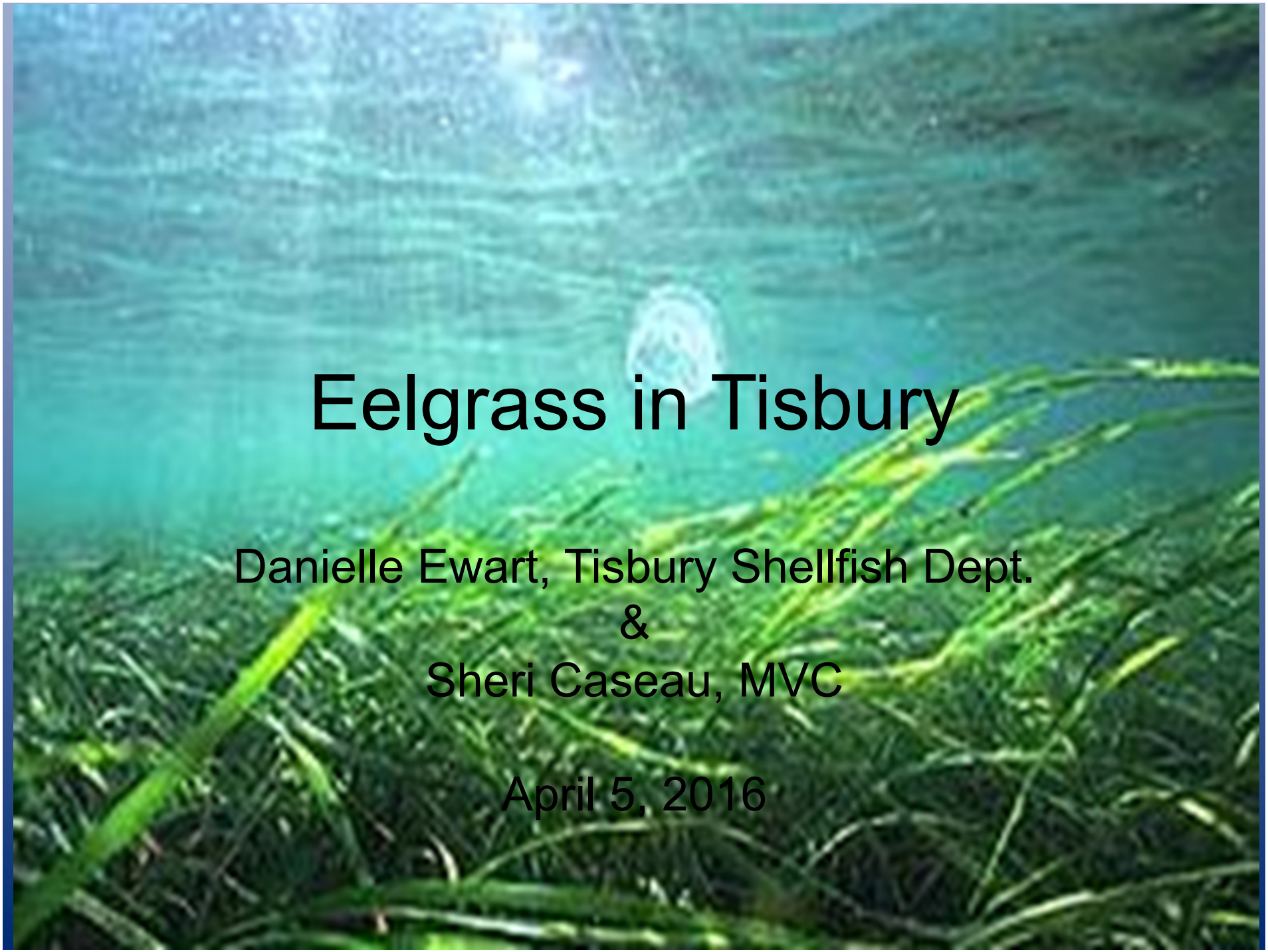


Eelgrass in Tisbury

Danielle Ewart, Tisbury Shellfish Dept.
&
Sheri Caseau, MVC

April 5, 2016

Outline

- Introduction
  - Why is eelgrass so important?
- DEP maps
  - past and present locations
  - methods of surveying
- Projects
- Things we can do to protect eelgrass
- Other regional eelgrass protection efforts
- Our Recommendations

Why is eelgrass important?

Economic value for commercially harvestable fish and shellfish

Important habitat for many fish

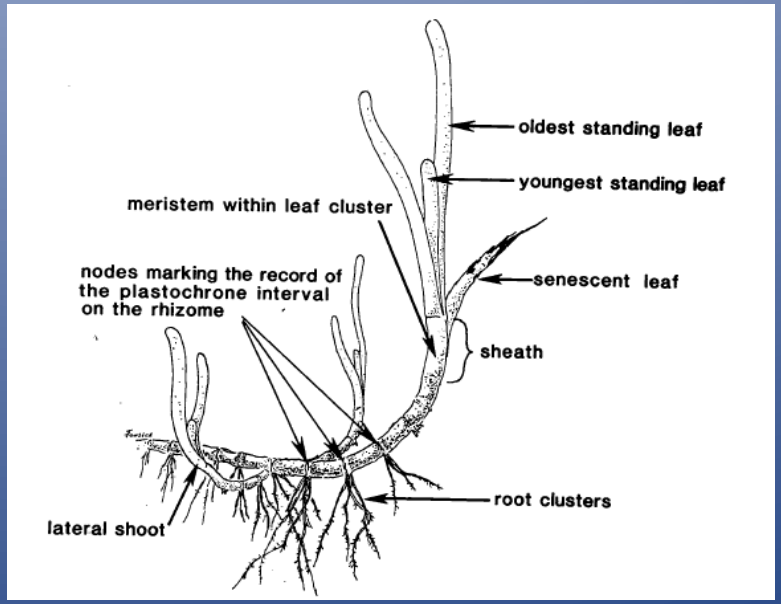
Protection for juveniles

Eelgrass is a plant, ME → NC

- Has rhizomes and also produces seeds

-Roots stabilize the bottom reducing shoreline erosion

-Leaves catch suspended sediment improving water clarity



Sequesters N and CO_2 produces O_2

Sequesters large amount of C more than terrestrial forests *Eelgrass could save the planet, Boston Globe 11/9/14

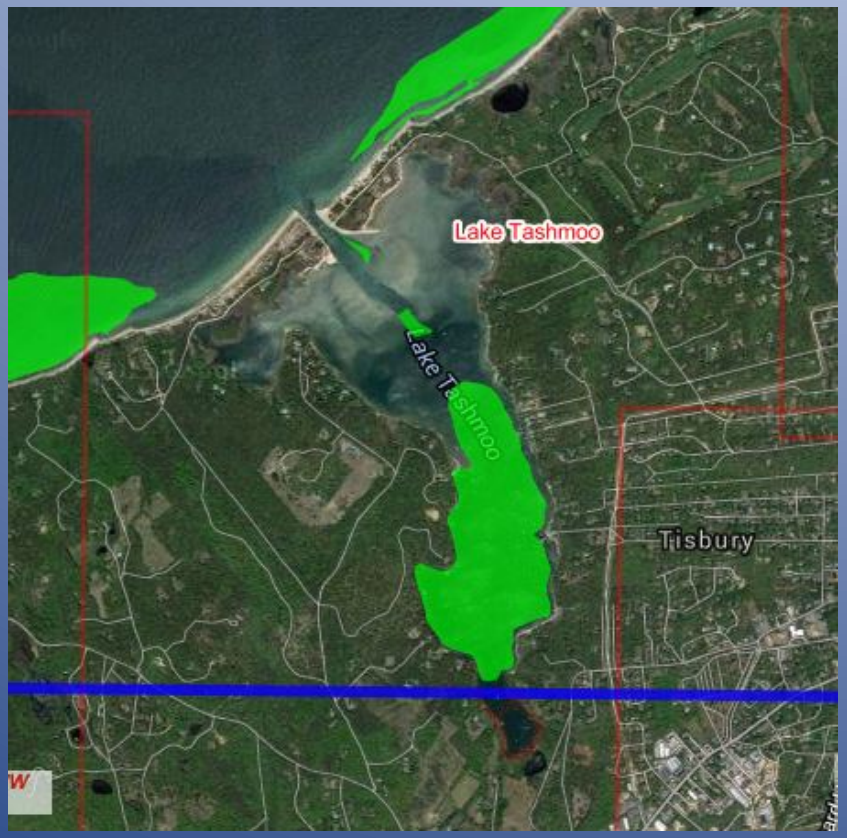
=

Used in MEP reports- ponds health

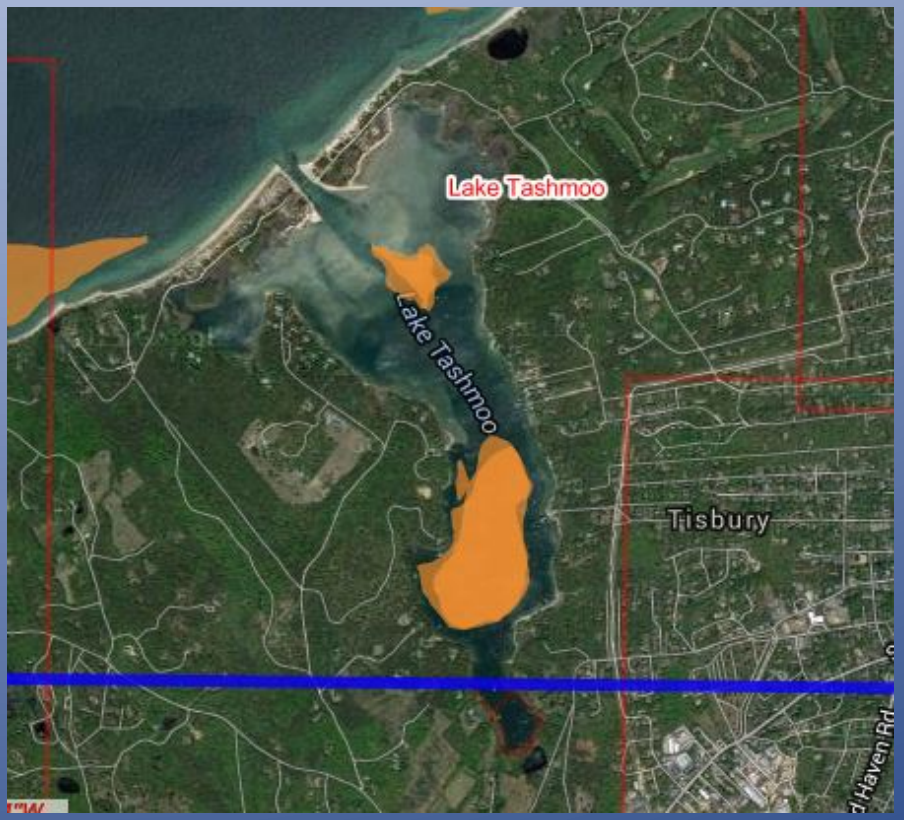
-The Massachusetts Estuaries Project uses eelgrass recovery as the primary indicator for the health of the ponds.

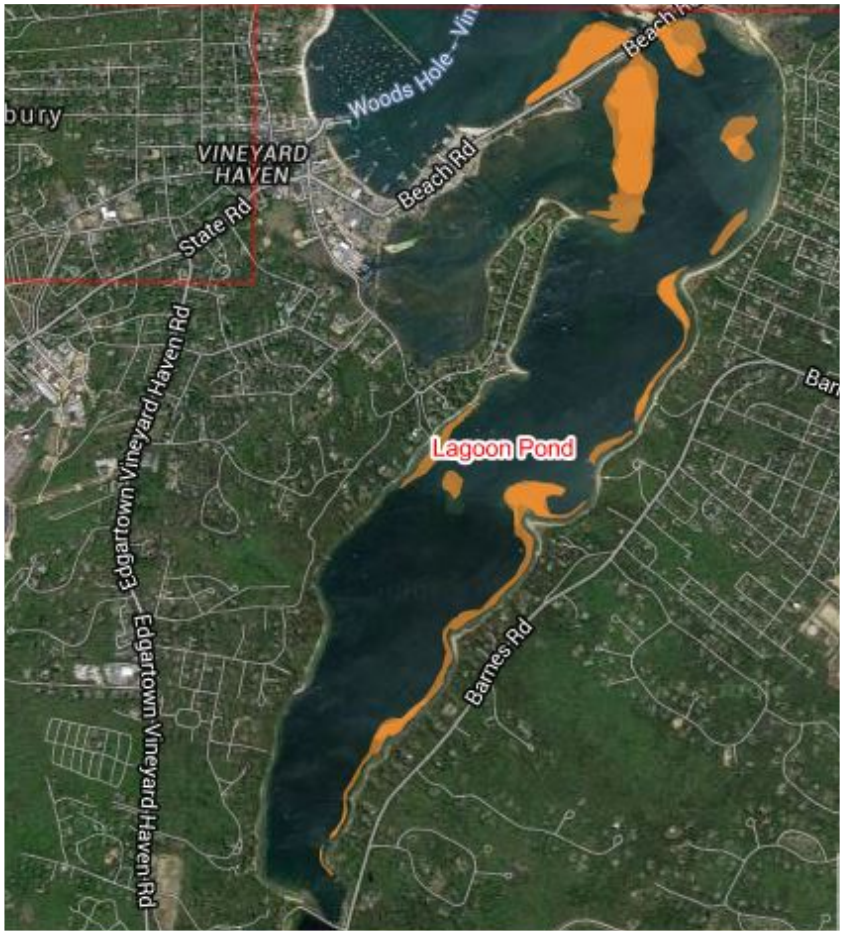

Lake Tashmoo
Lake Tashmoo
Tisbury

1995

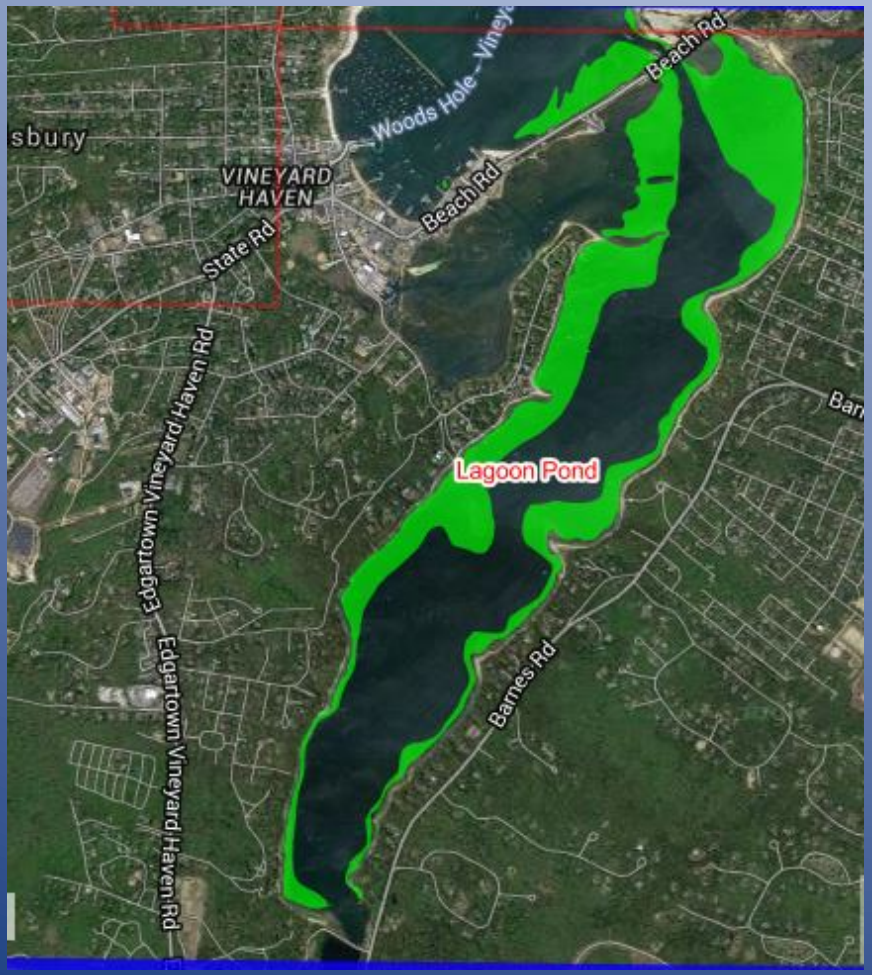

Lake Tashmoo
Lake Tashmoo
Tisbury

2013

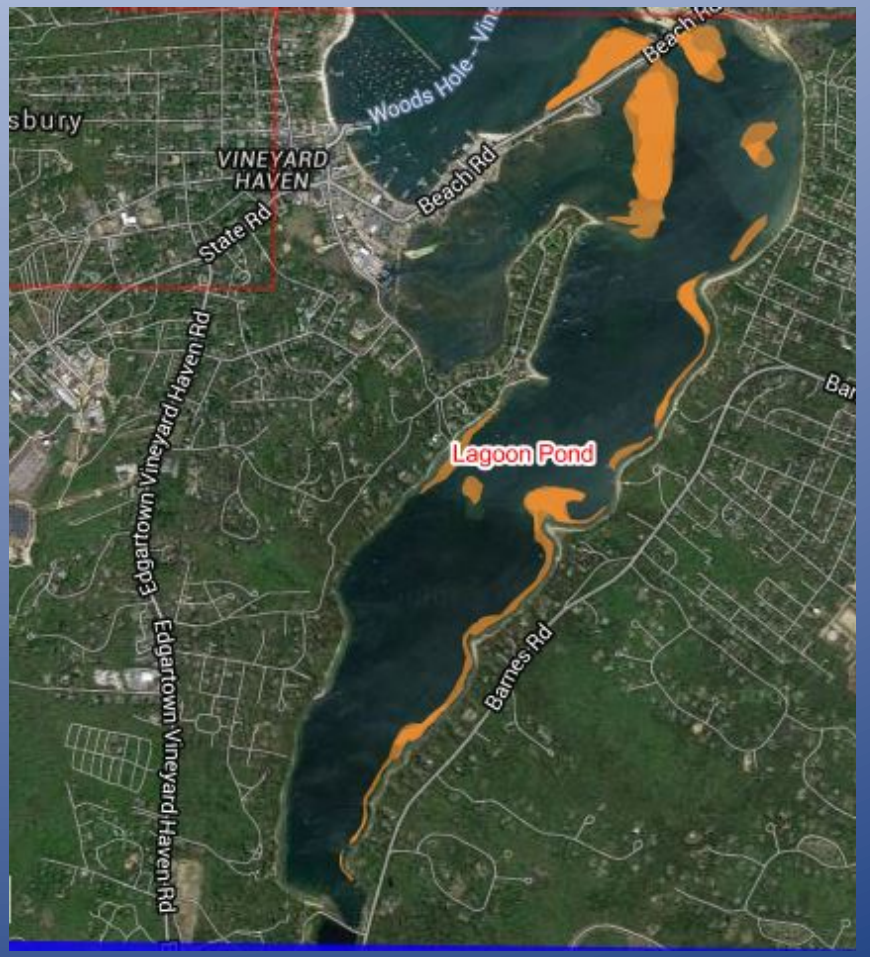

Lake Tashmoo
Lake Tashmoo
Tisbury


Woods Hole
Beach Rd
VINEYARD
HAVEN
State Rd
Edgartown Vineyard Haven Rd
Lagoon Pond
Barnes Rd

1995


Woods Hole - Vineyard
Beach Rd
sbury
VINEYARD HAVEN
Beach Rd
State Rd
Edgartown Vineyard Haven Rd
Lagoon Pond
Barnes Rd
Edgartown Vineyard Haven Rd

2013


Woods Hole - Vineyard
sbury
VINEYARD HAVEN
Beach Rd
State Rd
Edgartown Vineyard Haven Rd
Lagoon Pond
Barnes Rd
Edgartown Vineyard Haven Rd

Projects: past and present

- Not so long ago we had issues with eelgrass…

Report of the Shellfish Constable

To the Honorable Board of Selectmen:

The year 1967 was not a very remunerative one as far as the shellfisheries were concerned. The scallop crop did not come up to expectations.

The Lake 'I'ashmoo clams brought the financial returns up *so* that a small margin of profit shows on our budget. The value of shellfish, family and commercial catch, amounts to $8,288.00 for 1967.

There was an invasion of very small starfish in Lagoon Pond last summer but they were Soon brought under control.

The Aunt Rhoda's Pond experiment was not started in 1967. Mr. Arnold Carr, the State Biologtst could not get here at the proper time. I hope it can be done in 1968.

The big problem now facing us is the super abundance of eel grass in Lagoon Pond. Eel grass is a true plant, having roots, seeds, etc. Mr. Miles Carpenter and I worked out a dredge which will uproot the grass and not disturb or kill seed thac is in the grass. This dredge takes a great deal of power to use. I tried it with a 5-horse outboard and got no- where. I was lucky to obtain the services of Mr. Victor Oliver and his 18-horse outboard and this did the trick.

Mr. Carpenter and I are now working on another type of dredge ,that will take less power. The hope is that by use of both dredges the amount of work will be doubled with an increase of 25% in power used. From observation of Mr. Oliver's work I estimate the cost will be about $200.00 per acre to conrol the grass. Once the grass is brought under control the cost of maintaining it will be halved.

The closing of Tisbury Harbor due to pollution is a prob-lem that faces *us* in 1968. Unless it is brought under control

and stopped, this can become a very serious loss to the Town. It would close our town bathing beach and, as we have no other area, a lot of people would suffer. I will keep in touch with the state Board of Health in Boston in the coming year and hope this trouble can be alleviated with out too much

cost to the Town.

Respectfully submitted,

CRAIG J. KINGSBURY
Shellfish Constable

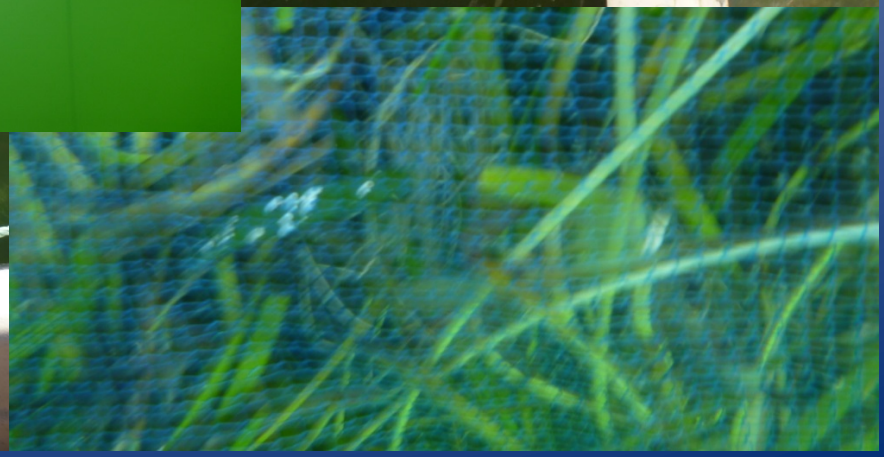
today

- More **awareness** of the importance of eelgrass
- WHOI, EPA, USGS have looked at the eelgrass in our ponds for various projects
- This past summer 2015 Sheri, Phil and I set out a test experiment in Tashmoo about eelgrass distribution through seeding methods

Research and Projects

- Invasive Tunicate research
- Blue carbon sequestering
- Shellfish enhancement
- Draw bridge impact assessment and required mitigation

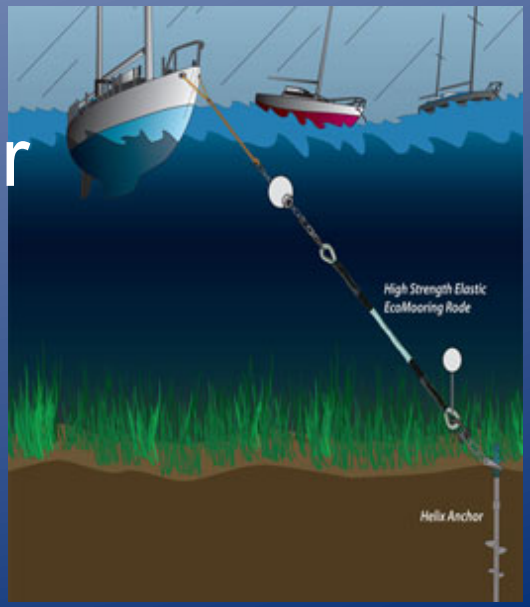
Summer 2011 in Tashmoo




Vineyard Sound
Tashmoo Pond
Eelgrass Seedling Stations 2015
Tashmoo Pond
Eelgrass
Seedling Stations 2015
NOTE: The information depicted on this map is for planning purposes only. It is not adequate for legal boundary definition.
500 0 N 500
Feet
MARTHA'S VINEYARD COMMISSION
Prepared by: The Martha's Vineyard Commission, CL Seidel, 3/25/16
www.mvcommission.org, phone - 508-693-3453
Data: Water Survey Points - MVC 2016; Aerial Photo - 2014 MassGIS;
Coordinate Reference: State Plane, Mass Mainland, Meters, NAD 83
File: estuaries, tsh_eelgrass_seedling.mxd
MASSGIS

Things we can do

- Use conservation moorings
- Set up rules prohibiting anchoring in eelgrass
- Protection zones, designate areas
- More monitoring
- Work towards improving water quality
- Education
- Nondestructive fishing gear



Other town's efforts to protect eelgrass

Brewster anchoring regulations

In the waters of Cape Cod Bay, all vessels must maintain a minimum of 25 feet from all aquatic vegetation, including but not limited to sedge (Spartina) or eelgrass (Zosteria)

Nantucket anchoring regulations

Established Habitat Sensitive Area(s) that allows the Town the ability to close off areas to anchoring, boat traffic and shellfishing – as circumstances require

Army Corps of Engineers

In areas of eelgrass habitat, moorings that are to be replaced due to change in ownership or replacement are to be converted from conventional to conservation moorings

Falmouth and Wareham regulations

Through Home Rule Amendment, Conservation Commissions have expanded the Wetlands Protection Act to include areas of and adjacent to eelgrass to ensure projects have minimal or no impact on the eelgrass

Florida & Caribbean

Caribbean

- Anchorless parks located throughout the Caribbean
- Virgin Islands National Park installed conservation moorings allows no anchoring in sensitive resources

Florida

- Statewide seagrass management and conservation program
- no boat and no anchorage closure areas
- Created aquatic preserves, estuarine reserves and sanctuaries

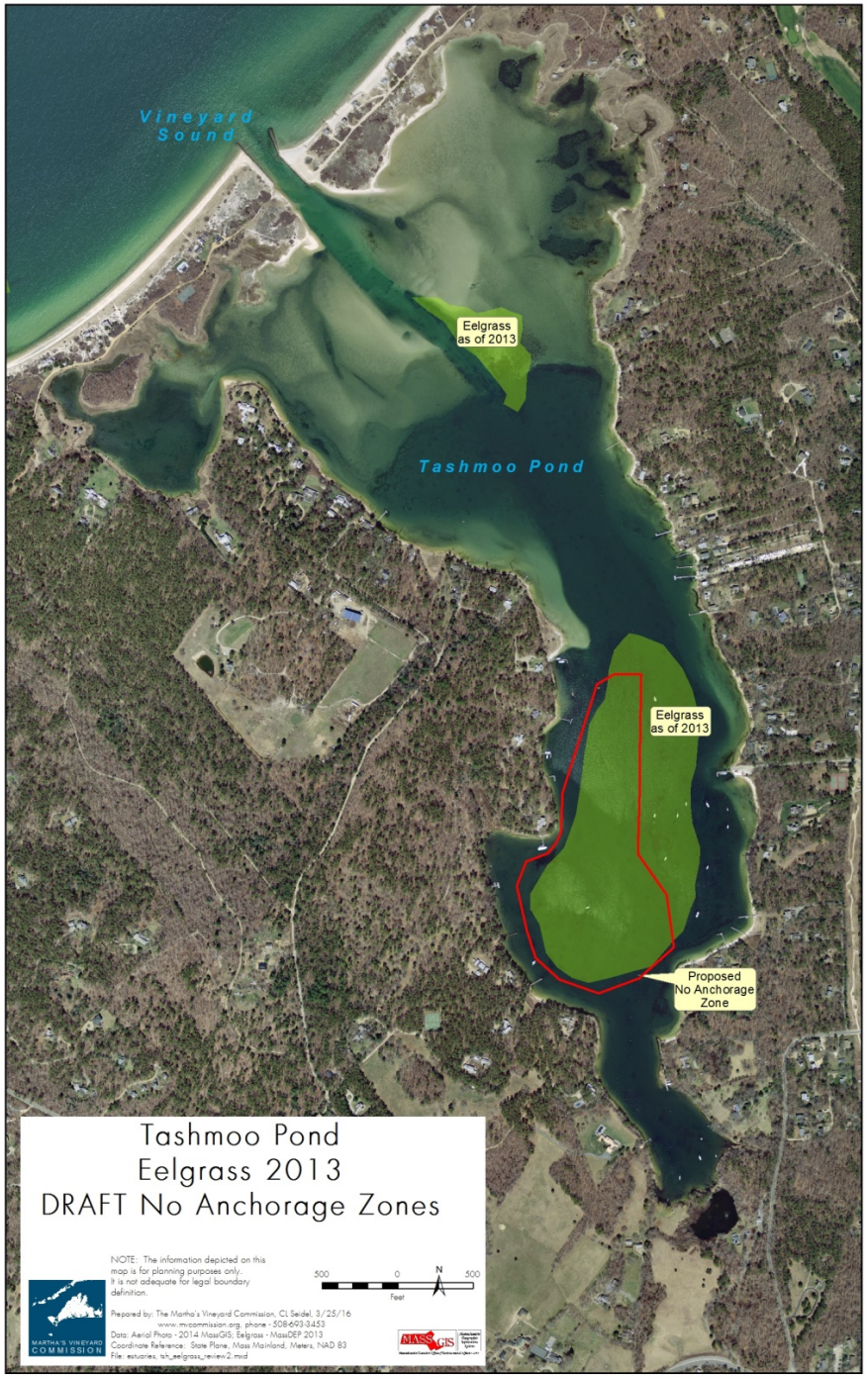
Both areas also have fines for resource damage

Our Recommendations

- Eelgrass education
- Accept the DEP maps of eelgrass, as they did the modeling
- To develop an area that is prohibited to anchoring
- Work towards Town-wide regulations that will prohibit anchoring in all eelgrass
- Expand Wetlands Protection Act

Map of pilot area

To protect our eelgrass beds we would propose a pilot no anchoring area.


Vineyard Sound
Eelgrass as of 2013
Tashmoo Pond
Eelgrass as of 2013
Proposed No Anchorage Zone
Tashmoo Pond
Eelgrass 2013
DRAFT No Anchorage Zones
NOTE: The information depicted on this map is for planning purposes only. It is not adequate for legal boundary definition.
500 0 N 500
Feet
MARTHA'S VINEYARD COMMISSION
Prepared by: The Martha's Vineyard Commission, CL Seidel, 3/25/16
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Data: Aerial Photo - 2014 MassGIS; Eelgrass - MassDEP 2013
Coordinate Reference: State Plane, Mass Mainland, Meters, NAD 83
File: estuaries, tsh_eelgrass_review2.mxd
MASSGIS


Proposed No Anchorage Zone
Vineyard Haven Harbor
No longer present as of 2015.
Proposed No Anchorage Zone
Lagoon Pond
Lagoon Pond
Eelgrass 2013
DRAFT No Anchorage Zones
NOTE: The information depicted on this map is for planning purposes only. It is not adequate for legal boundary definition.
Prepared by: The Martha's Vineyard Commission, CL Seidel, 3/22/16
www.mvcommission.org, phone - 508-693-3453
Data: Aerial Photo - 2014 MassGIS; Eelgrass - MassDEP 2013
Coordinate Reference: State Plane, Mass Mainland, Meters, NAD 83
File: estuaries_lgp_eelgrass2013.mxd
MARTHA'S VINEYARD COMMISSION
Eelgrass (per MassDEP)
Mapped in 2013
500 0 N 500
Feet
MASSGIS

thanks

references

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