

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

**Location:** East of Job Island, Penobscot Bay, Islesboro, Waldo County, Maine

**Purpose:** Experimental lease for suspended culture of sugar kelp (*Saccharina latissima*), skinny kelp (*Saccharina angustissima*), winged kelp (*Alaria esculenta*), horsetail/fingered kelp (*Laminaria digitata*), Dulse (*Palmaria palmata*), and sea lettuce (*Ulva lactuca*).

Site Review: Geoff Shook, Chloe Kilborn

Report Preparation: Katie von Hohenleiten, Geoff Shook, 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 geo-referenced aerial photographs provided by The Maine Office of GIS.



**Application Overview**

The applicant, Jett Lindelof, is requesting 3.71<sup>2</sup> acres east of Job Island in Penobscot Bay for the suspended culture of marine algae. The applicant intends to remove all gear except corner markers, mooring blocks, mooring chain, four mooring lines, and four mooring balls from June 15 through October 15.<sup>3</sup>

**General Characteristics**

On September 28, 2023, Maine Department of Marine Resources (MDMR) scientists assessed the proposed lease site. MDMR scientists arrived on site at approximately 9:56 AM. The eastern shore of Job Island, in the vicinity of the proposal, consists of rocky coastline leading to forested uplands and is undeveloped.

**Depth**

MDMR scientists began collecting depths at the proposed site during a rising tide at approximately 9:56 AM. Measured depths at corners of the proposed lease site ranged from 33 to 39.9 feet. Correcting for tidal variation derives water depths at the corners of the proposal at mean low water (MLW, 0.0 feet) to be from 22.6 to 29.5 feet (Table 1).

**Table 1.** Predicted tidal heights in Tenants Harbor, Maine.<sup>4</sup>

Date	Time	Height (ft)
2023/09/28	4:12 AM	-0.8 L
2023/09/28	10:26 AM	10.5 H
2023/09/28	4:31 PM	-0.7 L
2023/09/28	10:47 PM	11.3 H

**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 proposed lease site is 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

<sup>2</sup> Applicant originally requested 4.0 acres. MDMR calculations indicate the area is 3.71 acres.

<sup>3</sup> Application page 6

<sup>4</sup> <https://www.ussharbors.com/harbor/maine/tenants-harbor-me/tides/?tide=2023-09#monthly-tide-chart>



**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) – 3.71 Acres**

<u>Corner</u>	<u>Latitude</u>	<u>Longitude</u>	
NW	44.23237°	-68.93715°	then 164.5 feet at 100° True to
NE	44.23230°	-68.93653°	then 1,059.6 feet at 189° True to
SE	44.22943°	-68.93717°	then 141.3 feet at 280° True to
SW	44.22950°	-68.93770°	then 1,056.2 feet at 008° True to NW

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

Feature	Distance
NE corner to Islesboro Island at MLW	~1,169.5' to the east
SE corner to Pendleton Point at MLW	~1,756.4' to the east
SW corner to Job Island shoreline at MLW	~460.7' to the west
NW corner to Job Island shoreline at MLW	~288.5' to the west



**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**

MDMR did not observe any docks, houses, or moorings in the vicinity of the proposal. Nearby Job Island, located to the west of the proposal, is uninhabited and no docks or other structures were observed at the time of the site visit. Nearby Islesboro Island, located to the east of the proposal, is inhabited and one dock was observed 2,090 feet to the northeast of the proposal at the time of the site visit.



## (2) Navigation

The proposal is located approximately 288.5 feet to the east of Job Island at MLW. There is approximately 1,169.5 feet of navigable water between the proposal and the western shore of Islesboro Island at MLW. The main navigational channel splits into two sections in the vicinity of Islesboro Island and diverts east and west of the island, before reforming into a single channel. No vessel traffic was observed during the site visit.

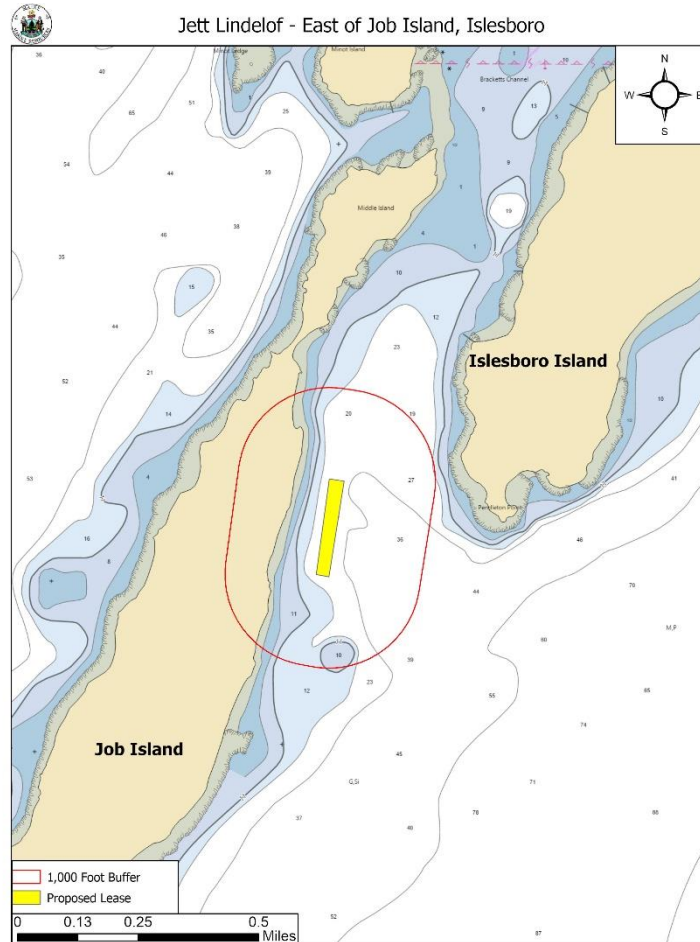


Figure 3. Navigational channels in the vicinity of the proposed lease area.

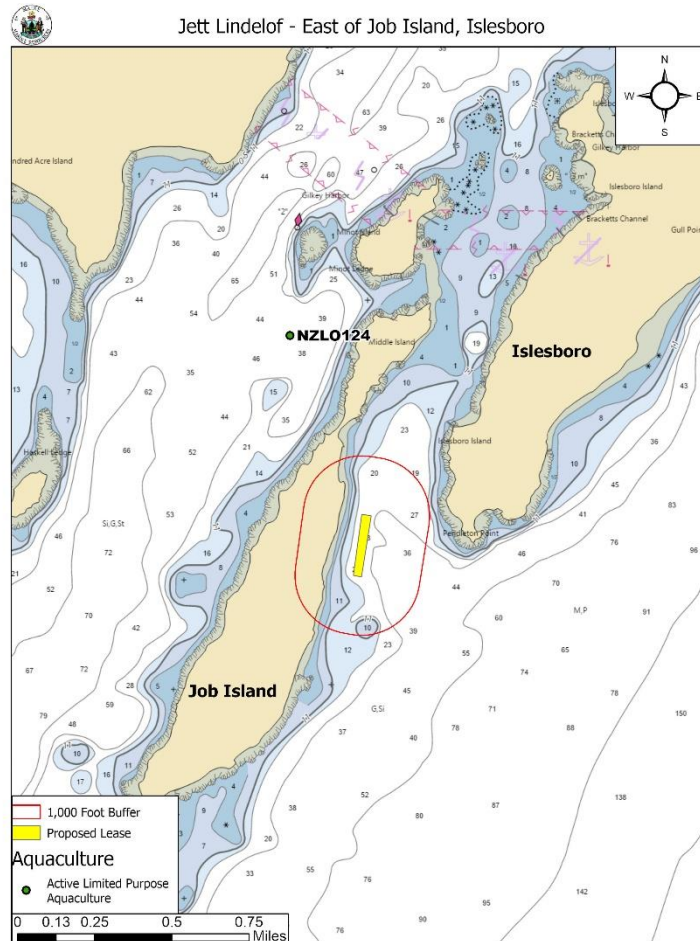
## (3) Fishing and Other Uses

During the site visit, MDMR documented lobster buoys in the general vicinity of the proposal. MDMR recorded the location of buoys closest to the proposal, as seen in Figure 2. One lobster buoy was located 26.8 feet to the east of the proposal boundaries and one buoy was located 199.1 feet southwest of the proposal. Additionally, there was a cluster of several lobster buoys located 144.7 feet to the south of the proposal. During the MDMR site visit on September 28, 2023, there was light lobstering activity observed to the east of the proposal.



**(4) Other Aquaculture Uses**

There are no aquaculture leases or limited purpose aquaculture (LPA) sites within 1,000 feet of the proposed lease site (Figure 4).



**Figure 4.** Aquaculture leases and LPA licenses in the vicinity of the proposed lease area.

**(5) Existing System Support**

**Epibenthic Flora and Fauna**

On September 28, 2023, 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 transect is described below in Table 4.



**Table 4.** Species observed on underwater camera footage.

Species Observed	Abundance
Shrimp ( <i>Crangon septemspinosa</i> )	Occasional
Crab ( <i>Cancer</i> spp)	Common
Sugar Kelp ( <i>Saccharina latissima</i> )	Rare
Sea lace ( <i>Membranipora membranacea</i> )	Rare
Flounder (Order, <i>Pleuronectiformes</i> )	Rare
Northern cerianthid ( <i>Pachycerianthus borealis</i> )	Rare

**Eelgrass (*Zostera marina*)**

Historical records of eelgrass collected by MDMR in 2010 do not indicate mapped eelgrass presence in the vicinity of the proposal. The nearest mapped eelgrass is approximately 1,884 feet northeast of the proposal (Figure 5).<sup>5</sup> No eelgrass was observed on underwater camera footage within the proposal boundaries during MDMR’s site assessment.

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<sup>5</sup> 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.



Figure 5. Mapped eelgrass (*Z. marina*) 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), the proposed lease is located approximately 3,320 feet to the south of mapped Tidal Waterfowl and Wading Bird Habitat. Data collected by the United States Fish and Wildlife Service in 2023 by aerial nest survey shows the closest mapped bald eagle nesting site to be approximately 0.96 miles west of the proposal (Figure 6).

During the site assessment, MDMR scientists observed common eiders (*Somateria mollissima*), black guillemots (*Cephus grylle*), American crows (*Corvus brachyrhynchos*), and herring gulls (*Larus argentatus*) in the general vicinity of the proposal.





On June 22, 2023, a Wildlife Biologist with MDIFW responded by email to a “Request for Agency Review and Comment” stating minimal impacts to wildlife are anticipated for this project.<sup>6</sup>



**Figure 6.** Mapped bald eagle nests and Tidal Waterfowl and Wading Bird Habitat.<sup>7</sup>

**(6) Interference with Public Facilities**

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

**(7) Water Quality**

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

<sup>6</sup> Email correspondence between MDIFW and MDMR

<sup>7</sup> Data obtained from USFWS “Bald\_Eagle\_Nests\_-\_Maine\_2023” and MDIFW maintained SDE Feature Class “GISVIEW.MEIFW.Twwh”