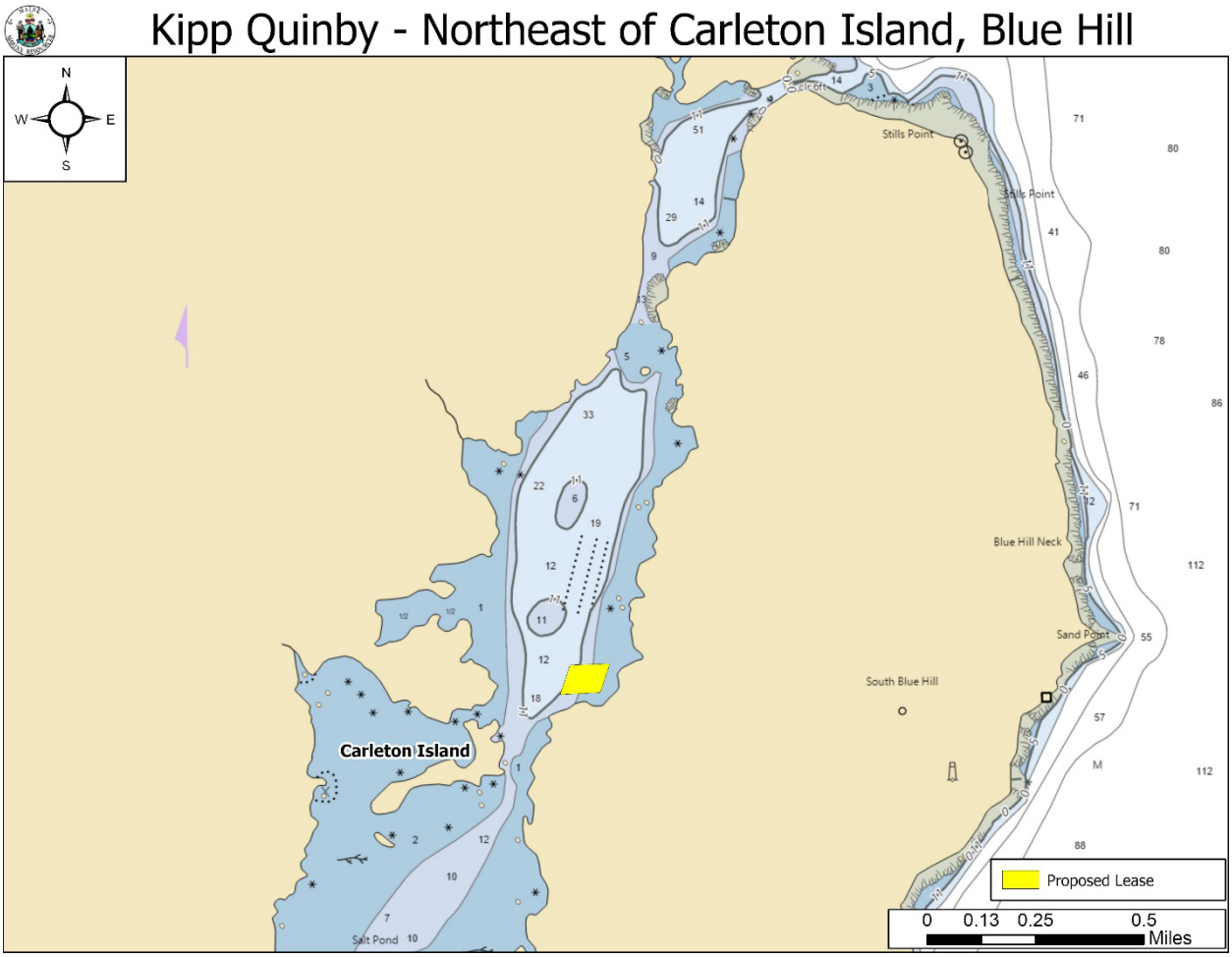

Figure 1. Vicinity map.[1]

Location: Northeast of Carleton Island, Blue Hill Salt Pond, Blue Hill, Hancock County, Maine

Purpose: Experimental lease for bottom and suspended culture of American/eastern oyster (*Crassostrea virginica*), hard clam/quahog (*Mercenaria mercenaria*), Atlantic surf clam (*Spisula solidissima*), sea scallop (*Placopecten magellanicus*), sugar kelp (*Saccharina latissima*), and dulse (*Palmaria palmata*).

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, Kipp Quinby, is requesting 3.91[2] acres northeast of Carleton Island in the Blue Hill Salt Pond for the culture of shellfish and marine algae. The applicant intends to have gear on site year-round.

General Characteristics

On August 21, 2024, Maine Department of Marine Resources (MDMR) scientists assessed the proposed lease site. MDMR scientists arrived on site at approximately 12:21 PM. The shoreline in the vicinity of the proposal consists of rocky ledge coastline leading to heavy forested uplands. On April 16, 2025, MDMR scientists revisited the proposed lease site.

Depth

MDMR scientists collected water depths at the proposed site at 12:30 PM on August 21, 2024, at the time of the predicted high tide in Blue Hill Harbor (Table 1). Measured depths at corners of the proposed lease site ranged from 6.2 to 14.3 feet. Throughout the duration of the site visit, MDMR scientists observed the tide to be incoming. The nearest tidal station, Blue Hill Harbor, is approximately 3.8 miles north of the proposal. However, due to the presence of Blue Hill Falls, the tidal cycle in the Blue Hill Salt Pond is delayed. Blue Hill Falls is located approximately 1.4 miles north of the proposal (Figure 3, Image 1). Therefore, on April 16, 2025, MDMR scientists revisited the proposed lease site to collect water depths at low tide. MDMR scientists collected depths during the outgoing tide at 10:50 AM, approximately three hours after the predicted low tide in Blue Hill Harbor (Table 1). Depths at corners of the proposal ranged from 2.9 to 11.6 feet. Correcting for tidal variation derives water depths at corners of the proposal at mean low water (MLW, 0.0 feet) to be from 2.4 to 11.1 feet.

Table 1. Predicted tidal heights in Blue Hill Harbor, ME.[3]

Date	Time	Height (ft)
2024/08/21	12:11 AM	12.2 H
2024/08/21	6:35 AM	-1.2 L
2024/08/21	12:42 PM	11.5 H
2024/08/21	6:53 PM	-0.7 L
2025/04/16	1:27 AM	10.3 H
2025/04/16	7:53 AM	0.5 L
2025/04/16	2:00 PM	9.3 H
2025/04/16	8:00 PM	1.6 L

[2] Applicant originally requested 3.9 acres. MDMR calculations indicate the area is 3.91 acres.
[3] https://www.usharbors.com/harbor/maine/blue-hill-harbor-me/tides/

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

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) – 3.91 Acres

Corner	Latitude	Longitude	
NW	44.354604°	-68.569546°	then 489.2 feet at 88° True to
NE	44.354653°	-68.567677°	then 371.7 feet at 199° True to
SE	44.353688°	-68.568136°	then 486.5 feet at 268° True to
SW	44.353627°	-68.569994°	then 375.0 feet at 018° True to NW

Table 3. Approximate distances from proposal to surrounding features (Figures 2 and 3).

Feature	Distance
NE corner to Blue Hill Shoreline at MLW	~138.5’ to the southeast
SE corner to Blue Hill Shoreline at MLW	~123.8’ to the southeast
SW corner to Carleton Island shoreline at MLW	~834.2' to the southwest
NW corner to Blue Hill Shoreline at MLW	~913.7’ to the southwest

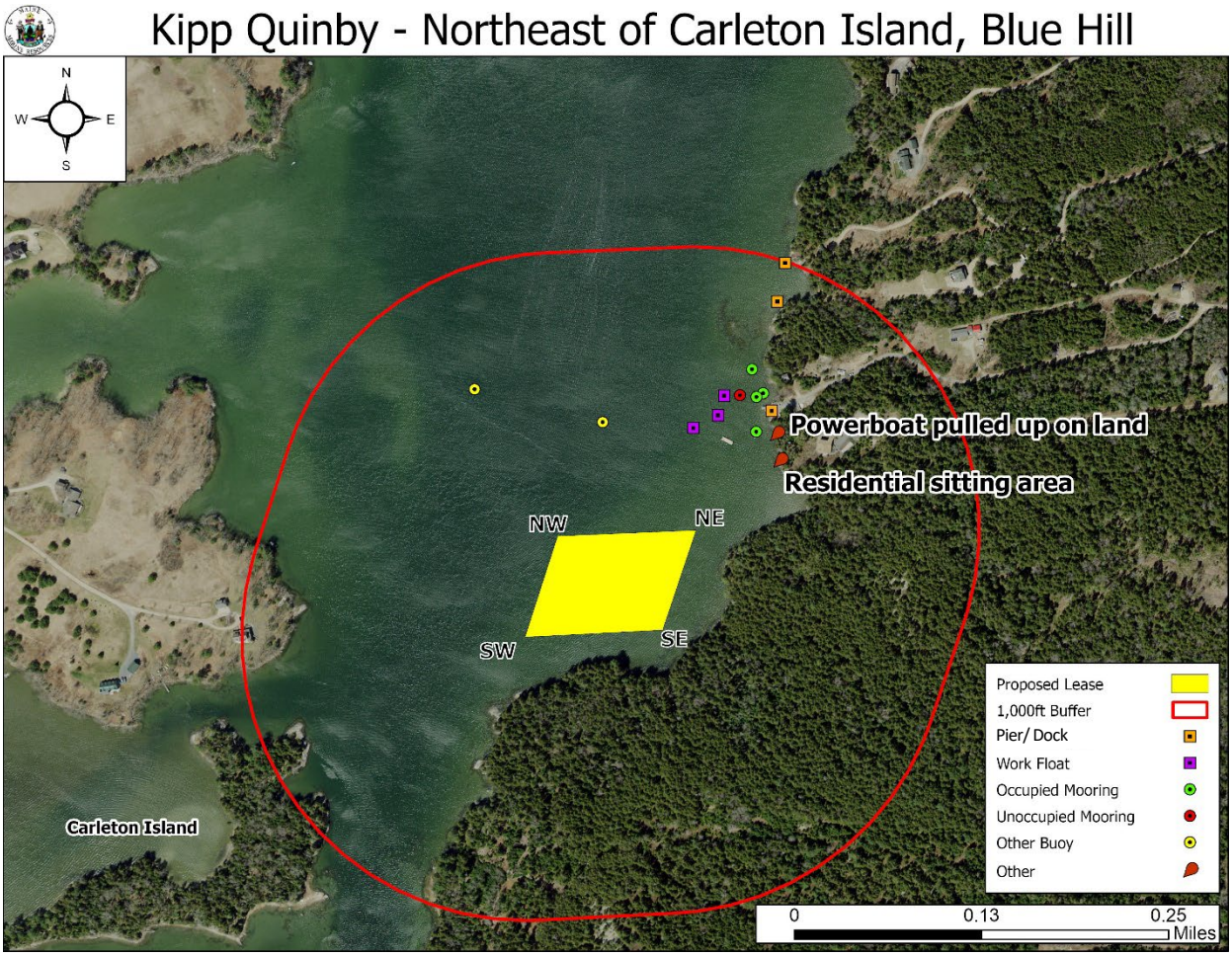

Figure 2. Proposed lease area with site visit observations.

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 observed three piers within 1,000 feet of the proposed lease; the closest was located approximately 498.6 feet northeast of the proposal. There were five moorings in the vicinity of the proposal, one of which was unoccupied. The closest mooring located approximately 407.4 feet northeast of the proposal had a 15-foot powerboat attached and belongs to a nearby riparian landowner. The remaining three occupied moorings had small power boats attached and belong to aquaculture lease and license holders, including one owned by the applicant, Kipp Quinby (Figure 2).

(2) Navigation

The proposal is located approximately 123.8 feet west of the eastern shore of the Blue Hill Salt Pond at MLW. There is approximately 913.7 feet of navigable water between the proposal and the western shore of the salt pond at MLW. Blue Hill Falls, located approximately 1.4 miles north of the proposal, is a reversing waterfall. The falls are created by water funneling into a narrow channel under the Blue Hill Falls Bridge. Navigation to and from the salt pond is only accessible by transiting under the Blue Hill Falls Bridge, or by private land access. There is no public boat launch that services the salt pond (Figure 3, Image 1). Depending on tidal stage, whitewater can form up to three feet in height.[4] At MHW, there is approximately 6 feet of clearance between the surface of the water and the bridge. At MLW, there is approximately 15 feet of clearance. Water depth under the bridge limits the types of vessels that can access and navigate in the area.

During the site visit on August 21, 2024, one powerboat engaged in aquaculture activities was observed transiting through the proposed lease.

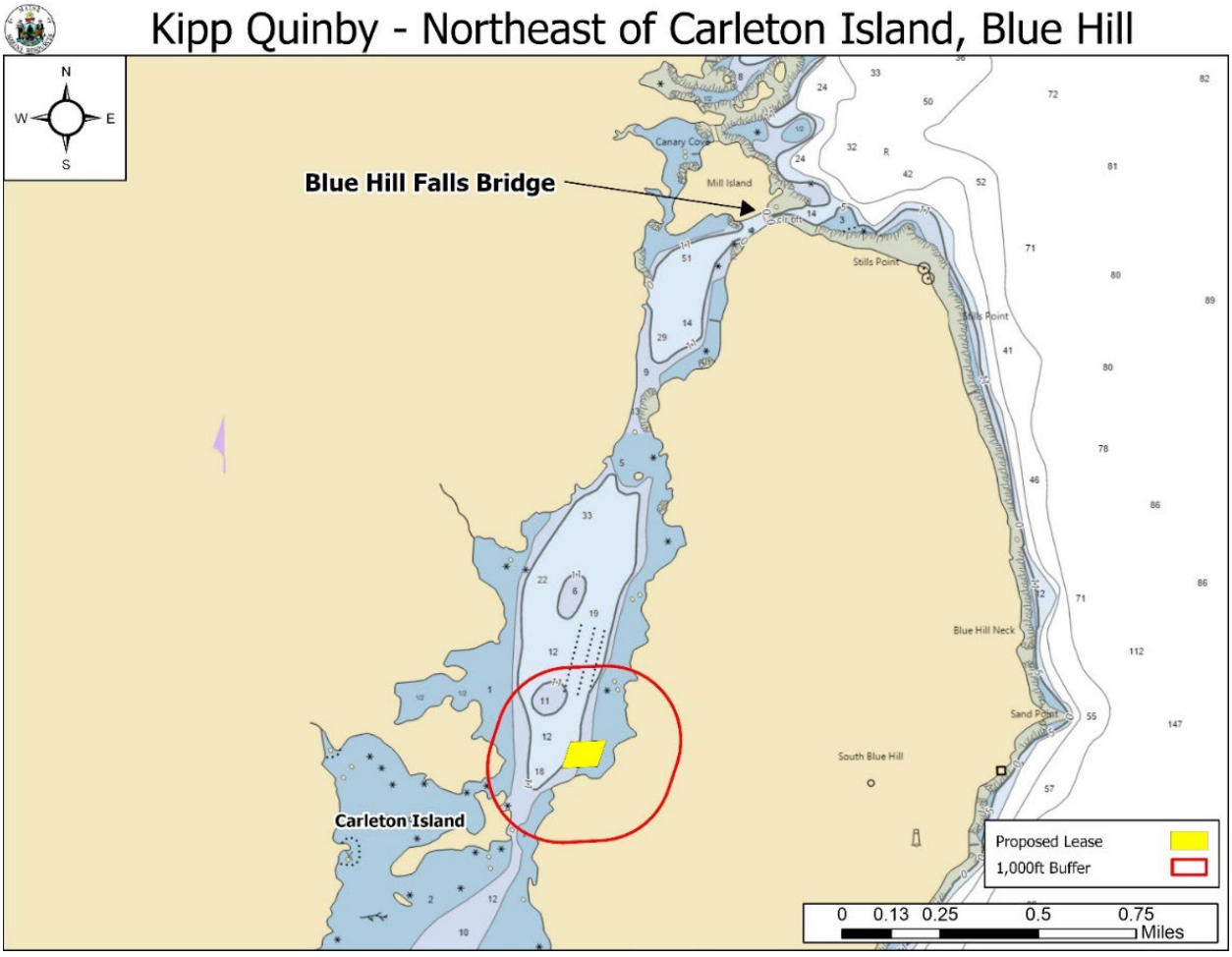

Figure 3. Navigational channels in the vicinity of the proposed lease area.

[4] https://www.acadianationalpark.com/downeast_attractions/blue_hill_falls.php

Image 1. Blue Hill Falls Bridge located over Blue Hill Falls. Image was taken on April 16, 2025 at approximately 10:00 AM while the tide was outgoing from the salt pond.

(3) Fishing and Other Uses

During the August 21, 2024 site visit, MDMR did not observe any evidence of commercial or recreational fishing, other than aquaculture activity.

(4) Other Aquaculture Uses

There are six limited purpose aquaculture (LPA) sites and one aquaculture lease within 1,000 feet of the proposed lease. Four LPAs are within the boundaries of the proposed lease: KQUI1323, KQUI1423, KQUI1524, KQUI1624. They are licensed to the applicant of this proposal, Kipp Quinby.[5] Additionally, there are two LPAs, YOU423 and YOU323, located approximately 515.1 feet northeast of the proposal. They are licensed to Evan Young. Standard lease BHB SP is approximately 671.7 feet north of the proposal (Figure 4). The lease is operated by Tightrope Seafarms, LLC. During the site visit on August 21, 2024, MDMR observed aquaculture activity at lease site BHB SP, as well as an aquaculture vessel transiting through the proposed lease area.

During MDMR's site visit on August 21, 2024, scientists observed two buoys located 395 feet and 595 feet north of the proposal. They appeared to be mislocated corner marker buoys for nearby lease BHB SP (Figure 2).[6]

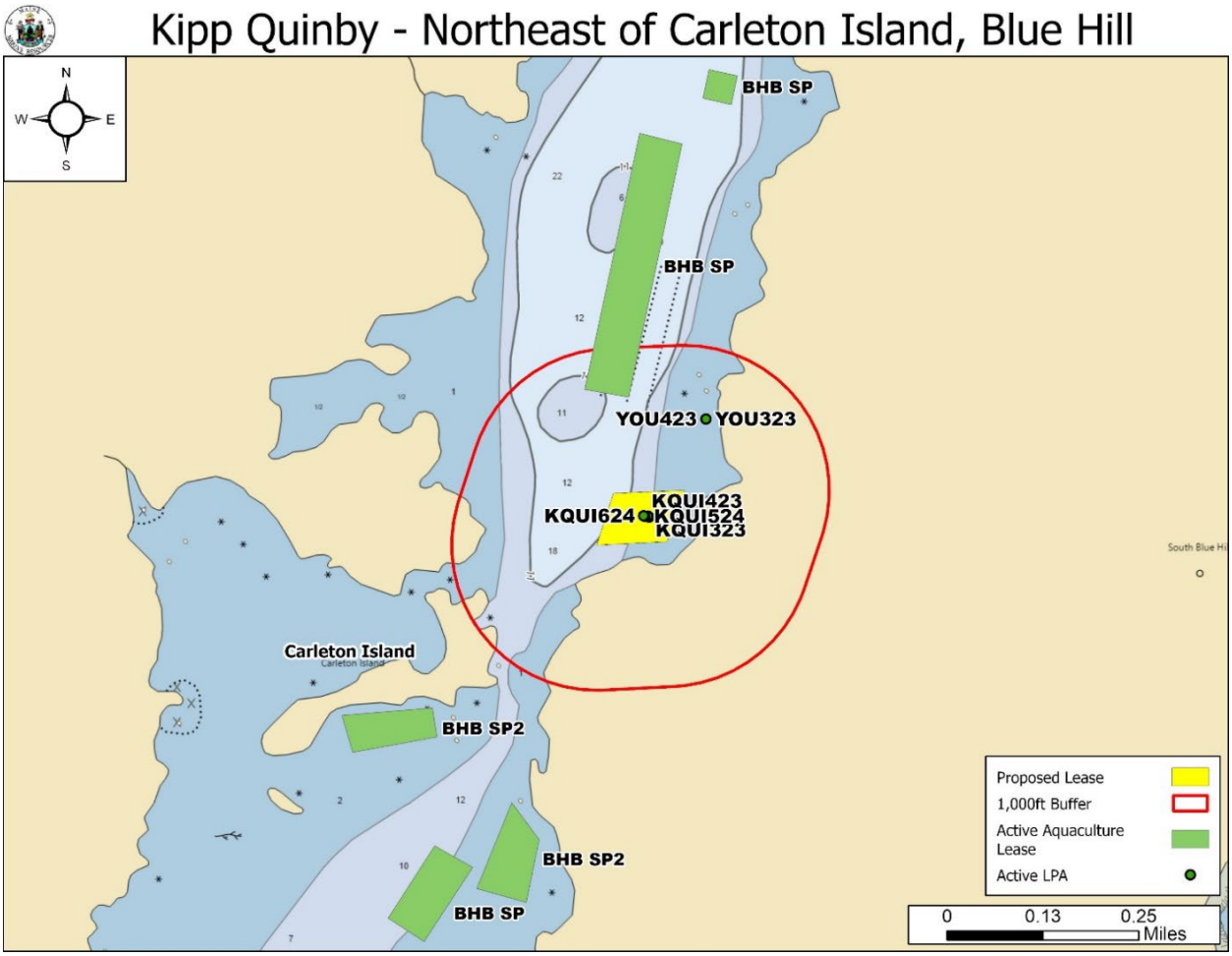

Figure 4. Aquaculture leases and LPA licenses in the vicinity of the proposed lease area.

[5] KQUI1323, KQUI1423, KQUI1524, KQUI1624 were licensed after this application was deemed complete by MDMR.
[6] These findings were passed on to the MDMR inspections program for appropriate follow up.

(5) Existing System Support

Epibenthic Flora and Fauna

On August 21, 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 video footage.

Species Observed	Abundance
Red algae (*Dasysiphonia japonica*)	Common
Fig sponge (*Halichondria panicea*)	Occasional
Sea vase tunicate (*Ciona intestinalis*)	Occasional

Eelgrass (*Zostera marina*)

Historical records of eelgrass collected by MDMR in 2010[7] indicates no mapped eelgrass presence in the vicinity of the proposal. The nearest mapped eelgrass is approximately 1,374.5 feet southwest of the proposal (Figure 5). No eelgrass was observed on underwater video footage within the proposal boundaries during MDMR's site visit.

[7] Data obtained from The Maine Office of GIS "GISVIEW.MEDMR.Eelgrass". This is the most current record of mapped eelgrass within the vicinity of the proposal.

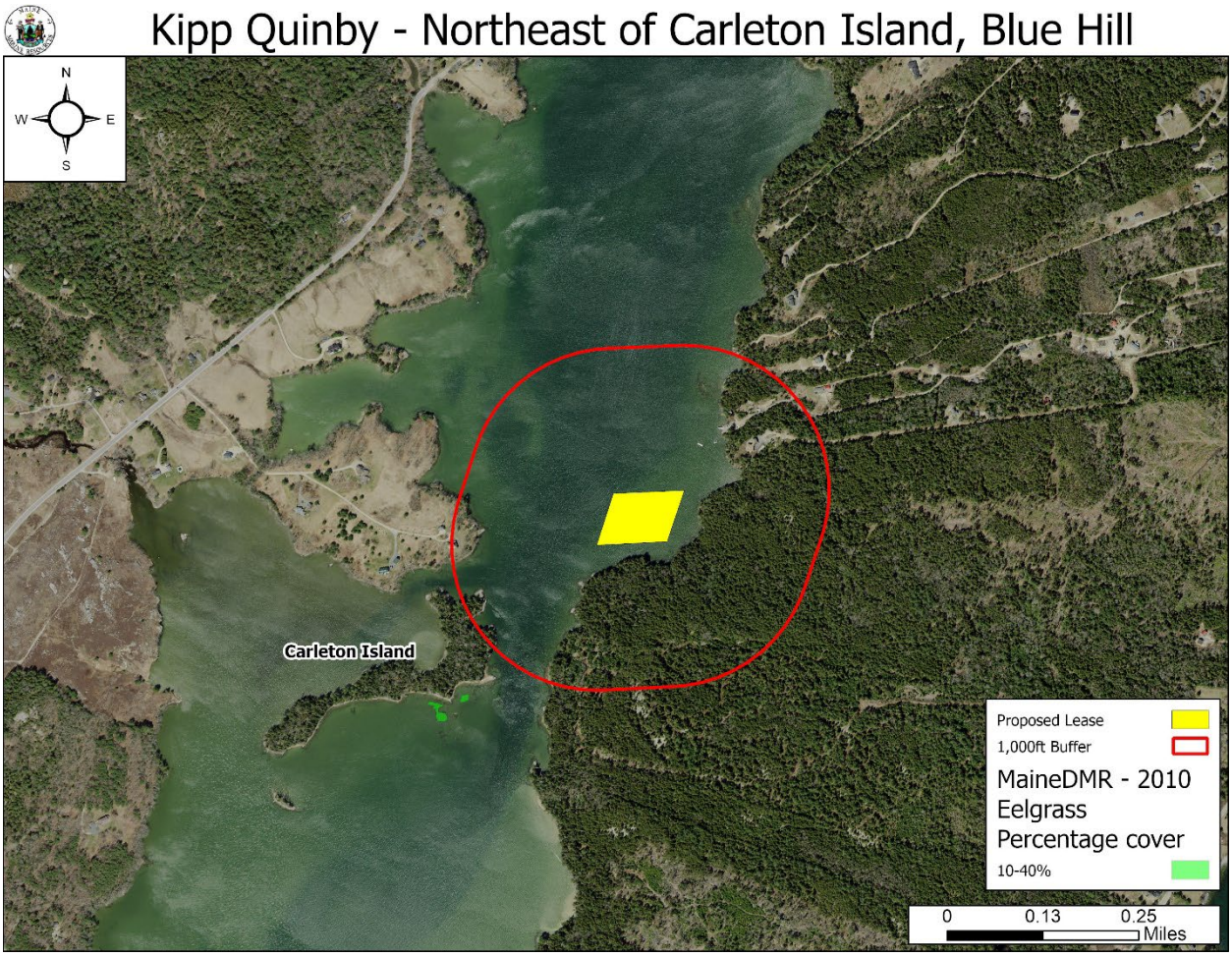

Figure 5. Mapped eelgrass (*Z. marina*) in the vicinity of the proposed lease area.

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 NW corner of the proposed lease is within mapped Tidal Waterfowl and Wading Bird Habitat (TWWH) by approximately 48.7 feet. A total of 0.1 acre of the proposed lease is located within TWWH. DMR sent a completed copy of the application with a request for agency review and comment to MDIFW. However, MDIFW did not submit any comment on the application. 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 0.53 miles southwest of the proposal (Figure 6).

During the site visit on August 21, 2024, MDMR scientists observed American crow (*Corvus brachyrhynchos*), American goldfinch (*Spinus tristis*), a school of menhaden (*Brevoortia tyrannus*), striped bass (*Morone saxatilis*), herring gull (*Larus argentatus*), and an unidentified flock of plovers (*Charadrius* sp.) in the general vicinity of the proposal.

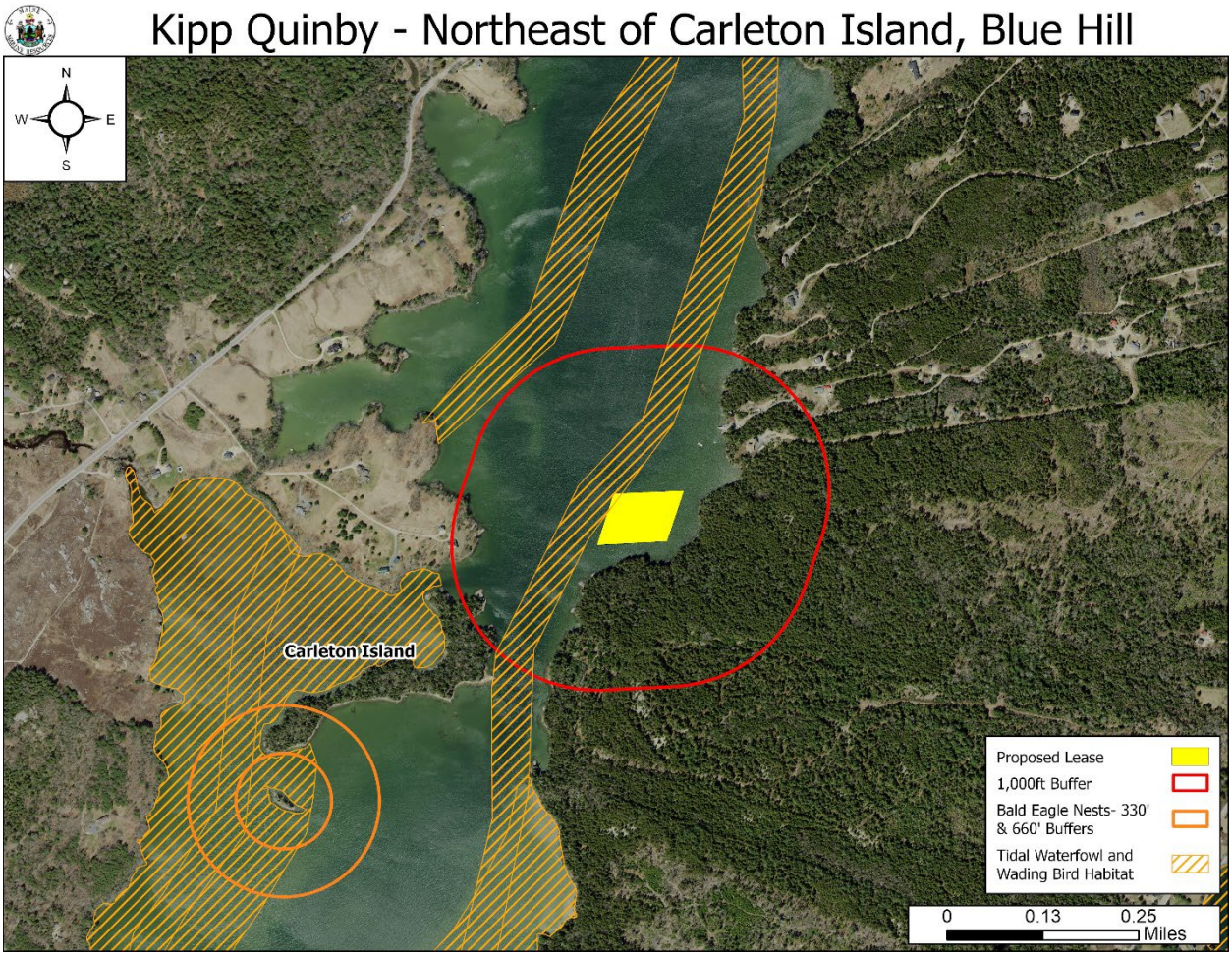

Figure 6. Mapped bald eagle nests and TWWH in the vicinity of the proposed lease area. [8]

(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] Data obtained from USFWS "Bald_Eagle_Nests_-_Maine_2023" and MDIFW maintained SDE Feature Class "GISVIEW.MEIFW.Twwh"