

Keep Wetlands Healthy

Overview

- Wetlands act like sponges. They have open nook and crannies when they are healthy, which can soak up water after a storm (storm surge or rain). They are located along the coast or along rivers and streams. Stored water is slowly released over time, like squeezing a sponge out, which reduces flash flooding and flooding in general.
- Almost 25% of Delaware is covered with tidal and non-tidal wetlands.
- Tidal wetlands are called marshes. Marshes provide protection from sea level rise and storm surge for waterfront properties.
- Marshes and other wetlands provide critical habitat for many native Delawarean species including listed and endangered species.
- Healthy wetlands improve water quality, store carbon, and prevent the release of greenhouse gases into the atmosphere.

Ways to keep wetlands healthy:

- Plant native plants on the marsh to re-vegetate the marsh, restore the marsh and stabilize the sediment.
- Remove all trash and debris from wetland.
- Remove invasive species such as phragmites from the marsh.
- Protect and maintain buffers around the wetlands.
- Post signs on the wetland edge notifying people to stay off the wetland.
- Do not place boats/kayaks on wetland vegetation.
- Do not drive on the wetland.
- Encourage community leaders to take care of public wetlands in your area.
- Encourage your neighbors to better take care of wetland habitat on their properties.



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Key Takeaways

During storms, high-energy waves can destroy unprotected waterfront structures and/or cause flooding. Wetlands offer natural protection from storm surge and flooding.

If a wetland is unhealthy, it is unable to provide protection from storms in addition to any other ecosystem services.

Keeping wetlands healthy makes them more likely to withstand flooding events and can potentially reduce costs associated with storm damage.

Estimated Costs/Benefits

*U.S. dollars (2022), estimates are subject to change

Potential Costs (one acre of wetland)		Potential Benefits (1,000 sq ft structure)		
Item	Estimate	Post-Flooding Recovery Action	Estimate	
Marsh restoration	Costs vary widely based off of conditions, area, etc.	Flood damaged structure recovery (professional clean-up, mold removal, replacement/ repair of flood damaged items)	1 inch water	\$10,800- \$53,500+
Invasive species control	\$80 per acre		↓	↓
Signs	\$15-\$50		4 feet water	\$43,400- \$203,300+
ESTIMATED TOTAL COST	\$15+	ESTIMATED TOTAL SAVINGS	\$10,800 - \$203,300+	



I-ADAPT

Shoreline Adaptation

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Photo credit: DNREC

Potential Funding Sources

- [DOI Partners for Fish and Wildlife Program](#)
- [Delaware Water Pollution Control Revolving Fund](#)
- [Building Resilient Infrastructure and Communities \(BRIC\)](#)
- [Phragmites Control Cost-Share Program](#)

Additional Actions

- Encourage neighbors and community leaders to also take care of their wetlands to help increase wetland ecosystem benefits for the community.
- Consider implementing other wetland protection strategies on your wetlands. Find more information on additional protection strategies at [DNREC You Can Help Protect Delaware's Waterways](#) and [DNREC Protecting Our Waterways](#).

Additional Resources

- [DNREC Delaware Wetlands](#)
- [DNREC Wetland Monitoring and Assessment Program](#)
- [DNREC The Delaware Freshwater Wetland Toolbox](#)
- [Protecting the Inland Bays: A Waterfront Property Owner's Guide](#)

Resources can also be found at <https://de.gov/iadapt>

Expected Maintenance

- Keeping a wetland healthy is an ongoing process, all recommended actions should be completed as needed.

Permitting Agencies

Contacts for permitting requirements include but are not limited to the following:

- Your city and/or county government for local flood ordinances or regulations
- Your city and/or county government for building permits
- [DNREC Wetlands and Subaqueous Lands Permit](#)

Who to Contact

- Invasive species removal contractor
- [DNREC Wetland Monitoring and Assessment Program](#)
- [811 Call Before You Dig](#)
- Native plant nursery



Photo credit: DNREC

Technical definitions and more information are located on the I-ADAPT website: <https://de.gov/iadapt>.



This information is intended to be used for planning purposes. It is not intended to substitute or take precedence over the guidance of design engineers, contractors, utility companies or regulatory agencies.

For more information, contact DNREC's Division of Climate, Coastal and Energy at DNREC_IADAPT@Delaware.gov

