



Maine Department of Marine Resources
Site Report

Brent Nappi
South of Clapboard Island, Casco Bay, Falmouth

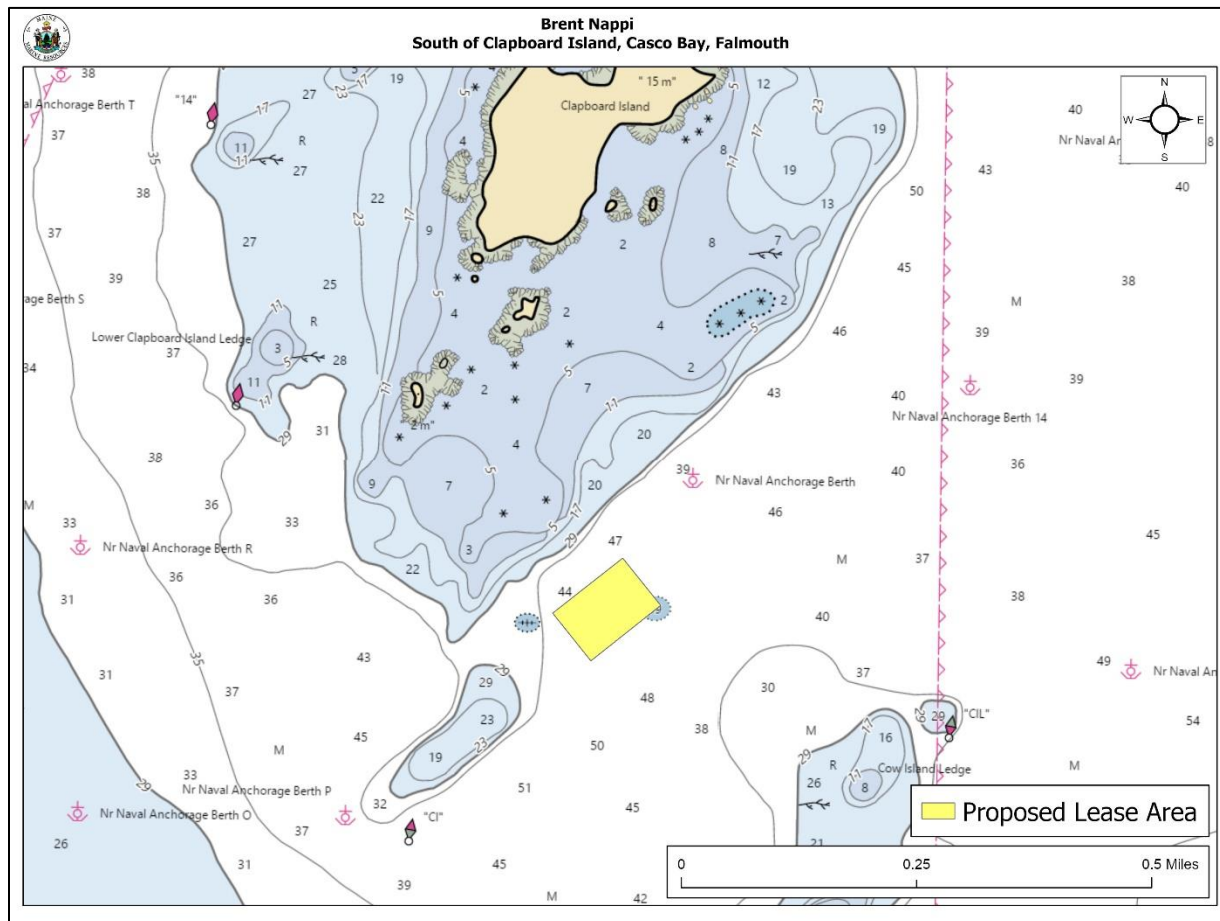


Figure 1. Vicinity map¹

Location: South of Clapboard Island, Casco Bay, Falmouth, Cumberland County, Maine

Purpose: Experimental lease for suspended culture of Sugar Kelp (*Saccharina latissima*) and Skinny Kelp (*Saccharina angustissima*).

Site Review: Cheyenne Adams

Report Preparation: Geoffrey Shook, Meryl Grady, and 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 geo-referenced aerial photographs provided by The Maine Office of GIS.



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Falmouth

Application Overview

The applicant, Brent Nappi, is requesting a 3.92² acre experimental lease for the commercial culture of marine algae south of Clapboard Island in Casco Bay. Kelp would be seeded on horizontal longlines in the Fall and harvested in the Spring. All proposed activities would take place between November 1st and June 1st. Only moorings and required lease markers would remain on site in the off season between June 2nd and October 31st.

General Characteristics

Scientists from the Maine Department of Marine Resources (MDMR) assessed the proposed lease site on April 25, 2022, beginning at approximately 12:00 PM. Underwater video footage was collected by conducting a transect using a drop-camera. At mean high water (MHW), the proposal is approximately 1,802 feet south of Clapboard Island and is in subtidal waters. There is no land or intertidal areas within 1,000 feet of the proposal. The shoreline of Clapboard Island is low-lying rock ledge with intertidal ledge areas containing seaweed and mixed forest uplands. During the site visit conducted on April 25, 2022, two houses on Clapboard Island were visible from the proposed lease area.

Depth

MDMR scientists assessed depths at the site at approximately 12:00 PM. The tide was ebbing with the next low tide predicted at 1:44 PM. Depths were recorded at the corners of the proposal and were determined to be between 50.3 and 57.6 feet. Correcting for tidal variations derives a range of depths from 48.9 – 56.2 feet at mean low water (MLW, 0.0 feet) and from 57.6 – 64.8 feet at the next high tide.

Table 1. Tide observations at Portland Station 8418150, Portland, Maine.³

Date	Time	Height (ft)
04/25/2022	12:58 AM	0.87 L
04/25/2022	07:17 AM	9.14 H
04/25/2022	01:44 PM	-0.09 L
04/25/2022	08:06 PM	8.63 H

² Applicant originally requested 4 acres. MDMR calculations indicate the area is 3.92 acres.

³ <https://tidesandcurrents.noaa.gov/waterlevels.html?id=8418150>



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Bottom Characteristics

MDMR scientists observed the bottom characteristics of the area by collecting video with a drop-camera. Observed 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 observed sea floor within the proposal boundaries was composed primarily of soft mud.

Table 2. Bottom characteristics of the proposed site.

Substrate Origin	Substrate Class	Substrate Subclass	Substrate Group
Geologic Substrate	Unconsolidated Mineral Substrate	Fine Unconsolidated Mineral Substrate	Mud

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) –3.92 Acres

<u>Corner</u>	<u>Latitude</u>	<u>Longitude</u>						
NW	43.709186	-70.192164	then	340.0	feet at	144°	True to	
NE	43.708468	-70.191343	then	500.0	feet at	232°	True to	
SE	43.707600	-70.192808	then	342.8	feet at	322°	True to	
SW	43.708325	-70.193634	then	499.5	feet at	53°	True to NW	

Table 3. Approximate distances from proposed lease to surrounding features.

Feature	Distance
NW corner to Clapboard Island nearest point (~MLW)	~1,675 feet to the north
NE corner to red/green “CIL” nav buoy	~1,775 feet to the southeast
SE corner to red/green “CI” nav buoy	~1,436 feet to the southwest
SW corner to Prince Point mainland nearest point (~MHW)	~1.1 miles to the west
NE corner to designated “deep water” navigation corridor	~1 mile to the east

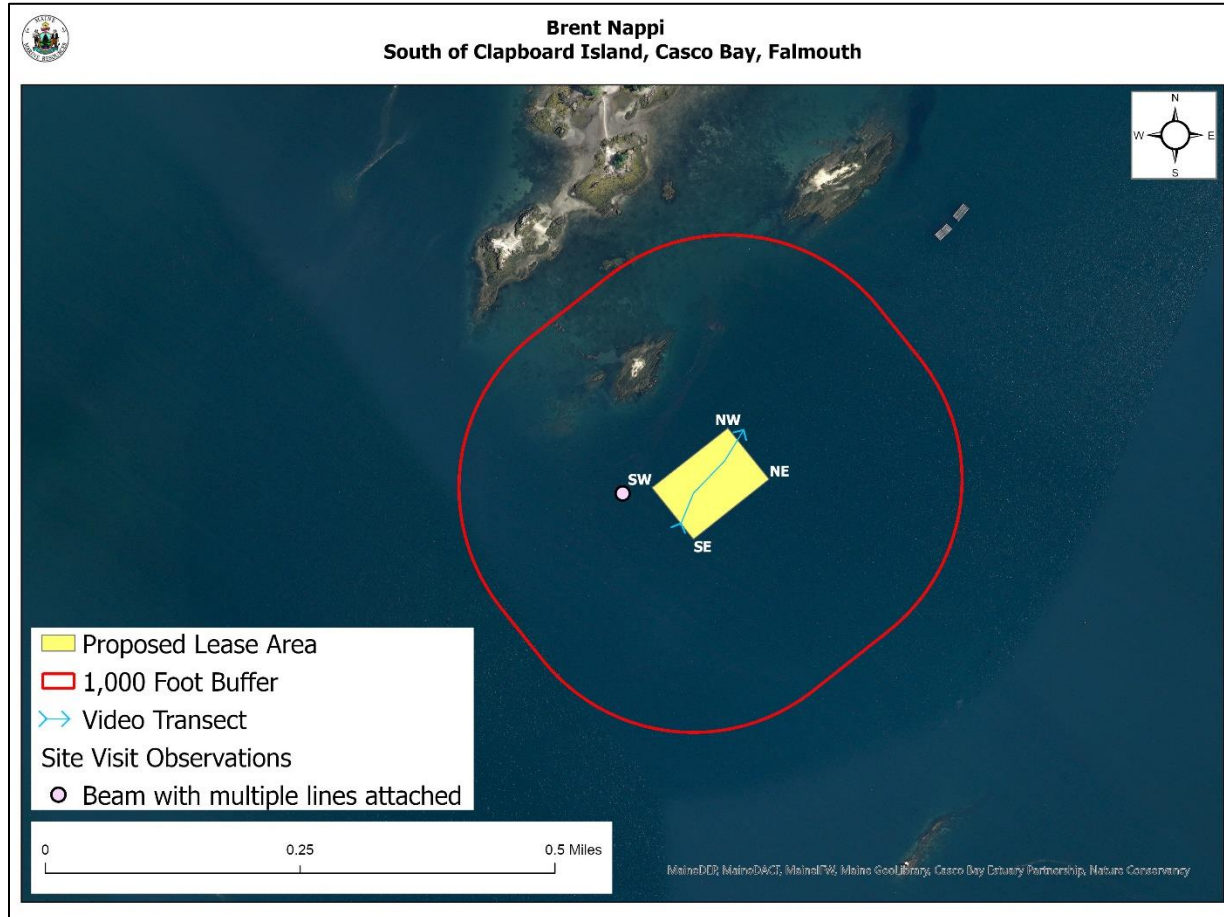


Figure 2. Approximate video transect, nearby features, and site visit observations.

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

(1) Riparian Ingress and Egress

The location of the proposal is approximately 1,675 feet from the southeastern shoreline of Clapboard Island at MLW. There are no houses, docks, or moorings within 1,000 feet of the proposal. The nearest observed pier/dock is approximately .5 miles away on the southwestern shoreline of Clapboard Island.



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(2) Navigation

The location of the proposal is approximately 1,200 feet to the east of the navigational channel that leads to/from Falmouth and 1 mile to the west of the designated deep water navigation route that leads to/from Cousins Island. The proposal is approximately 589 feet to the southwest of an area that is indicated as a “Naval Anchorage Berth” on navigational charts (Figure 3). During MDMR’s site assessment on April 25, 2022, a ferry was observed transiting the navigational channel to the east.

A Harbormaster Questionnaire was submitted to the Town of Falmouth and local harbormaster on April 11, 2022. MDMR did not receive a response.

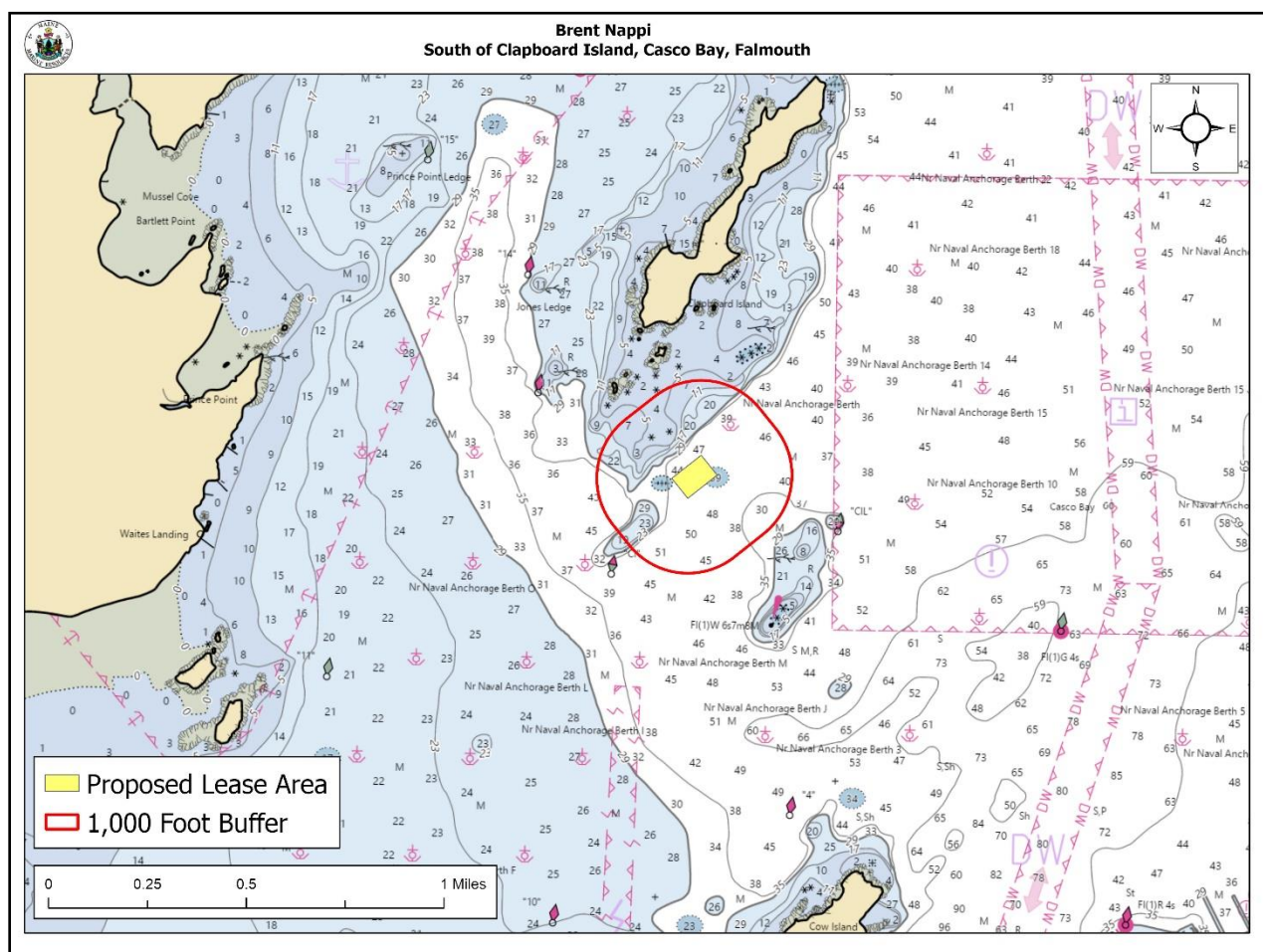


Figure 3. Proposed lease area and navigation channels.



(3) Fishing and Other Uses

During MDMR's site assessment on April 25, 2022, scientists did not observe any lobster buoys within 1,000 feet of the proposal. MDMR did not observe any other fishing activity during the site assessment. MDMR scientists also observed a beam with multiple lines attached that appeared to be anchored to the bottom (Figure 2). The beam was located approximately 154 feet to the west of the proposal. Navigational charts for the area indicate a wreck at this location (Figure 3) and data from echosounders on board the vessel used to conduct the site assessment confirmed the presence of a submerged object. It is unknown if this presumed wreck is a site for recreational SCUBA or other activities.

(4) Other Aquaculture Uses

There are no aquaculture leases or LPAs within 1,000 feet of the proposal. CAS Clx is an experimental lease, which was granted to Oceans Balance, Inc on September 12, 2018. It is currently listed as a pending application as the holder has applied to convert it to a standard lease (Figure 4). During MDMR's site assessment, three boats were observed working on the standard lease site CAS CF3 located approximately 1,200 feet to the northeast.

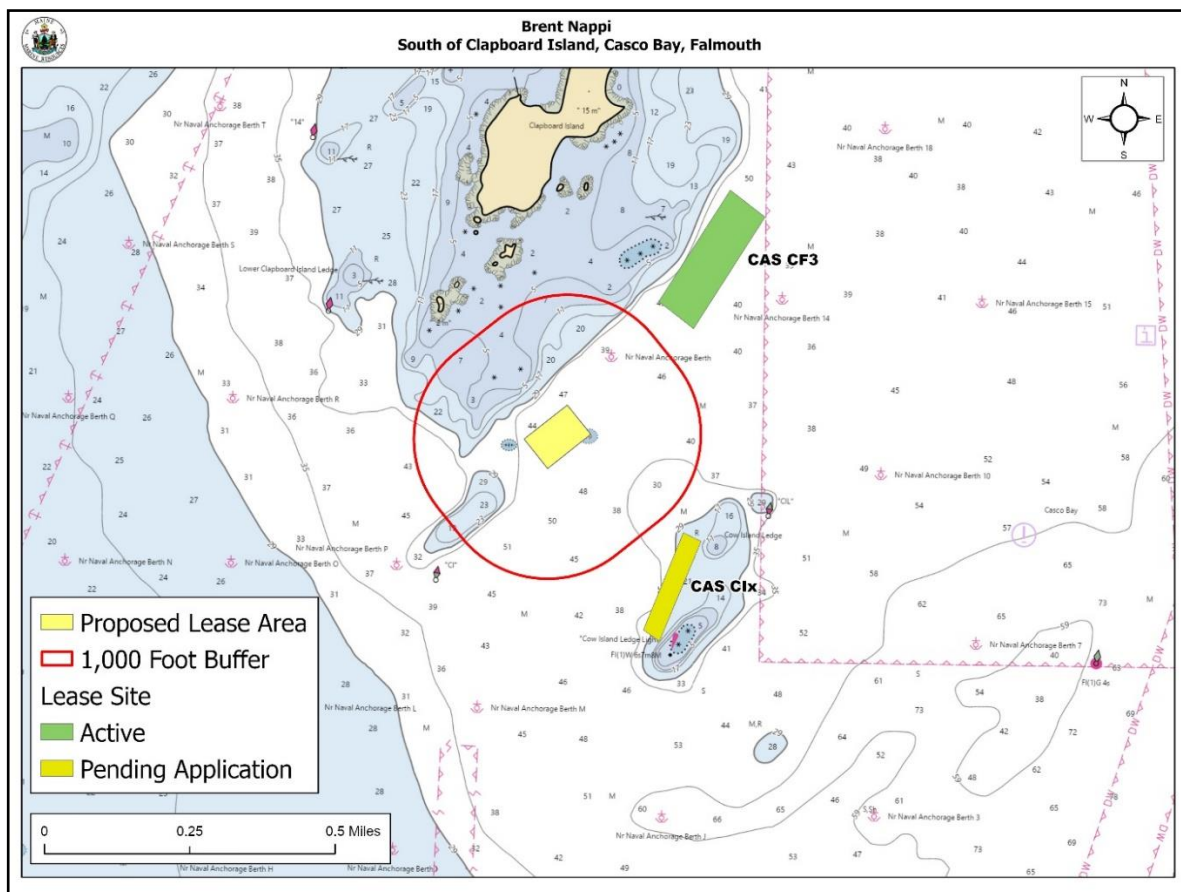


Figure 4. Aquaculture activity in the general area of the proposal.



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(5) Existing System Support

Epibenthic Flora and Fauna

MDMR scientists collected underwater video footage using a drop-camera. The observed bottom was soft mud. Lobster (*Homarus americanus*) burrows were observed on underwater footage, but no lobsters were observed. A green crab was observed. Seaweed species were occasionally observed on the bottom but were generally covered in a layer of silt and possibly not alive or growing.

Table 4. Species observed on underwater footage collected by MDMR.

Species Observed	Abundance
Green crab (<i>Carcinus maenas</i>)	Rare
Seaweed (<i>Ascophyllum sp.</i>)	Occasional
Sugar kelp (<i>Saccharina latissima</i>)	Occasional

Eelgrass (*Zostera marina*)

According to data collected in 2022, there was eelgrass (*Zostera marina*) located within 1,000 feet of the proposal, around intertidal ledges approximately 470 feet to the northwest of the proposal (Figure 5). No *Z. marina* was observed during the camera transect conducted by MDMR.

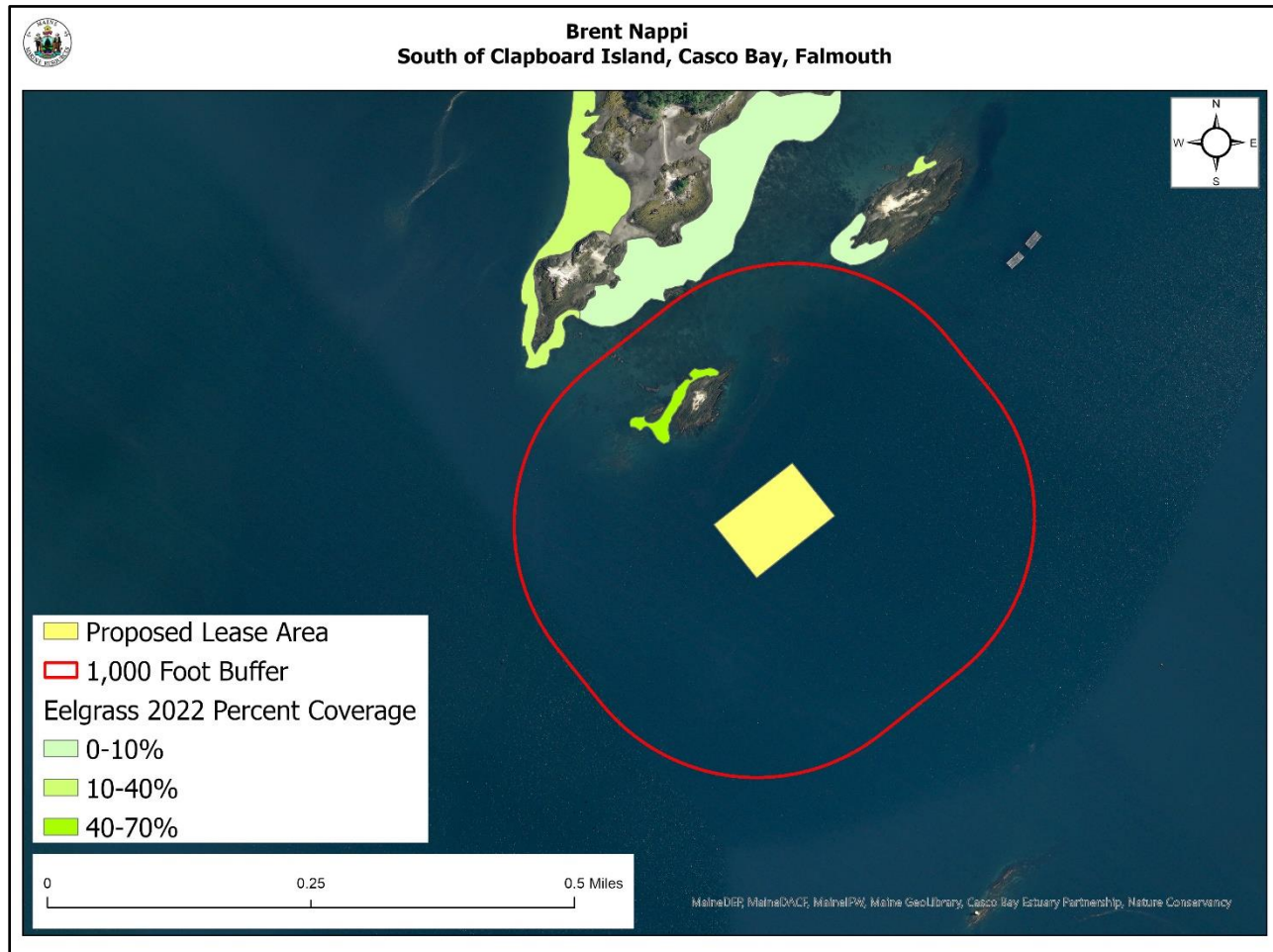


Figure 5. Mapped eelgrass (*Z. marina*) near the proposed lease site utilizing 2022 data.⁴

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, the proposal is not located within tidal waterfowl and wading bird habitat. There is tidal waterfowl and wading bird habitat approximately 375 feet to the northwest of the proposal in the shallow water around Clapboard Island and the surrounding ledges.

During MDMR's site assessment on April 25, 2022, scientists observed eider ducks (*Somateria mollissima*) and gulls (*Larus sp.*) within the vicinity of the proposal.

⁴ Data obtained from The Maine Office of GIS (Eelgrass 2022).

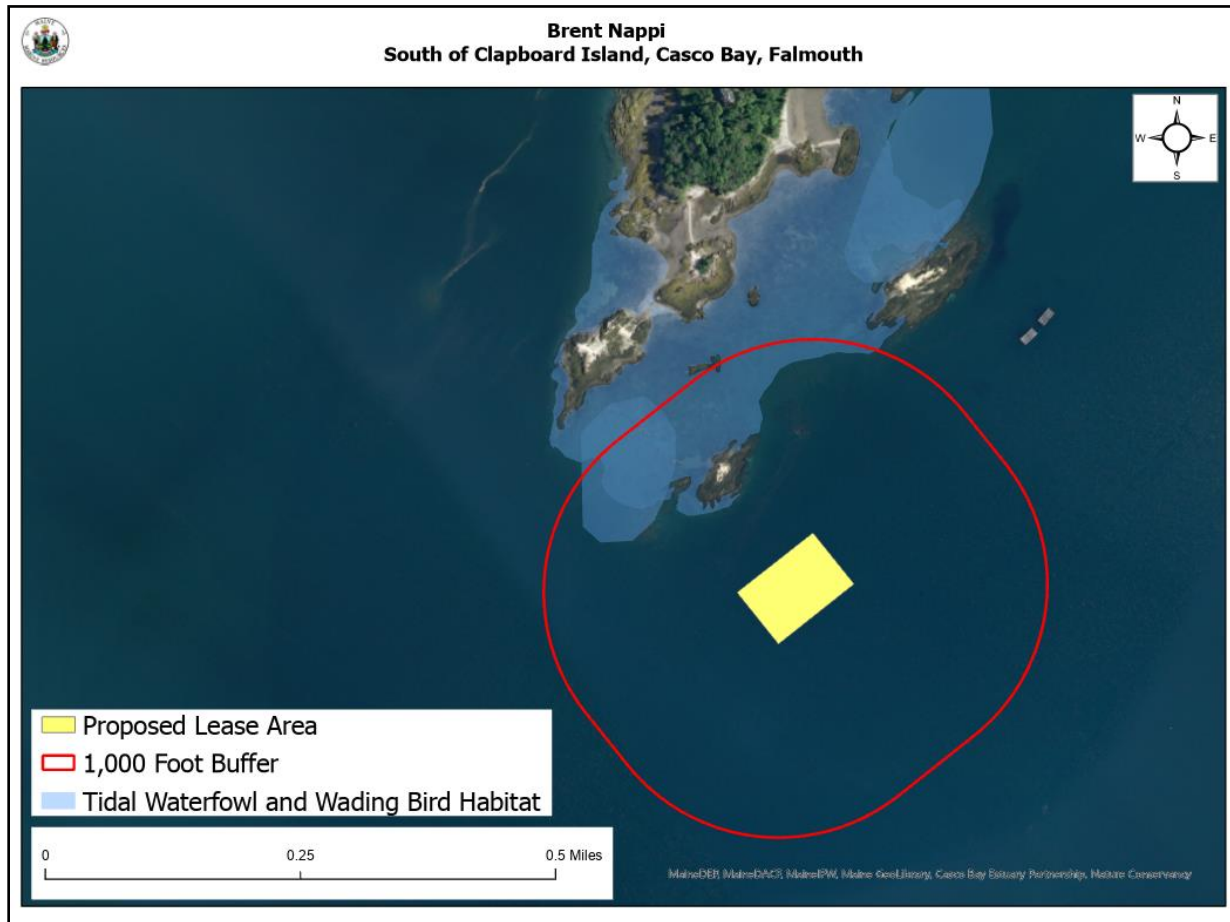


Figure 6. Tidal waterfowl and wading bird habitat⁵

(6) Water Quality

The proposal is located in an area that is currently classified as Approved by the MDMR Bureau of Public Health.

(7) Public Facilities

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

⁵ Data obtained from MDIWF maintained SDE Feature Class "GISVIEW.MEIFW.Twwh"