

SALT MARSH RESTORATION PROJECT



wellsreserve
at laudholm
Wells National Estuarine Research Reserve

2024-2028



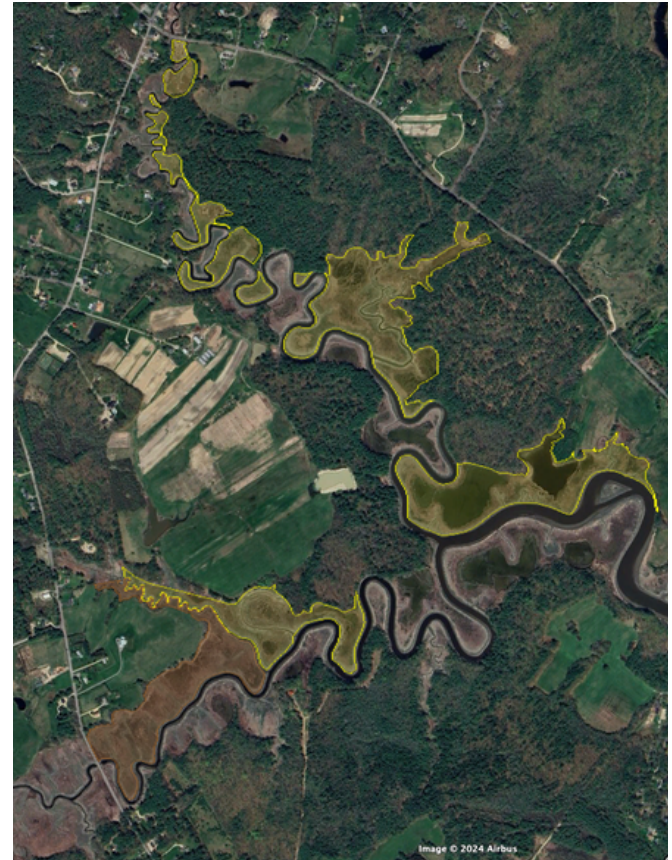
YORK RIVER
WILD & SCENIC



Project Partners and Goals

York Land Trust (YLT) is working with partners at the York River Stewardship Committee, Wells Reserve, Rachel Carson Wildlife Refuge, Maine Department of Inland Fisheries & Wildlife, and Maine Coast Heritage Trust to conduct salt marsh restoration on approximately 132 acres of salt marsh across YLT and U.S. Fish & Wildlife Service (USFWS) lands on the upper York River. The project has two goals:

- **1) Stop the decline of marsh surface elevations and improve plant growth.** Improvements to salt marsh growing conditions and hydrology will stabilize eroding soils, enhance native plant growth and spread, restore additional salt marsh functions and values such as carbon sequestration, and foster long-term marsh resilience. This work will also support eventual salt marsh migration towards the surrounding uplands as sea levels rise.
- **2) Improve habitat quality and resiliency for important coastal species.** The restoration work aims to increase the quantity, resilience, and suitability of saltmarsh sparrow nesting habitat.



The 132-acre project area with York Land Trust land in yellow and USFWS land in orange.

Why Restore the Marsh?

During the colonial era, salt marshes were widely used and maintained for growing cattle fodder. Early colonial farmers maximized salt hay production by creating an extensive network of ditches and embankments to limit tidal flows. These abandoned agricultural features continue to impact marsh systems today by lowering the water table in some areas of the marsh and creating mega-pools in others. **These conditions disrupt natural marsh hydrology, causing marsh subsidence, habitat degradation, and increased vulnerability to sea level rise.** The restoration work aims to **restore natural functional hydrology** to these marshes so that the mega-pools can drain and the underlying soil and vegetation of the marsh can recover.



Mega-pools on a salt marsh, a sign of a stressed ecosystem. Photo by Rebecca Conley/Maine Public.

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Nelson’s Island, Parker River National Wildlife Refuge - Rowley MA: Hand-dug Micro-runnel



Crane’s Beach Marsh, Crane’s Wildlife Refuge - Ipswich MA: Mechanically-dug Runnel B

Examples of hand-dug and mechanically-dug runnels.

How Do You Restore the Marsh?

The York River Stewardship Committee and landowners hired **Northeast Wetland Restoration** to assess the marsh systems and develop restoration designs for the 132 acres of salt marsh owned by YLT and USFWS. Northeast Wetland Restoration has identified and documented agricultural infrastructure on the salt marshes using on-the-ground marsh surveys and aerial imagery. They identified areas where restoration is needed to reestablish more natural tidal flows and hydrological connections. Part of this work involves identifying tide sheds and directing tidal flows to create a sustainable tidal channel network for better vegetation growth conditions and soil accretion. **Primary restoration approaches include (1) using runnels, or shallow channels, to reconnect mega-pools to nearby tidal channels, and (2) filling ditches over several seasons with hay cut from adjacent areas.** This will be done both with large mechanized equipment and by hand using shovels. They will be able to allow large equipment onto the marsh without disturbing soils by using large mats that distribute pressure across a wider area of ground.

How Can I Help?

Interested in helping out or learning more? **Volunteers will be an important part of pre- and post-restoration monitoring and data collection on the salt marsh.** Please reach out to York Land Trust Stewardship Director Liz Walworth at lwalworth@yorklandtrust.org with any questions or to discuss volunteer opportunities.

Project Timeline (Subject to Change)

Fall 2025	Finalize Restoration Design Plans
Summer - Winter 2025	Permitting, Funding, and Outreach
Summer 2026	Pre-restoration Monitoring and Data Collection
Fall 2026 - Spring 2027	Restoration Implementation
Summer 2027	Continue Monitoring
Fall 2027 - Spring 2028	Continue and Finalize Restoration Implementation
Summer 2028 and On	Post-restoration Monitoring