

Figure 1. Vicinity map.¹

Location: Deep Cove, St. George River, St. George, Knox County, Maine

Purpose: Standard 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*)

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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.



Application Overview

The applicant, Albatross Fisheries, is requesting a 4.38² acre standard lease in Deep Cove, St. George for the suspended culture of marine algae. The applicant intends to remove culture lines, crosslines, and depth control buoys from the site from June 16 until October 1. Moorings, mooring chains, and mooring lines will remain on site year-round, but mooring balls will be removed, and mooring lines and chains will be sunk to the bottom on site from June 16 until October 1. Required lease markers would remain on site year-round.³ The applicant currently operates experimental lease STG DC2x in the footprint of this proposal. The applicant is proposing an increase in acreage from 3.83⁴ to 4.38 acres (Figure 4).

General Characteristics

On October 18, 2023, Maine Department of Marine Resources (MDMR) scientists assessed the proposed lease site. MDMR scientists arrived on site at approximately 10:10 AM. The proposal is situated in the middle of Deep Cove. The vicinity around the proposal includes a rocky shoreline with rockweed coverage leading to forested uplands, as well as maintained residential lawns.

Depth

On October 18, 2023, MDMR scientists began collecting depths at the proposed site at approximately 10:12 AM. The tide was rising with next high tide predicted to occur at 1:41 PM (Table 1). Depths were collected at the proposal corners and determined to be between 31.3 and 50.3 feet. Correcting for tidal variations derives water depths to be approximately 25.6 to 44.6 feet at mean low water (MLW, 0.0 feet) (Table 1).

Table 1. Predicted tidal heights in Port Clyde, Maine.⁵

Date	Time	Height (ft)
2023/10/18	1:37 AM	8.7 H
2023/10/18	7:36 AM	0.9 L
2023/10/18	1:41 PM	9.8 H
2023/10/18	8:10 PM	0.1 L

Bottom Characteristics

MDMR scientists observed 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 primarily composed of mud.

² Applicant originally requested 4.41 acres. MDMR calculations indicate the area is 4.38 acres.

³ Application page 13.

⁴ STG DC2x decision history, page 1

⁵ <https://www.usharbors.com/harbor/maine/port-clyde-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

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) – 4.38 Acres

<u>Corner</u>	<u>Latitude</u>	<u>Longitude</u>	
NW	43.94333°	-69.27626°	then 1,163.1 feet at 106° True to
NE	43.94249°	-69.27200°	then 163.0 feet at 196° True to
SE	43.94206°	-69.27217°	then 1,159.6 feet at 286° True to
SW	43.94289°	-69.27642°	then 165.8 feet at 17° True to NW

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

Feature	Distance
NE corner to eastern shoreline of St. George River at MLW	~1,121.3 feet to the east
SE corner to Hupper Point at MLW	~1,539.4 feet to the south
SW corner to northern tip of Caldwell Island at MLW	~4,333.0 feet to the west
NW corner to Howard Point at MLW	~1,479.9 feet to the north



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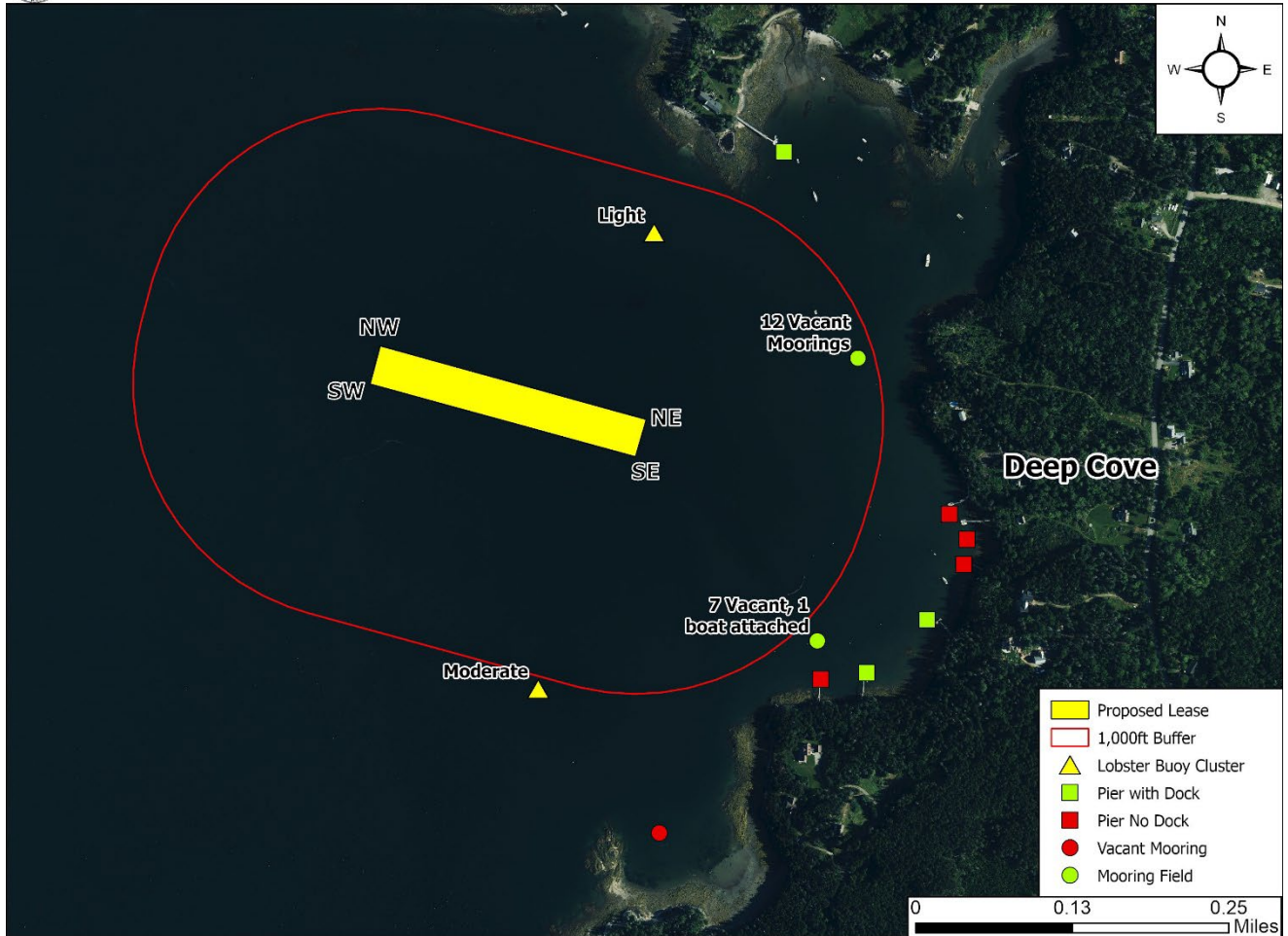


Figure 2. Proposed lease area with site visit observations.

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

During the site visit, MDMR scientists observed six piers to the east of the proposal in Deep Cove and one pier to the north of the proposal. Four of the observed piers did not have a dock in the water at the time of the site visit. Based on the time of year the site visit occurred, it is likely the docks had been removed from the water for the winter season. Additionally, MDMR scientists observed two mooring fields to the east of the proposal. One mooring field had 12 vacant moorings and is approximately 929.8 feet to the northeast of the proposal. The second mooring field observed is approximately 1,091.7 feet southeast of the proposal and contained eight total moorings. Seven moorings were vacant and one mooring had a boat attached to it (Figure 2).



The harbormaster indicated in the Harbormaster Questionnaire that the proposal should not affect riparian ingress and egress.

(2) Navigation

The proposal is located in Deep Cove, approximately 890 feet to the east of the navigational channel. There is 4,333.0 feet of navigable water at MLW between the proposal and Caldwell Island to the west (Figure 3). MDMR scientists observed a large powerboat and a lobster boat operating to the west of the proposal during the site assessment on October 18, 2023.

The harbormaster indicated in the Harbormaster Questionnaire that the proposal would have no impact on navigation or storm anchorages.

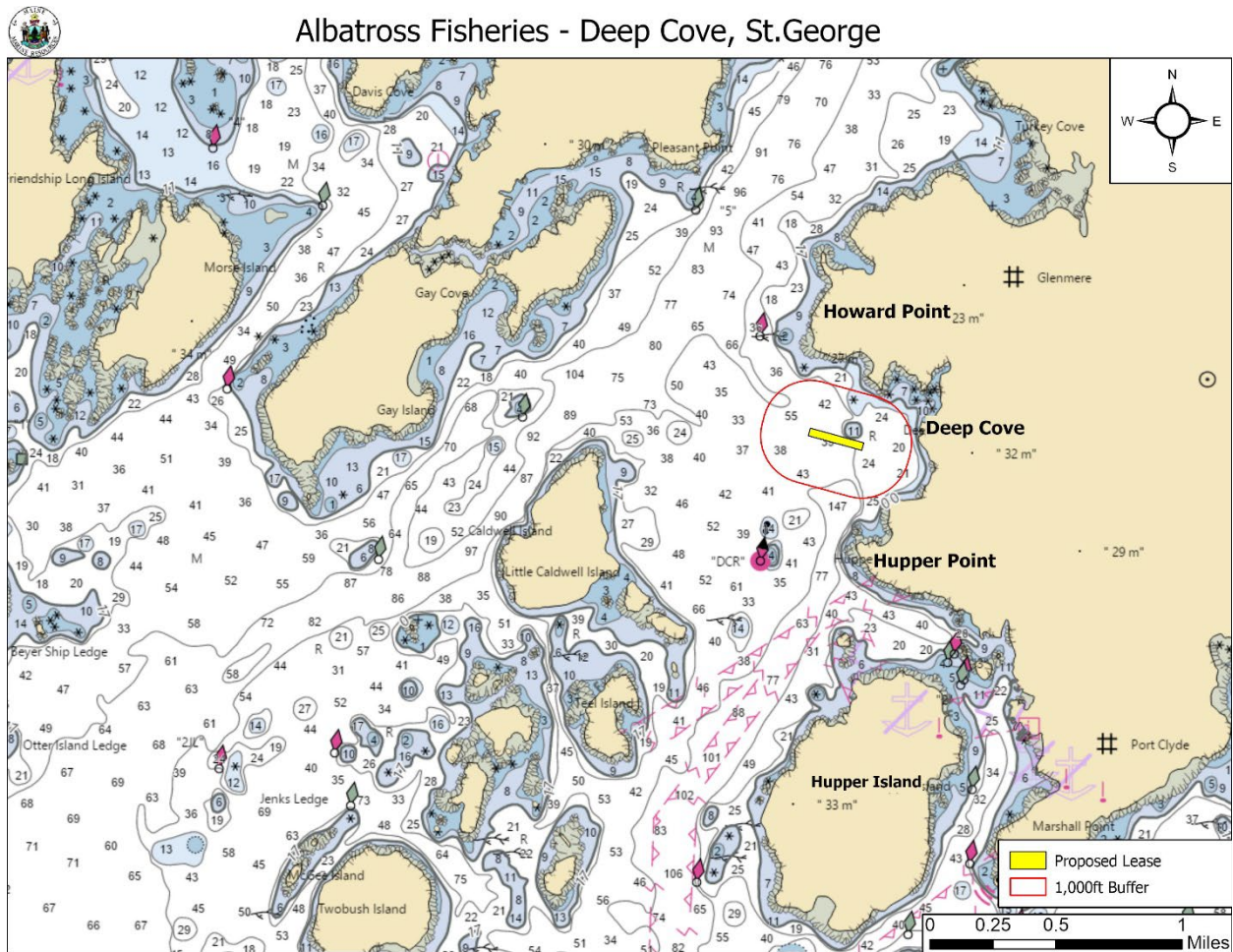


Figure 3. Navigational channels in the vicinity of the proposed lease area.

(3) Fishing and Other Uses

During the site assessment, MDMR observed a small (light) cluster of lobster buoys approximately 772.2 feet north of the proposal. A moderate cluster of lobster buoys was



observed approximately 1,047.3 feet south of the proposal (Figure 2). No recreational fishing activity was observed within the vicinity of the proposed lease.

The harbormaster indicated in the Harbormaster Questionnaire that there is no commercial or recreational fishing within the area of the proposal.

(4) Other Aquaculture Uses

There are three aquaculture leases (STG DC2x, STG DC3x, STG DC1x) and five limited purpose aquaculture (LPA) sites (JSCH820, JCOT117, JCOT219, JCOT319, JCOT419) within 1,000 feet of the proposal. STG DC2x is held by Albatross Fisheries who is the applicant of this proposal. This standard lease proposal is intended to replace STG DC2x. STG DC3x is approximately 110 feet south of this proposal and is held by Miss Madisyn. STG DC3x has a pending standard lease application that was deemed complete by MDMR on May 30, 2023. STG DC1x, located 400 feet south of the proposal, is held by John Cotton. STG DC1x submitted a draft standard lease application and held a scoping session on June 5, 2023. No final application has been received by MDMR at the time this report was published (Figure 4).

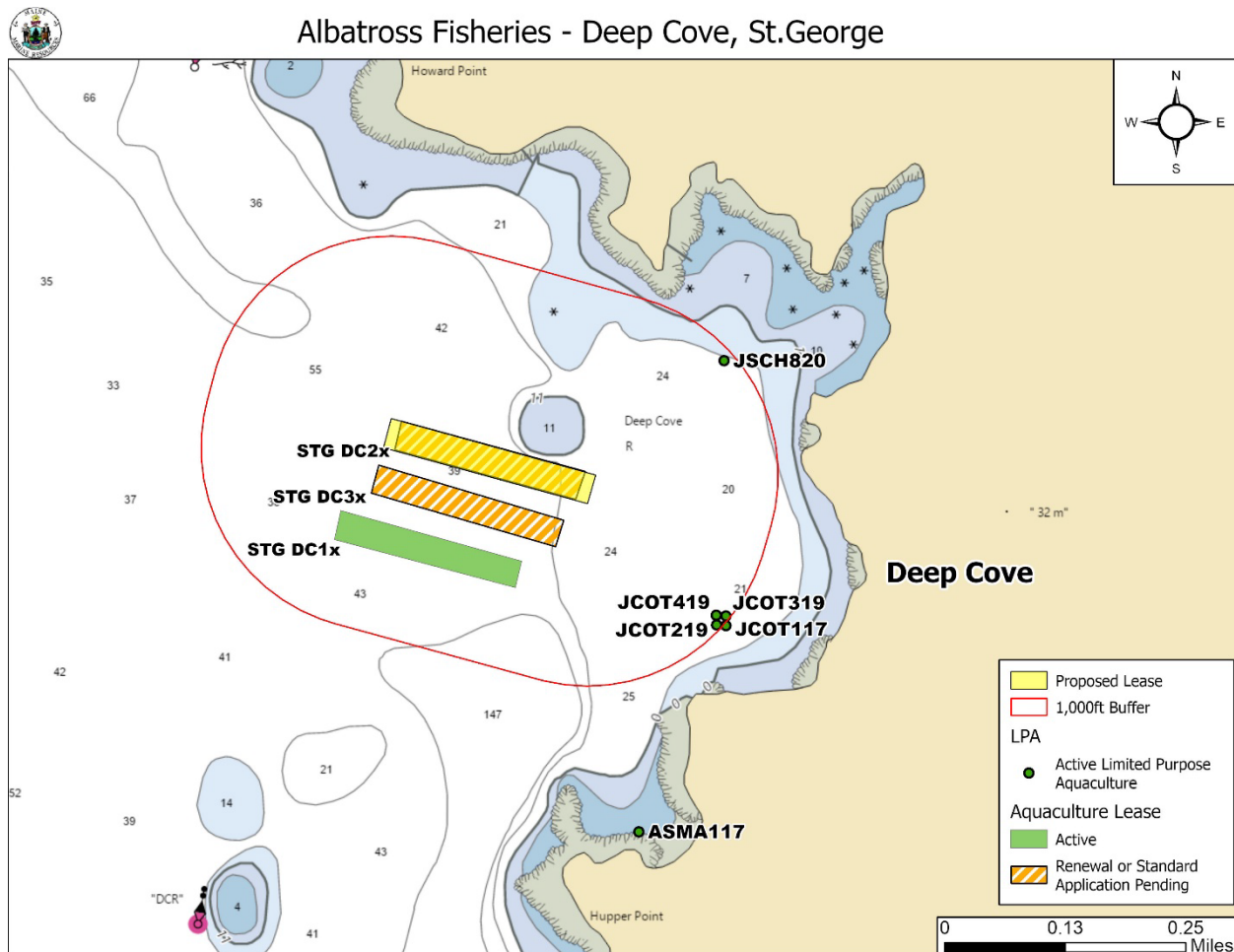


Figure 4. Aquaculture leases and LPA licenses in the vicinity of the proposed lease area.



(5) Existing System Support

Epibenthic Flora and Fauna

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 footage is described below in Table 4.

Table 4. Species observed using underwater camera footage.

Species Observed	Abundance
Shrimp (<i>Crangon septemspinosa</i>)	Common
Crab (<i>Cancer spp</i>)	Rare
Winter Flounder (<i>Pleuronectes americanus</i>)	Common

Eelgrass (*Zostera marina*)

Recent records of eelgrass collected by the Maine Department of Environmental Protection (MDEP) in 2023 indicate no mapped eelgrass presence in the vicinity of the proposal (Figure 5).⁶ No eelgrass was observed within the proposal boundaries during MDMR’s site assessment.

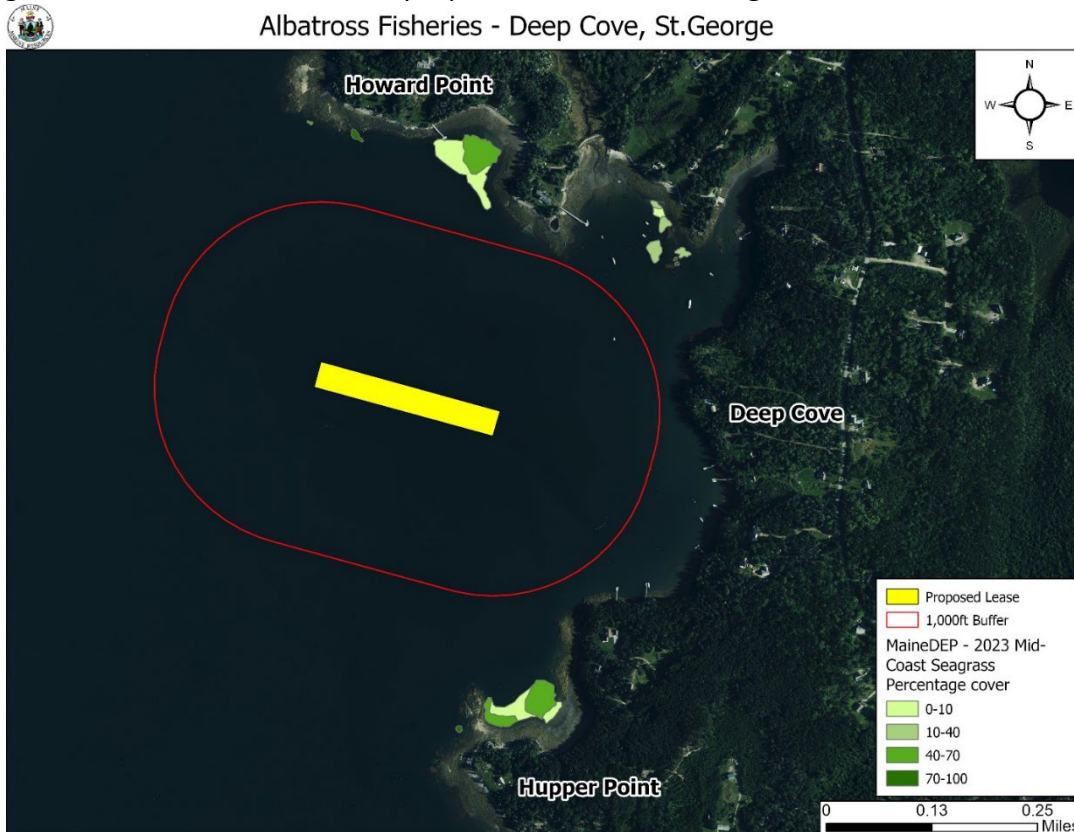


Figure 5. Mapped eelgrass (*Z. marina*) in the vicinity of the proposed lease area.

⁶ Data obtained from The Maine Office of GIS “GISVIEW.MEDEP.Seagrass2023”. Widgeon grass was observed only in a tributary to the Great Salt Bay, upstream of a culvert that likely restricts tidal flow. Eelgrass was the dominant vascular species in all other locations. This is the most current record of mapped eelgrass within 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 1,000 feet of mapped Tidal Waterfowl and Wading Bird Habitat (TWWH). 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 0.95 miles southwest of the proposal (Figure 6).

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



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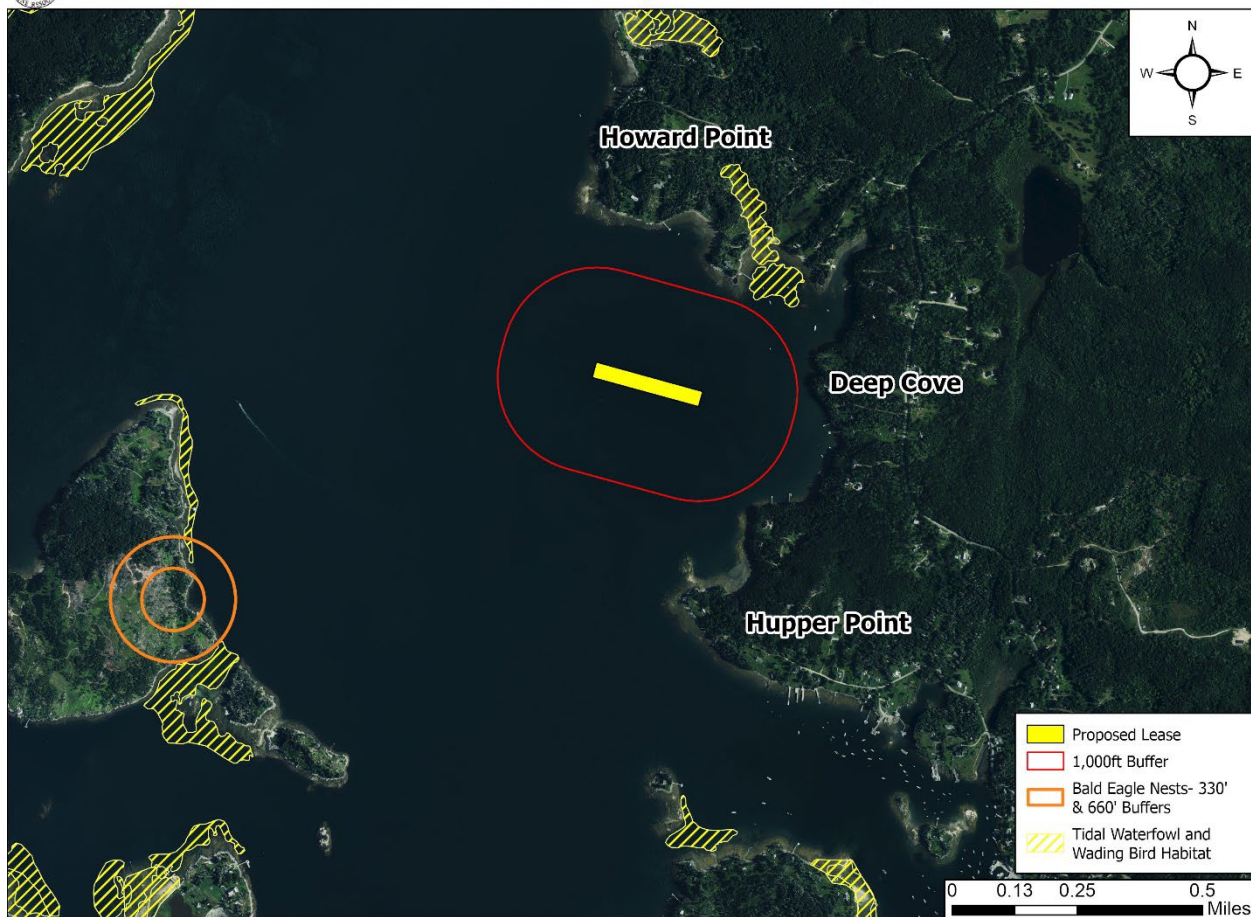


Figure 6. Mapped bald eagle nests and TWWH.⁷

⁷ Data obtained from USFWS “Bald_Eagle_Nests_-_Maine_2023” and MDIFW maintained SDE Feature Class “GISVIEW.MEIFW.Twwh”



(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 7).



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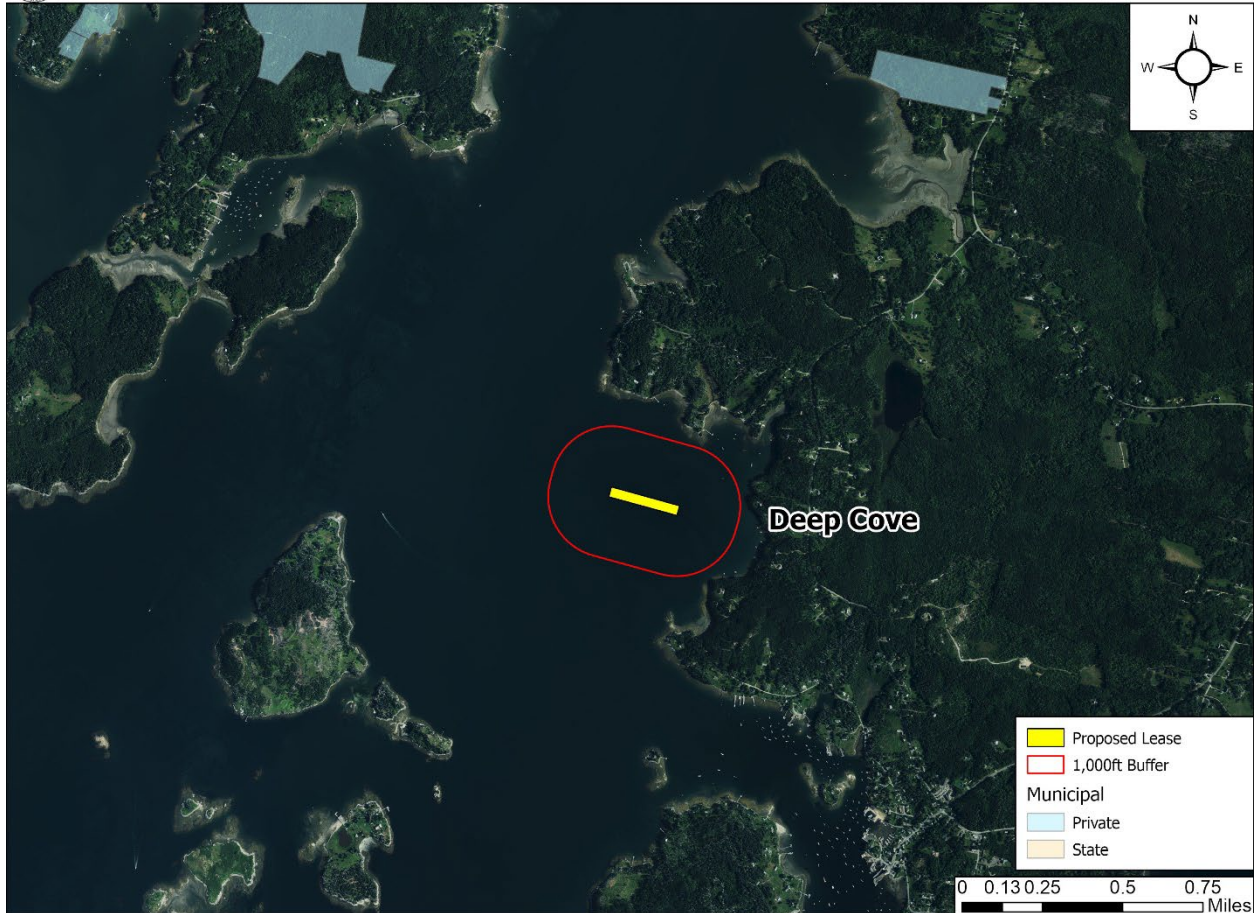


Figure 7. Public facilities near the proposed lease site.⁸

(7) Water Quality

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

⁸ Data obtained from The Maine Office of GIS "GISVIEW.MECONSLANDS.Conserved_Lands"