



Salt Marshes

Coastal wetlands that are flooded and drained by salt water brought in by the tides.

What is a Salt Marsh?

“Salt marshes are an integral part of Maine’s coastal estuaries — the prairies of New England. They are low-lying, open plains of lush grasses in distinct, colorful bands or patches, interwoven with tidal creeks and pools. They result from the interactions of different types of salt marsh plants that flourish in response to specific patterns of tidal flooding. The ability of these systems to thrive is dependent upon the salt marsh’s link to the sea. Specialized plants are the foundation of the remarkably productive salt marsh ecosystem.” — Michele Dionne, Ph.D.

Salt Marshes are Valuable Because They...

- Control Erosion
- Defend Against Storm Surge
- Protect Shorelines and Coastal Properties
- Filter Pollutants and Nutrients
- Reduce Flooding after Storms
- Provide Habitats for Fish & Wildlife
- Store Carbon
- Create a Rich Visual Landscape
- Offer Recreational Opportunities like Birding, Fishing, Clamming, Kayaking, Paddleboarding, Painting, and Photography

What Threats do Salt Marshes Face?

- **Changes to Natural Hydrology**
Tidal restrictions like roads, railroads, dikes, and undersized culverts block the flow of tides, starving marshes of sediments, nutrients, and life.
- **Environmental Pollution**
Stormwater carries fertilizers and pesticides from upland areas into salt marshes. Heavy metals and excess nutrients damage marshes and create harmful algal blooms.
- **Coastal Development**
Sea walls, riprap, and fill kill salt marsh plants, limiting a salt marsh’s ability to provide valuable services.

- **Invasive Species**
Non-native plants like *Phragmites*, purple loosestrife, and perennial pepperweed reduce salt marsh plant diversity. European green crabs alter food webs and cause marsh erosion.
- **Climate Change & Sea-Level Rise**
Sea level is already rising rapidly and the rate is expected to increase. Salt marshes need time to build up naturally or migrate landward, otherwise they will drown in place. Warmer and wetter conditions will also change which plants and animals can live in salt marshes.

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What You Can Do to Protect Salt Marshes

- Support efforts to reconnect salt marshes to the natural movement of tides. Returning tidal flow helps a degraded salt marsh to heal itself.
- Maintain a buffer of native trees and shrubs between your house and salt marshes or other water bodies.
- Reduce or eliminate fertilizers and pesticides on your property. Use traps to control biting insects (and remember they indicate a healthy marsh).
- Know where your drainage goes — does it flow straight to the marsh? Use rain barrels or rain gardens to intercept stormwater run-off.
- Maintain a functioning septic system if your home is not connected to the town sewer system.
- Don't dump fill — dirt, grass clippings, leaves — on the salt marsh.
- Keep pets off the marsh.
- Resist walking on the marsh. Reduce trampling by walking on salt marsh hay (*Spartina patens*) and take different paths to avoid deepening the path. For regular crossings, obtain a permit to build an elevated boardwalk — as narrow as possible with large spaces between the boards — so plants underneath it can continue to grow.
- Remove invasive species such as *Phragmites*, purple loosestrife, and perennial pepperweed from marsh edges by hand-pulling (not pesticides). Contact the Wells Reserve if you suspect perennial pepperweed is on your property.
- Support organizations that study and protect salt marshes and the environments that connect to them.
- Share what you've learned about being a good steward of the salt marsh with family and friends. Your grandchildren's children will appreciate your efforts.



PERENNIAL PEPPERWEED

PHOTO: MICHAEL BECKER CC-BY-SA 3.0

To Learn More...

- Visit wellsreserve.org/saltmarsh for information and links to useful documents.
- Attend Wells Reserve programs focused on salt marsh systems.
- Download *Maine's Salt Marshes: Their Functions, Values, and Restoration*, a resource guide by Michele Dionne, Erno Bonebakker, and Kristen Whiting-Grant, available at digitalcommons.library.umaine.edu/seagrant_public/27/
- Download *Salt Marshes in the Gulf of Maine: Human Impacts, Habitat Restoration, and Long-term Change Analysis* by Peter H. Taylor, available at gulfofmaine.org/2/wp-content/uploads/2014/06/Salt_Marshes-2008.pdf



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