Salt Marsh Preservation & Restoration

Association to Preserve Cape Cod

Working to preserve, protect, and enhance the natural resources of Cape Cod.

What are Salt Marshes and why are they important?

Salt marshes are coastal wetlands that form a transition zone between land and sea. They are ever-changing environments that are regularly flooded by seawater (twice-daily in this region) as the tides rise and fall.

Salt marsh habitats are essential for healthy fisheries, coastlines and communities. Salt marshes serve as a critical habitat for numerous species of animals. Due to low wave energy, they support nursery habitat for more than 75% of commercial fishery species. Waterfowl, wading birds, river otters and other animals depend on salt marshes for food, breeding sites and overwintering locations.

Salt marshes help protect coastal communities from the effects of storms by buffering waves and protecting the shoreline against erosion. Over time, carbon is stored in the layers of deposited sediment and plant matter, thus keeping it from entering the atmosphere and contributing to the warming of the planet. Salt marshes have a vital role to play in protecting Cape Cod against the harmful effects of sea level rise and a changing climate.

Animal Species that Use Salt Marshes as Habitat

Osprey

American Eel

Great Blue Heron

River Herring

Diamondback Terrapin

Fiddler Crab

The Problem:

Salt marshes on Cape Cod continue to be impacted by several factors. Nitrogen from wastewater, lawn fertilizers, and stormwater runoff result in algal blooms that lower oxygen levels in the water and cause fish to die. Past development and agricultural practices resulted in acres of salt marsh being filled or drained. Mosquito ditching has created unnatural cuts and barriers in the marsh. It is estimated that 36% (7,000 acres) of Cape Cod's salt marshes have been lost or severely degraded as a result of direct human impact, therefore it is vital that we protect and restore our remaining salt marshes.

Tidal restrictions, manmade barriers that reduce the **tidal flow** coming in and out of the marsh, are a significant factor to diminished salt marsh health. Examples of tidal restrictions include dikes, tide gates, undersized pipes, or narrow culverts beneath roads and bridges. Restricting the natural tidal flow to the marsh leads to a decrease in **salinity**, the saltiness of the water. This change in the water makes it possible for **invasive species** such as the common reed (Phragmites) to thrive. With less salt water flowing into the marsh, Phragmites is able to take over and dominate.

Tidal Flow: the water current caused by the tides as sea water flows in and out of coastal habitat.
Invasive Species: species of plant or animal that are not native to an area that take over, resulting in harmful impact to native species.

Common Reed (*Phragmites australis*)

Association to Preserve Cape Cod, 482 Main Street, Dennis, Massachusetts, 02638
Phone: 508-619-3185 Email: info@apcc.org Website: www.apcc.org

Solutions:

Restoring tidal flow through the removal of manmade barriers, like dikes, dams, tide gates, undersized pipes and culverts, will support a diversity of native salt marsh plants and animals, and allow the natural flushing of nutrients and other pollutants that degrade salt marshes.

Improving wastewater and stormwater management will reduce the nutrients entering the salt marsh from sewer systems and rainwater runoff that contribute to unwanted algal blooms and pollution.

Controlling invasive species like *Phragmites* will ensure diversity of salt marsh species and help sustain a healthy marsh.

Preserving adjacent lowlands will allow for salt marshes to adapt and migrate landward to survive rising seas.

Monitoring the salt marsh before and after restoration will track our success and provide important information to improve methods for better results on future projects.

What APCC is Doing:

APCC is working to protect and restore the health of our salt marshes.

APCC supported a Cape wide volunteer salt marsh monitoring program training individuals to assist with research to gather vital information on plants, fish, and water both before and after restoration.

In 2015, APCC established the Cape Cod Restoration Coordination Center (RCC) to expand our impact and involvement with restoration projects. The RCC is now working with towns and community groups to fund, plan and implement restoration projects across the Cape providing support, coordination and technical assistance.

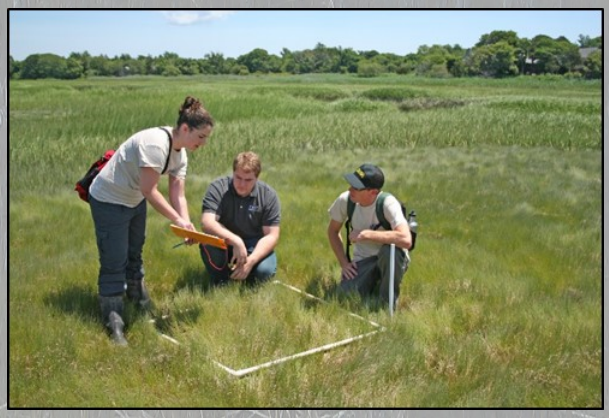
APCC is working to preserve the Cape's ability to bounce back from climate change events including flooding from major storm events and tracking projected sea level rise to ensure our restoration efforts are targeted to areas that will be able to adapt to the rise in sea level.

How You Can Help:

Support use of Town funds for restoration projects: One of the biggest barriers to implementation of these important restoration projects is funding. Voting to support funding for restoration projects will help protect and preserve our coastline.

Learn more about salt marshes and restoration efforts across the Cape: Join our email list or follow us on Facebook to get information about upcoming lectures, activities, and events!

Share what you learn with neighbors, family and friends: This is not a problem one person or one organization can solve. We must all work together to support monitoring, funding, and implementation of restoration projects for our efforts to be a success.



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