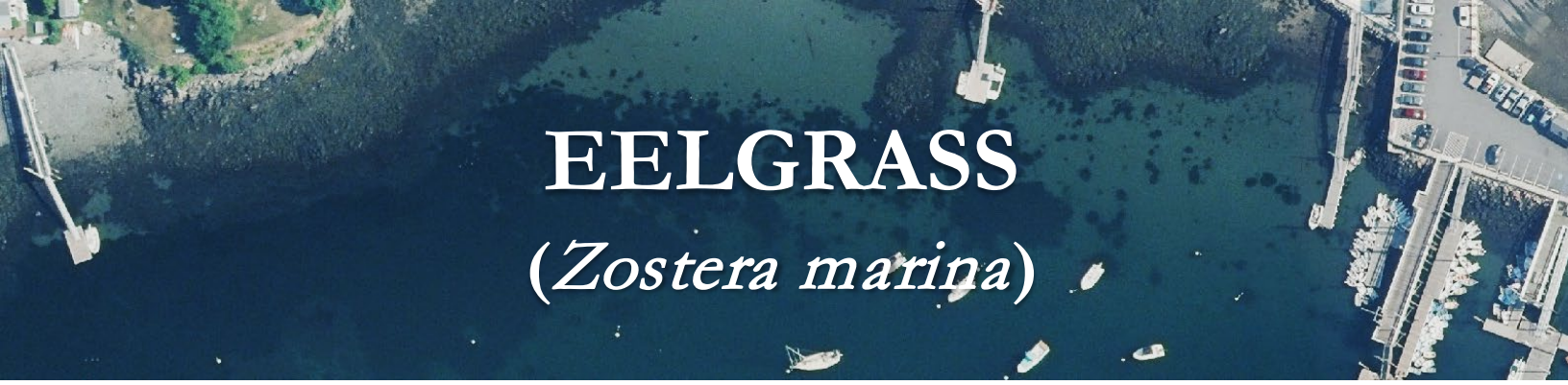


EELGRASS

(*Zostera marina*)

What is eelgrass?

Thriving eelgrass supports recreational and commercial fisheries and the superb coastal water quality Maine is known for. Eelgrass is a flowering marine plant that grows in temperate climates worldwide, and can form vast underwater beds or meadows in shallow water on muddy and sandy bottoms. It is most visible in the spring and summer. In the fall, naturally decomposing leaves wash up on the shoreline. Green crab foraging and burrowing, and storm events can cause additional leaves to wash up.

Why is eelgrass important?

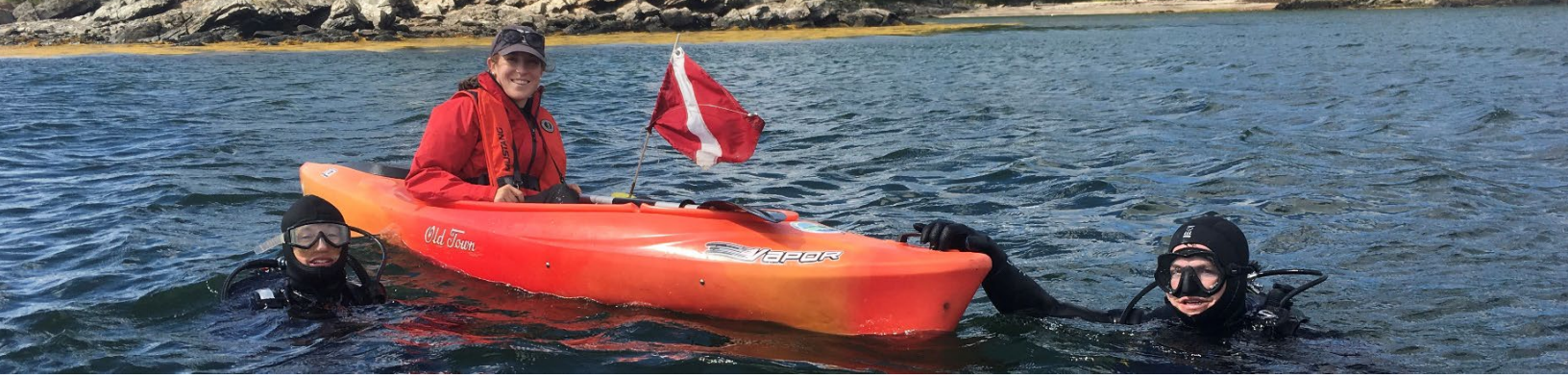
- **Food source** – consumed directly by fish, shellfish, waterfowl and migratory birds
- **Nursery** for eggs and larvae, especially blue mussels and clams
- **Refuge** from predators, especially for young striped bass and herring, as well as shrimp and lobster
- **Nutrient filter** – removes nitrogen that can fuel nuisance algae growth
- **Sediment trap** – dense leaf growth and extensive rhizome and root mats remove particles from the water and stabilize sediment
- **Wave protection** – reduces coastal erosion
- **Climate resiliency** – efficiently absorbs and stores carbon from the atmosphere and water, buffers against coastal acidification.

Eelgrass is a sensitive indicator of **nitrogen pollution**. High nitrogen levels fuel algal blooms that can make water cloudy, weigh down leaves and harm water quality. ***Abundant eelgrass indicates a healthy ecosystem.***

How to protect eelgrass

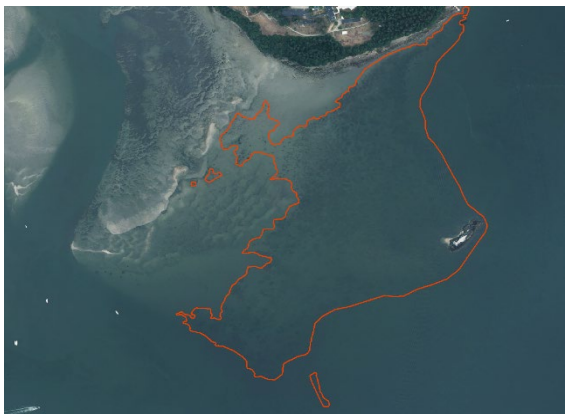
Eelgrass is threatened by numerous human uses of the shoreline, shallow estuaries and marine waters, especially by habitat alteration and development. You can help protect eelgrass by:

- **Decreasing runoff from land** – mow high; plant and maintain vegetative buffers along shorelines
- **Limiting use of fertilizers** – prevent excess nitrogen from entering the water
- **Boat carefully** – propellers, anchors, and mooring chains can harm eelgrass in shallow water
- **Installing high, narrow ramps and docks** – minimize the amount of shade underneath structures
- **Using sustainable harvest practices** – prevent damage from aquaculture moorings, lobster traps, and shellfish/worm rakes



Monitoring

The Maine DEP has eelgrass monitoring sites in the Portland area. Our team dives during the summer to assess eelgrass health by measuring density, size and amount of leaves, and light levels. Water quality data collection allows characterization of conditions experienced by eelgrass, and is possible in part due to support from the Maine Outdoor Heritage Fund: www.maine.gov/ifw/mohf . The data allow us to document short- and long-term changes.



Mapping

The Maine DEP uses aerial imagery to map eelgrass along Maine's coast through the Marine Vegetation Mapping Program. These maps are used to inform shoreline development, carbon storage estimates, and determine potential aquaculture and wild fisheries interactions. Each coastal area is surveyed every five years, documenting gains or losses in eelgrass acreage.

Restoration Techniques

Eelgrass can re-establish naturally following disturbance. Sometimes recovery can be facilitated by human-mediated transplanting of mature plants or even seeding.

MAINE OUTDOOR HERITAGE FUND

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