

# ENVIRONMENTAL Fact Sheet



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## NH Salt Marsh Restoration: Parson's Creek Marsh, Rye NH

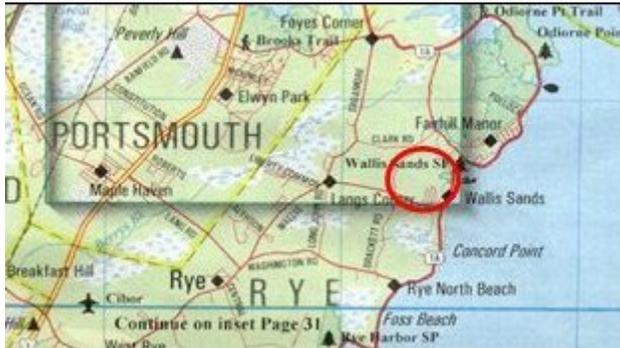
**Year of Project:** 1997- 1999

**Type of Project:** Tidal Restriction Removal/Invasive Species Control

**Primary Project Partners:** Town of Rye, NH Coastal Program

**Contractor:** Northeast Wetland Restoration

**Type of Monitoring:** Post-Restoration



**Location:** Parson's Creek Marsh is located on Route 1A (Ocean Boulevard) in Rye across from Wallis Sands State Park. It is bordered by Marsh Road to the north, Wallis Road to the south, and Brackett Road to the west.

### Background:

A 1994 study completed by the regional USDA Natural Resource Conservation Service (NRCS) entitled "Evaluation of Restorable Salt Marshes in New Hampshire" identified numerous tidal restrictions throughout the coastal town of Rye that have negatively impacted salt marshes in the area. The restrictions have kept tidal waters from reaching degraded salt marshes, which need tidal flushing in order to maintain their ecological integrity. The Rye Conservation Commission wished to deal with the issue by systematically removing some of the restrictions in the NRCS report. Rye had taken care of the larger restrictions and were down to some of the smaller ones. The project at Parson's Creek involved removing several of the smaller restrictions at several sites along Rye's coastline.

### The Issues:

**Tidal Restrictions.** For over a century, there has been inadequate saltwater flow into Parson's Creek Salt Marsh since it lacked a connection to the ocean of sufficient size. Without tidal flow the overall health of the marsh is reduced.

**Invasive Species Replacing Native Salt Marsh Plants.** Over the years, the lack of saltwater allowed invasive species such as common reed (*Phragmites australis*) to several portions of the marsh.



*Parson's Creek across from Wallis Sands and the intersection of Route 1A and Brackett Road*

## Project Goals:

- Remove the tidal restriction and allow adequate tidal flow to the marsh.
- Reduce flooding and allow proper drainage of the marsh.



*Tidal Restriction: The old culvert under Rt 1A at Parson's Creek.*

monitoring program.

The NH Department of Environmental Services permit conditions read as follows: *"Dredge and fill of a total of 10,600 square feet of hydrologically deprived and/or previously impacted salt marsh (removal of sections of old roadway) to restore approximately 150 acres of the Parson's Creek salt marsh by increasing and reestablishing tidal flow, removal of debris and accumulated sediments, installing new box culverts under Wallis Road and Rt 1A, and dredging a new main channel connector with auxiliary drainage ditches on a salt marsh currently subject to impoundment of freshwater runoff, lack of tidal flushing and*



*Culvert replacement under Wallis Road At Parson's Creek.*

Atmospheric Administration (NOAA).

## Funding the Project:

NH Coastal Program, \$25,000; Town of Rye, \$25,000 (matching funds and in-kind services); for a total project cost of **\$50,000**.

## Restoration:

The primary objective was to revitalize Rye's degraded salt marshes through the removal of tidal flow restrictions. The improved health of the marshes has led to their increased use by fish and wildlife. Removal of the tidal restrictions has also lessened the occurrences of flooding. Instead of water backing up behind a restriction, the water is now able to reach the salt marsh where it is needed to maintain the health of the ecosystem. Another project objective is to monitor the healing process within the affected salt marshes through the implementation of a long-term



*New culvert under Rt 1A at Parson's Creek*

*encroachment of invasive plant species."*

Three culverts have been replaced at Parson's Creek since 1997. Adequate tidal flushing now reaches the marsh and the salt marsh vegetation has been transitioning appropriately. Continued monitoring has occurred since removal of the tidal restrictions in such areas as aerial photo interpretation, root-zone salinities, vegetation, and fish.

## Other Project Partners:

Other project partners have included: US Fish and Wildlife Service (USFWS), and the National Oceanic