

GOT EELGRASS?

***Zostera marina* in New England**

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What is Eelgrass?

- Submerged aquatic flowering plant
- Uses photosynthesis to convert sunlight to energy
- Has a vascular system to carry nutrients throughout the plant
- Contains an extensive underground root and rhizomes system that anchor the plant to the substrate
- Reproduces through vegetative expansion and sexual reproduction
- The most valuable marine habitat found in the Northeast region

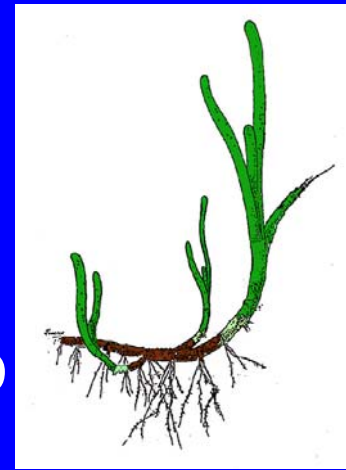
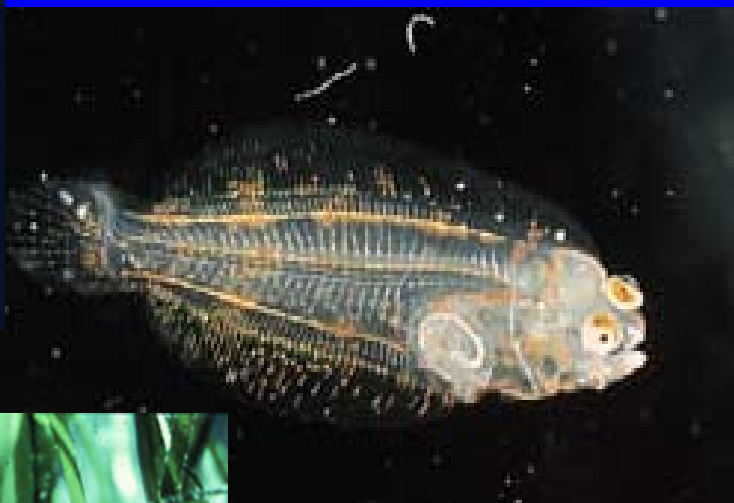


Photo courtesy of URIGSO

Why is Eelgrass Important?

- Creates a highly productive ecosystem
- Plays a key role in nutrient cycling
- Dampens wave energy, reducing beach erosion
- Provides food for fish and invertebrates
- Provides critical habitat for commercially important fin- and shellfish species





Where Does Eelgrass Grow?

- Geographic range – East Coast (New Brunswick to North Carolina) and West Coast (Washington to California)
- Found in both subtidal and intertidal zones
- Grows in shallow embayments, estuaries, tidal creeks and shallow coastal waters
- Predominantly grows in sandy sediments but may also be found in cobble or muddy substrates
- Depth limited by light availability



Photo courtesy of Thomas F. Freeman

DEP Eelgrass Mapping Project SALEM HARBOR

Map 8
SALEM SOUND

Eelgrass Mapped

-  2001 ONLY
-  1995 AND 2001
-  1995 ONLY
-  Limits of Project
-  Municipal Boundary
-  Limited Access Highway
-  Multilane Highway
-  Other Numbered Highway



Map Statistics


Eelgrass Area in Acres:

1995	113.7
2001	24.7
Change	- 88.9
	78.2%

1:20,000



Mitt Romney, Governor
Stephen R. Pritchard, Secretary
Executive Office of Environmental Affairs



MASS GIS
Massachusetts Geographic Information System



What are the Threats to Eelgrass?

Human Induced

- Excess Nutrients
- Sedimentation
- Dredging
- Boating activity
- Fishing activity
- Climate change



Natural

- Wasting Disease
- Bioturbation/Grazing
- Hurricanes
- Ice scour



Photos courtesy of Save The Bay



Photo courtesy of Lighthawk and Center for Coastal Studies

Is Eelgrass Protected?

- Section 404 of Clean Water Act
- Rivers and Harbors Act
- Essential Fish Habitat under Magnuson Stevens Fishery Conservation and Management Act
- Massachusetts Wetland Protection Act



What Can I Do?

- **Get involved!** - Lobby representatives to support legislation to improve water quality.
- **Start in your own backyard** - Minimize use of fertilizer and use only organic fertilizers.
- **Keep it clean** - Buy environmentally friendly cleaners and dispose of hazardous materials properly.
- **Be septic savvy** – Be sure your septic system is functioning properly.
- **Be a responsible boater** - Avoid anchoring in eelgrass beds, lift your motor when passing over a bed, always discharge waste at a pump out station, and use eelgrass friendly moorings.
- **Show your support/ Become a Volunteer!** – Support organizations that work to protect and restore marine habitats.



Photo courtesy of Save The Bay

THANK YOU!

Volunteer Opportunities Contact:

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Stephany Hessler – Save The Bay's
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