Peconic Estuary watershed



Partners

Town of Southold
Suffolk County Dept. of Health Services
LIRR
NYSDOT

Tidal Restriction Challenges

Current culvert infrastructure severely limits tidal exchange

- 24" culvert under the Long Island Railroad (LIRR)
- 24" culvert under NYS Route 25
- 18" culvert under Old Main Road (installed in 2013)

Preferred Restoration Approach

Culvert Replacement for Hydrologic Restoration. After evaluating multiple options, the preferred design calls for replacing the Old Main Road culvert with an 8 ft wide x 3 ft high concrete box culvert.

This replacement would:

- Enhance tidal flow to the PSP wetland
- Increase salinity & water levels
- Reduce conditions favorable to Phragmite

Ecological & Community Benefits

- Restored Wetland Ecology
- Improved tidal flow will increase wetland resilience & restore native plant communities.

Adaptive Planning & Collaboration

Highlights the importance of interagency communication, jurisdiction clarity, & engineering-driven ecological restoration.

Status

Contract executed.

Pending Repairs & Dependencies

- LIRR has completed culvert maintenance
- Repairs to Route 25 culvert by NYSDOT remain pending
- Restoration benefits are contingent on full tidal pathway functionality

Infrastructure-Based Restoration

This approach uses targeted infrastructure upgrades to naturally restore tidal dynamics, representing a minimally invasive, cost-effective alternative to dredging or extensive regrading.

Stakeholder Coordination & Permitting

- All necessary permit documents have been drafted for Town submission as Southold Town and NYSDOT work out plan forward
- Project paused pending resolution of ownership & permitting issue