

Figure 1. Vicinity map.¹

Location: North of Phoebe Island, Robinhood Cove, Georgetown, Sagadahoc County, Maine

Purpose: Standard lease for bottom and suspended culture of American/Eastern Oysters (*Crassostrea virginica*) and Hard Clams/Quahogs (*Mercenaria mercenaria*)

Site Review: Cheyenne Adams, Marcy Nelson, Geoffrey Shook

Report Preparation: Meryl Grady, Geoffrey Shook 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 georeferenced aerial photographs provided by The Maine Office of GIS.



Application Overview

The applicants, Michael and Mark Gaffney, are requesting a 7.49² acre standard lease north of Phoebe Island in Robinhood Cove, Georgetown for the bottom and suspended culture of American/Eastern oysters (*Crassostrea virginica*) and hard clams/quahogs (*Mercenaria mercenaria*). The applicants currently operate experimental lease SAS Plx within the footprint of the standard lease proposal (Figure 4). This proposal is larger than existing experimental lease SAS Plx. The applicants are proposing an expansion from 3.99³ acres to 7.49 acres.

General Characteristics

On June 16, 2022, Maine Department of Marine Resources (MDMR) scientists assessed the proposed lease site. MDMR scientists arrived on site at approximately 9:20 AM. The proposal is situated along the western shoreline of Robinhood Cove and is approximately 35 feet to the west of an uninhabited island. On October 11, 2023, MDMR scientists conducted a second site visit to assess depths at low tide and collect additional information about nearby features. MDMR scientists arrived on site at 3:42 PM.

Depth

On October 11, 2023, MDMR scientists began collecting depths at the proposed site at approximately 3:45 PM. The tide was falling with next low tide predicted to occur at 4:08 PM (Table 1). Depths were collected at the proposal corners and determined to be between 3.1 and 5.9 feet. Correcting for tidal variations derives water depths to be approximately 10.8 to 13.6 feet at the next high tide and 1.9 to 4.7 feet at mean low water (MLW, 0.0 feet) (Table 1).

Table 1. Predicted tidal heights in Robinhood, Maine.⁴

Date	Time	Height (ft)
2022/06/16	12:49 AM	11.3 H
2022/06/16	7:20 AM	-1.5 L
2022/06/16	1:37 PM	9.5 H
2022/06/16	7:29 PM	0.0 L
2023/10/11	3:54 AM	0.9 L
2023/10/11	10:04 AM	8.5 H
2023/10/11	4:08 PM	1.2 L
2023/10/11	10:18 PM	8.9 H

² Applicant originally requested 7.0 acres. DMR calculations indicate the area is 7.49 acres.

³ Experimental lease SAS Plx decision history page 1

⁴ <https://www.ussharbons.com/harbor/maine/robinhood-me/tides/?tide=2022-06#monthly-tide-chart>



Bottom Characteristics

MDMR staff observed the bottom characteristics of the proposed lease site via one drop camera transect and one SCUBA transect (Figure 2). 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.

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
Biogenic Substrate	Shell Substrate	Shell Rubble	Not Classified

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) – 7.49 Acres

<u>Corner</u>	<u>Latitude</u>	<u>Longitude</u>	
A	43.817159°	-69.747289°	then 315.3 feet at 69° True to
B	43.817468°	-69.746173°	then 170.3 feet at 112° True to
C	43.817298°	-69.745572°	then 643.0 feet at 191° True to
D	43.815564°	-69.746023°	then 283.6 feet at 275° True to
E	43.815610°	-69.747096°	then 576.4 feet at 184° True to
F	43.814031°	-69.747224°	then 114.0 feet at 278° True to
G	43.814062°	-69.747654°	then 1,132.6 feet at 5° True to A



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

Feature	Distance
Corner C to eastern shoreline at MLW	~570 feet to the east
Corner C to nearest mooring	~338 feet to the northwest
Corner D to Phoebe Island at MLW	~420 feet to the south
Corner F to small uninhabited island at MLW	~35 feet to the east
Corner G to western shoreline at MLW	~120 feet to the west



Michael & Mark Gaffney - North of Phoebe Island, Robinhood Cove, Georgetown

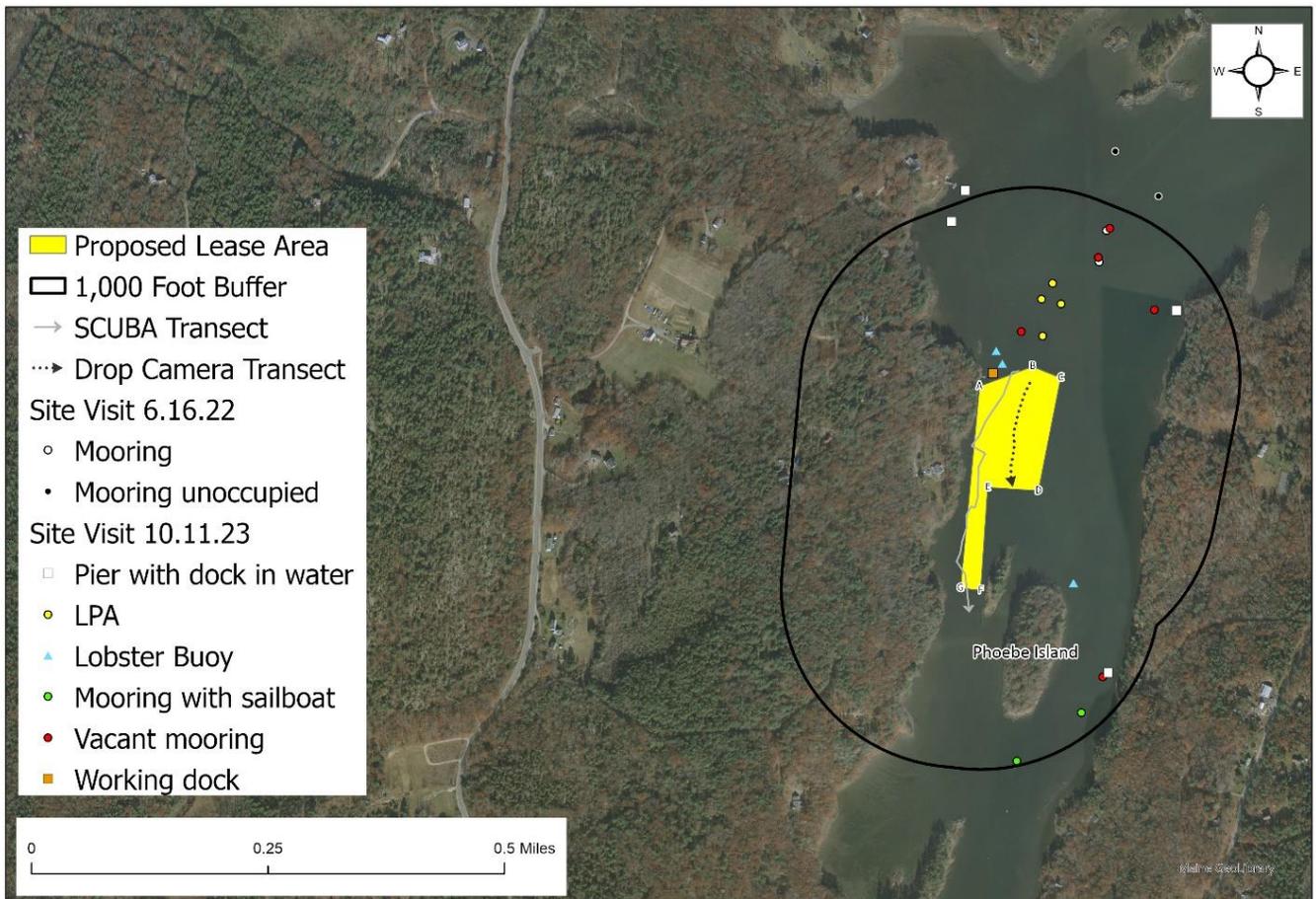


Figure 2. Proposed lease area with site visit observations.

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 on June 16, 2022, MDMR observed seven docks located north of the proposal, three docks located to the east of the proposal on the eastern shore of Robinhood Cove, and one pier located south of the proposal. The pier had an associated dock that was stored on shore at the time of the site visit. In addition, the applicant owns a pier with a ramp and floats that are located directly adjacent to the proposal. MDMR scientists observed four moorings in the vicinity of the proposal (Figure 2). The two closest moorings were occupied by small powerboats and located approximately 680 feet and 860 feet to the north of the proposal. The remaining two moorings were vacant at the time of the site visit.

Additionally, during the site visit on October 11, 2023, MDMR scientists observed a vacant mooring approximately 338 feet to the northwest of the proposed site. Scientists also observed a mooring field to the southwest of Phoebe Island that contained 2 sailboats.

A Harbormaster Questionnaire was completed by the local harbormaster and submitted to the MDMR Aquaculture Division on November 24, 2021. The harbormaster indicated that the proposal should not impact riparian ingress and egress.

(2) Navigation

The proposal is located in shallow water bordering the western shore of Robinhood Cove. The center of the main navigational channel is located approximately 250 feet east of the proposal (Figure 3). MDMR did not observe any vessels operating in the vicinity of the proposal during the site assessment on June 16, 2022, or October 11, 2023.

The harbormaster indicated in the Harbormaster Questionnaire that the proposal could have a minor effect on navigation as the navigational channel will be slightly narrower, which could affect sailboats who choose to tack under sail when navigating north-south in Robinhood Cove.



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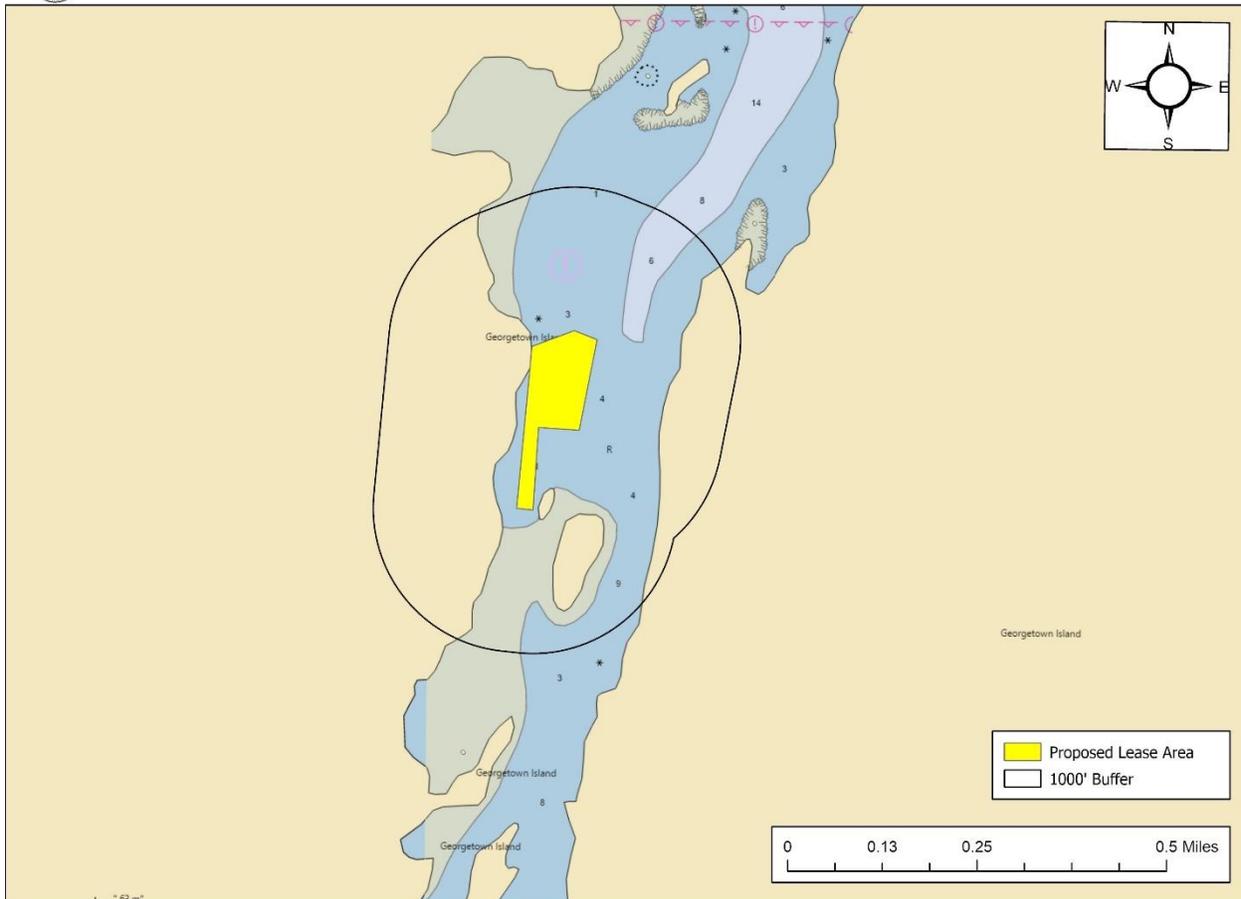


Figure 3. Proposed lease area, 1000' buffer, and navigation channels.

(3) Fishing and Other Uses

During MDMR's site assessment on June 16, 2022, no commercial or recreational fishing activity was observed within the boundaries of the proposed lease.

During MDMR's site assessment on October 11, 2023, three lobster buoys were observed within 1,000 feet of the proposed lease. The closest lobster buoy was observed approximately 75 feet to the north of the proposal.

The harbormaster indicated in the Harbormaster Questionnaire that there is very little lobstering or recreational fishing within the area of the proposal.



(4) Other Aquaculture Uses

The applicants currently operate experimental lease SAS PIx within the boundaries of this proposal. This standard lease proposal is intended to replace SAS PIx. There are nine limited purpose aquaculture sites within 1,000 feet of the proposed lease site – CCAM117, CCAM217, CCAM319, CCAM419, MGAF222, RPEA318, RPEA418, RPEA519, RPEA619 (Figure 4).

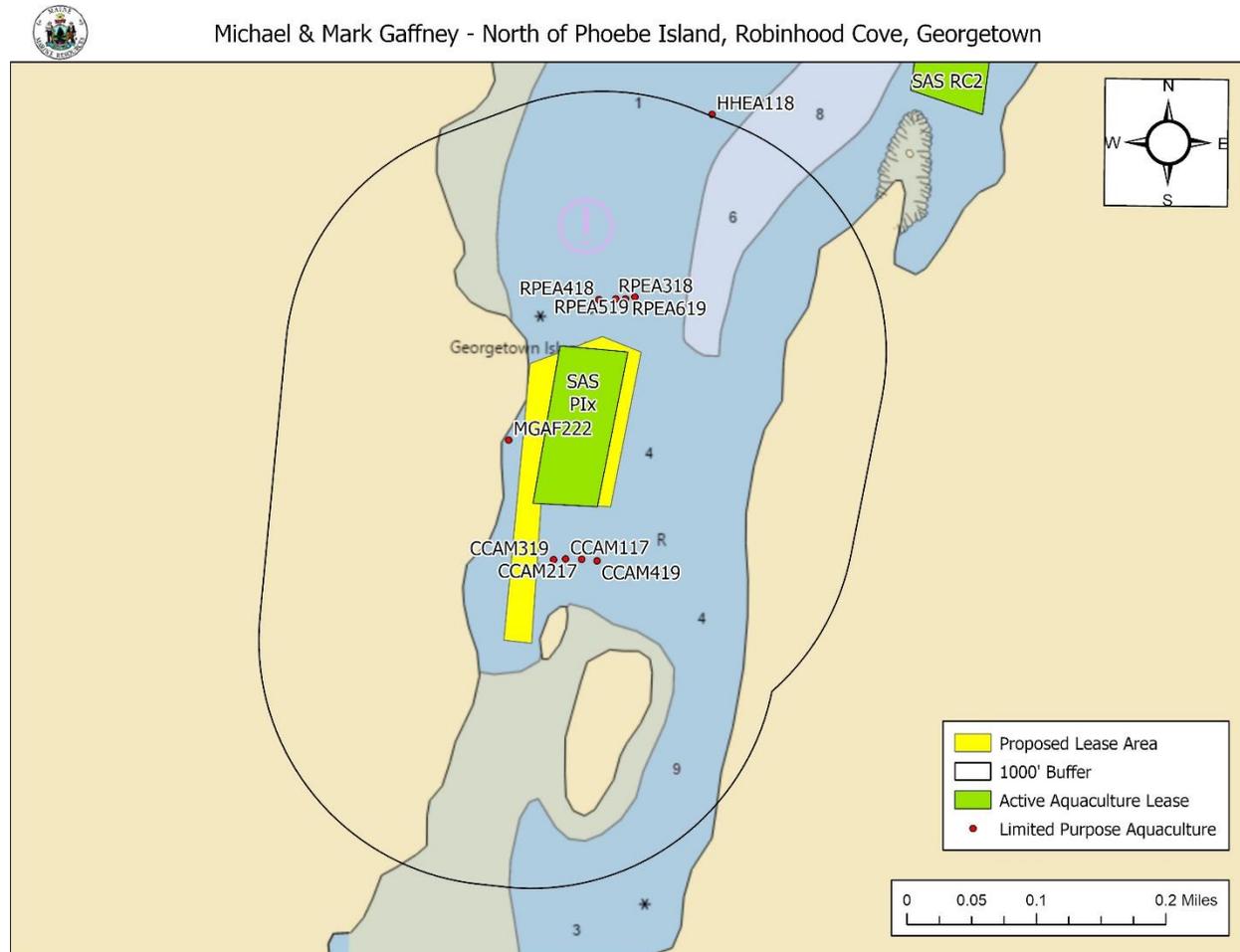


Figure 4. Aquaculture leases and Limited Purpose Aquaculture (LPA) licenses in the vicinity of the proposal.

**(5) Existing System Support
Epibenthic Flora and Fauna**

MDMR scientists conducted one drop camera transect and one SCUBA transect to assess the epibenthic ecology of the proposed lease. The relative abundance of epibenthic flora and fauna observed in the video transects is described below in Table 4.



Table 4. Species observed using underwater camera footage.

Species Observed	Abundance
Sugar Kelp (<i>Saccharina latissima</i>)	Occasional

Eelgrass (*Zostera marina*)

Historical records of eelgrass collected by MDMR in 2010⁵ indicate no mapped eelgrass presence in the vicinity of the proposal (Figure 5). No eelgrass was observed within the proposal boundaries during MDMR’s site assessments.



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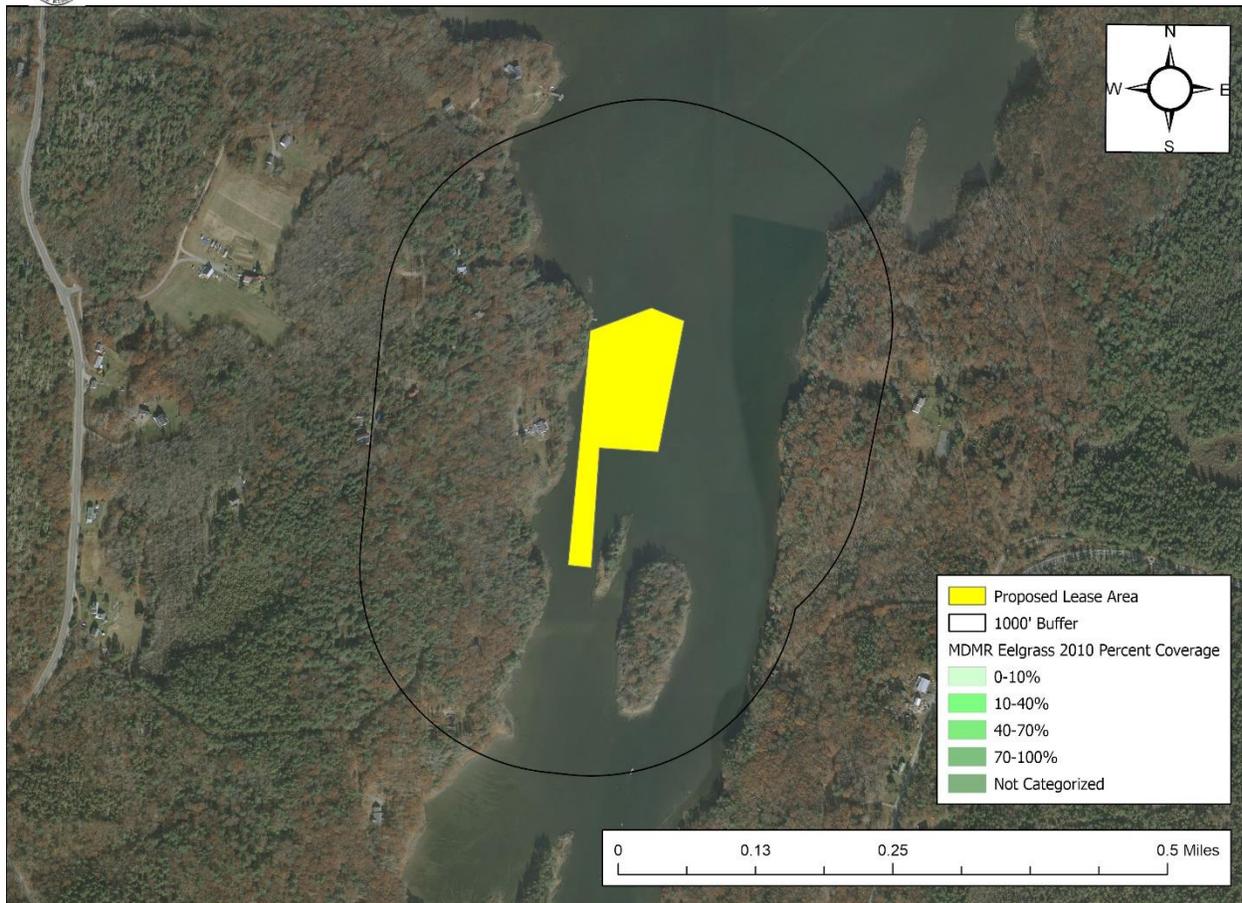


Figure 5. Mapped eelgrass (*Z. marina*) in the vicinity of the proposal.

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 located partially within mapped tidal waterfowl and wading bird habitat. Data

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



collected by the United States Fish and Wildlife Service in 2022 by aerial nest survey shows the closest mapped Bald Eagle nesting site to be approximately 1.8 miles northwest of the proposal (Figure 6).

On November 24, 2021, a Wildlife Biologist with MDIFW responded by email to a “Request for Agency Review and Comment”, stating that minimal impacts to wildlife are anticipated.⁶



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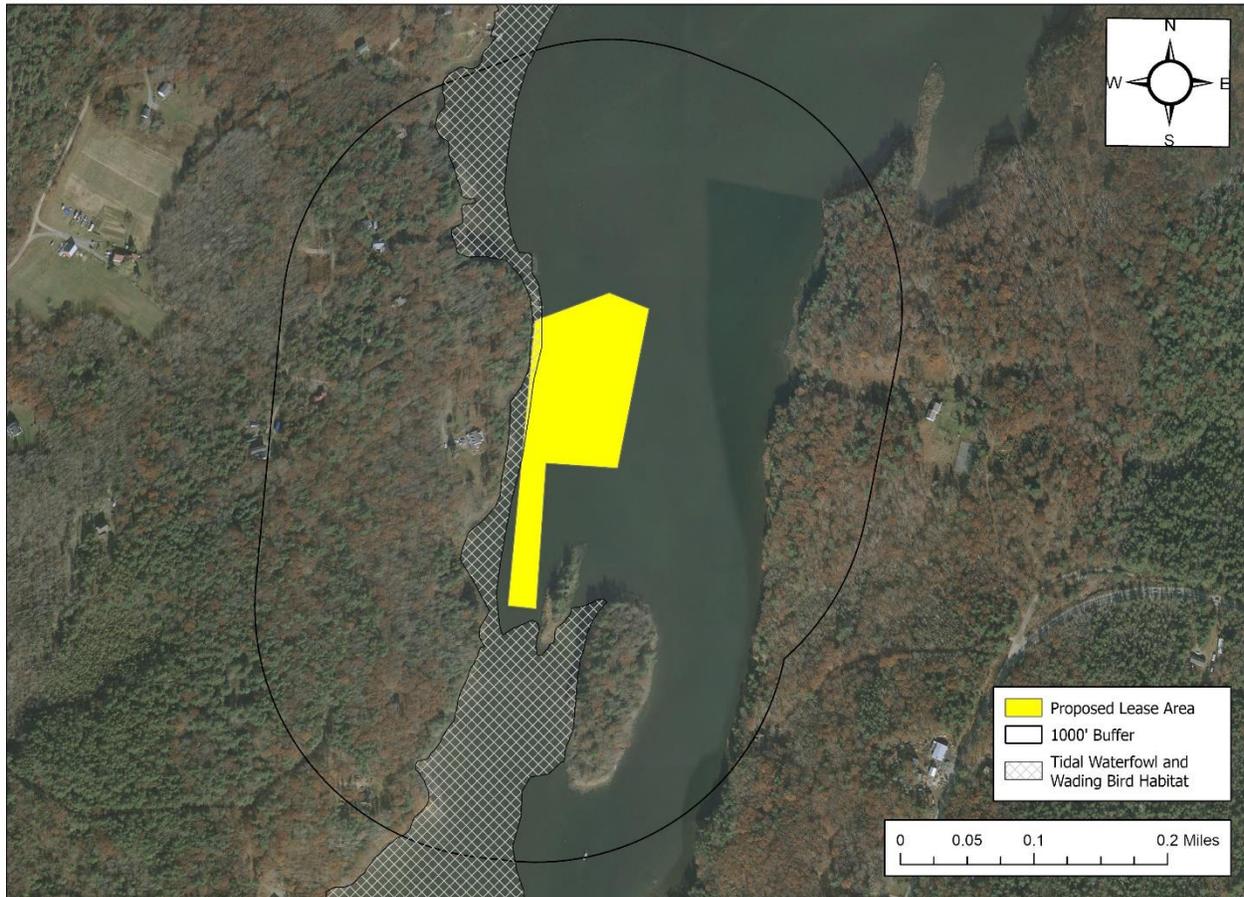


Figure 6. Mapped bald eagle nests and tidal waterfowl and wading bird habitat.⁷

(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).

⁶ Email correspondence between MDIFW and MDMR

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



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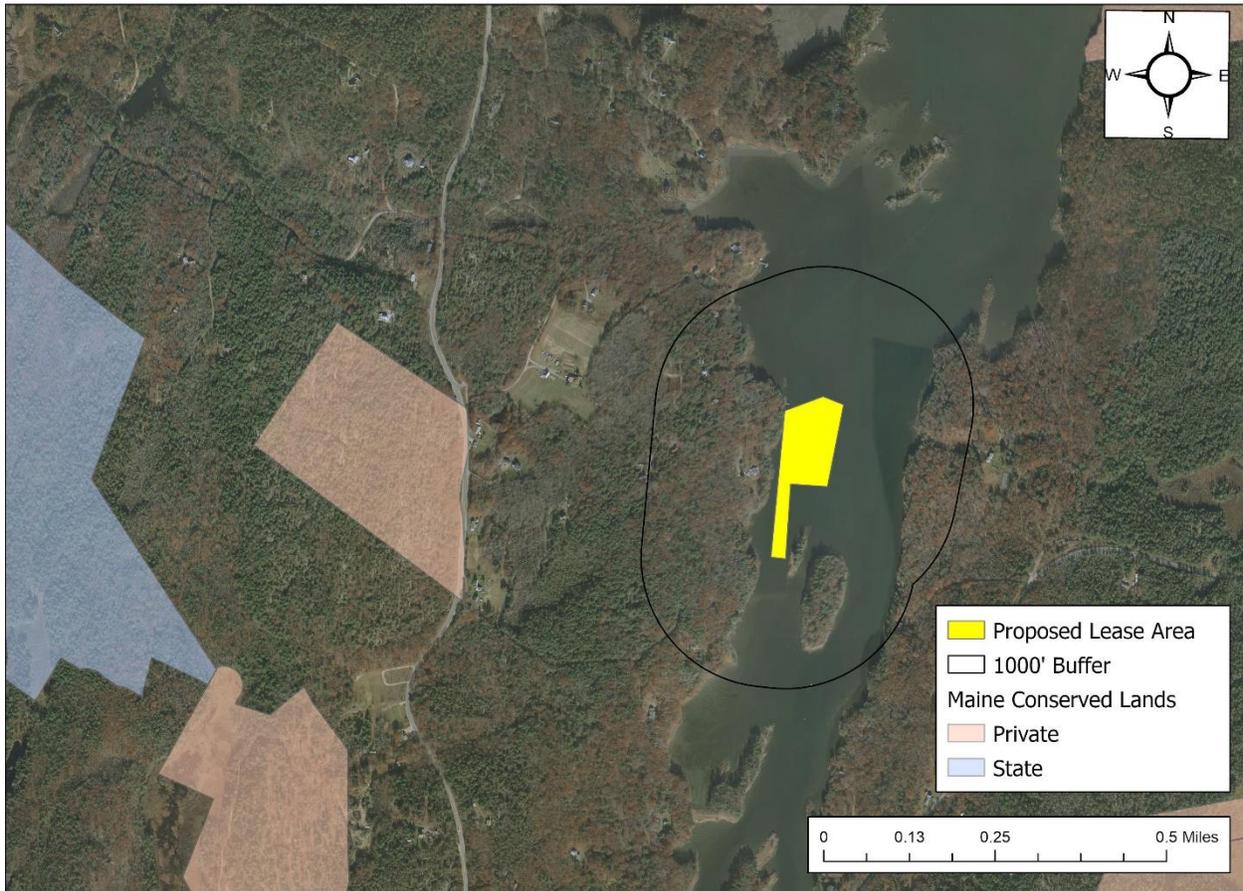


Figure 7. Public facilities near the proposed lease site.⁸

(7) Water Quality

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

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