



Glidden Point Oyster Company
West of Prentiss Island, Damariscotta River, South Bristol

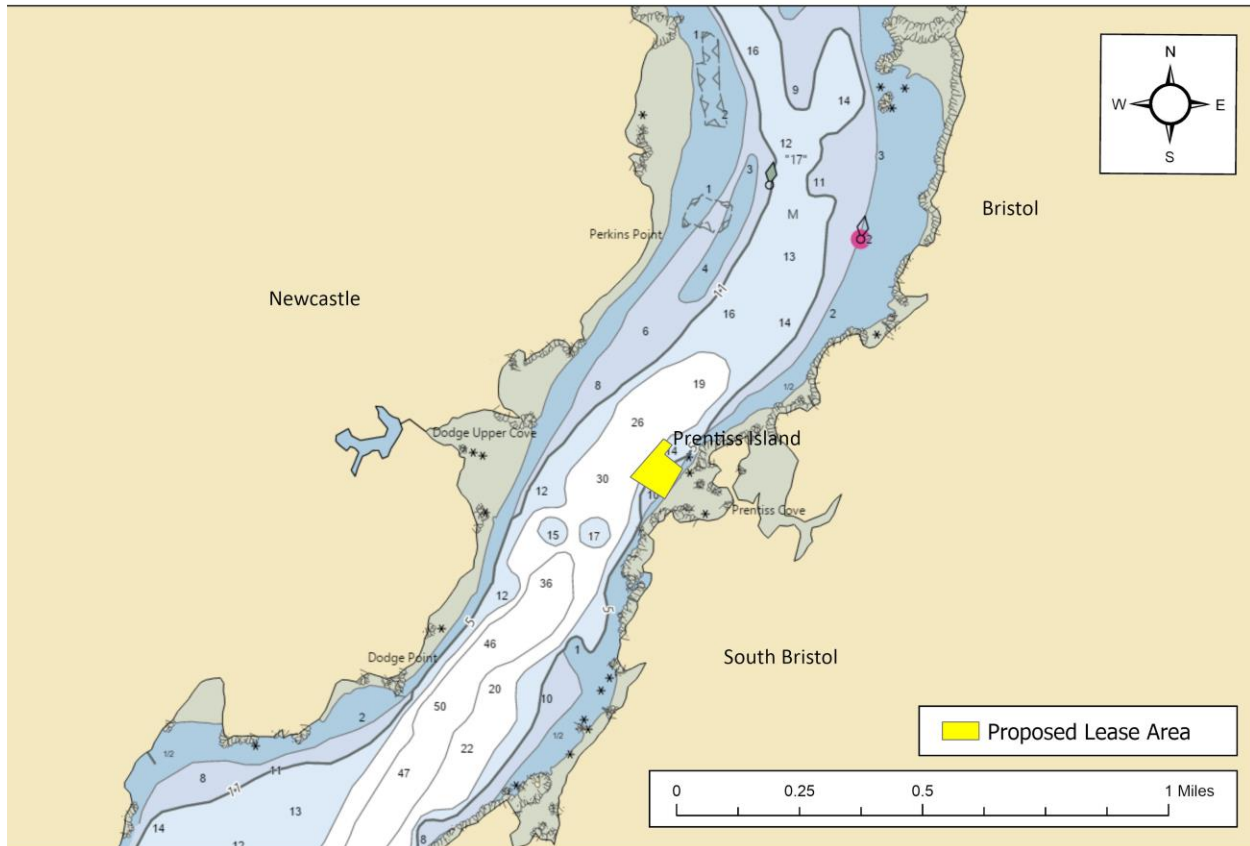


Figure 1. Vicinity map.¹

Location: West of Prentiss Island, Damariscotta River, South Bristol, Lincoln County, Maine

Purpose: Experimental lease for suspended culture of American/eastern oyster (*Crassostrea virginica*).

Site Review: Meryl Grady, Geoffrey Shook, Chloe Kilborn

Report Preparation: Chloe Kilborn, Meryl Grady, 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 applicant, Glidden Point Oyster Company, is requesting 3.99 acres West of Prentiss Island in the Damariscotta River for the suspended culture of American/eastern oyster (*Crassostrea virginica*). The applicant currently operates standard lease DAM WP (bottom culture only) within a portion of this experimental lease proposal (Figure 4).

General Characteristics

On September 20, 2023, Maine Department of Marine Resources (MDMR) scientists assessed the proposed lease site beginning at 11:30 AM. Prentiss Island, to the east, consists of a rocky shoreline leading to forest uplands. MDMR observed two houses on the mainland to the southeast that are visible from the proposed lease area.

Depth

MDMR scientists began collecting depths at 11:36 AM at the proposed site. Measured depths at corners of the proposed lease site ranged from 4.6 to 32.6 feet. Correcting for tidal variation derives water depths at the corners of the proposal at the next high tide to be from 9.6 to 37.6 feet and from 0.3 to 28.3 feet at mean low water (MLW, 0.0 feet) (Table 1).

Table 1. Predicted tidal heights in South Bristol, Maine.²

Date	Time	Height (ft)
2023/09/20	2:50 AM	8.5 H
2023/09/20	8:53 AM	1.1 L
2023/09/20	3:00 PM	9.3 H
2023/09/20	9:27 PM	0.6 L

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 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

² <https://www.usharbors.com/harbor/maine/south-bristol-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) – 3.99 Acres

<u>Corner</u>	<u>Latitude</u>	<u>Longitude</u>	
NW	43.993711°	-69.546542°	then 112.7 feet at 126° True to
Midpoint 1	43.993531°	-69.546194°	then 127.6 feet at 218° True to
Midpoint 2	43.993256°	-69.546494°	then 247.3 feet at 129° True to
NE	43.992836°	-69.545756°	then 375.8 feet at 210° True to
SE	43.991944°	-69.546472°	then 439.4 feet at 302° True to
SW	43.992578°	-69.547892°	then 544.8 feet at 41° True to NW

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

Feature	Distance
NW corner to western shoreline of Damariscotta River at MLW	~1,300' to the west
NE corner to Prentiss Island shoreline at MLW	~30' to the east
SE corner to nearby shoreline at MLW	~1' to the east
SW corner to western shoreline of Damariscotta River at MLW	~1,150' to the west



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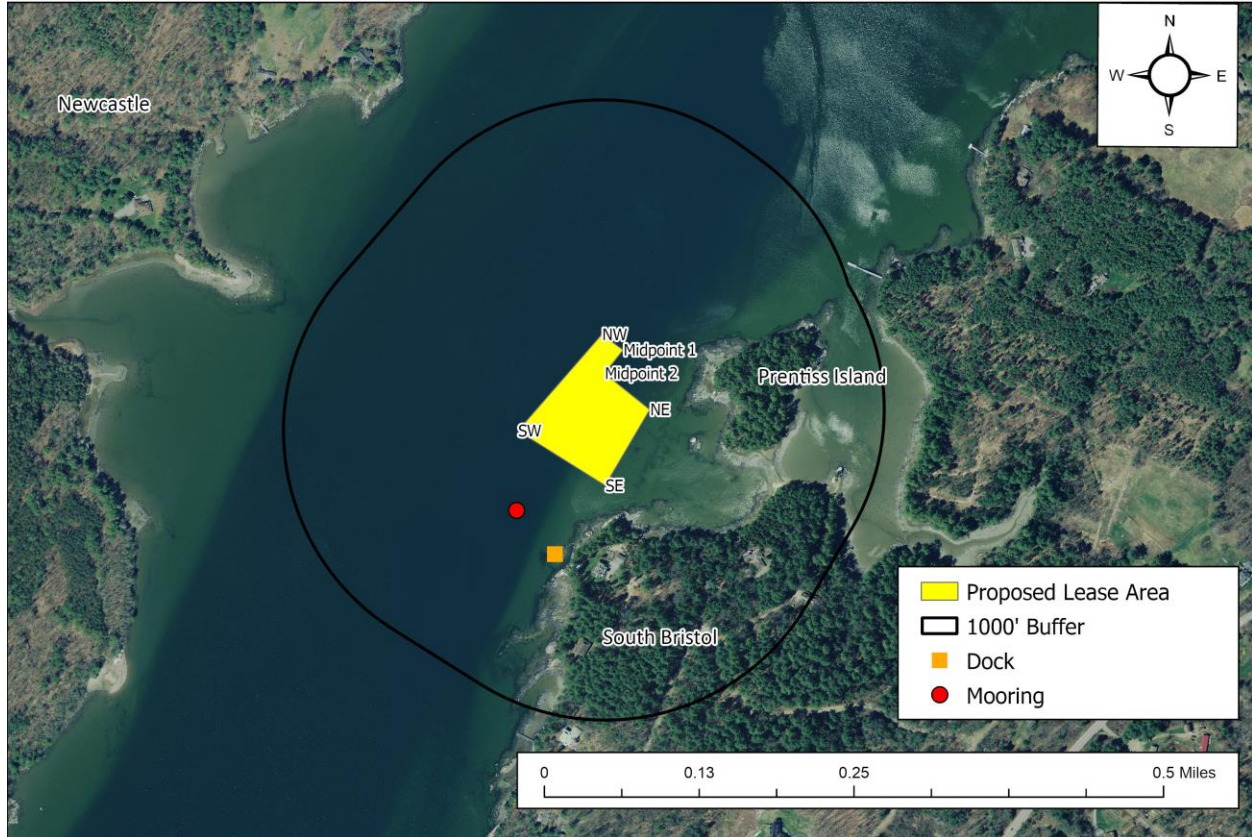


Figure 2. Proposed lease area with site visit observations.

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 assessment, MDMR scientists observed one mooring and one dock in the vicinity of the proposal. The mooring was occupied with a commercial fishing vessel with a drag on board and was approximately 292 feet south of the proposal. The dock was approximately 362 feet south of the proposal (Figure 2).



(2) Navigation

The main navigational channel for the Damariscotta River abuts the proposal to the west. During the site assessment, MDMR scientists observed one small powerboat operating in the navigational channel to the west.

A Harbormaster Questionnaire was sent to the Town of South Bristol and the local harbormaster responded stating the proposal location should not affect navigation within the main channel of the Damariscotta River but may affect navigation for riparian landowners traveling between the southeast corner of the proposal and the mainland.³



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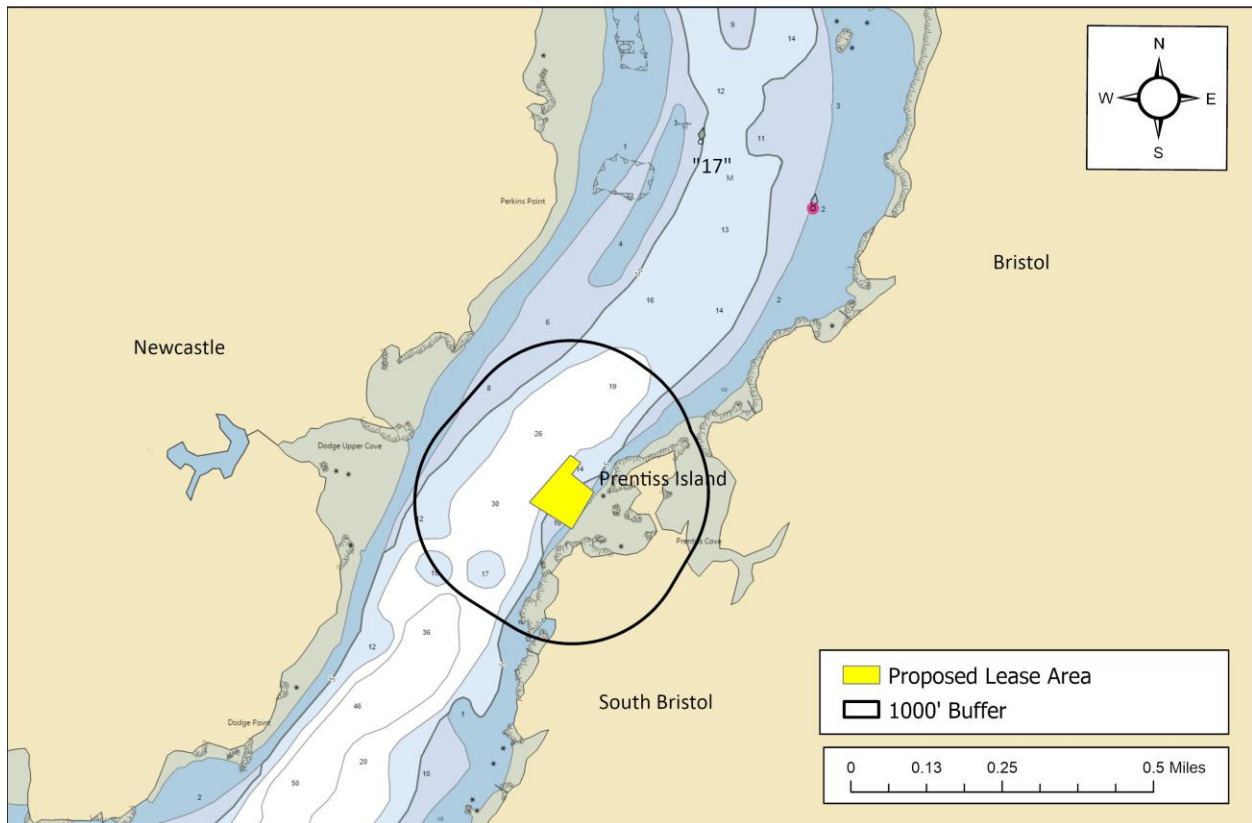


Figure 3. Proposed lease area and nearby navigational channels.

³ Harbormaster questionnaire received by MDMR April 2023.



(3) Fishing and Other Uses

During the site visit, MDMR observed light lobstering to the west of the proposal within the main navigational channel. There were no lobster buoys observed within 1,000 feet of the proposal.

(4) Other Aquaculture Uses

The applicant currently operates standard lease DAM WP within a portion of this proposal. DAM WP is licensed for bottom culture only, whereas this experimental lease proposal includes suspended gear. DAM WP is also subject to several conditions governing its use. Experimental lease DAM DUX, held by Norumbega Oyster Inc., is 822 feet southwest of this proposal. There are no active Limited Purpose Aquaculture (LPA) licenses within 1,000 feet of this proposal (Figure 4).

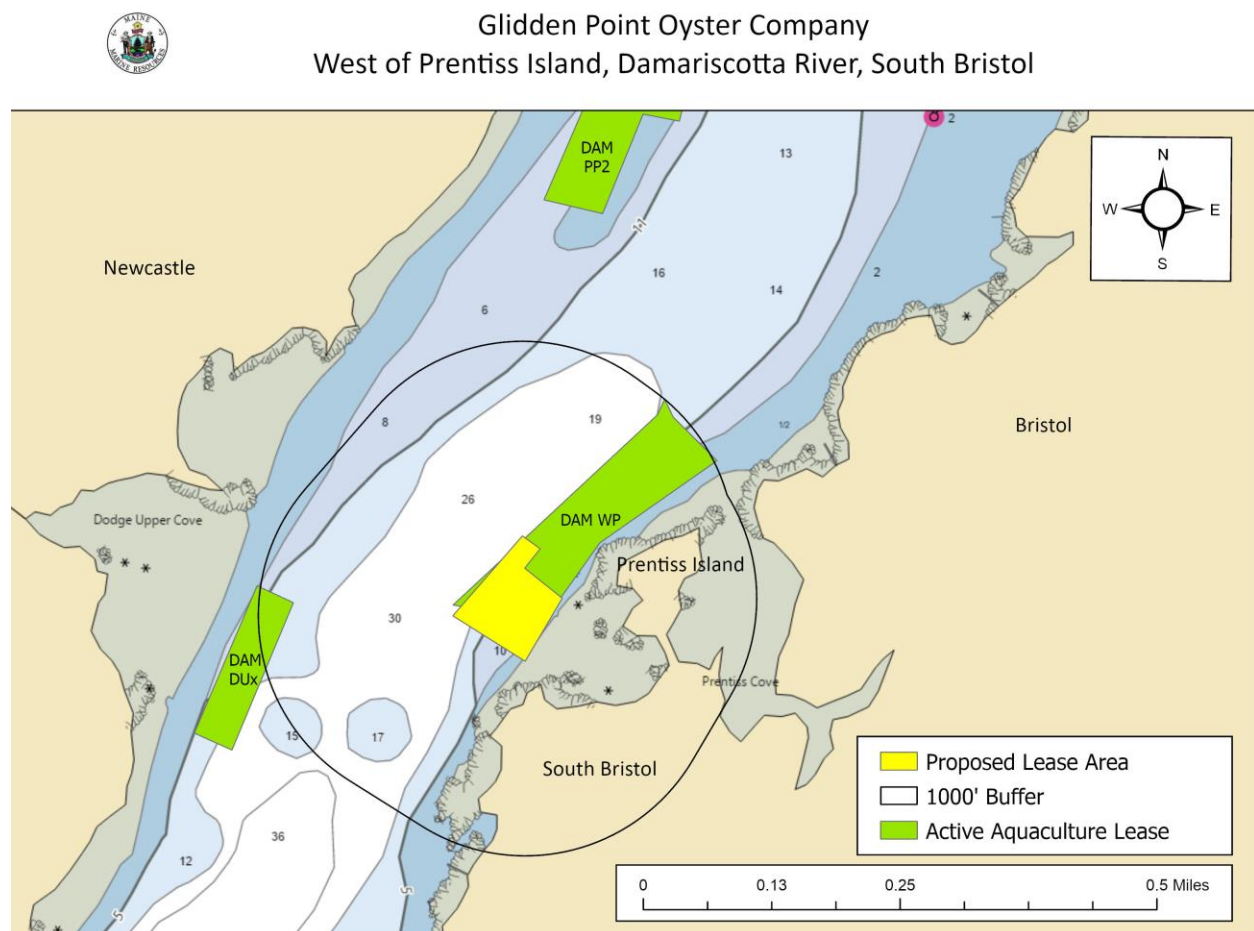


Figure 4. Aquaculture leases and LPA licenses in the vicinity of the proposal.



(5) Existing System Support

Epibenthic Flora and Fauna

On September 20, 2023, MDMR scientists utilized an ROV to assess the epibenthic ecology of the proposed lease. The relative abundance of epibenthic flora and fauna observed is described below in Table 4.

Table 4. Species observed during site assessment.

Species Observed	Abundance
Crab (<i>Cancer sp.</i>)	Common
Atlantic Horseshoe Crab (<i>Limulus polyphemus</i>)	Occasional
Seaweed (<i>Ascophyllum sp.</i>)	Occasional
Sugar Kelp (<i>Saccharina latissima</i>) (unattached, floating within proposal)	Occasional
American Oyster (<i>Crassostrea virginica</i>)	Occasional

Eelgrass (*Zostera marina*)

Records of seagrass collected in 2023 indicate no mapped eelgrass presence in the vicinity of the proposal (Figure 5).⁴ During the site assessment, MDMR scientists observed unattached eelgrass floating on the surface of the water in the vicinity of the proposal. No eelgrass was observed attached to the seafloor.

⁴ 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.

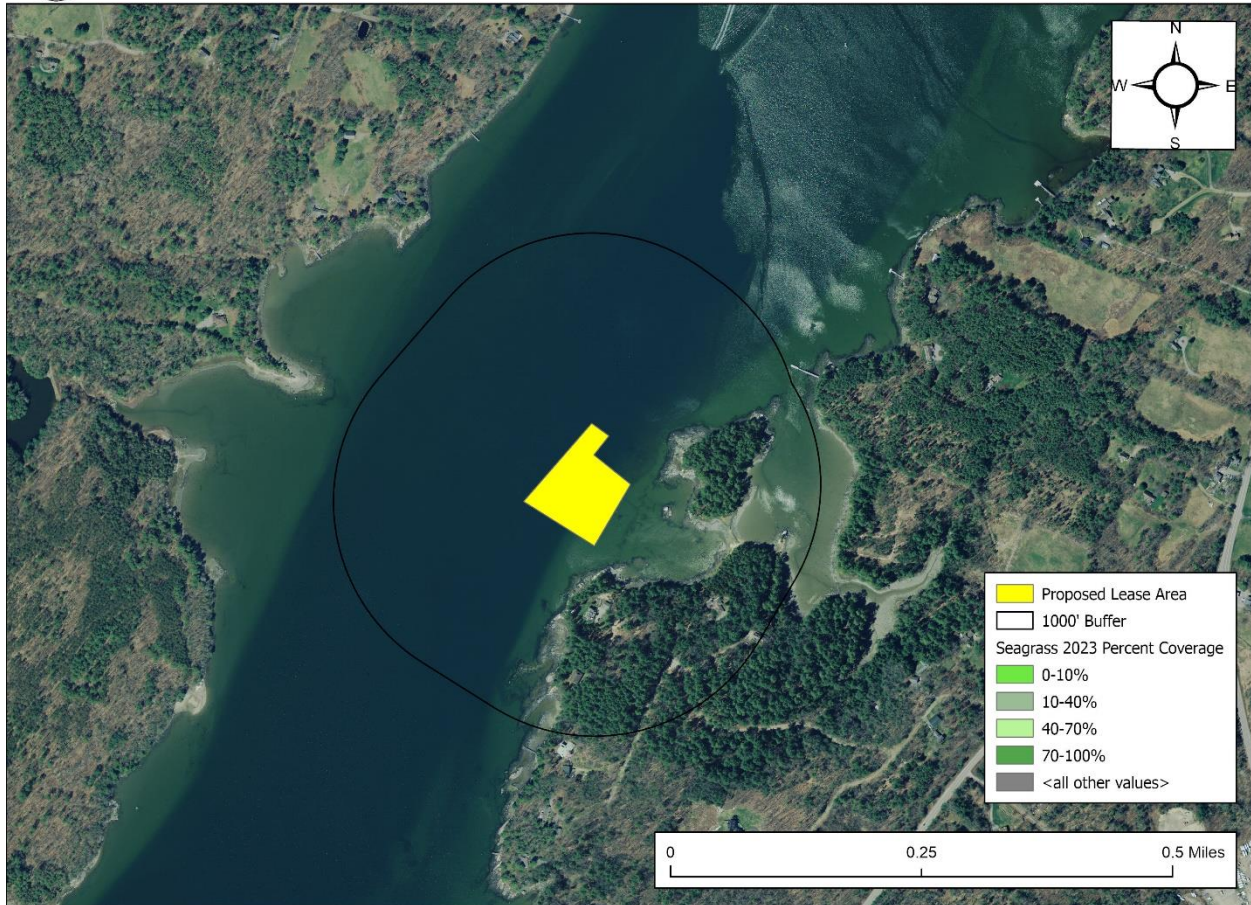


Figure 5. Mapped eelgrass (*Z. marina*) near the proposed lease utilizing 2023 data.

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 abuts mapped tidal waterfowl and wading bird habitat to the east. 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 1.42 miles north of the proposal (Figure 6).⁵

On February 6, 2023, 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

During the site assessment, MDMR scientists observed herring gull (*Larus argentatus*), common tern (*Sterna hirundo*), double-crested cormorant (*Nannopterum auritum*), and a bald eagle (*Haliaeetus leucocephalus*) in the general vicinity of the proposal.

⁵ Data obtained from MDIWF maintained SDE Feature Class “USFWS “Bald_Eagle_Nests_-_Maine_2023”.

⁶ Email correspondence between MDIFW and MDMR.

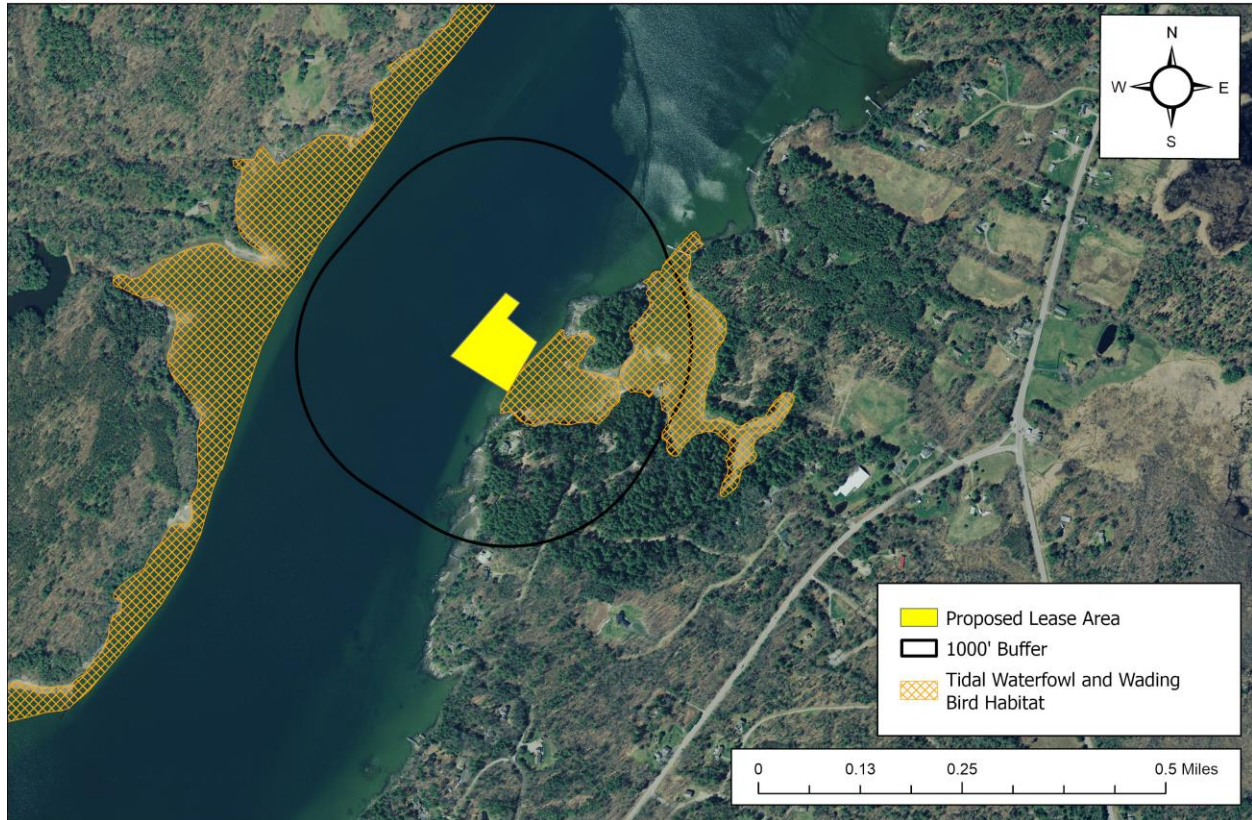


Figure 6. Mapped Tidal Waterfowl and Wading Bird Habitat.⁷

(6) Interference with Public Facilities

The proposed lease is not located 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.

⁷ Data obtained from MDIWF maintained SDE Feature Class “GISVIEW.MEIFW.Twwh” .