 Benjamin Weeks (App 1) - East of Dingley Island, Harpswell

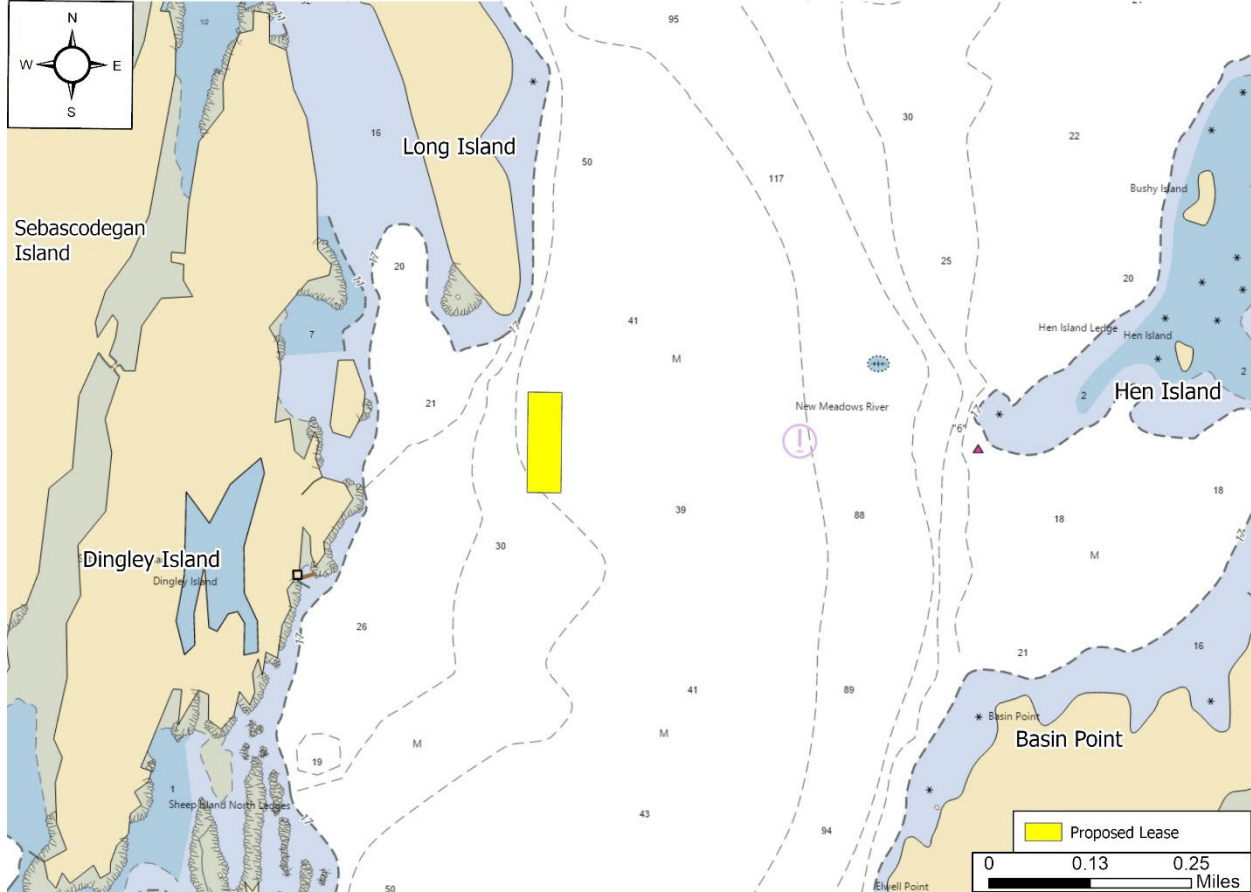


Figure 1. Vicinity map.¹

Location: East of Dingley Island, New Meadows River, Harpswell, Cumberland County, Maine

Purpose: Experimental lease (App 1) for suspended culture of sugar kelp (*Saccharina latissima*).

Site Review: Geoff Shook and Katie von Hohenleiten

Report Preparation: Katie von Hohenleiten, Geoff 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.



Application Overview

The applicant, Benjamin Weeks, is requesting 3.33² acres east of Dingley Island in the New Meadows River for the suspended culture of marine algae. The applicant intends to remove all gear except for mooring blocks and lease markers during the off season.³ This proposal is referred to as Application 1, as the applicant has a second pending experimental lease application to the east of this proposal (Application 2).

General Characteristics

On May 30, 2024, Maine Department of Marine Resources (MDMR) scientists assessed the proposed lease site. MDMR scientists arrived on site at approximately 10:04 AM. The shoreline of Long Island and both sides of the New Meadows River are comprised of rocky ledges and some gravel beaches that lead to forested uplands. There is a dense concentration of residential homes in the cove between Long Island and Sebascodegan Island.

Depth

MDMR scientists began collecting depths at the proposed site an hour before low tide at approximately 10:09 AM. Measured depths at corners of the proposed lease site ranged from 33.9 to 48.3 feet. Correcting for tidal variation derives water depths at the corners of the proposal at mean low water (MLW, 0.0 feet) to be from 33.4 to 47.8 feet (Table 1).

Table 1. Predicted tidal heights in Cundys Harbor, Maine.⁴

Date	Time	Height (ft)
2024/05/30	4:42 AM	9.6 H
2024/05/30	11:07 AM	0.0 L
2024/05/30	5:31 PM	9.0 H
2024/05/30	11:30 PM	1.0 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 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 Applicant originally requested 4.0 acres. MDMR calculations indicate the area is 3.33 acres.

³ Page 5 of the application states the off season will be June 15 through September 30, while pages 23-25 indicate the off season will be June 1 through October 31.

⁴ <https://www.us harbors.com/harbor/maine/cundys-harbor-me/tides/?tide=2024-05#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, a nautical chart provided by the National Oceanic and Atmospheric Administration (NOAA), and the application coordinates (Table 3, Figures 2 and 3).

Application Coordinates (WGS84) – 3.33 Acres

<u>Corner</u>	<u>Latitude</u>	<u>Longitude</u>	
NW	43.816744°	-69.875508°	then 221.43 feet at 91° True to
NE	43.816744°	-69.874669°	then 655.14 feet at 180° True to
SE	43.814947°	-69.874669°	then 221.43 feet at 271° True to
SW	43.814947°	-69.875508°	then 655.14 feet at 360° True to NW

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

Feature	Distance
NE corner to Hen Island at MLW	~4,016.3' to the east
SE corner to Basin Point at MLW	~3,154.8' to the southeast
SW corner to Dingley Island shoreline at MLW	~1,060.0' to the west
NW corner to Long Island at MLW	~520.5' to the northwest



Benjamin Weeks (App 1) - East of Dingley Island, Harpswell

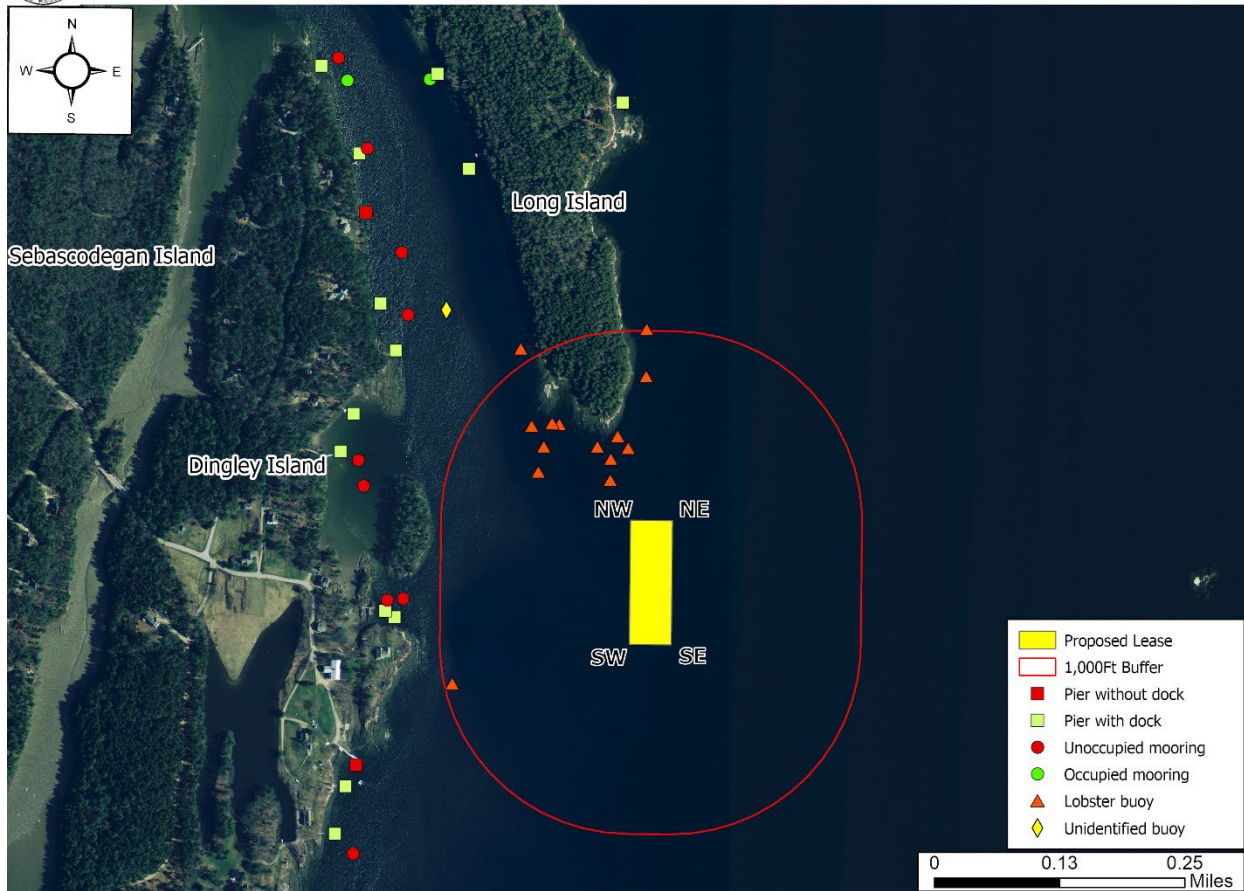


Figure 2. Proposed lease area with site visit observations.

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 within 1,000 feet of the proposal. To the northwest of the proposal, the eastern shore of nearby Sebascodegan and Dingley Islands and the western shore of Long Island are densely concentrated with residential homes. MDMR scientists noted in the general vicinity of the proposal there were 13 piers with docks, two piers without docks, two occupied moorings, and nine unoccupied moorings (Figure 2). One dock had kayaks stored on it and several of the nearby docks had small sailboats hauled out and stored on the deck.

The harbormaster indicated in the Harbormaster Questionnaire that the proposal is unlikely to prohibit riparian ingress and egress.



(2) Navigation

The proposal is located approximately 1,060 feet to the east of the eastern shoreline of Dingley Island at MLW and approximately 520.5 feet to the south of Long Island at MLW. There is approximately 3,154.8 feet of navigable water between the SE corner of the proposal and Basin Point on the eastern shore of the New Meadows River at MLW (Figure 3). During the site visit, MDMR observed two recreational powerboats. One boat was navigating to the south of the proposal and one navigated westerly through the proposal.

The harbormaster indicated in the Harbormaster Questionnaire that although the applicant is proposing to operate during the boating off-season, the proposed location could still negatively impact navigation in the area.

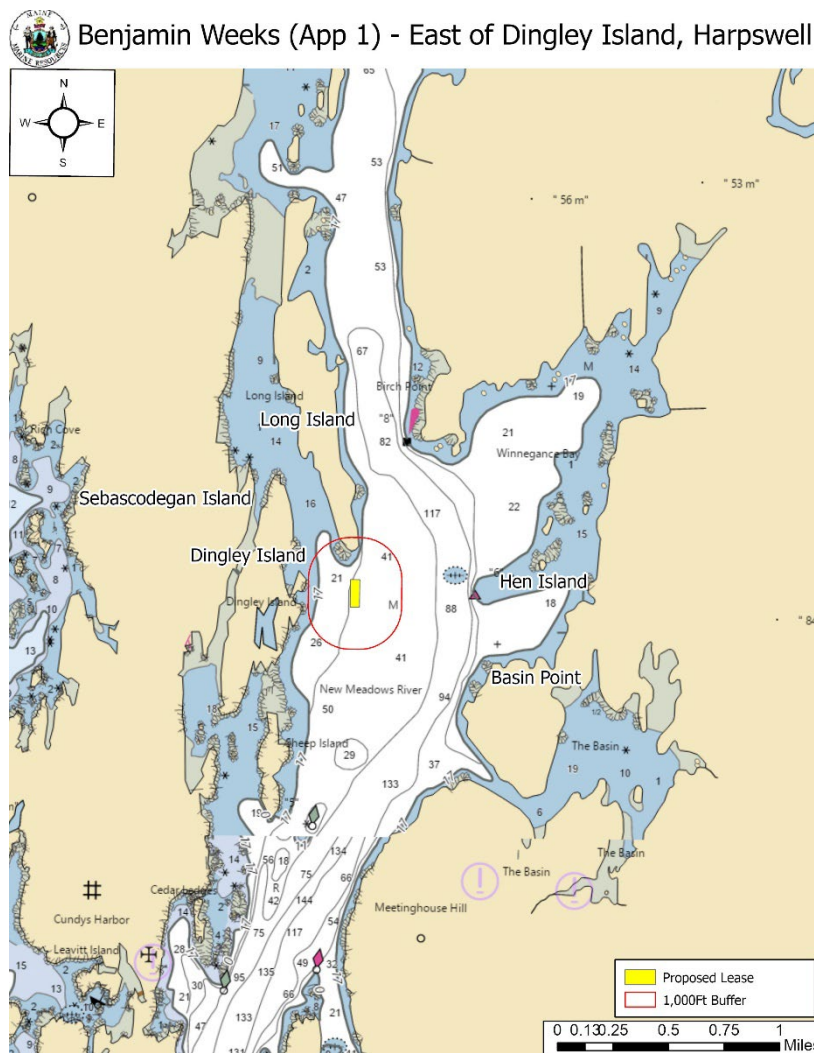


Figure 3. Navigational channels in the vicinity of the proposed lease area.



(3) Fishing and Other Uses

During the site visit, MDMR documented 13 lobster buoys within 1,000 feet of the proposal. MDMR recorded the location of buoys closest to the proposal, as seen in Figure 2. During the site visit, MDMR observed one lobster boat actively working in the vicinity of the proposal, and one lobster boat transiting through the vicinity of the proposal.

The harbormaster indicated in the Harbormaster Questionnaire that commercial fishing does occasionally occur in the area. Additionally, the harbormaster indicated that while the New Meadows River is typically a safe anchorage, it is not often used for that purpose in the winter months.

(4) Other Aquaculture Uses

There are no aquaculture leases or limited purpose aquaculture (LPA) sites within 1,000 feet of the proposal (Figure 4). There are four LPAs immediately outside the 1,000-foot buffer: MLAN123, MLAN223, MLAN323, and MLAN423. The applicant, Benjamin Weeks, has an additional pending experimental lease application (Application 2) located immediately adjacent to this proposal that was deemed complete on 05/04/2023.⁵

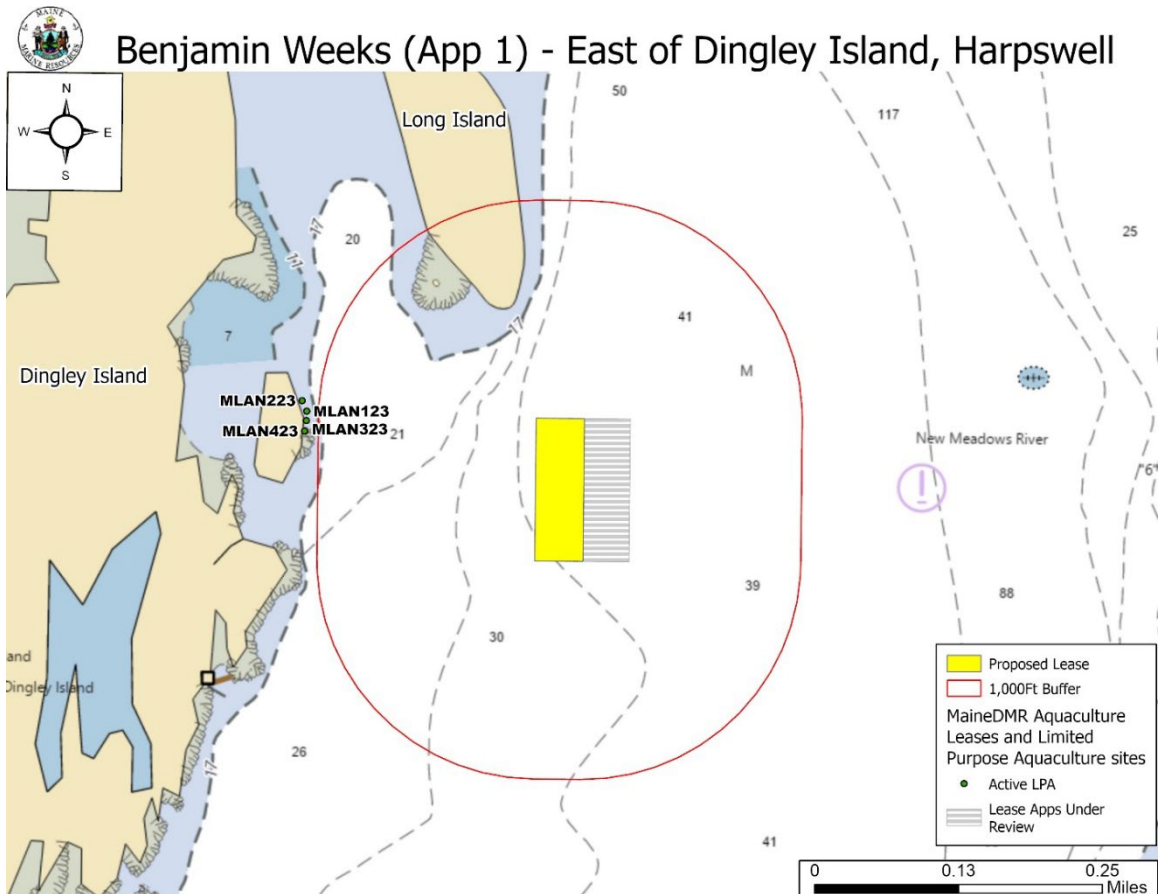


Figure 4. Aquaculture leases and LPA licenses in the vicinity of the proposed lease area.

⁵ https://www.maine.gov/dmr/sites/maine.gov/dmr/files/inline-files/COMPLETE_5.04.23_Weeks%232_0.pdf



(5) Existing System Support

Epibenthic Flora and Fauna

On May 30, 2024, 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 transect is described below in Table 4.

Table 4. Species observed on underwater camera footage.

Species Observed	Abundance
Sand Shrimp (<i>Crangon septemspinosa</i>)	Common

Eelgrass (*Zostera marina*)

Records of eelgrass collected by the Maine Department of Environmental Protection (MDEP) in 2022 indicate no mapped eelgrass presence in the vicinity of the proposal. The nearest mapped eelgrass is approximately 1,710.55 feet north of the proposal (Figure 5).⁶ No eelgrass was observed on underwater camera footage within the proposal boundaries during MDMR’s site assessment.

⁶ Data obtained from The Maine Office of GIS “GISVIEW.MEDEP.Seagrass2022”. Widgeon grass was observed only in the New Meadows River area off Old Brunswick Road near shore. 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.



Benjamin Weeks (App 1) - East of Dingley Island, Harpswell

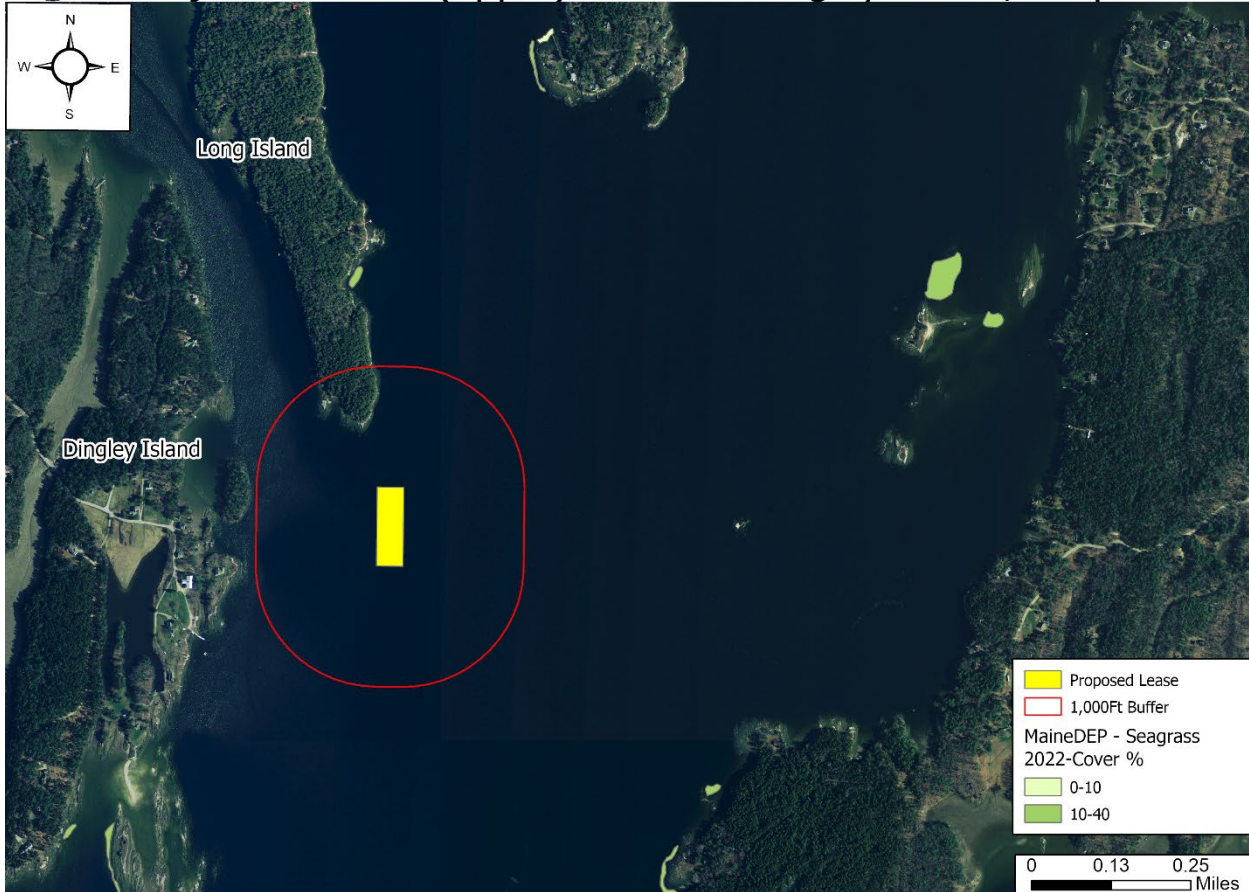


Figure 5. Mapped eelgrass (*Z. marina*) in the vicinity of the proposed lease area.

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 2,431.3 feet to the northeast of mapped Tidal Waterfowl and Wading Bird Habitat (TWWH). Data collected by the United States Fish and Wildlife Service in 2023⁷ by aerial nest survey shows there are no mapped bald eagle nests in the vicinity of the proposal, although a bald eagle was observed during the site visit by MDMR (Figure 6).

During the site assessment, MDMR scientists observed double-crested cormorant (*Nannopterum auritum*), osprey (*Pandion haliaetus*), common tern (*Sterna hirundo*), moon jellyfish (*Aurelia aurita*), bald eagle (*Haliaeetus leucocephalus*), gray seal (*Halichoerus grypus*), great blue heron (*Ardea herodias*), Canada geese (*Branta canadensis*), American crow (*Corvus brachyrhynchos*), and herring gull (*Larus argentatus*) in the general vicinity of the proposal.

⁷ Data obtained from USFWS "Bald_Eagle_Nests_-_Maine_2023"



On June 28, 2023, a Wildlife Biologist with MDIFW responded by email to a “Request for Agency Review and Comment” stating minimal impacts to wildlife are anticipated for this project.⁸



Benjamin Weeks (App 1) - East of Dingley Island, Harpswell

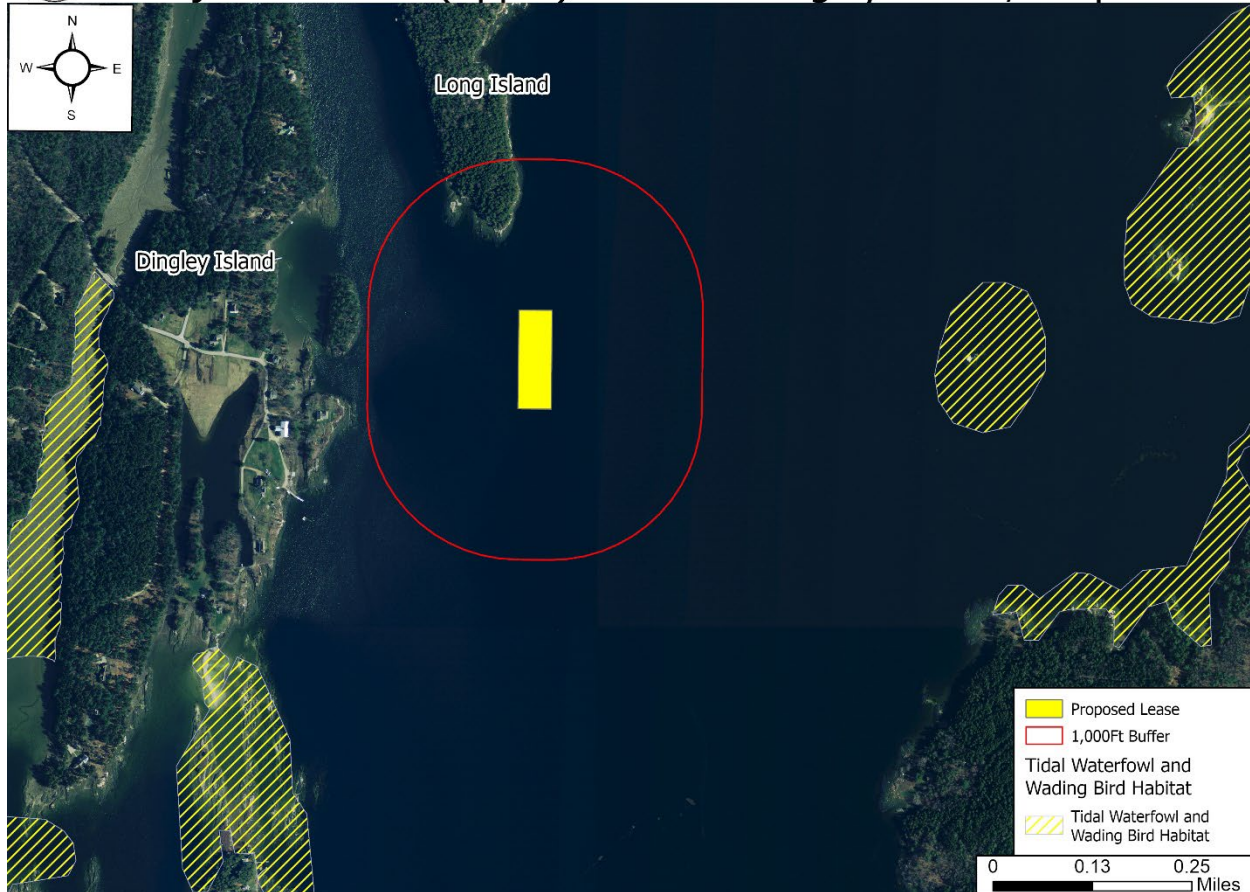


Figure 6. Mapped TWWH in the vicinity of the proposal.⁹

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

⁸ Email correspondence between MDIFW and MDMR

⁹ Data obtained from MDIFW maintained SDE Feature Class “GISVIEW.MEIFW.Twwh”