



Keith Miller, Mike Hyvarinen, Richard Philbrook  
- Northwest of Seavey Ledges, St. George

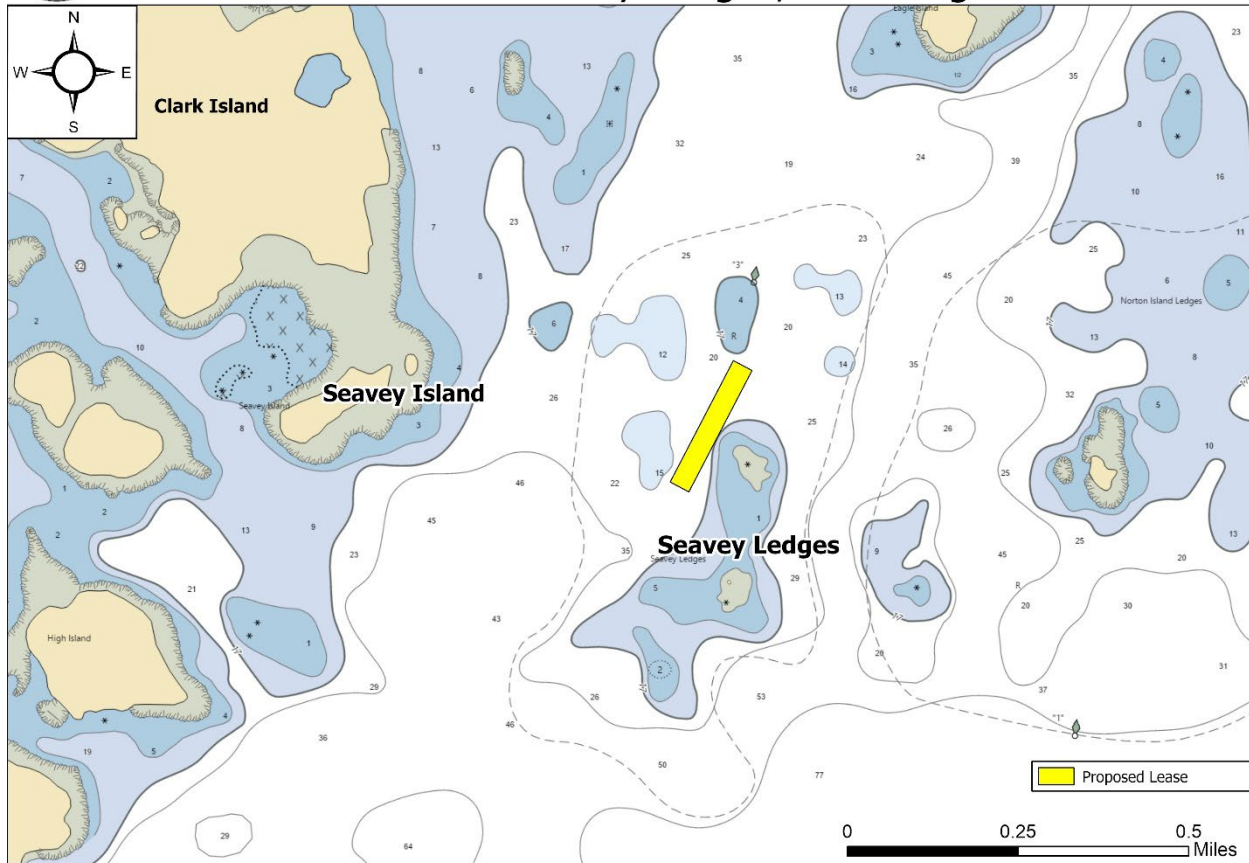


Figure 1. Vicinity map.<sup>1</sup>

**Location:** Northwest of Seavey Ledges, Penobscot Bay, St. George, Knox 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*), shotgun kelp (*Agarum clathratum*), dulse (*Palmaria palmata*), nori/laver (*Porphyra* spp), red seaweed (*Gracilaria tikvahiae*), Irish moss (*Chondrus crispus*), and sea lettuce (*Ulva lactuca*).

Site Review: Meryl Grady, Geoff Shook, and Heidi Bray

Report Preparation: Katie von Hohenleiten, Geoff Shook, and Meryl Grady

<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.



# Maine Department of Marine Resources Site Report

Keith Miller, Mike Hyvarinen, Richard Philbrook  
Seavey Ledges, Penobscot Bay, St. George

## Application Overview

The applicants, Keith Miller, Mike Hyvarinen and Richard Philbrook, are requesting 3.98<sup>2</sup> acres northwest of Seavey ledges in Penobscot Bay within the town of St George for the suspended culture of marine algae. Aquaculture gear will be in place from October 1 - June 15. In the off-season from June 16 – September 30, culture lines and depth control buoys will be removed. Lease corner markers, moorings, mooring buoys, and associated anchor tackle will be left onsite year-round.<sup>3</sup>

## General Characteristics

On July 16, 2024, Maine Department of Marine Resources (MDMR) scientists assessed the proposed lease site. MDMR scientists arrived on site at approximately 9:15 AM. Seavey Ledges are approximately 165 feet to the east of the proposal at MLW and consisted of rock ledges. Distant shorelines were observed to consist of rocky shoreline leading to forested uplands.

## Depth

MDMR scientists began collecting depths at the proposed site at approximately 9:58 AM. The tide was ebbing with the next low tide predicted at 1:12 PM (Table 1). Depths were determined to be from 30.0 to 37.6 feet. Correcting for tidal variation derives water depths at mean low water (MLW, 0.0 feet) to be from 24.9 to 32.5 feet.

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

Date	Time	Height (ft)
2024/07/16	1:11 AM	1.6 L
2024/07/16	7:22 AM	7.8 H
2024/07/16	1:12 PM	2.0 L
2024/07/16	7:36 PM	9.2 H

## Bottom Characteristics

MDMR scientists observed the bottom characteristics of the proposed lease site via SCUBA. 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 gravel and shell rubble.

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

Substrate Origin	Substrate Class	Substrate Subclass	Substrate Group	Substrate Subgroup
Geologic Substrate	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravel	Cobble
Biogenic Substrate	Shell Substrate	Shell Rubble	Not Classified	Not Classified

<sup>2</sup> Applicant originally requested 3.99 acres. MDMR calculations indicate the area is 3.98 acres.

<sup>3</sup> Application page 16,17

<sup>4</sup> <https://www.usharbors.com/harbor/maine/tenants-harbor-me/tides/?tide=2024-07#monthly-tide-chart>



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**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, a nautical chart provided by the National Oceanic and Atmospheric Administration (NOAA), and the application coordinates (Table 3, Figure 2).

**Application Coordinates (WGS84) – 3.98 Acres**

<u>Corner</u>	<u>Latitude</u>	<u>Longitude</u>	
NW	43.97776°	-69.16579°	then 163.8 feet at 117° True to
NE	43.97755°	-69.16524°	then 1,059.1 feet at 207° True to
SE	43.97497°	-69.16709°	then 163.8 feet at 297° True to
SW	43.97518°	-69.16764°	then 1,059.1 feet at 027° True to NW

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

<u>Feature</u>	<u>Distance</u>
NW corner to green can “3” navigational buoy	~620.0’ to the north
SE corner to green can “1” navigational buoy	~3,533.0 to the east
SW corner to Seavey Island shoreline at MLW	~2,004.2’ to the west
NE corner to Eagle Island shoreline at MLW	~2,798.0’ to the northeast
Eastern boundary of lease to Seavey Ledge at MLW	~165.0’ to the east

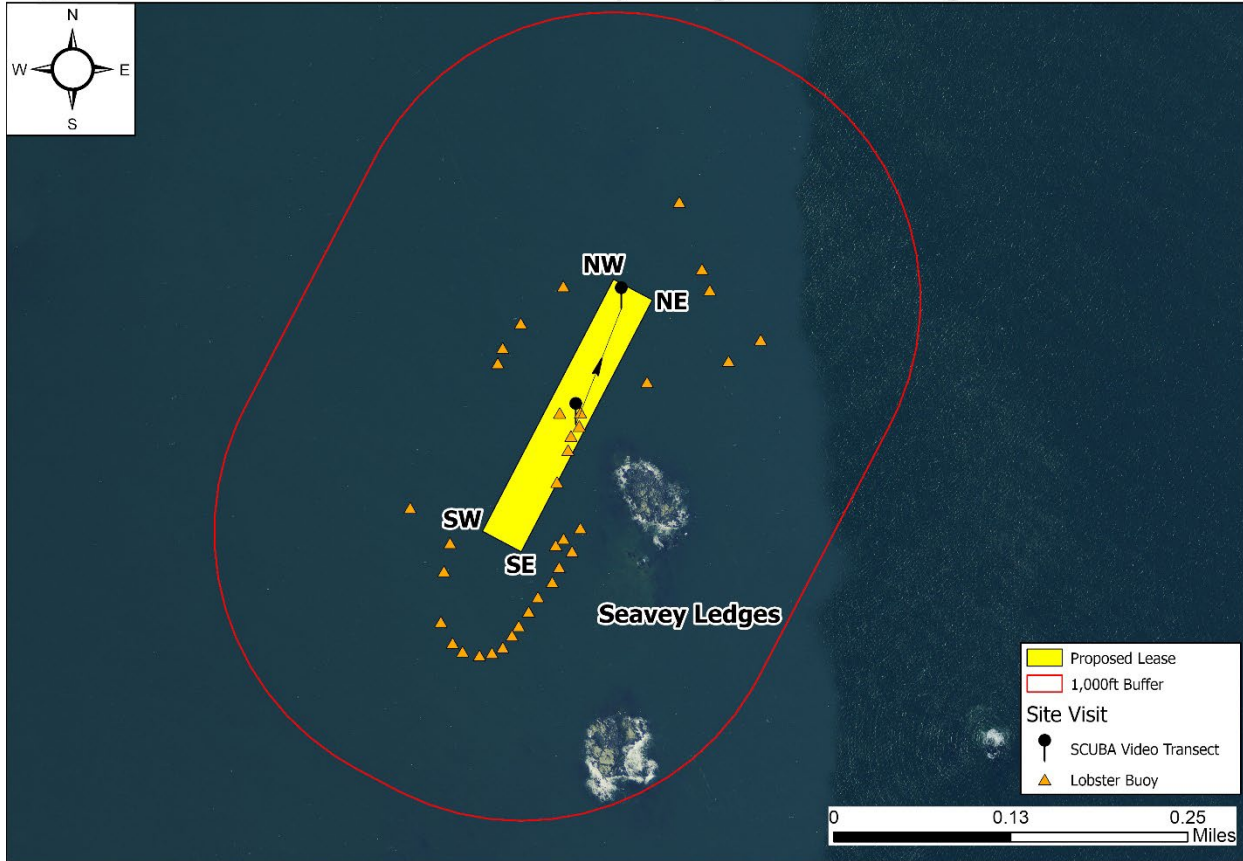


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**Figure 2.** Proposed lease area with site visit observations.

***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 Seavey Island, as well as the southern tip of Clark Island, located to the west of the proposal, are owned by the State of Maine and no docks or other structures were observed at the time of the site visit.

A completed Harbormaster Questionnaire submitted to MDMR on June 7, 2023, indicates that the proposal would not impact riparian ingress and egress.



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**(2) Navigation**

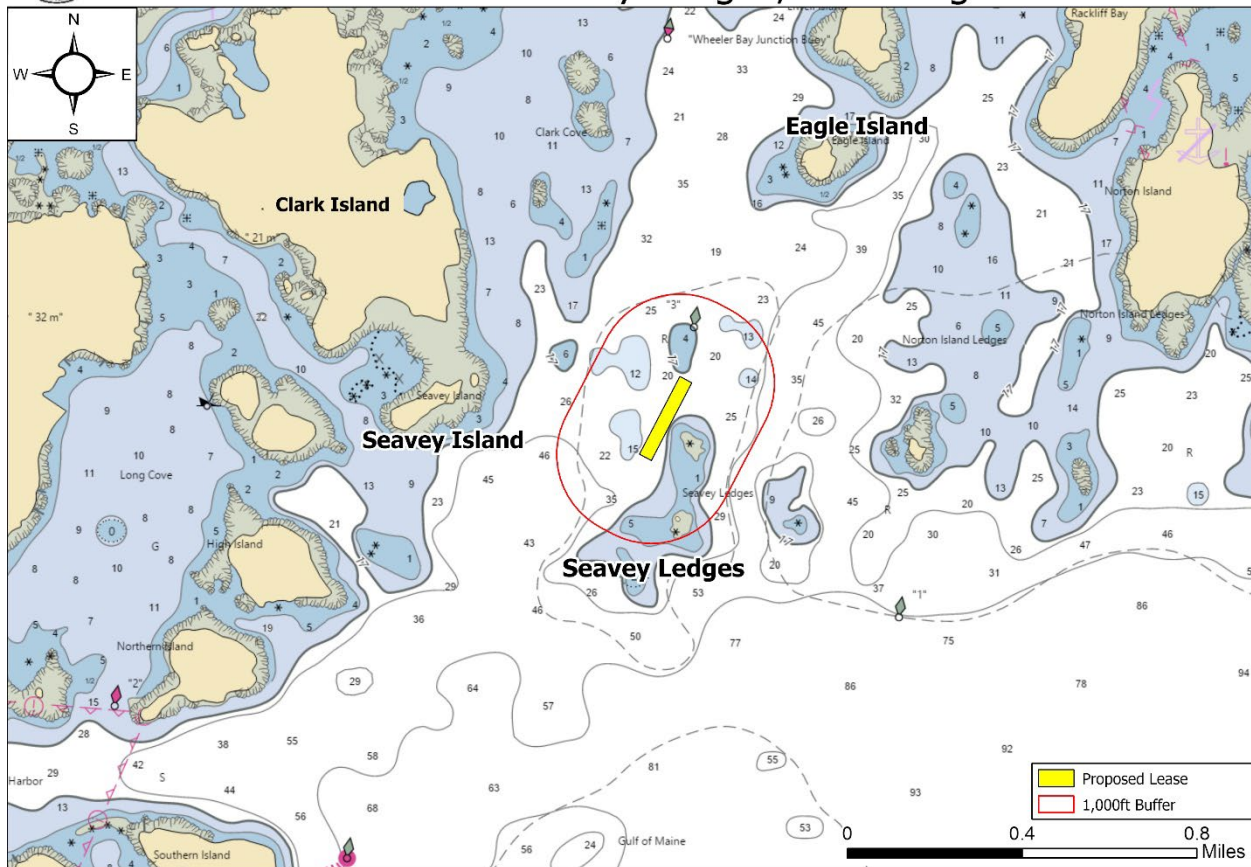
The proposal is located outside of the main navigational channel to Wheeler Bay, situated approximately 165.0 feet to the west of Seavey Ledges. There is approximately 2,798.0 feet of navigable water between the proposal and the southern shore of eagle Island at MLW. There is approximately 2,004.2 feet of navigable water between the proposal and Seavey Island (Figure 3).

During MDMR’s site visit, no recreational powerboats were observed transiting in the main navigational channel or around Seavey ledges. MDMR scientists observed a recreational kayaker paddling around the southern end of Seavey Ledges.

The Harbormaster Questionnaire indicates that the proposed lease would not unreasonably interfere with navigation in the area.



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



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**(3) Fishing and Other Uses**

During the site visit, MDMR observed many lobster buoys in the general vicinity of the proposal. Six lobster buoys were located within the proposal boundaries at the time of the site visit (Figure 2). Due to the high density of lobster buoys in the vicinity of the proposal, MDMR did not record the location of all buoys, rather MDMR recorded the location of the buoys nearest to the proposal. There were additional buoys observed beyond what is displayed in Figure 2. During MDMR’s site assessment, there were three lobster vessels actively hauling traps in the vicinity of the proposal. MDMR scientists observed lobster within the proposal boundaries (*Homarus americanus*) on the underwater camera footage collected during the site assessment.

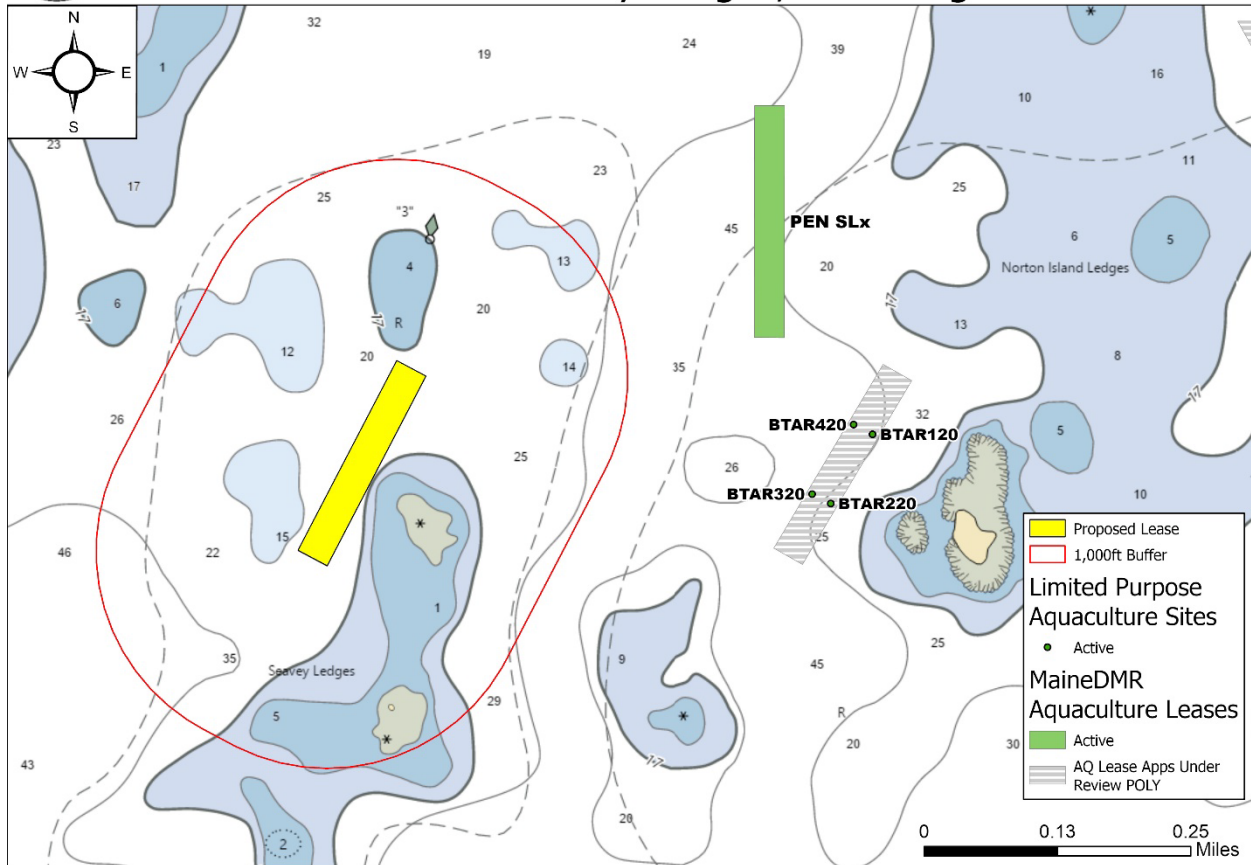
The Harbormaster Questionnaire states that commercial fishing in the area is seasonally dependent.

**(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).



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



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**(5) Existing System Support**

**Epibenthic Flora and Fauna**

On July 16, 2024, 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 on underwater camera footage.

Species Observed	Abundance
<i>Dasysiphonia japonica</i>	Abundant
Rock weed ( <i>Fucus vesiculosus</i> )	Abundant
Green filamentous algae ( <i>Chaetomorpha</i> sp.)	Abundant
Sugar kelp ( <i>Saccharina latissima</i> )	Abundant
American Lobster ( <i>Homarus americanus</i> )	Common
Winged kelp ( <i>Alaria esculenta</i> )	Common
Shotgun Kelp ( <i>Agarum clathratum</i> )	Common
Spiral rockweed ( <i>Fucus distichus</i> )	Common
Marine snail ( <i>Littorina</i> sp.)	Common
Hermit crab	Common
Sea lettuce ( <i>Ulva lactuca</i> )	Occasional
Grubby sculpin ( <i>Myoxocephalus aeneus</i> )	Rare

**Eelgrass (*Zostera marina*)**

Historical records of eelgrass collected by MDMR in 2010 indicate no mapped eelgrass presence within the vicinity of the proposal. The nearest mapped eelgrass is approximately 2,522.3 feet west 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.

<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.

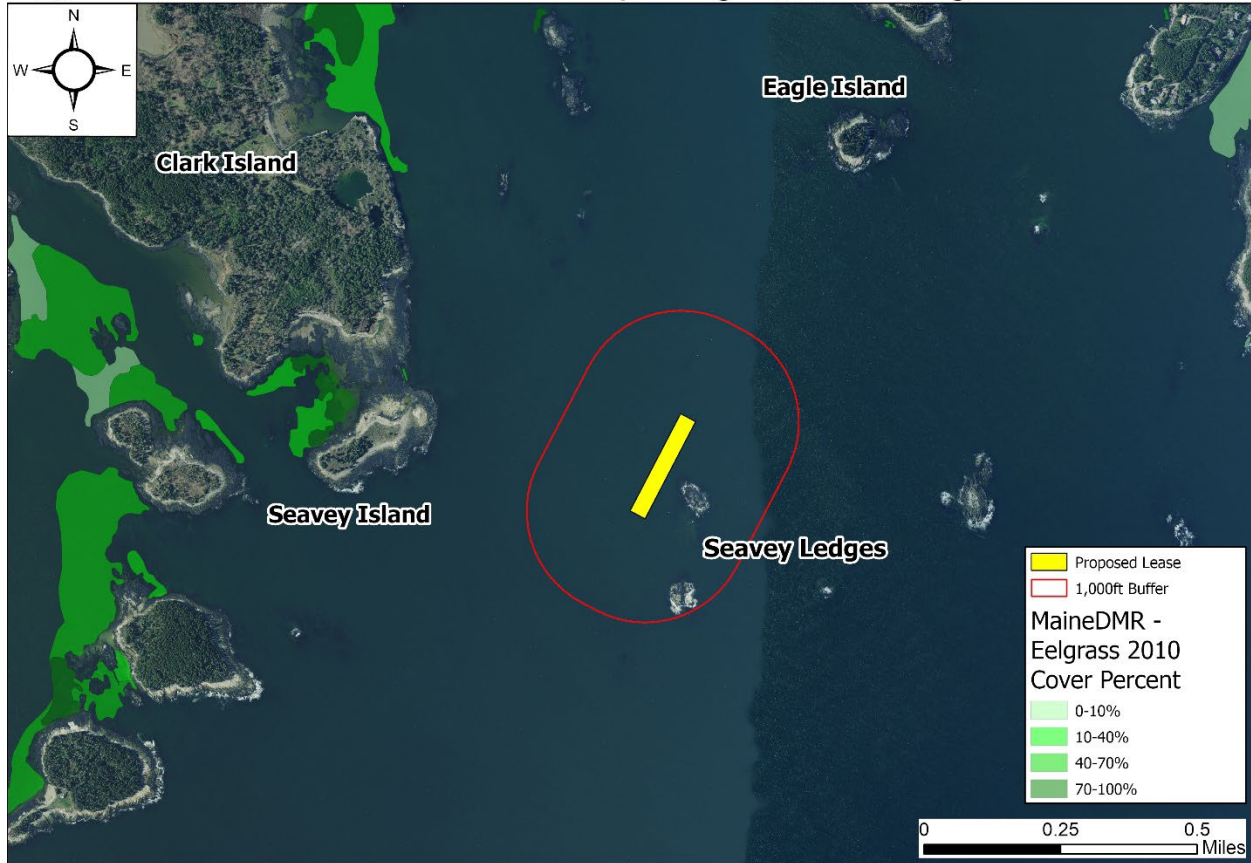


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**Figure 5.** Mapped eelgrass (*Z. marina*) in the vicinity of the proposed lease area.

**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 1,981.3 feet to the east of mapped Tidal Waterfowl and Wading Bird Habitat (TWWH) (Figure 6). 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 1.54 miles northwest of the proposal.

During the site assessment, MDMR scientists observed double-crested cormorants (*Nannopterum auritum*), laughing gulls (*Leucophaeus atricilla*), herring gulls (*Larus argentatus*) and harbor seals (*Phoca vitulina*) in the general vicinity of the proposal.



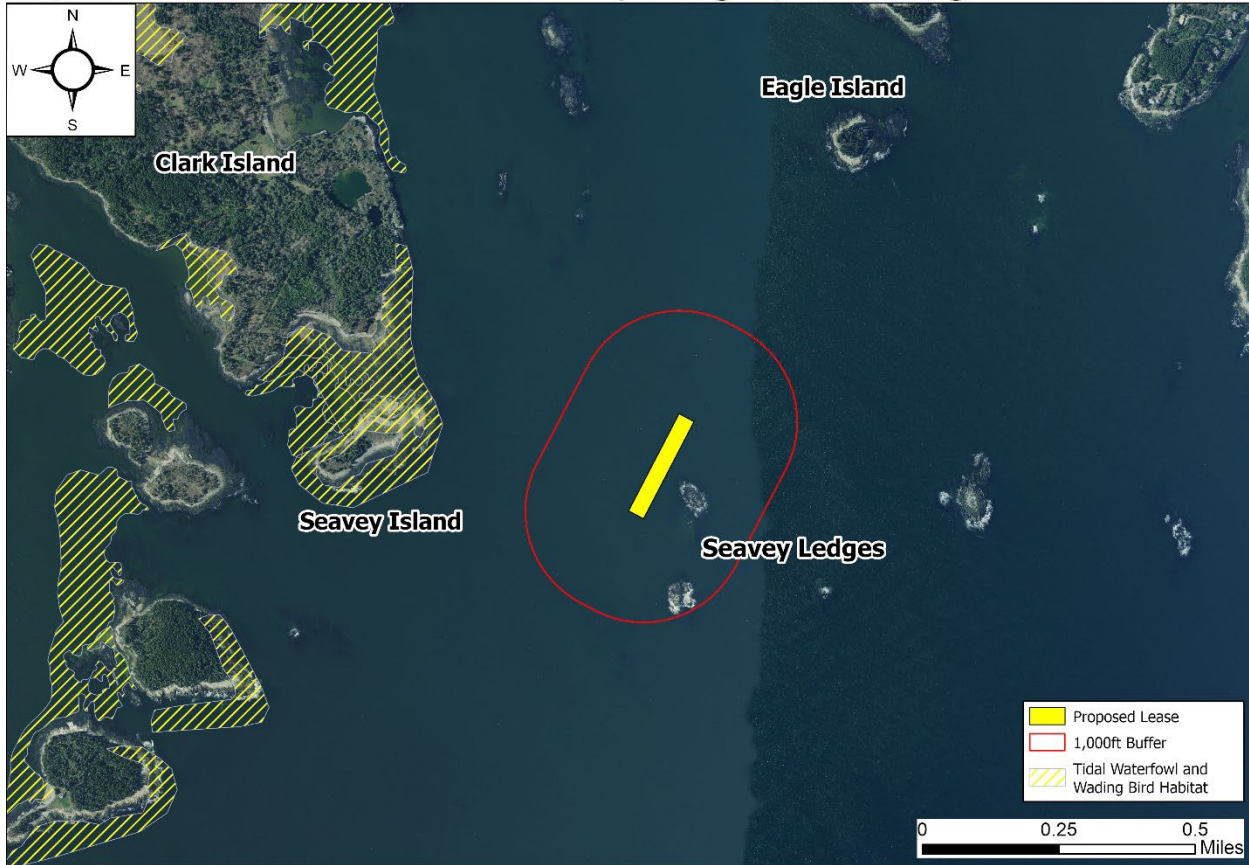


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**Figure 6.** Mapped TWWH in the vicinity of the proposed lease area.<sup>6</sup>

**(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 Open/Approved by the MDMR Bureau of Public Health and Aquaculture.

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