



Department of Marine Resources
Site Report

Greenhead Lobster, LLC (App 1)
Existing tidal impoundments, North of Moose Island
Stonington



Greenhead Lobster, LLC (App 1) - Tidal Impoundments North of Moose Island, Stonington

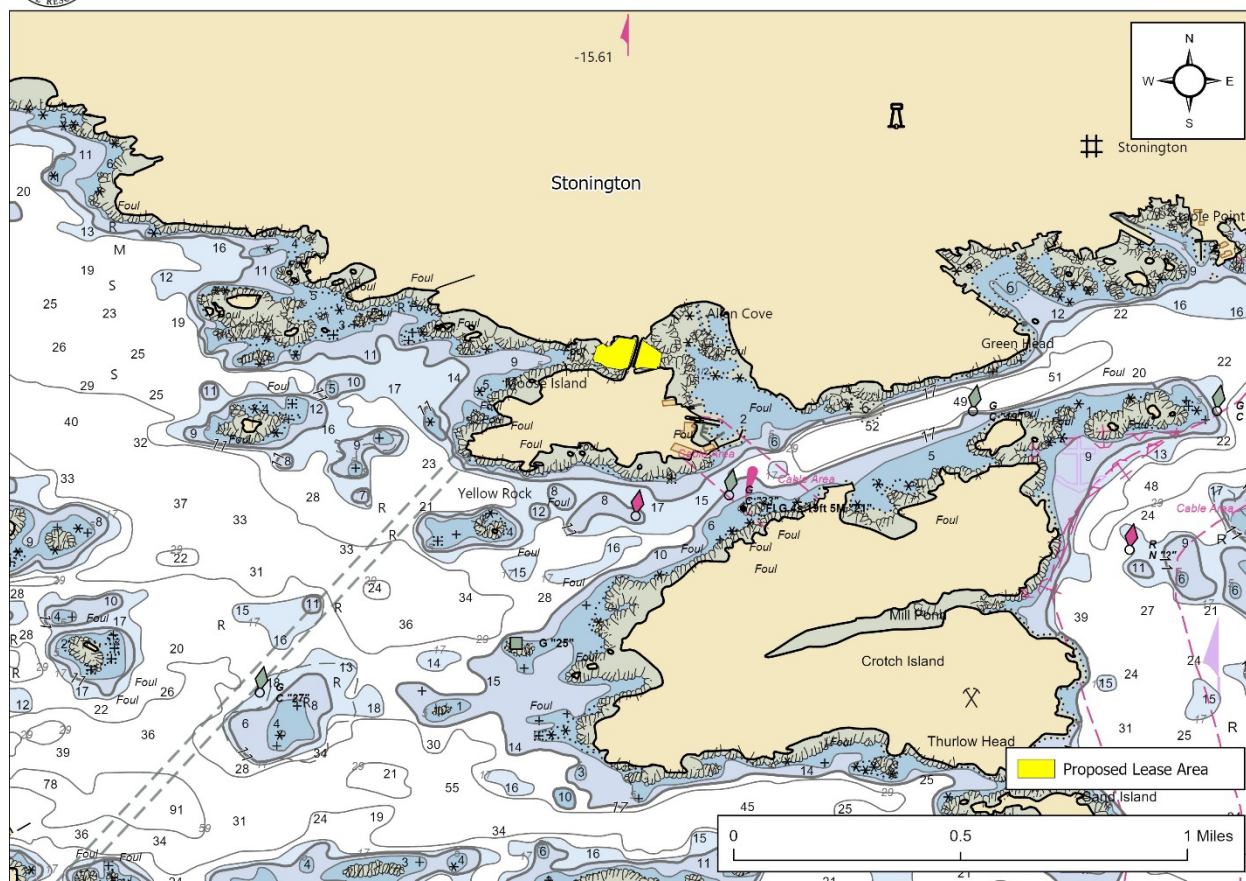


Figure 1. Vicinity map.¹

Location: Tidal Impoundments North of Moose Island, Penobscot Bay, Stonington, Hancock County, Maine

Purpose: Experimental lease for suspended culture of American/Eastern oysters (*Crassostrea virginica*)

Site Review: Geoffrey Shook and Katie VonHohenleiten

Report Preparation: Meryl Grady and Amanda Ellis

¹ Unless otherwise noted, all figures in this report were created in ArcGIS Pro version 3.3 using digitized NOAA Nautical Charts or geo-referenced aerial photographs provided by The Maine Office of GIS.



Application Overview

The applicant, Greenhead Lobster LLC, is requesting a 3.22² acre experimental lease in Stonington for the suspended culture of American/Eastern oysters (*Crassostrea virginica*). The proposed lease is located within two tidal impoundments that are physically and hydraulically separated by a causeway. Both tidal impoundments are owned by Greenhead Holdings LLC. The contact person for the proposed application, Hugh Reynolds, is the owner of the company applying for the lease, Greenhead Lobster LLC, as well as the owner of Greenhead Holdings LLC.³ The applicant is proposing to culture oysters up to about 25 millimeters in size in a variety of gear types.⁴

General Characteristics

On August 29, 2024, Department of Marine Resources (DMR) scientists assessed the proposed lease site. DMR scientists arrived on site at approximately 12:45 PM. The surrounding area consists of a mixture of forest, residential buildings, impoundment structures, and a commercial boat yard located outside the tidal impoundments southeast of the proposal.

Depth

The proposal is located entirely within two tidal impoundments that are operated and maintained by the applicant. Water depths inside the impoundments are partially a function of local tide stage. According to the applicant, the impoundments hold water at a minimum depth of 3 feet below mean high water (MHW). The average depth within the impoundments at mean low water (MLW) is 9 feet. The maximum depth is approximately 15 feet, and minimum depth is 3 feet along the shoreline. If the tidal gates were opened, portions of the proposed lease site would be above MLW, and therefore intertidal.⁵

Table 1. Predicted tidal heights in Deer Isle, Stonington, Maine.⁶

Date	Time	Height (ft)
2024/08/29	1:47 AM	0.5 L
2024/08/29	8:03 AM	8.8 H
2024/08/29	2:03 PM	1.4 L
2024/08/29	8:19 PM	10.0 H

Bottom Characteristics

DMR 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 with shell rubble.

² Applicant originally requested 3.50 acres. DMR calculations indicate the area is 3.22 acres.

³ Application pages 5, 35, 40, 41

⁴ Application pages 5, 6, 7, 15, 16, 32

⁵ Application page 23

⁶ <https://www.usharbors.com/harbor/maine/stonington-me/tides/?tide=2024-08#monthly-tide-chart>



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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	N/A

Position and Distances to Shore

The measuring tool in ArcGIS Pro 3.3 was used to verify the distances and bearings between proposed lease corners. Distances to shore were determined using the measuring tool in ArcGIS Pro 3.3, a nautical chart provided by the National Oceanic and Atmospheric Administration (NOAA), and the application coordinates (Table 3, Figures 2-4).

Application Coordinates (WGS84)

1A – 2.10 Acres

<u>Corner</u>	<u>Latitude</u>	<u>Longitude</u>	
1	44.151594°	-68.681457°	then 116 feet at 214° True to
2	44.151328°	-68.681702°	then 35 feet at 252° True to
3	44.151296°	-68.681829°	then 51 feet at 321° True to
4	44.151404°	-68.681953°	then 63 feet at 238° True to
5A	44.151311°	-68.682156°	then 71 feet at 191° True to
5B	44.151118°	-68.682208°	then 75 feet at 197° True to
6	44.150920°	-68.682283°	then 25 feet at 152° True to
7	44.150858°	-68.682241°	then 21 feet at 180° True to
8	44.150799°	-68.682240°	then 23 feet at 92° True to
9	44.150796°	-68.682151°	then 33 feet at 110° True to
10	44.150764°	-68.682034°	then 54 feet at 136° True to
11	44.150656°	-68.681894°	then 25 feet at 107° True to
12	44.150635°	-68.681804°	then 56 feet at 105° True to
13	44.150598°	-68.681597°	then 53 feet at 105° True to
14	44.150558°	-68.681401°	then 72 feet at 67° True to
15	44.150633°	-68.681146°	then 21 feet at 5° True to
16	44.150692°	-68.681139°	then 310 feet at 12° True to



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17 44.151524° -68.680896° then 149 feet at 280° True to 1

1B – 1.12 Acres

<u>Corner</u>	<u>Latitude</u>	<u>Longitude</u>	
18	44.151508°	-68.680706°	then 121 feet at 192° True to
19	44.151182°	-68.680799°	then 78 feet at 192° True to
20	44.150972°	-68.680856°	then 109 feet at 192° True to
21	44.150680°	-68.680946°	then 35 feet at 156° True to
22	44.150592°	-68.680893°	then 38 feet at 64° True to
23	44.150636°	-68.680760°	then 140 feet at 85° True to
24	44.150654°	-68.680228°	then 27 feet at 190° True to
25	44.150581°	-68.680245°	then 27 feet at 50° True to
26A	44.150630°	-68.680165°	then 86 feet at 9° True to
26B	44.150864°	-68.680113°	then 80 feet at 8° True to
27A	44.151082°	-68.680073°	then 133 feet at 314° True to
27B	44.151334°	-68.680441°	then 94 feet at 313° True to 18

Table 3. Approximate distances from proposal corners to surrounding features (Figures 2-4).

Feature	Distance
Corner 14 to red navigational buoy "24"	~1,700' to the south-southeast
Corner 22 to red navigational buoy "24"	~1,700' to the south
Corner 15 to green navigational buoy "23"	~1,700' to the southeast
Corner 26A to green navigational buoy "23"	~1,590' to the southeast
Corner 18 to nearest riparian pier	~30' to the north



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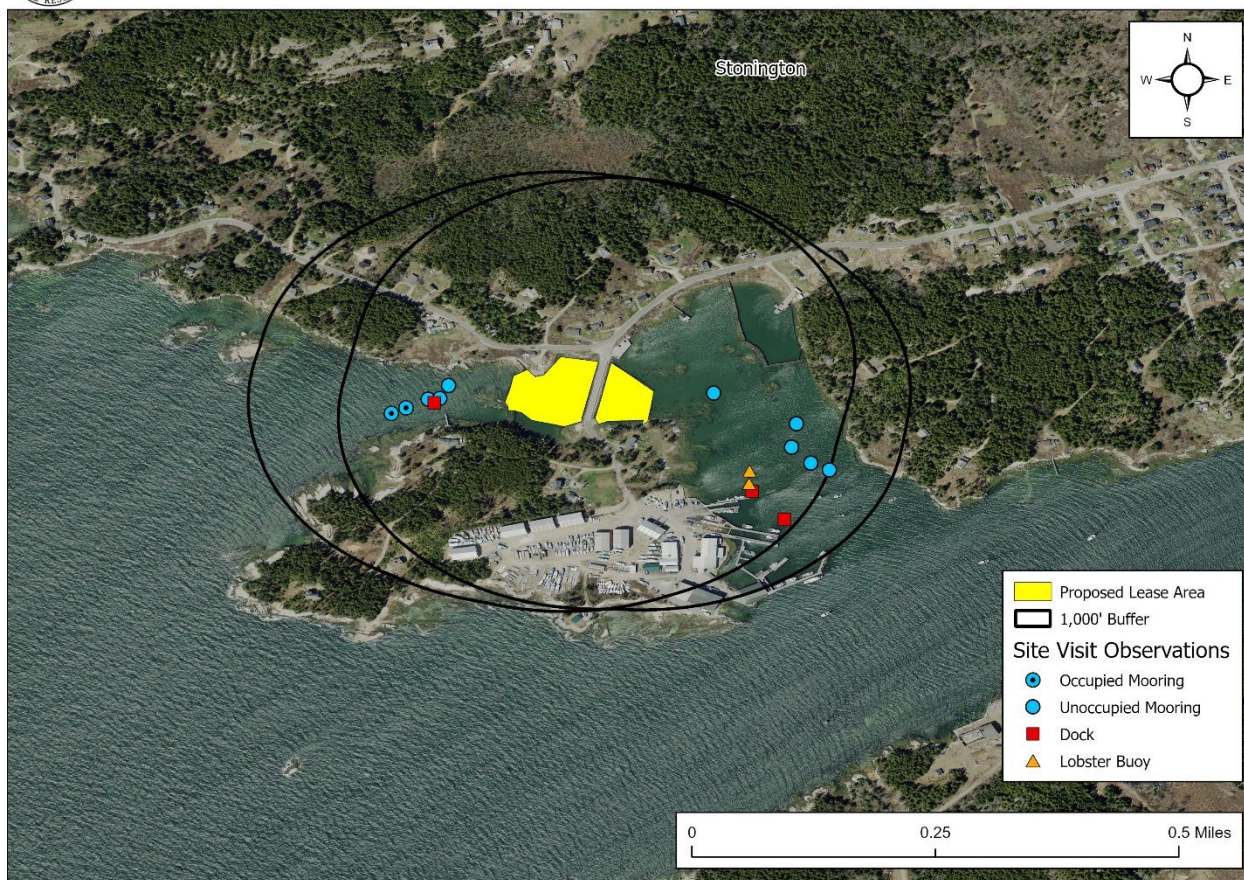


Figure 2. Proposed lease area with site visit observations.

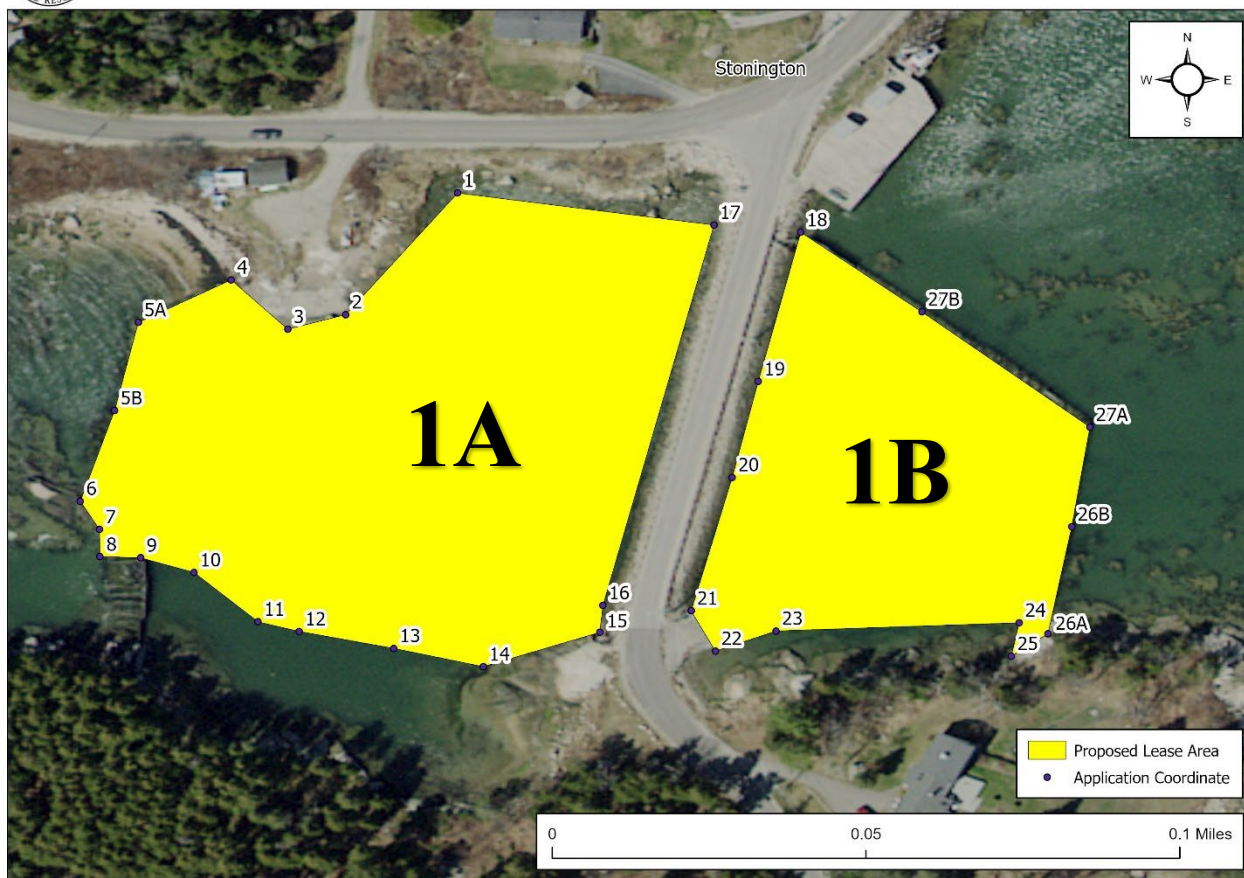


Figure 3. Proposed lease area with application coordinates.

Pursuant to statute and regulation, aquaculture leases are evaluated in consideration of applicable decision criteria. The Site Report documents DMR'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, DMR scientists observed 10 moorings in the vicinity of the proposal. Eight moorings were vacant and two had vessels present; one had a powerboat approximately 20-feet in length and the other had a powerboat approximately 22-feet in length attached. The nearest mooring was approximately 232 feet east of the proposal. All moorings were located outside of the tidal impoundments. DMR recorded waypoint locations for three docks in the vicinity of the proposal. One dock, approximately 240 feet west of the proposal, had a rowboat tied to it. The other two docks recorded, approximately 565 feet and 775 feet southeast of the proposal, had numerous vessels tied up of varying size. Both docks are part of a commercial boat yard, Billings Diesel & Marine (Figure 2).



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According to aerial imagery⁷, there are three additional wharves/piers in the vicinity of the proposal. Approximate distances from the proposal are the following: 180 feet west, 30 feet north, and 350 feet northeast. DMR observed these wharves/piers during the site visit but could not access them to collect a waypoint due to tidal stage (Figures 2 and 3).

A Harbormaster Questionnaire was sent to the Town of Stonington. DMR did not receive a response back.

The proposal is located in two existing tidal impoundments. The aquaculture activities proposed would occur within the tidal impoundments.

Due to the intertidal location of the proposal, the applicant is required to obtain written consent from the owner of the intertidal land. According to the application, both tidal impoundments, including intertidal areas, are owned by Greenhead Holdings LLC. The contact person for the proposed application, Hugh Reynolds, is the owner of the company applying for the lease, Greenhead Lobster LLC, as well as the owner of Greenhead Holdings LLC.⁸ In the application, Greenhead Holdings LLC provided written consent to Greenhead Lobster LLC to use the intertidal land.

⁷ Regional\orthoRegional 2020

⁸ Application pages 5, 35, 40, 41



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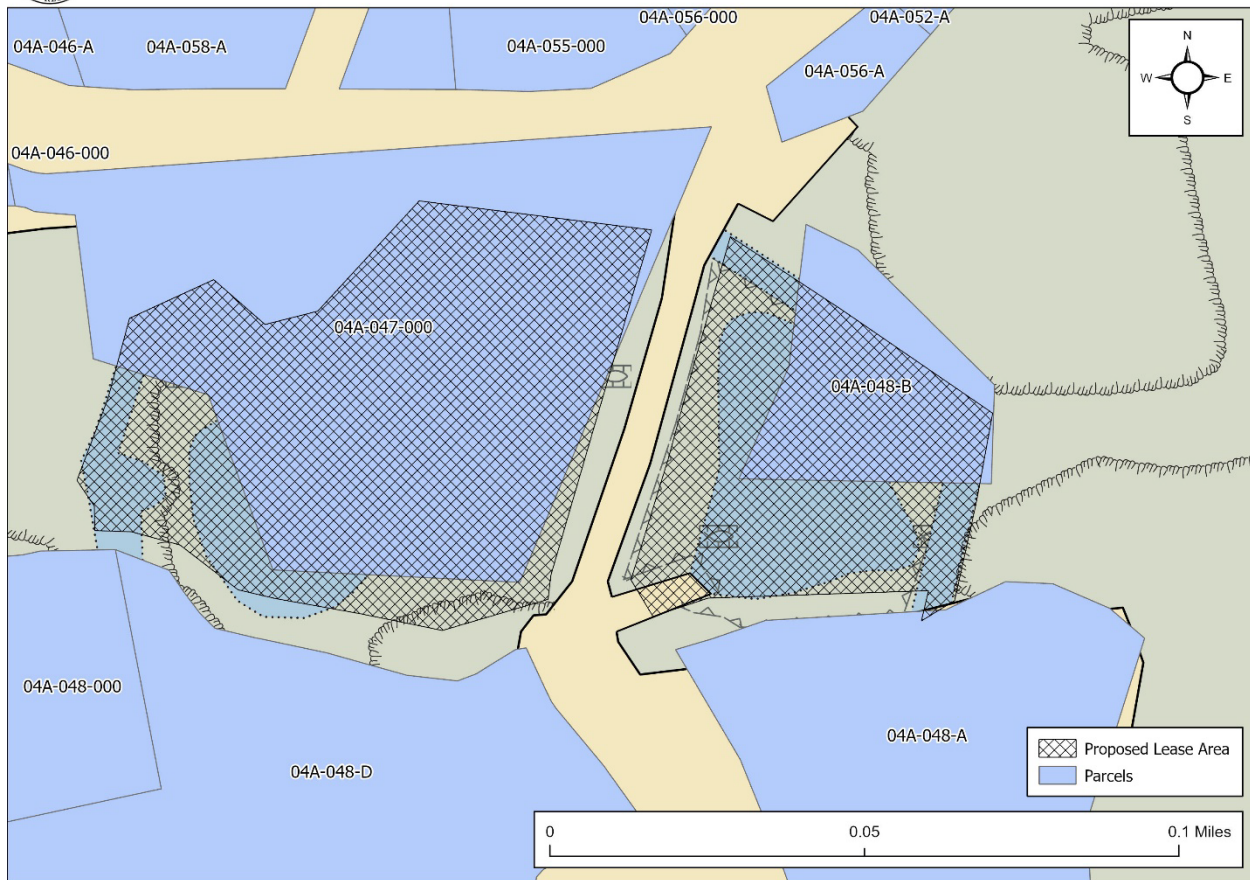


Figure 4. Proposed lease area with parcel boundaries.⁹

(2) Navigation

The proposal is located within two privately owned tidal impoundments (Figure 5).

During DMR's site visit, several vessels were observed traveling to and from the commercial boat yard approximately 600 feet southeast of the proposal.

⁹ Parcels 04A-047 and 04A-048-B are displayed incorrectly in the parcels layer (Maine Parcels Organized Towns). The two parcels should be displayed further to the south. Based on data collected during the site visit, and as listed in the application, the proposal is located within two existing tidal impoundments owned by the applicant.

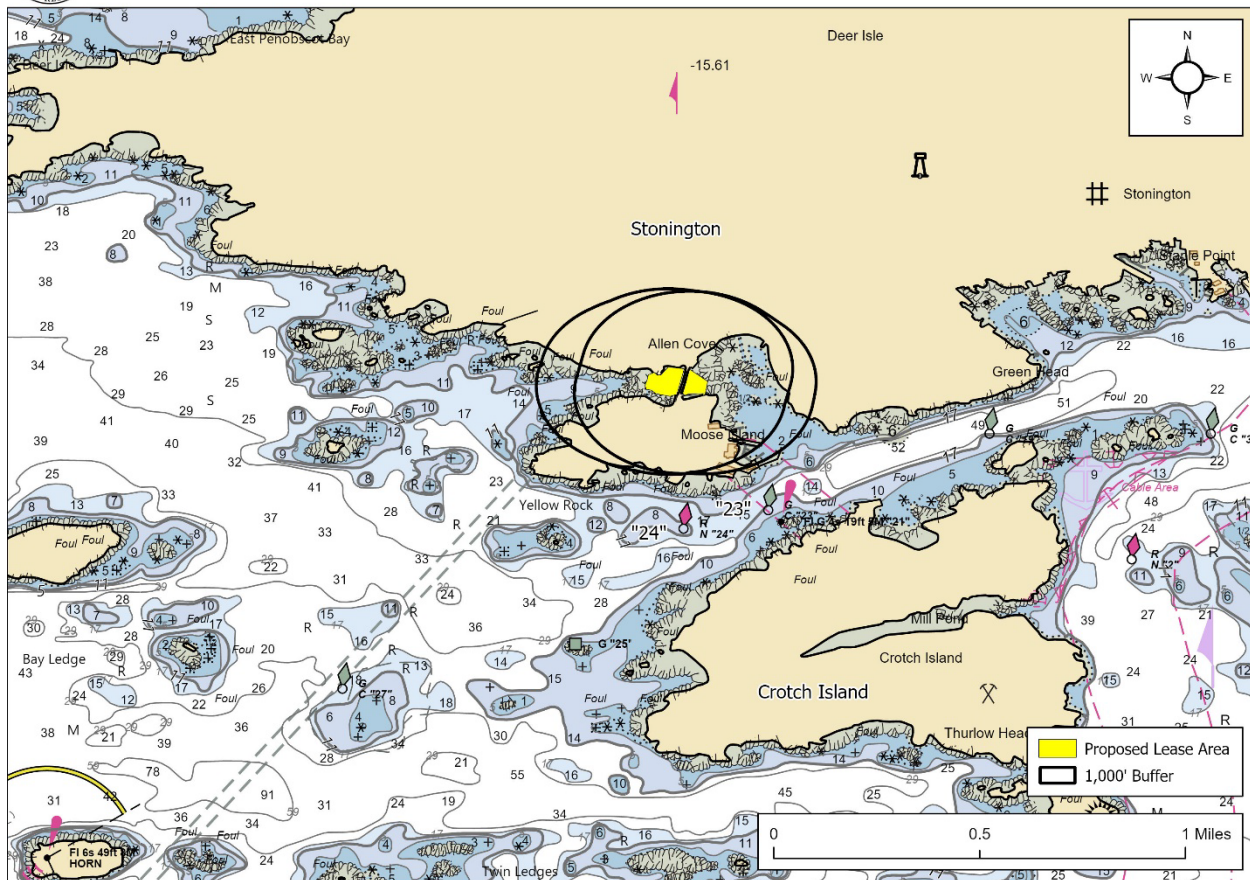


Figure 5. Navigational channels in the vicinity of the proposed lease area.

(3) Fishing and Other Uses

During the site visit, DMR observed two lobster buoys approximately 475 feet and 515 feet southeast of the proposal (Figure 2). These buoys were located outside of the tidal impoundments. There are no public access points, by land, to the impoundments. Additionally, due to water quality classification, the harvest of wild shellfish is prohibited within impoundment 1B (Figure 9).

The Towns of Deer Isle and Stonington have a shellfish conservation program in accordance with 12 M.R.S.A. § 6671 and because the site is located within the intertidal, the applicant is required to obtain consent from the municipality. The applicant provided this permission with the application.¹⁰

¹⁰ Application page 43



(4) Other Aquaculture Uses

There are four limited purpose aquaculture (LPA) sites within the boundaries of the proposal. HREY125, HREY225, HREY325, and HREY425 are licensed to Hugh Reynolds, who is the owner of Greenhead Lobster LLC. There are no licensed aquaculture leases within 1,000 feet of the proposal (Figure 6).



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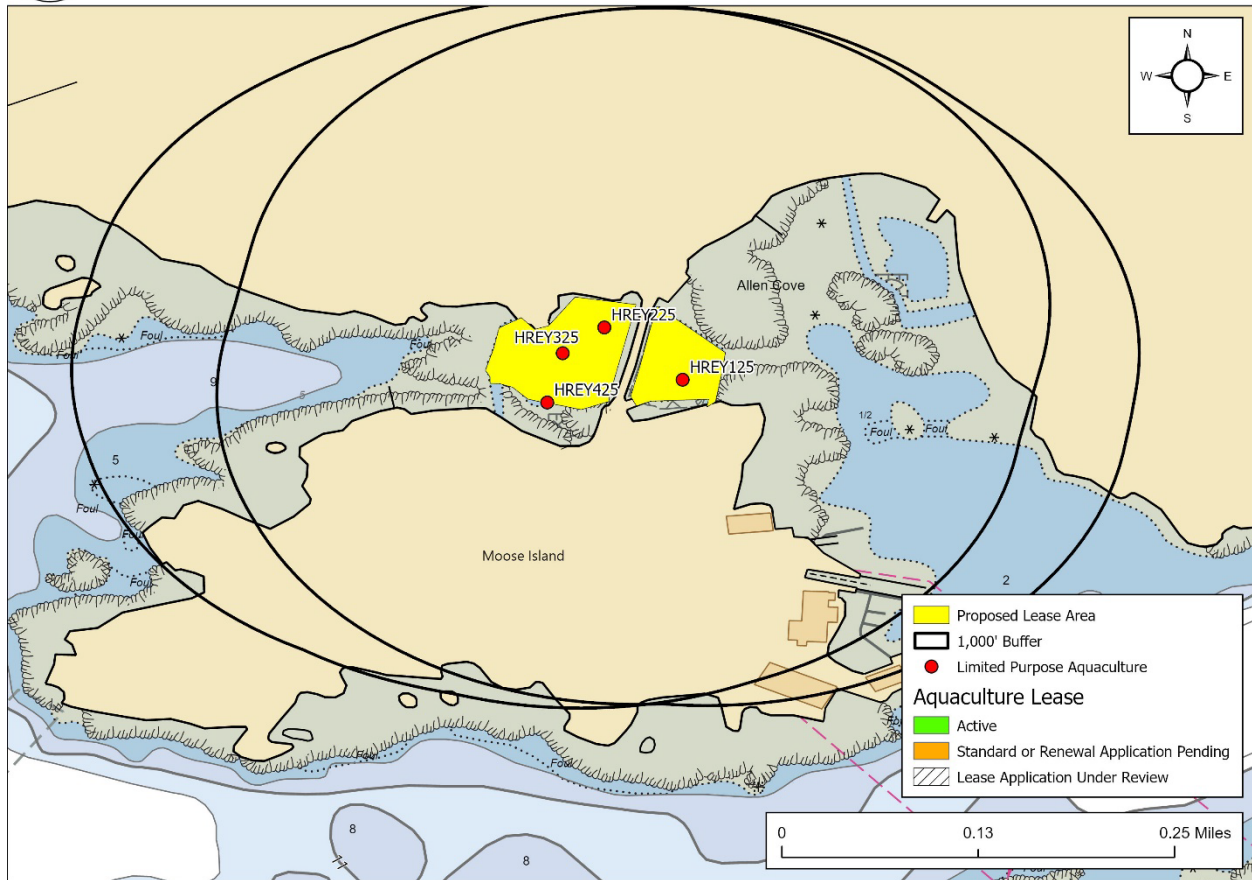


Figure 6. Aquaculture leases, LPA licenses, and applications under review by DMR in the vicinity of the proposed lease area.

(5) Existing System Support

Epibenthic Flora and Fauna

On August 29, 2024, DMR 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 on underwater video footage.

Species Observed	Abundance
Hermit crab (<i>Pagurus</i> spp.)	Common
Sand Shrimp (<i>Crangon septemspinosa</i>)	Occasional
European green crab (<i>Carcinus maenas</i>)	Occasional
Rockweed (<i>Ascophyllum nodosum</i>)	Occasional
Mysid Shrimp (<i>mysis</i> sp.)	Occasional

Eelgrass (*Zostera marina*)

Records of eelgrass collected by DMR in 2010¹¹ indicates the nearest mapped eelgrass is approximately 205 feet west of the proposal (Figure 7). No eelgrass was observed on underwater video footage within the proposal boundaries during DMR's site visit.



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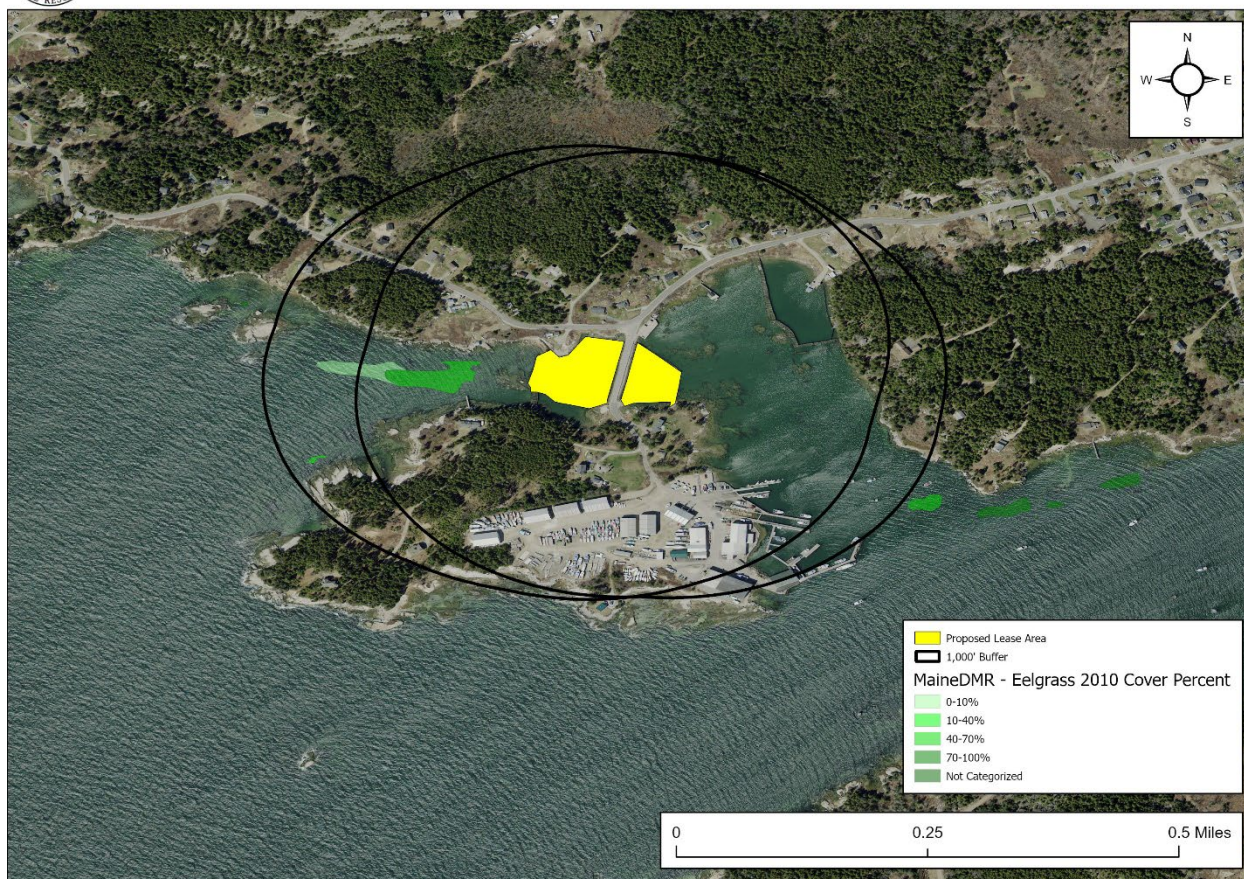


Figure 7. Mapped eelgrass (*Z. marina*) in the vicinity of the proposed lease area.

¹¹ 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.



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Wildlife

During DMR's site visit, scientists observed an osprey (*Pandion haliaetus*), great blue heron (*Ardea herodias*), double-crested cormorant (*Nannopterum auritum*), and lesser black backed gulls (*Larus fuscus*) in the general vicinity of the proposal.

The Department of Inland Fisheries and Wildlife (IFW) has jurisdiction over inland fisheries and wildlife resources of the state. IFW also has the authority to conserve wildlife populations and their ecosystems through applicable state laws and rules. DMR provides IFW with notice and the opportunity to comment on all complete lease applications. In addition, the Site Report also includes IFW designated and mapped habitat types that are within 1,000 feet of the lease proposal, if applicable.

According to Geographic Information System (GIS) data maintained by IFW and available through the Maine Office of GIS (MEGIS), there is one mapped habitat type within 1,000 feet of the lease proposal. The proposal is near Tidal Waterfowl and Wading Bird Habitat (TWWH), which is a type of Significant Wildlife Habitat designated and regulated by IFW.¹² Based on data maintained by IFW, the proposal is adjacent to, but not within, mapped TWWH (Figure 8).

Though bald eagles are no longer listed on Maine's Endangered and Threatened Species List, the United States Fish and Wildlife Service (USFWS) may also have jurisdiction over the management and conservation of the species based on applicable law and rule. Data collected by USFWS in 2023 by aerial nest survey shows there is no mapped bald eagle nesting site within the vicinity of the proposal. The nearest mapped bald eagle nest is approximately 2.3 miles southeast of the proposal.

IFW was provided with the opportunity to comment on this proposal. On October 27, 2023, a Resource Biologist with IFW responded by email to a "Request for Agency Review and Comment" stating that minimal impacts to wildlife are anticipated for this project.¹³

¹² <https://www.maine.gov/ifw/programs-resources/environmental-review/significant.html>

¹³ Email correspondence between IFW and DMR

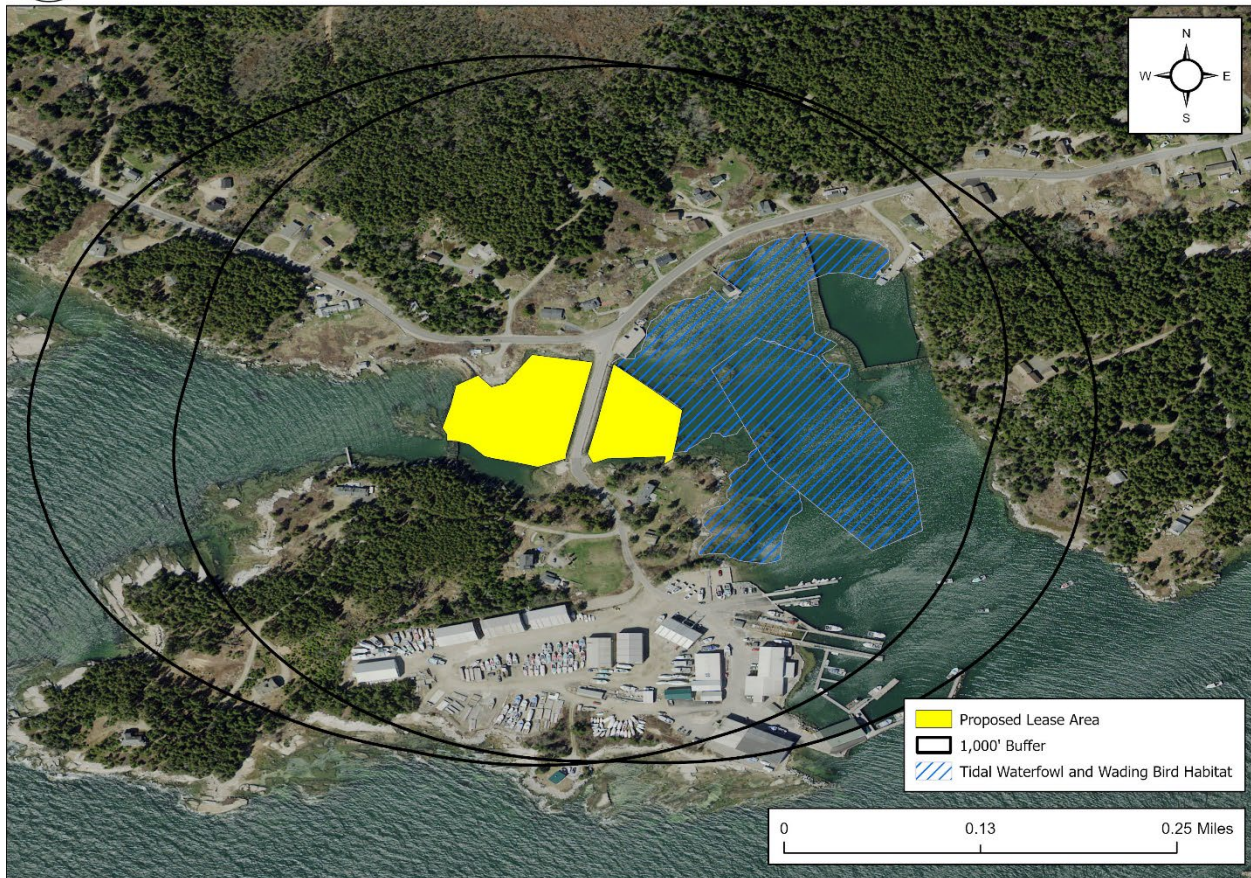


Figure 8. Mapped habitats in the vicinity of the proposed lease area.¹⁴

(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) Growing Area Classification

The proposed lease is located within two different classifications as determined by the DMR Bureau of Public Health and Aquaculture (Figure 9). Proposal 1A is located in an area classified as Conditionally Approved. The area closes to the harvest of shellfish following a bypass or overflow event at the Stonington Wastewater Treatment Plant. Proposal 1B is located within an area classified as Prohibited. In the prohibited classification, only shellfish up to 0.5" in size can be

¹⁴ Data obtained from USFWS "Bald_Eagle_Nests_-_Maine_2023" and IFW "EHRTERN", "EHPLVTRN", "GISVIEW.MEIFW.Twwh", "ShorebirdAreas", and "SNI".



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cultured within this area, as required in Chapter 2. The applicant intends to culture seed to 12 mm (0.48") in 1B, then move seed to 1A for further grow out. ¹⁵



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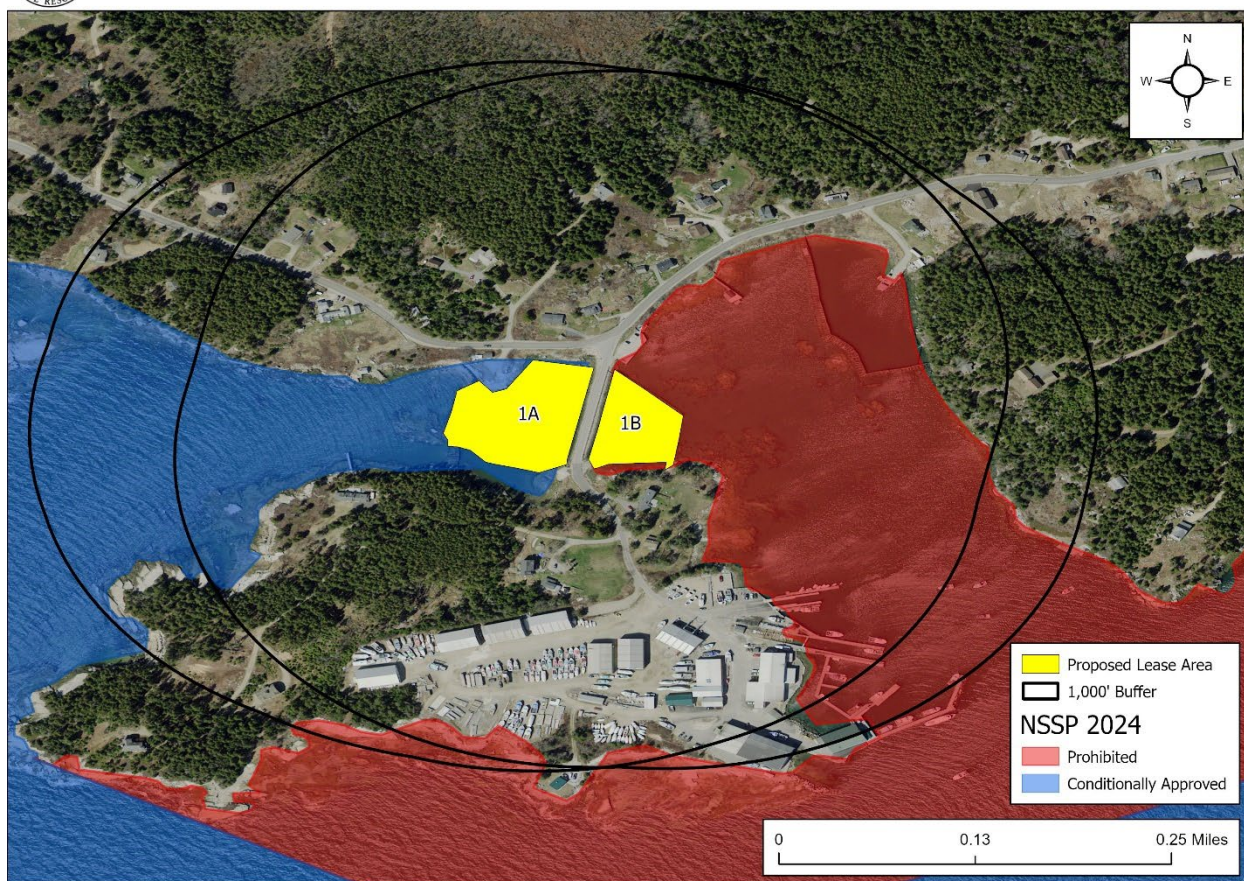


Figure 9. National Shellfish Sanitation Program (NSSP) classifications in the vicinity of the proposal.

¹⁵ Application pages 6-7