

Section V.G.

Marine Resources

I. Marine Resources

The National Wetlands Inventory identifies five types of marine wetlands in Islesboro.

Aquatic beds include a diverse group of plant communities that require surface water for growth and reproduction. They are best developed in permanent water or conditions of repeated flooding. Plants are either attached to the substrate or float freely above the bottom or on the surface. Aquatic beds may include algal beds, aquatic mosses, rooted vascular plants, or floating vascular plants. They are nearly continuous along the entire shoreline of the Town, except where there are rocky shores/bottoms and unconsolidated sand and at the shorelines near Job's Mountain, between Little Island and Hewes Point, between the Bluffs and Decker Point, and in some areas west of Meadow Pond.

Emergent wetlands are characterized by erect, rooted, herbaceous hydrophytes, excluding mosses and lichens. Vegetation is present most of the growing season most years and is usually dominated by perennial plants. Emergent wetlands may include persistent or non-persistent emergent vegetation. Some emergent wetlands are inland, generally, but not always, adjacent to areas of open water. They are found in small areas near Spragues Beach, Coombs Cove, the Narrows, and Mill Creek. One specific type of emergent vegetation is eel grass.

Eel grass beds typically occur in the shallow subtidal zone in soft substrate (mud or sand). Eelgrass beds play a critical role in stabilizing the shoreline by trapping and binding sediments and protecting the shoreline from erosion. They also provide food, refuge, and nursery grounds for juvenile fish, waterfowl, shellfish, and other invertebrates. Eel grass is extremely sensitive to turbidity in the water, which blocks sunlight the plants need for photosynthesis. Turbidity is caused by sediment and nutrient loading as well as boat traffic.

Rocky shore is characterized by bedrock, stones, or boulders which cover 75% of the bottom in high-energy habitats exposed as a result of continuous erosion by wind-driven waves or strong currents. Sessile or sedentary invertebrates and algae or lichens attach

to rocky shores and usually display a vertical zonation that is a function of tidal range, wave action, and exposure to the sun. Rocky shore is found east of Turtle Head, along the Bare Ledges linking Hutchins Island to both Point Comfort and the shore of Coombs Cove, and several small areas DownIsland and along Seven Hundred Acre and other islands.

Unconsolidated shore have substrates with less than 75% cover of stones, boulder, or bedrock and less than 30% cover by vegetation other than pioneering plants. Erosion and deposition by waves and currents produce beaches, bars, and flats in palustrine and lacustrine systems. They may include cobble-gravel, sand, mud, organic or vegetation that is usually killed by rising water levels and may be gone by the beginning of the next growing season. Unconsolidated bottoms are characterized by a lack of stable surfaces for plant and animal attachment. They are usually in areas of lower energy and may be very unstable. Most macroalgae attach to the substrate by means of basal hold-fast cells or discs; however, in sand and mud, algae may penetrate the substrate and higher plants can successfully root if wave action and currents are not too strong. They may include cobble-gravel, sand, mud, and organic bottoms. Large areas of unconsolidated sand are found at Spragues Beach, south of Marshall Point, Parker and Coombs coves, Ryder Cove, Billys Shore, Crow's Cove, Islesboro Harbor, Broad Cove, Dark Harbor, and near the Gulf on Seven Hundred Acre Island.

Shellfish Habitat – There are three types of shellfish habitat in Islesboro – soft shell and quahog clams, sea scallop, and mussel. Nearly all shellfish habitat found near the shore, except for a portion of the habitat in Broad Cove, is soft shell and quahog clams. Offshore habitat and the remaining portion of Broad Cove are sea scallop habitat.

II. Water Quality

All coastal waters off Islesboro's shores are classified 'SB' under State statute which is defined as "of such quality that they are suitable for the designated uses of recreation in and on the water, fishing, aquaculture, propagation and harvesting of shellfish, industrial process and cooling water supply, hydroelectric power generation, navigation and as

habitat for fish and other estuarine and marine life. The habitat must be characterized as unimpaired. [Furthermore] Discharges to Class SB waters may not cause adverse impact to estuarine and marine life in that the receiving waters must be of sufficient quality to support all estuarine and marine species indigenous to the receiving water without detrimental changes in the resident biological community. There may be no new discharge to Class SB waters that would cause closure of open shellfish areas by the Department of Marine Resources¹ (DMR).

Islesboro began a volunteer, local marine Water Quality Monitoring program in 1992 under the auspices of the municipal Shellfish Committee, Islesboro Islands Trust and Islesboro Central School. Since then, water quality characteristics such as temperature, dissolved oxygen and salinity have been measured at selected locations around the island. From 1992 until 1997 coliform bacteria were also measured. However, this procedure is labor intensive and requires a laboratory. It was dropped from the protocol when the primary laboratory volunteer, Jon Kerr, was no longer able to perform or oversee the test.

Test results tend to suggest that marine water in coves is warming earlier in the year. For example, the average water sample temperature during April in 1994 was 4.7 degrees Celsius while in 2007 the average April water temperature was 9.3. Each intervening year that April samples were taken showed a slight increase.

In general, dissolved oxygen test results suggest a healthy environment for aquatic species. Although Islesboro does not have a Healthy Beaches program aimed specifically at determining whether popular swimming areas are safe, there is no data to suggest otherwise. The DMR collects water samples at 20 locations along the Islesboro shore and tests them for coliform. State and federal agencies use the test results to determine whether eating shellfish taken from these areas is a health threat. In addition to the regular water quality monitoring, DMR must undertake a shoreline survey to further assure that contaminants are not entering the shellfish market.

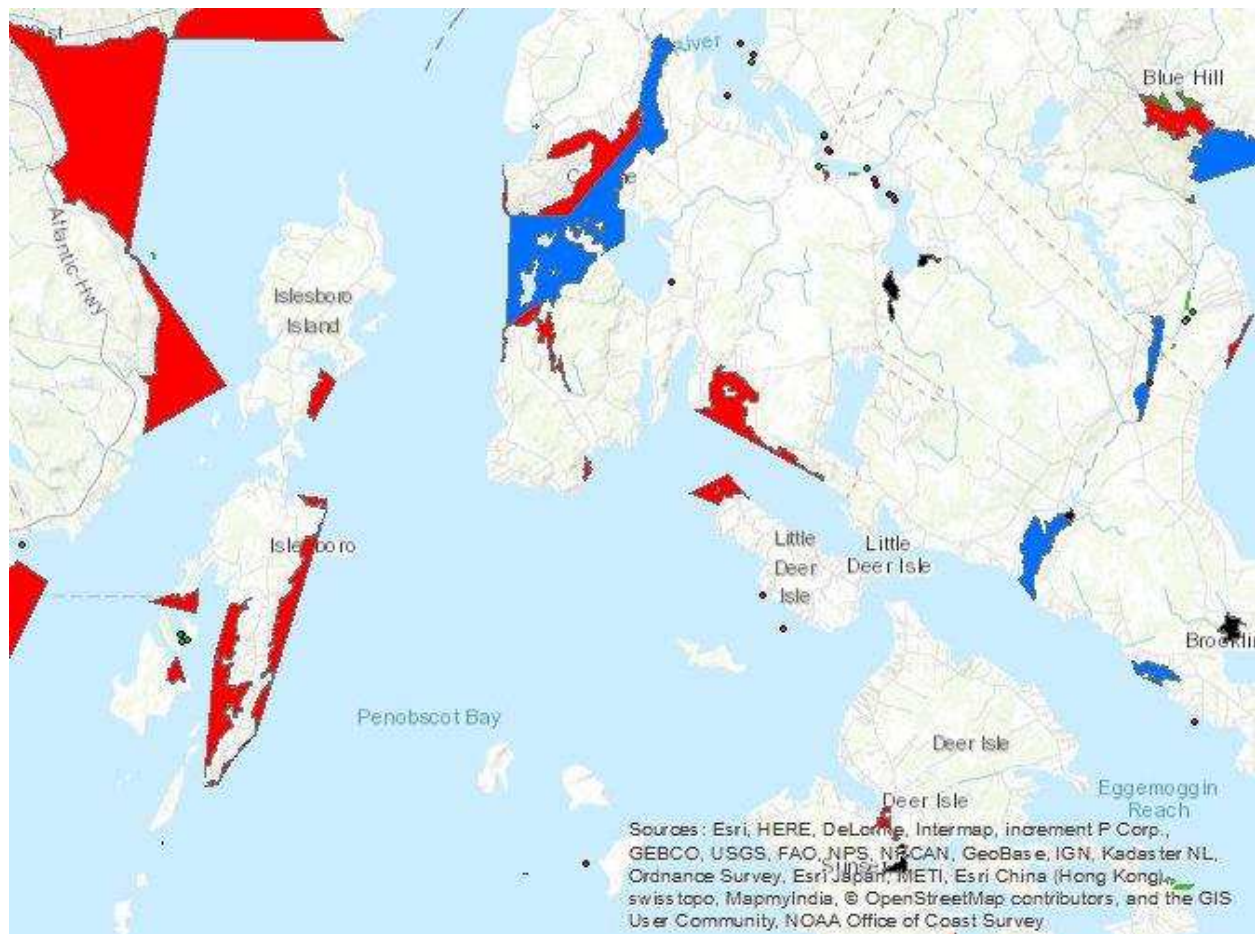
¹ MRSA 38, § 465-B

III. Fishing Licenses

	2012	2013	2014	2015	2016	% Total
Commercial Fishing Crew	1	0	0	0	0	
Commercial Shrimp Crew	1	0	0	0	0	
Commercial Shellfish	3	0	0	0	0	
Lobster/Crab Noncommercial	6	9	10	14	13	0.33
Lobster/Crab Apprentice	1	0	0	1	4	0.10
Lobster/Crab Class I	4	2	2	1	1	0.03
Lobster/Crab Class II	8	8	6	4	4	0.10
Lobster/Crab Class III	7	6	4	4	7	0.18
Lobster/Crab Over Age 70	0	1	1	1	0	
Lobster/Crab Class II + 70	2	1	1	1	1	0.03
Lobster/Crab Class III + 70		1	1	2	3	0.08
Lobster/Crab Student	0	1	2	1	4	0.10
Retail Seafood	3	5	4	3	3	0.08
Total	35	35	34	35	40	1.00
Source: Maine Department of Marine Resources, 2017						

Nearly two-thirds of all fishing license in the Town are for lobsters and crabs, distantly followed by noncommercial lobster and crab licenses and retail seafood.

IV. Aquaculture



◦ LIMITED-PURPOSE AQUACULTURE (“LPA”) LICENSES

Source: Maine Department of Marine Resources, 2017

There are four aquaculture sites in Islesboro. They are located between Spruce and Warren Islands and are for Eastern American Oysters. It uses suspended cultivation techniques. As a result, navigation, lobster fishing, and recreational boating and fishing are allowed on the lease.

V. Waterfront Access

Islesboro Waterfront Access, 2007				
Name	Use	Ownership	Access	Comments
Town Dock	Public Wharf	Municipal	Public	
Ferry Terminal	Transportation Facility	State	Public	
Grindle Point	Public Boat Launch	Municipal	Public	
Dark Harbor Boat Yard	Private Boatyard	Private	Private	
Pendleton Yacht Yard	Private Boatyard	Private	Private	
Tarratine Yacht Club	Private Commercial Recreational	Private	Private	Opened seasonally
Islesboro Marine Enterprises	Private Boatyard	Private	Private	
Moseley's Public Wharf	Public Wharf	Municipal	Public	
Pripet Wharf	Public ROW and Landing	Municipal	Public	Barge service only, permit required
Town Beach	Public ROW	Municipal	Public	Path to shore, picnic benches, recreational area
Point Comfort ROW	Public ROW	Municipal	Public	Path to the shore used for recreation & clamming
Narrows ROW	Private ROW	Municipal	Public	Owned by Islesboro Islands Trust. Path to shore for clamming & worming.
Mill Creek Bridge ROW	Public ROW	Municipal	Public	ROW over town owned bridge to clam flats
Kissel Point ROW	Public ROW	Municipal	Public	Limited use by commercial fishermen for boat storage
Derby Road Town Landing	Public ROW	Municipal	Public	Natural boat ramp, used for float storage & repair

Islesboro Waterfront Access, 2007				
Name	Use	Ownership	Access	Comments
Loranus Cove	Public ROW	Municipal	Public	Access to shore for recreation & clamming
Charlotte's Cove	Public ROW	Municipal	Public	Beach for public recreation
Source: Maine Department of Conservation, 2006				

Waterfront access facilities include one transportation facility; one public boat launch; one private, commercial, recreational facility; two public wharves; three private boatyards, and nine public rights-of-way. The various rights-of-way provide public access to the shore for clamming, worming, and recreating and include paths, beaches, picnic benches, and some limited boat storage.

There are 85 piers along the Town's shores.

VI. Issues and Implications

1. The number of fishing licenses and lobster traps have risen slightly. Four aquaculture facilities are licensed in the community. In discussions about building a more stable, sustainable community, there was a desire to expand the Town's fisheries and it seems to be occurring. Should the Town do more to assist lobstermen? What should it do? Is the Town interested in expanding aquaculture opportunities?
2. Now that most overboard discharge systems have been closed, should the Town seek the opening of some areas closed to shellfish harvesting? Should the Town partner with the DMR to collect data to support opening currently closed areas?
3. What should the Town do to support continued, and possibly expanded, eelgrass bed and clam flat restoration?

4. Is the Town satisfied with the number and condition of its public access points? Are facilities in good conditions? Do they meet all current and anticipated needs?
5. Should the Harbor Committee's jurisdiction be expanded to cover all water around the Island, not just select coves?