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Overview

The 1,055-acre Cohansey River Watershed *Phragmites*-dominated Wetland Restoration Site, located in Fairfield and Hopewell Townships, Cumberland County, New Jersey, encompasses approximately 910 acres of previously impounded coastal marsh, adjacent freshwater wetlands and upland areas. Wetland enhancement and restoration efforts began in 1996, and concluded in 1999. Restoration has transformed more than 400 acres from *Phragmites* vegetation to desirable plant species.



Goals

The goal of enhancement and restoration efforts for the site were to:

- Expand spawning and nursery habitat for aquatic species
- Control / eliminate the invasive plant, *Phragmites*
- Allow Spartina spp. and other desirable marsh plants to re-vegetate
- Preserve wetlands and upland buffer

Actions Taken

The EEP took the following actions to achieve the enhancement and restoration goals for the site:

- Utilized targeted aerial, ground and boat glyphosate-based herbicide treatments to control *Phragmites* and allow for *Spartina* spp. re-vegetation
- Studied 2 test areas to determine relative effectiveness of various treatments for *Phragmites* control / elimination





Accomplishments

As a result of actions taken by the EEP, the following has been accomplished:

- 910 acres of aquatic habitat has been restored in the Delaware Estuary
- More than 400 acres of Phragmites-dominated wetland has been replaced with desirable native vegetation
- Restoration goals were met in 2004

Other Enhancements

The EEP also completed a number of additional enhancements to improve and enhance environmental education, public access and long-term use of the site, including:

- Outdoor classroom
- Nature trail
- Parking area
- Boardwalk
- Boat ramp
- **New Jersey** Coastal Heritage Trail Route Site



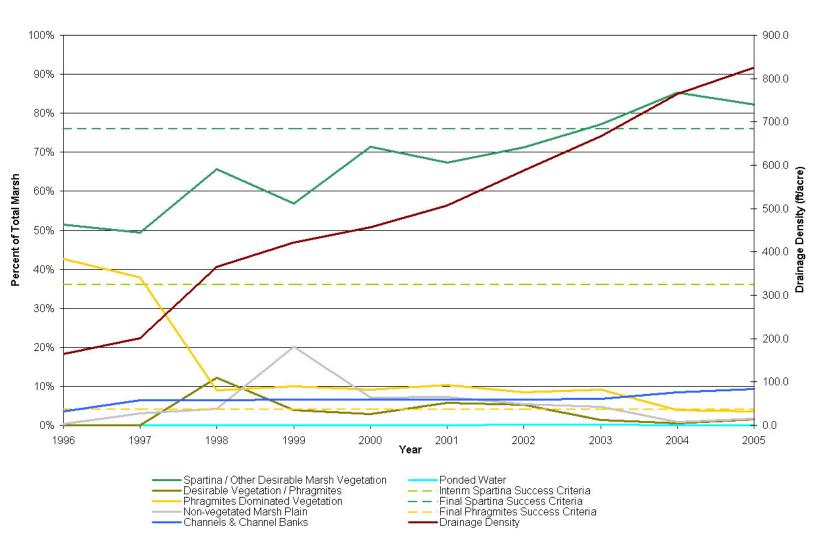




Cohansey River Watershed Wetland Restoration Site Vegetative Cover Summary Chart

TUARY ENHANCEMENT

Prior to restoration both *Spartina* (green line) and *Phragmites* (yellow line) co-dominated the Cohansey River Watershed *Phragmites*-dominated Wetland Restoration Site. As *Phragmites* was treated with herbicide and the dead culms were removed, the population plummeted and tidal flushing improved. *Spartina* now dominates 85% of the wetland. The red line (linear feet of channel per acre) indicates the increased aquatic habitat at this site.



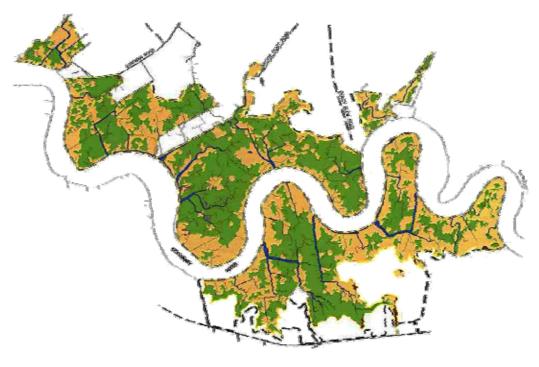




ESTUARY ENHANCEMENT PROGRAM

Cohansey River Watershed Site - 1996

As shown by similar abundances of the tan and green shaded areas, *Phragmites* (tan shaded areas) and *Spartina* (green shaded areas) co-dominated the site prior to restoration.



Cohansey River Watershed Site – 2005

After implementation of controls, the *Phragmites* (tan shaded areas) was nearly eliminated and *Spartina* (green shaded areas) coverage expanded into areas formerly covered by *Phragmites*.

