

Figure 1. Vicinity map.¹

Location: Pickering Cove, Southeast Harbor, Deer Isle, Hancock County, Maine

Purpose: Standard lease for suspended culture of American/Eastern oyster (*Crassostrea virginica*), European/ Belon oyster (*Ostrea edulis*), Sugar kelp (*Saccharina latissima*/*Saccharina latissima forma angustissima*), Horsetail kelp (*Laminaria digitata*), Winged kelp (*Alaria esculenta*), Dulse (*Palmaria palmata*), Nori/Laver (*Porphyra umbilicalis*).

Site Review: Geoffrey Shook, Molly Waters

Report Preparation: Geoffrey Shook, Meryl Grady, Amanda Ellis

¹ 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, Abigail Barrows, is requesting a 4.61-acre² standard lease in Pickering Cove in Southeast Harbor, within the town of Deer Isle, for the suspended culture of shellfish and marine algae. Gear related to oyster production would be on site year-round with gear related to marine algae production on site from November-April.³ No additional structures are intended to be on site.

General Characteristics

On August 2, 2023, Maine Department of Marine Resources (MDMR) scientists assessed the proposed lease site. MDMR scientists arrived on site at approximately 12:34 PM. The proposal is located on the southeastern side of Pickering Cove between Deer Isle, Big Hay Island and Freese Island (Figure 1). The surrounding shoreline is composed of rock ledges and marshland with mixed forest uplands. There are no houses within the general proximity of the proposed lease area.

Depth

On August 2, 2023, scientists began collecting depths at the proposed site at approximately 12:53 PM. The tide was ebbing with the next low tide predicted at 5:57 PM (Table 1). Depths were determined to be between 16.3-23.4 feet. Correcting for tidal variations derives depths at mean low water (MLW, 0.0 feet) to be between 6.5-13.6 feet.

Table 1. Predicted tidal heights in Deer Isle, Maine.⁴

Date	Time	Height (ft)
2023/08/02	5:44 AM	-1.1 L
2023/08/02	11:56 AM	10.4 H
2023/08/02	5:57 PM	-0.1 L
2023/08/02	NA	NA

Bottom Characteristics

MDMR scientists observed the bottom characteristics of the proposed lease site via a remotely operated vehicle (ROV). 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 lease site is primarily composed of mud.

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

² Applicant originally requested 4.24 acres. MDMR calculations indicate the area is 4.61 acres.

³ Application page 4

⁴ <https://www.usharbors.com/harbor/maine/stonington-me/tides/?tide=2023-08#monthly-tide-chart>



Position and Distances to Shore

The geodesic 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) – 4.61 Acres

<u>Corner</u>	<u>Latitude</u>	<u>Longitude</u>	
NW	44.204086°	-68.619136°	then 290.2 feet at 81° True to
NE	44.204225°	-68.618046°	then 753.0 feet at 165° True to
SE	44.202240°	-68.617250°	then 250.6 feet at 258° True to
SW	44.202141°	-68.618196°	then 750.4.4 feet at 342° True to NW

Table 3. Approximate distances from proposal corners to surrounding features (Figure 3).

Feature	Distance
SW corner to Deer Isle shoreline closest point MLW	~655.3 feet to the west
SW corner to green navigational aid "1"	~5,964.1 feet to the southeast
NE corner to Freese Island shoreline closest point MLW	~104.2 feet to the northeast
NW corner to Big Hay Island closest point MLW	~851.7 feet to the north
SE corner to Pickering Cove entrance	~574.0 feet to the south

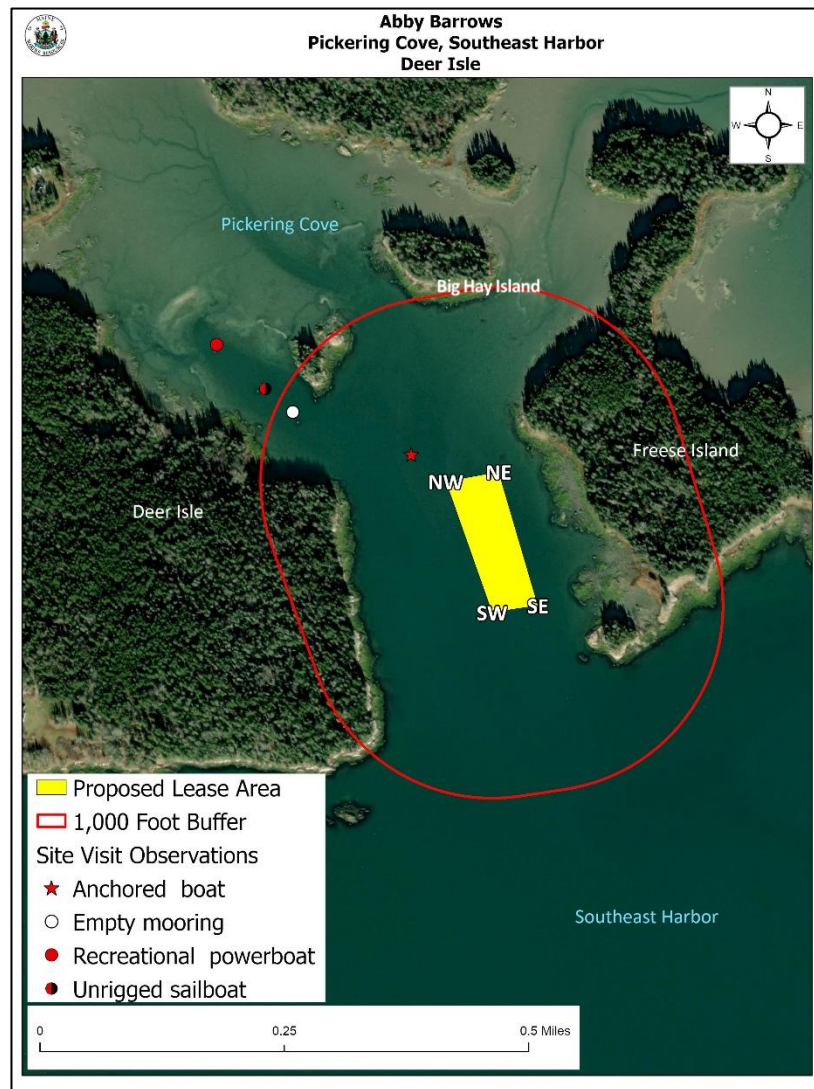


Figure 2. Proposed lease area with site visit observations.

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 MDMR's site assessment, scientists did not observe any houses or piers within 1,000 feet of the proposal. A small mooring field was observed to the northwest with the nearest mooring located approximately 908 feet northwest of the proposal. At the time of MDMR's site visit, one mooring was unoccupied, one mooring contained a small recreational powerboat, and the third mooring contained an unrigged sailboat (Figure 2). From the general proposal area, four houses were visible to the north further inside Pickering Cove and two additional houses were visible to



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the northeast. The houses to the northeast were observed to have stairs leading to the water, but no piers or docks were observed. Three small rowboats were observed tied up along the shore. There is approximately 655.3 feet of navigable water between the western boundary and the Deer Isle shoreline at MLW (Figure 3).

(2) Navigation

The proposal is in subtidal waters on the southeastern side of Pickering Cove in Southeast Harbor. Navigational charts indicate that much of the northern portion of Pickering Cove is shallow and intertidal. The proposal is located approximately 574 feet to the north of the entrance to Pickering Cove and the deeper, more open waters of Southeast Harbor (Figure 3). The nearest navigational aid is located approximately 5,964.1 feet to the southeast of the proposal. When MDMR scientists arrived at the proposal site, a small recreational powerboat with a cabin was anchored to the north of the proposal (Figure 2). The boat was occupied and appeared to be anchored for recreational purposes. During the site assessment, the boat raised its anchor and transited to the west of the proposal out of Pickering Cove.

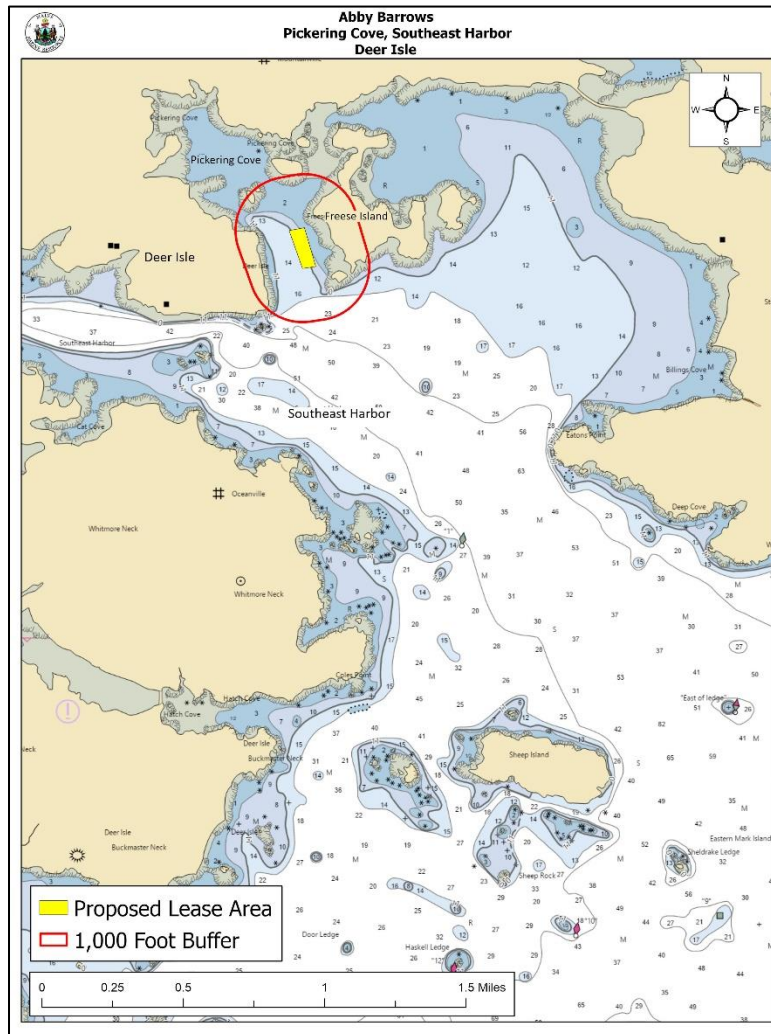


Figure 3. Charted navigational channels in the vicinity of the proposed lease area.

(3) Fishing and Other Uses

During MDMR’s site assessment, no fishing activities were observed. No lobster buoys were observed within 1,000 feet of the proposal.

(4) Other Aquaculture Uses

There are no active aquaculture leases or Limited Purpose Aquaculture licenses (LPAs) within 1,000 feet of the proposal (Figure 4).

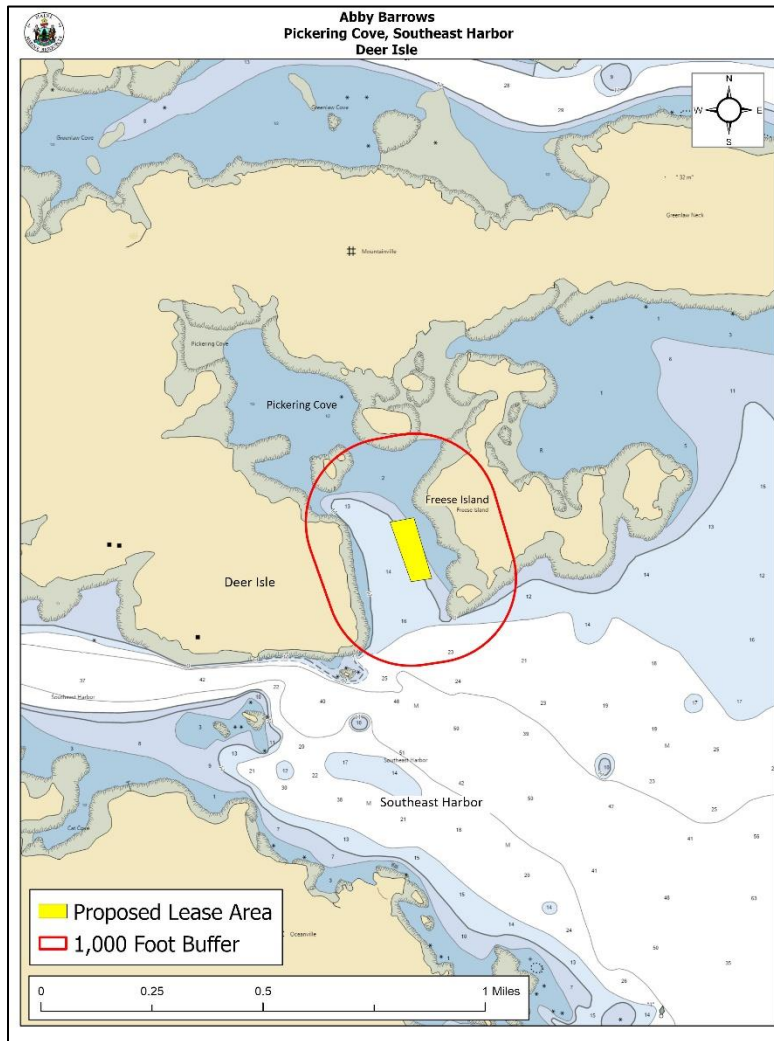


Figure 4. Aquaculture sites in the vicinity of the proposed lease area.

(5) Existing System Support

Epibenthic Flora and Fauna

MDMR scientists utilized an ROV to assess the epibenthic ecology of the proposed lease. The relative abundance of epibenthic flora and fauna observed in the video is described below in Table 4.

Species Observed	Abundance
Rock crab (<i>Cancer</i> spp.)	Occasional
Sand shrimp (<i>Crangon septemspinosa</i>)	Common



Eelgrass (*Zostera marina*)

Historical records of eelgrass collected in 2010⁵ indicate that there is mapped eelgrass within 1,000 feet of the proposal. The nearest mapped eelgrass is a patch approximately 61.2 feet to the east of the proposal. During MDMR's site assessment, scientists did not observe any eelgrass.



Figure 5. Mapped eelgrass in the vicinity of the proposed lease area.

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), there is mapped Tidal Waterfowl and Wading Bird Habitat (TWWH) within 1,000 feet of the proposal (Figure 6). The nearest TWWH is approximately 670.9 feet to the northeast of the proposal. The nearest

⁵ Data obtained from The Maine Office of GIS "GISVIEW.MEDMR.Eelgrass". This is the most current record of mapped eelgrass within the vicinity of the proposal.



mapped bald eagle (*Haliaeetus leucocephalus*) nest is located approximately 1.64 miles to the west of the proposal.

On July 28, 2022, a Wildlife Biologist with MDIFW responded by email to a “Request for Agency Review and Comment”, stating that minimal impacts to wildlife are anticipated.

During MDMR’s site assessment, scientists observed double-crested cormorants (*Nannopterum auritum*), common terns (*Sterna hirundo*), herring gulls (*Larus argentatus*), lesser black backed gulls (*Larus fuscus*), a bald eagle (*Haliaeetus leucocephalus*), as well as a harbor seal (*Phoca vitulina*) in the vicinity of the proposal.



Figure 6. Mapped Tidal Waterfowl and Wading Bird Habitat.⁶

⁶ Data obtained from USFWS “Bald_Eagle_Nests_-_Maine_2023” and MDIFW maintained SDE Feature Class “GISVIEW.MEIFW.Twwh”



(6) Interference with Public Facilities

The proposal is not within 1,000 feet of any beach, park, or docking facilities owned by federal or state governments. The proposed lease is within 1,000 feet of conserved lands owned by federal and state governments. The “Edgar M. Tennis Preserve” is located on Deer Isle, which is approximately 655.3 feet to the west of the proposal at MLW. The preserve is owned by the State of Maine and managed by the Island Heritage Trust. The preserve is publicly accessible and contains hiking trails.

Big Hay Island is located approximately 851.7 feet to the north of the proposal at MLW. The island is federally owned by the US National Park Service and is considered part of Acadia National Park. The island is an undeveloped conservation area.

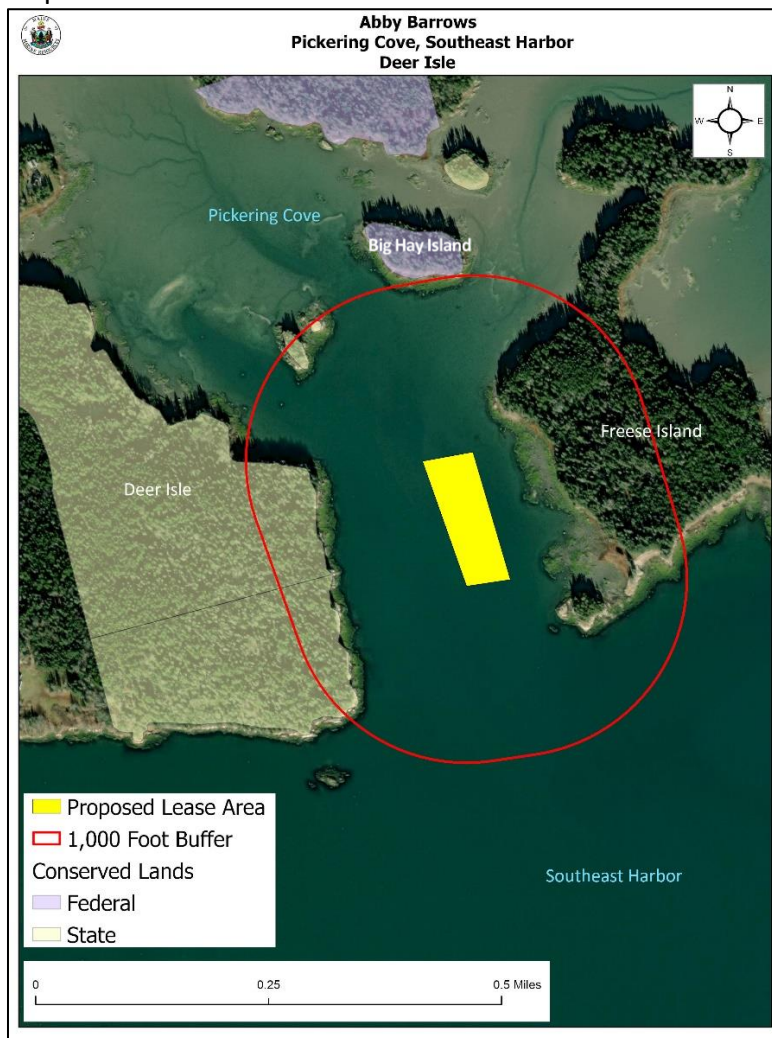


Figure 7. Conserved lands within 1,000 feet of the proposed site.

(7) Water Quality

The proposed lease is located within an area that is currently classified as Open/Approved by the MDMR Bureau of Public Health and Aquaculture.