



Heron Island Oyster Company - Fitch Cove, Damariscotta River, South Bristol

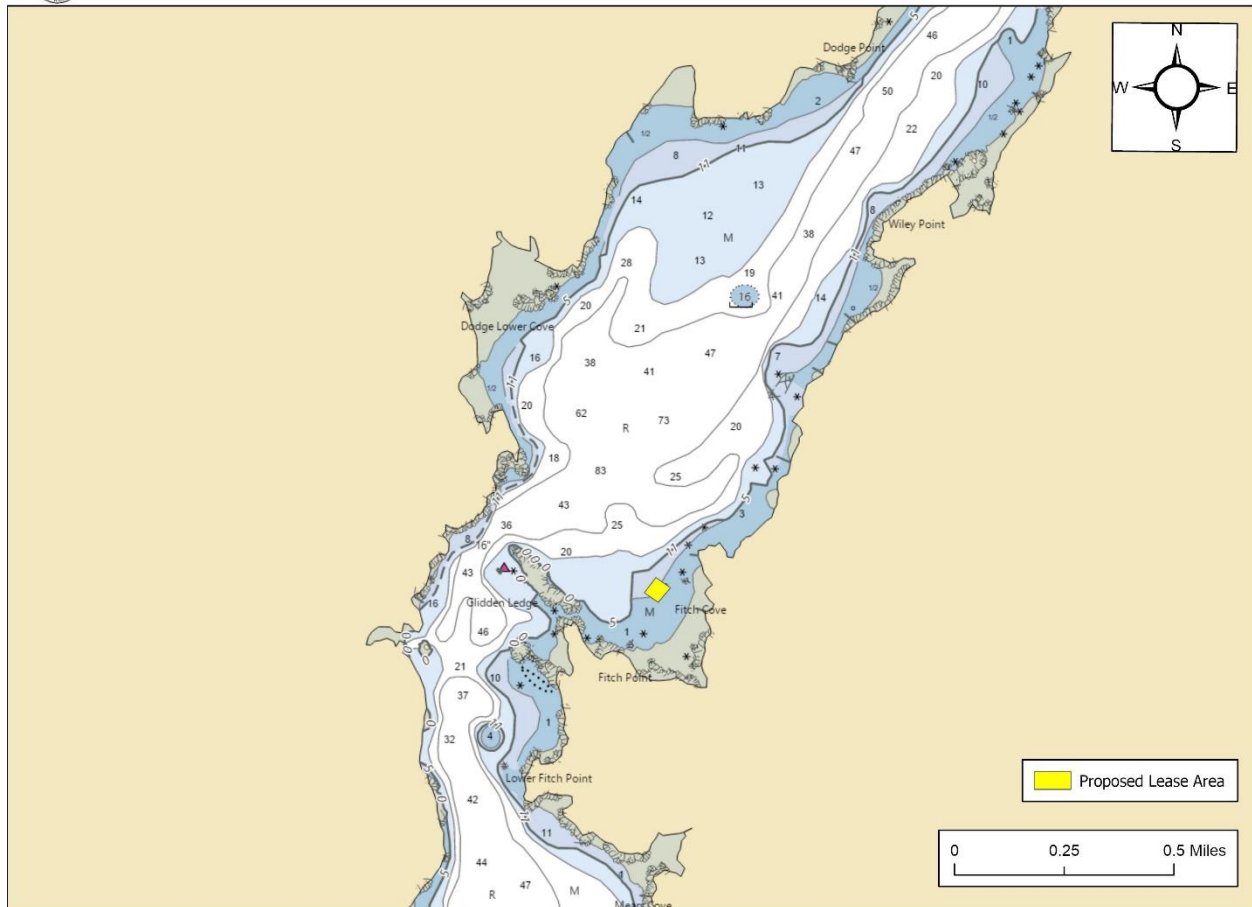


Figure 1. Vicinity map.<sup>1</sup>

**Location:** Fitch Cove, Damariscotta River, South Bristol, Lincoln County, Maine

**Purpose:** Standard lease for bottom and suspended culture of American/Eastern Oysters (*Crassostrea virginica*)

Site Review #1: Flora Drury, Cheyenne Adams, Heidi Bray

Site Review #2: Meryl Grady, Geoffrey Shook, Katie von Hohenleiten, Chloe Kilborn (dive support)

Report Preparation: Meryl Grady, Amanda Ellis

<sup>1</sup> Unless otherwise noted, all figures in this report were created in ArcGIS Pro version 2.9 using digitized NOAA Nautical Charts or georeferenced aerial photographs provided by The Maine Office of GIS.



**Application Overview**

The applicant, Heron Island Oyster Company, is requesting a 1.09<sup>2</sup> acre standard lease in Fitch Cove in the Damariscotta River within South Bristol for the bottom and suspended culture of American/Eastern oysters (*Crassostrea virginica*). An individual associated with the company applying for the lease currently operates four limited purpose aquaculture licenses (LPAs) within the vicinity of this standard lease proposal (Figure 4).

**General Characteristics**

On September 30, 2021, Maine Department of Marine Resources (MDMR) scientists assessed the epibenthic flora and fauna of the proposed lease site via SCUBA. MDMR scientists returned to the proposed lease site on October 25, 2023, to gather additional data pertaining to the proposed lease site and the surrounding area. MDMR scientists arrived on site at approximately 9:42 AM. The proposal is situated in Fitch Cove. The shoreline of Fitch Cove is mainly cobble with occasional rocky outcroppings that lead to forested uplands. There are three homes and five shorefront parcels located within Fitch Cove.

**Depth**

On October 25, 2023, MDMR scientists began collecting depths at the proposed site at approximately 9:42 AM. The tide was falling with next low tide predicted to occur at 2:38 PM (Table 1). Depths were collected at proposal corners and determined to be between 11.6 and 18 feet. Correcting for tidal variations derives water depths to be approximately 12.5 to 18.9 feet at the previous high tide and 3.3 to 9.7 feet at mean low water (MLW, 0.0 feet) (Table 1).

**Table 1.** Predicted tidal heights in South Bristol, Maine.<sup>3</sup>

Date	Time	Height (ft)
2023/10/25	2:13 AM	0.1 L
2023/10/25	8:30 AM	9.2 H
2023/10/25	2:38 PM	0.4 L
2023/10/25	8:51 PM	9.9 H

**Bottom Characteristics**

MDMR scientists observed the bottom characteristics of the proposed lease site via SCUBA transect (Figure 2). Bottom characteristics were categorized using the Coastal and Marine Ecological Classification Standard (CMECS), a national standard for describing features of the marine environment (Table 2). Sediment information was determined based on visual analysis of the video. The bottom of the proposed lease site is primarily composed of mud and shell rubble.

<sup>2</sup> Applicant originally requested 1.0 acre. MDMR calculations indicate the area is 1.09 acres.

<sup>3</sup> <https://www.usharbors.com/harbor/maine/south-bristol-me/tides/?tide=2023-10#monthly-tide-chart>



**Table 2.** Bottom characteristics of the proposed site.

Substrate Origin	Substrate Class	Substrate Subclass	Substrate Group
Geologic Substrate	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Mud
Biogenic Substrate	Shell Substrate	Shell Rubble	Not Classified

**Position and Distances to Shore**

The measuring tool in ArcGIS Pro 2.9 was used to verify the distances and bearings between proposed lease corners. Distances to shore were determined using the measuring tool in ArcGIS Pro 2.9, digital orthophotography provided by the Maine Office of GIS, and the application coordinates (Table 3, Figure 2).

**Application Coordinates (WGS84) – 1.09 Acres**

<u>Corner</u>	<u>Latitude</u>	<u>Longitude</u>	
1	43.969709°	-69.566030°	then 214.7 feet at 125° True to
2	43.969372°	-69.565361°	then 228.0 feet at 220° True to
3	43.968892°	-69.565916°	then 202.9 feet at 304° True to
4	43.969204°	-69.566554°	then 230.1 feet at 36° True to 1

**Table 3.** Approximate distances from proposed lease corners to surrounding features (Figure 2).

Feature	Distance
Corner 1 to nearest mooring	~319' to the northwest
Corner 2 to shoreline at MLW	~270' to the east
Corner 2 to nearest dock	~373' to the southeast
Corner 3 to nearest dock	~438' to the southeast
Corner 4 to nearest mooring	~236' to the northwest



Heron Island Oyster Company - Fitch Cove, Damariscotta River, South Bristol

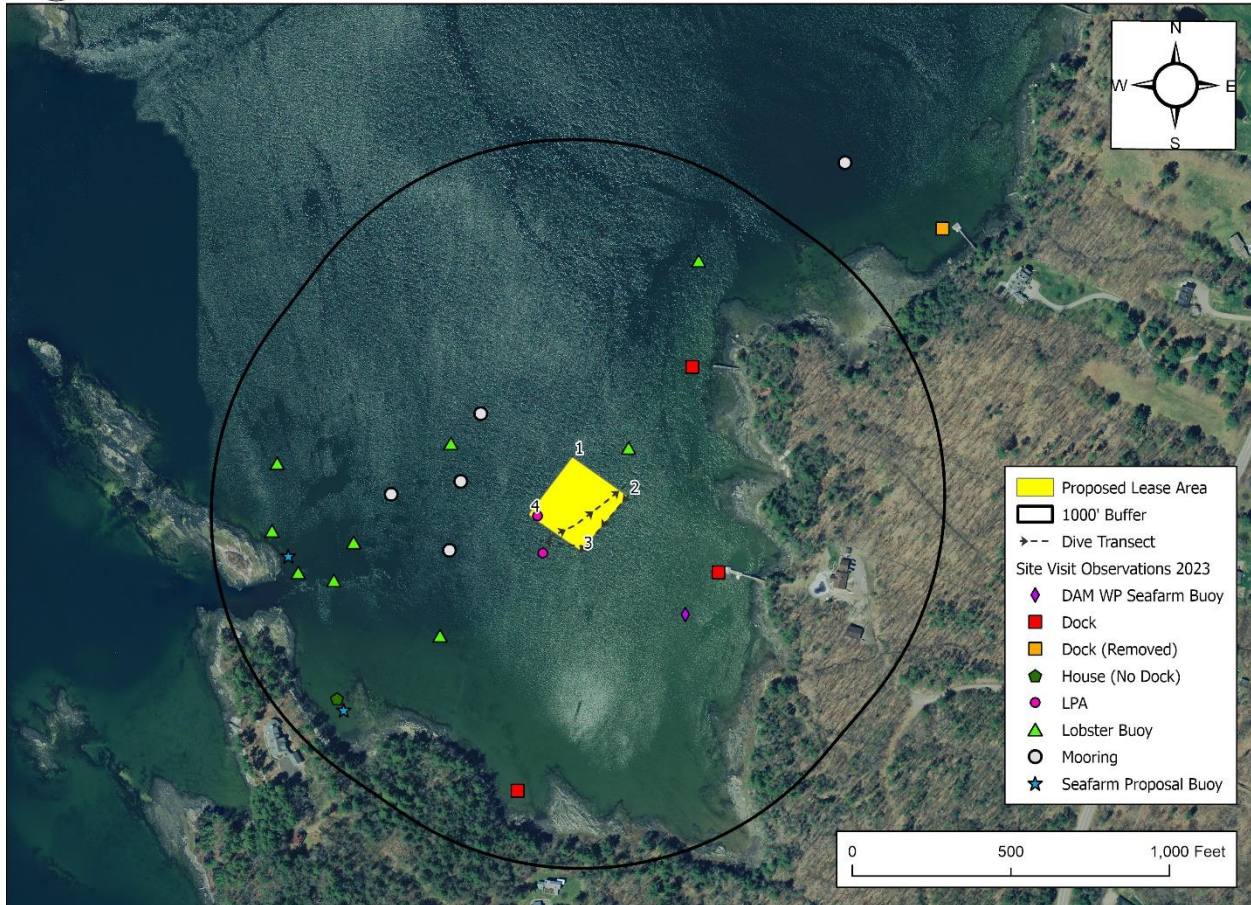


Figure 2. Proposed lease area with site visit observations.

*Pursuant to statute and regulation, aquaculture leases are evaluated in consideration of applicable decision criteria. The site report documents MDMR’s observations of the area and other information, in consideration of those criteria, as noted below:*

**(1) Riparian Ingress and Egress**

During the site visit on October 25, 2023, MDMR observed three docks located within Fitch Cove and one dock north of Fitch Cove. The dock located to the north of Fitch Cove had been detached from the pier and ramp for overwintering at the time of the site visit. The three docks within Fitch Cove all had associated piers and ramps and are the following distances from the proposal (north to south): 450 feet, 373 feet, and 780 feet.

MDMR scientists observed four moorings within Fitch Cove and one mooring north of Fitch Cove. All five moorings were vacant at the time of the site visit. The four moorings within Fitch Cove

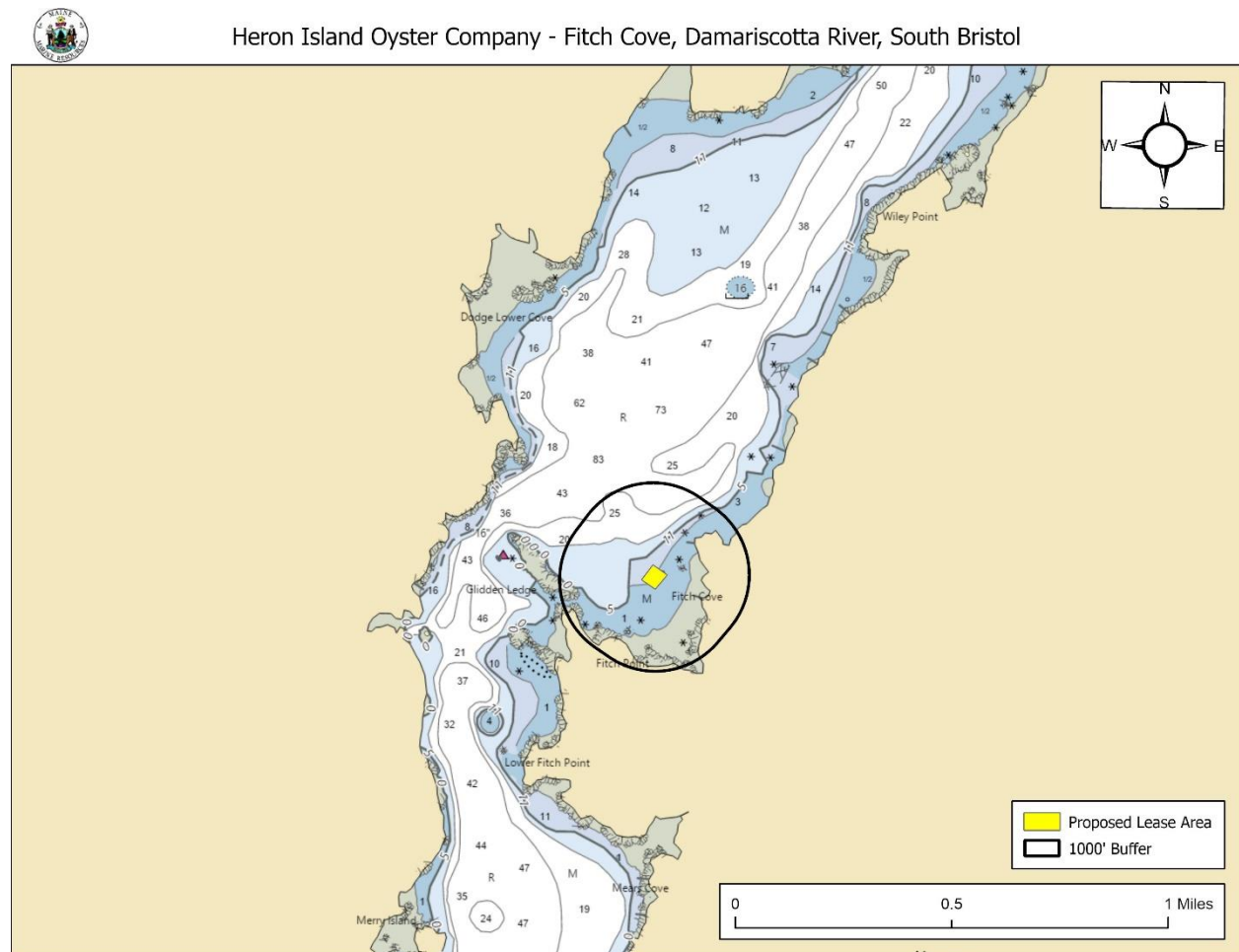


are the following distances from the proposal (north to south): 319 feet, 236 feet, 437 feet, and 272 feet (Figure 2).

**(2) Navigation**

The proposal is located within Fitch Cove outside of the main navigational channel in the Damariscotta River. The main navigational channel is approximately 1,500 feet northwest of the proposal (Figure 3). MDMR observed one commercial fishing vessel hauling lobster gear in the main river channel during the site assessment.

A Harbormaster Questionnaire was completed by the local harbormaster and submitted to the MDMR Aquaculture Division on October 25, 2021. The harbormaster indicated that due to shallow water in Fitch Cove at lower tidal stages, boats may need to navigate towards the deeper water in the center of the cove where the proposal is partially located.



**Figure 3.** Navigational channels in the vicinity of the proposed lease area.



### (3) Fishing and Other Uses

During MDMR's site assessment on October 25, 2023, dense lobster buoys were observed in the main channel of the Damariscotta River. Nine lobster buoys were observed within 1,000 feet of the proposed lease. The closest lobster buoy was approximately 125 feet north of the proposal (Figure 4).

The harbormaster indicated in the Harbormaster Questionnaire that recreational fishing occurs in the summer months near Glidden Ledge to the west of the proposal.



Heron Island Oyster Company - Fitch Cove, Damariscotta River, South Bristol

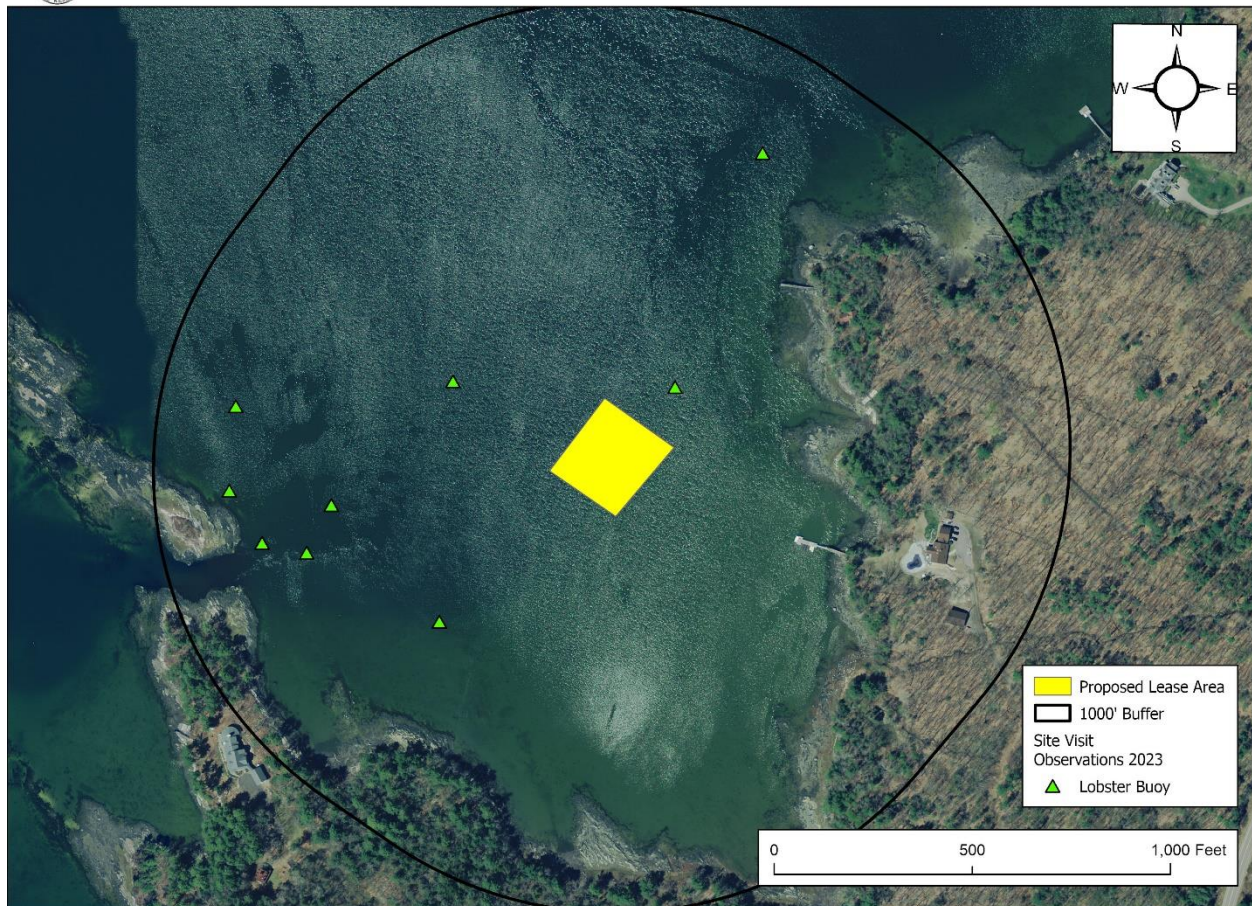


Figure 4. Lobster buoys observed during MDMR's site visit in the vicinity of the proposal.

### (4) Other Aquaculture Uses

There are four limited purpose aquaculture licenses within 1,000 feet of the proposal. All four LPAs are operated by an individual associated with the company applying for this standard lease proposal: MELA 115, MELA 215, MELA418, MELA518 (Figure 5).



During the site visit, MDMR scientists observed a sea farm corner marker buoy with the acronym DAM WP located approximately 380 feet southeast of the proposal (Figure 2).<sup>4</sup> There are no active aquaculture leases within Fitch Cove.

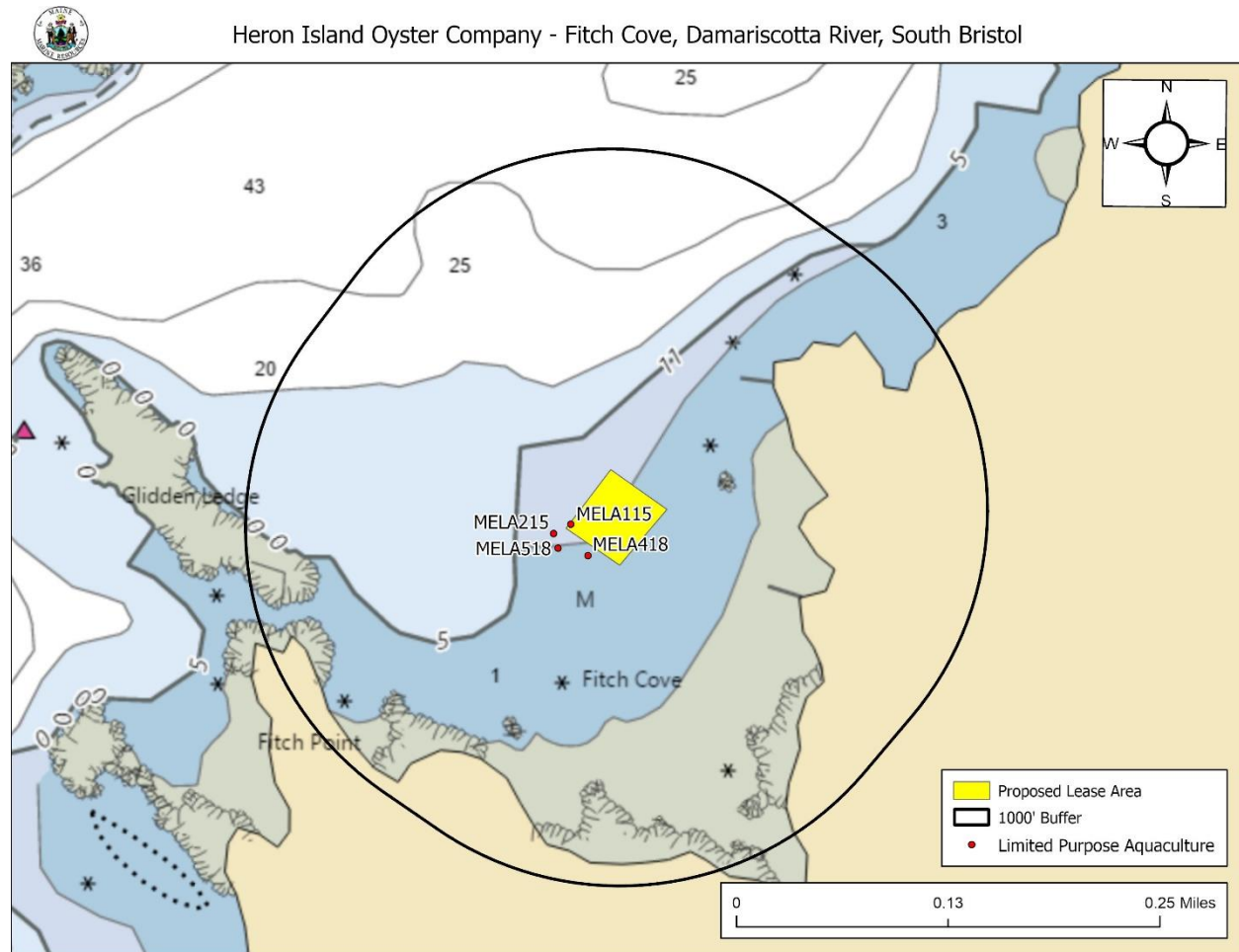


Figure 5. Aquaculture leases and LPA licenses in the vicinity of the proposed lease area.

(5) Existing System Support

Epibenthic Flora and Fauna

MDMR scientists conducted a SCUBA transect to assess the epibenthic ecology of the proposed lease. The relative abundance of epibenthic flora and fauna observed in the video transect is described below in Table 4.

Table 4. Species observed using underwater camera footage.

Species Observed	Abundance
Green Crab ( <i>Carcinus maenas</i> )	Occasional
Horseshoe Crab ( <i>Limulus polyphemus</i> )	Occasional

<sup>4</sup> DAM WP is a standard lease held by Glidden Point Oyster Company. DAM WP is located to the west of Prentiss Island. DMR contacted the lease holder who removed the buoy, which had drifted from the boundaries of DAM WP.



Species Observed	Abundance
Hermit Crab ( <i>Paguroidea</i> sp.)	Occasional
American Oyster ( <i>Crassostrea virginica</i> )	Occasional
Razor Clam ( <i>Ensis directus</i> )	Occasional
Soft-shell Clam ( <i>Mya arenaria</i> )	Occasional
Crab ( <i>Cancer</i> sp.)	Occasional

**Eelgrass (*Zostera marina*)**

Historical records of eelgrass collected by MDMR in 2010<sup>5</sup> indicate no mapped eelgrass presence in the vicinity of the proposal (Figure 6). No eelgrass was observed within the proposal boundaries during MDMR’s site assessments.



**Figure 6.** Mapped eelgrass (*Z. marina*) in the vicinity of the proposed lease area.

<sup>5</sup> Data obtained from The Maine Office of GIS “GISVIEW.MEDMR.Eelgrass”. This is the most current record of mapped eelgrass in the vicinity of the proposal.



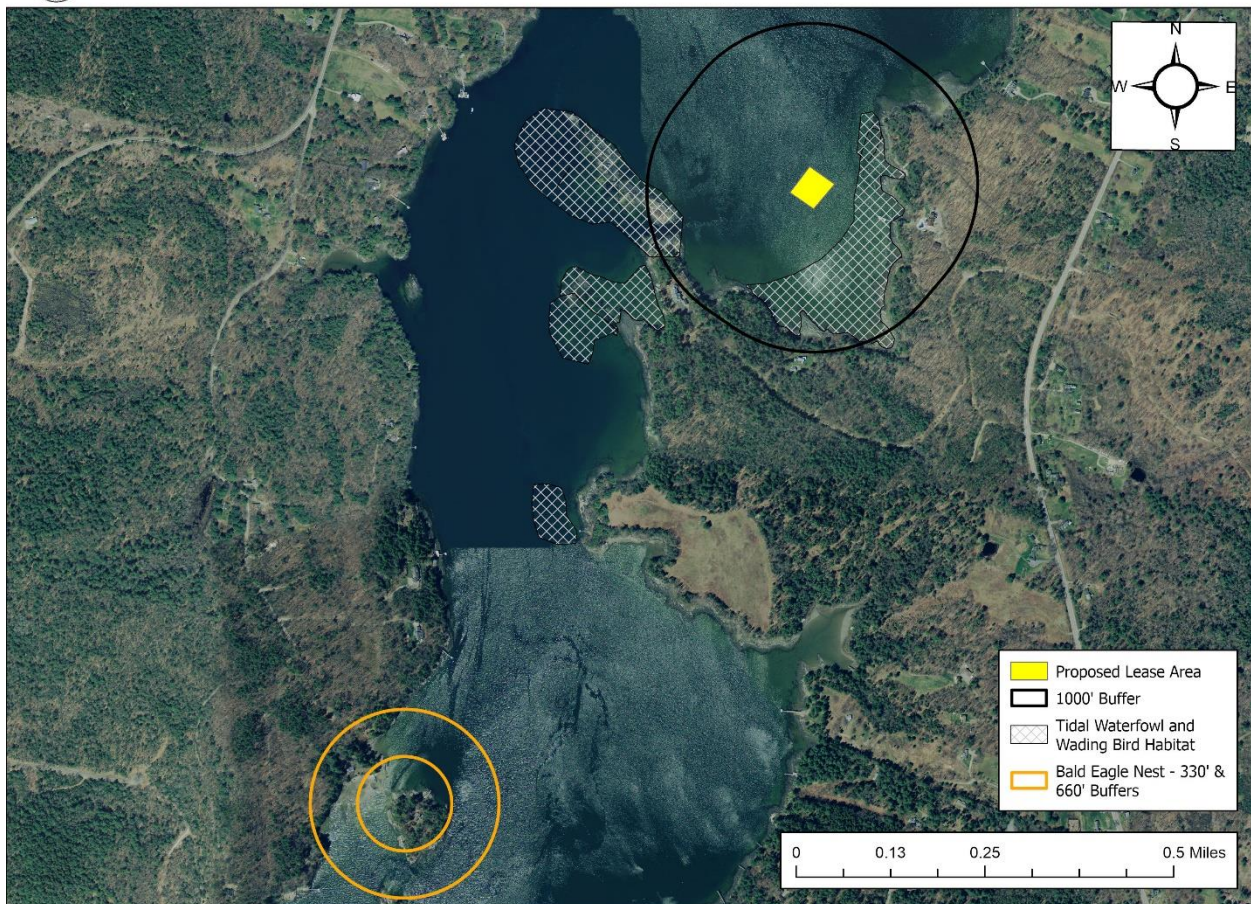


**Wildlife**

According to Geographic Information System (GIS) data maintained by the Maine Department of Inland Fisheries and Wildlife (MDIFW) and available through the Maine Office of GIS (MEGIS), the proposed lease is not located within mapped tidal waterfowl and wading bird habitat. Data collected by the United States Fish and Wildlife Service in 2022 by aerial nest survey shows the closest mapped bald eagle nesting site to be approximately 1 mile southwest of the proposal (Figure 7).



Heron Island Oyster Company - Fitch Cove, Damariscotta River, South Bristol



**Figure 7.** Mapped bald eagle nests and tidal waterfowl and wading bird habitat.<sup>6</sup>

**(6) Interference with Public Facilities**

The proposed lease is not within 1,000 feet of any beach, park, docking facility, or conserved lands owned by federal, state, or municipal governments (Figure 8).

<sup>6</sup> Data obtained from USFWS “Bald\_Eagle\_Nests\_-\_Maine\_2023” and MDIFW maintained SDE Feature Class “GISVIEW.MEIFW.Twwh”



Figure 8. Public facilities near the proposed lease site.<sup>7</sup>

### (7) Water Quality

The proposed lease is currently located within an area classified as Approved for the harvest of shellfish by the MDMR Bureau of Public Health and Aquaculture.

<sup>7</sup> Data obtained from The Maine Office of GIS "GISVIEW.MECONSLANDS.Conserved\_Lands"