



Black Stone Point Oysters LLC - East of Blackstone Point, Damariscotta River, Damariscotta

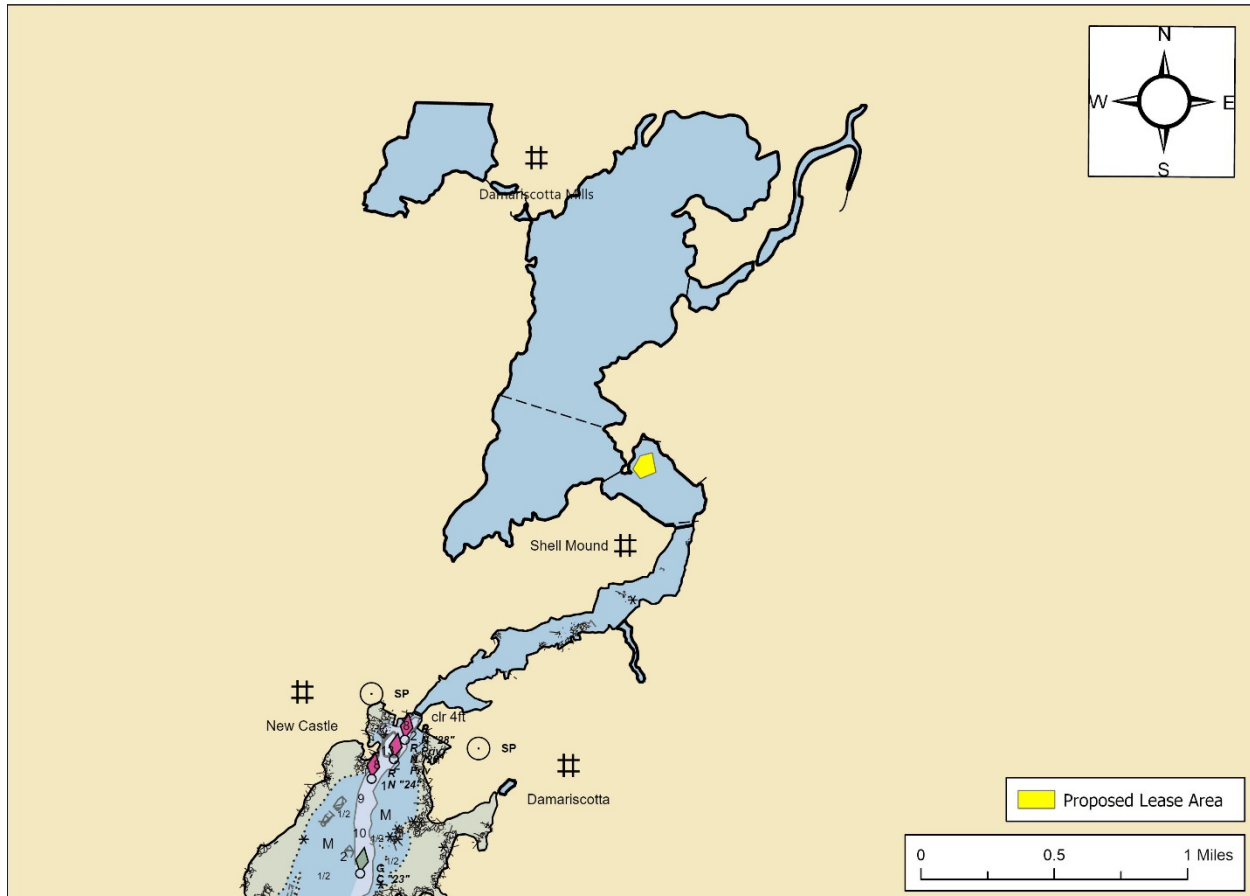


Figure 1. Vicinity map.¹

Location: East of Blackstone Point, Damariscotta River, Damariscotta, Lincoln County, Maine

Purpose: Experimental lease for suspended culture of American/eastern oyster (*Crassostrea virginica*), hard clam/quahog (*Mercenaria mercenaria*), and bay scallop (*Argopecten irradians*)

Site Review: Meryl Grady, 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 2.9 using digitized NOAA Nautical Charts or geo-referenced aerial photographs provided by The Maine Office of GIS.



Application Overview

The applicant, Black Stone Point Oysters LLC, is requesting 3.47² acres east of Blackstone Point in the Blackstone Narrows of the Damariscotta River for the suspended culture of shellfish. The applicant intends to use Zapco tubes and rebar staples in the northern, shallow portion of the lease and suspended cages in the southern portion of the lease. The tubes/staples will be removed, and the suspended cages will be sunk to the bottom from November through March/April.³

General Characteristics

On July 17, 2024, Maine Department of Marine Resources (MDMR) scientists assessed the proposed lease site. MDMR scientists arrived on site at approximately 2:40 PM. The shoreline in the area is mud leading to a mixture of cobble and boulders leading to mossy, mixed forest uplands with areas of residential lawn. Three residential homes are visible from the proposal to the northeast. Blackstone Point, to the west of the proposal, is owned by Coastal Rivers Conservation Trust. The land is held in private conservation and contains recreational trails for public use, year-round. State Route 1 is nearby and a bridge over the Damariscotta River is approximately 1,200 feet to the southeast and is visible from the proposal. On August 2, 2024, MDMR scientists deployed a water depth logging device in the vicinity of the proposal to gather additional information on tidal amplitude in Blackstone Narrows. On September 10, 2024, MDMR collected the depth logging device. On November 1, 2024, MDMR scientists revisited the site to collect additional information on eelgrass distribution within the boundaries of the proposal.

Depth

MDMR scientists began collecting depths at the proposed site shortly after the predicted low tide in Newcastle at approximately 2:44 PM on July 17, 2024 (Table 1). Measured depths at corners of the proposed lease site ranged from 0.95 to 39.04 feet. While collecting depth measurements, MDMR observed the tide was still ebbing so upon concluding the site visit, MDMR recorded a second set of depths for corners W, NW, and NE. These depths were collected at 4:25 PM on July 17, 2024, approximately 1.75 hours after the predicted low tide in Newcastle, and ranged from 0.33 to 1.67 feet (Table 2). Based on preliminary analysis, the site was determined to be subtidal.

The nearest tidal station, Newcastle, is approximately one mile downriver from the proposal. However, due to the geography of the river and natural restrictions downstream, the Newcastle tidal station may not fully reflect tidal amplitude within Blackstone Narrows. Because of this and the collected depth measurements, MDMR deployed a depth logging device in the vicinity of the proposal to gather additional data on tidal amplitude to verify that the site is subtidal. Upon analyzing the data, MDMR made the determination that the proposal is located in subtidal waters.

² Applicant originally requested 3.45 acres. MDMR calculations indicate the area is 3.47 acres.

³ Application page 15, 16, 18



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

Date	Time	Height (ft)
2024/07/17	2:44 AM	1.4 L
2024/07/17	8:47 AM	7.8 H
2024/07/17	2:41 PM	2.0 L
2024/07/17	8:54 PM	9.4 H

Table 2. Recorded depths during MDMR site visit on July 17, 2024.

Corner	Recorded Depth (ft) @ 2:44 PM	Recorded Depth (ft) @ 4:25 PM
W	6.98	1.67
NW	0.95	0.33 (4")
NE	0.98	0.33 (4")
SE	39.04	n/a
S	15.06	n/a

Bottom Characteristics

MDMR scientists observed the bottom characteristics of the proposed lease site via snorkeling and 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 3). Sediment information was determined based on visual analysis of the video. The bottom of the proposed lease site is primarily composed of mud and gravel.

Table 3. Bottom characteristics of the proposed site.

Substrate Origin	Substrate Class	Substrate Subclass	Substrate Group
Geologic Substrate	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Mud
Geologic Substrate	Unconsolidated Mineral Substrate	Course Unconsolidated Substrate	Gravel
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, a nautical chart provided by the National Oceanic and Atmospheric Administration (NOAA), and the application coordinates (Table 4, Figures 2 and 3).

⁴ <https://www.ussharbor.com/harbor/maine/newcastle-me/tides/?tide=2024-07#monthly-tide-chart>



Application Coordinates (WGS84) – 3.47 Acres

<u>Corner</u>	<u>Latitude</u>	<u>Longitude</u>	
NW	44.047577°	-69.517244°	then 247.4 feet at 75° True to
NE	44.047747°	-69.516333°	then 392.2 feet at 169° True to
SE	44.046691°	-69.516047°	then 333.9 feet at 247° True to
S	44.046335°	-69.517217°	then 241.1 feet at 323° True to
W	44.046858°	-69.517778°	then 297.4 feet at 28° True to NW

Table 4. Approximate distances from proposal corners to surrounding features (Figure 2).⁵

Feature	Distance
NW corner to Blackstone Point	~115' to the west
NE corner to nearest shoreline	~155' to the northeast
S corner to Blackstone Narrows southern shoreline	~460' to the southwest
W corner to Blackstone Point	~75' to the west

⁵ Navigational charts for this area do not show mean low water (MLW) contours so mean high water (MHW) is used as a reference.

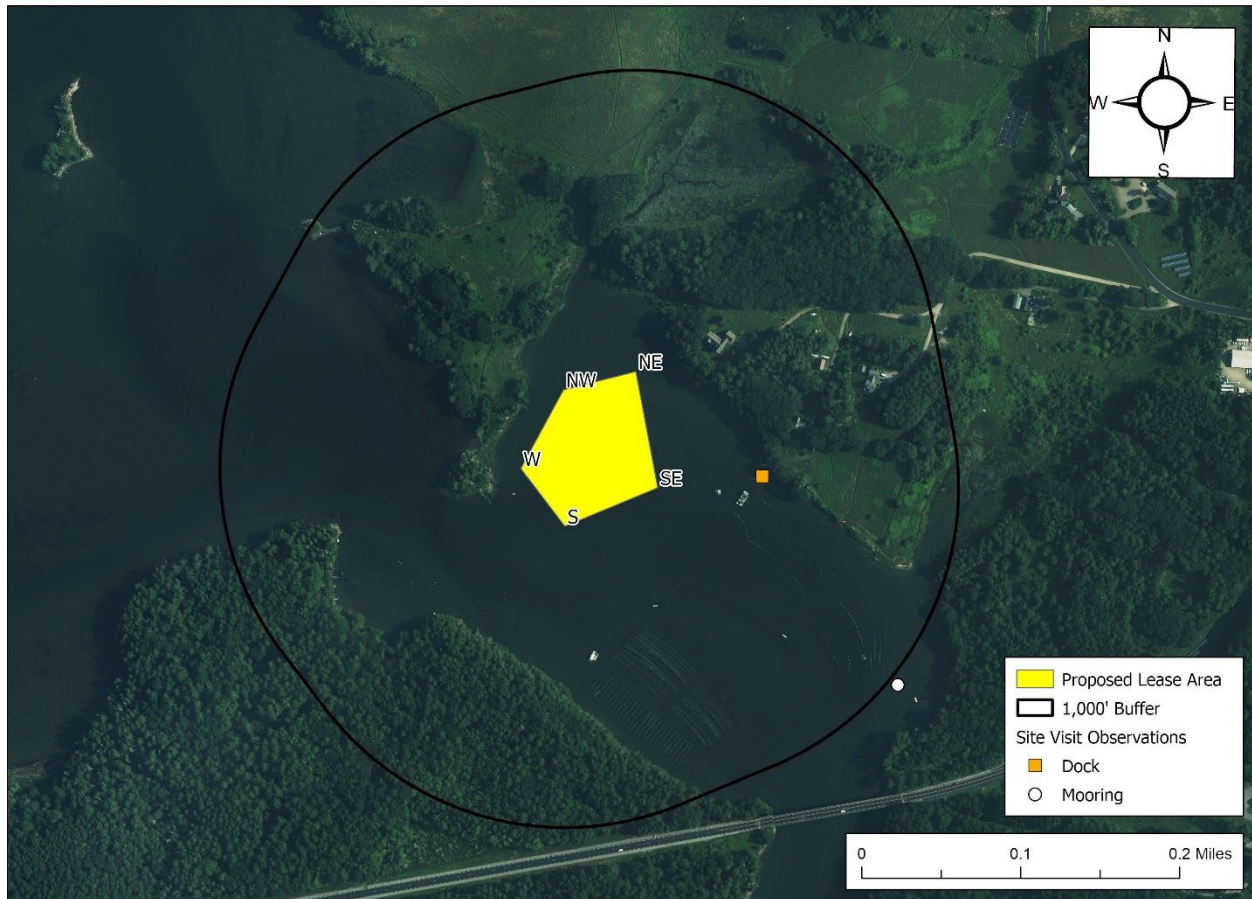


Figure 2. Proposed lease area with site visit observations.

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 one dock and three residential homes within 1,000 feet of the proposal located along the northern shoreline of Blackstone Narrows (Figure 2). The dock was approximately 357 feet east of the proposal, and there was no boat present at the time of the site visit on July 17, 2024. MDMR also observed one mooring located approximately 1,030 feet southeast of the proposal. The mooring had a 15-foot aquaculture working vessel attached to it.



(2) Navigation

The proposal is situated in a cove to the east of Blackstone Point. There is 75 feet of navigable water at MHW between the proposal and Blackstone Point. There is 155 feet of navigable water at MHW between the NE corner and the nearby shoreline. There is 162 feet of navigable water between S corner of the proposal and nearby aquaculture lease DAM GP (Figure 4). The nearest navigation channel marker is over 1.5 miles downriver (Figure 3). Due to natural constraints and rapids downriver, powered vessels are not common in the area.

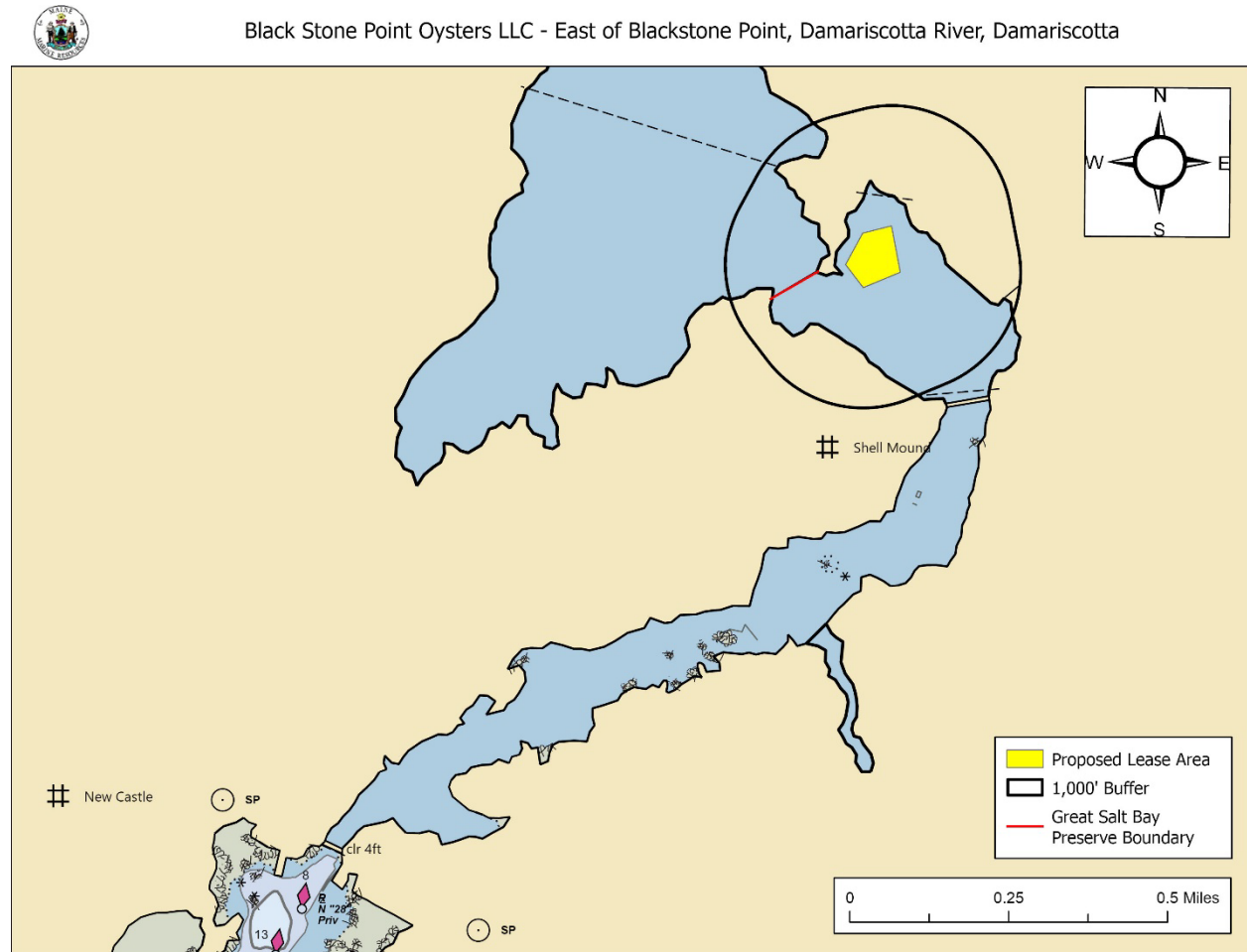


Figure 3. Navigational channels in the vicinity of the proposed lease area.

(3) Fishing and Other Uses

In accordance with 12 M.R.S.A. §6961 a portion of the Great Salt Bay, located to the north of the proposed lease, is designated a marine shellfish preserve (Figure 3). The harvesting of any shellfish species and other harvesting activities involving bottom disturbance are generally prohibited in the area designated a marine shellfish preserve. During MDMR's site visits, no commercial or recreational fishing activity was observed in the vicinity of the proposal.



(4) Other Aquaculture Uses

There are four aquaculture leases and four limited purpose aquaculture (LPA) sites within 1,000 feet of the proposed lease site (Figure 4). The leases in the area include DAM BP, which is held by Coastal Rivers Conservation Trust, and is 267 feet to the north of the proposal. DAM BN, held by Johns River Shellfish LLC, is 207 feet to the southeast. DAM GS2, held by Muscongus Bay Aquaculture Inc, is 305 feet to the south. DAM GP, held by George Faux Inc, is 162 feet to the south. The LPAs in the area include KATW117, which is licensed to Kim Atwater-Moses and is 100 feet to the east. AGRO123 is licensed to Andrew Gross and is 63 feet to the west. BPAR216 and BPAR422 are licensed to Brendan Parsons and are within the proposed lease boundaries. If the lease is granted, BPAR216 and BPAR422 will be relinquished.⁶ During the site assessment on July 17, 2024, one aquaculture vessel was observed tending to DAM BN.



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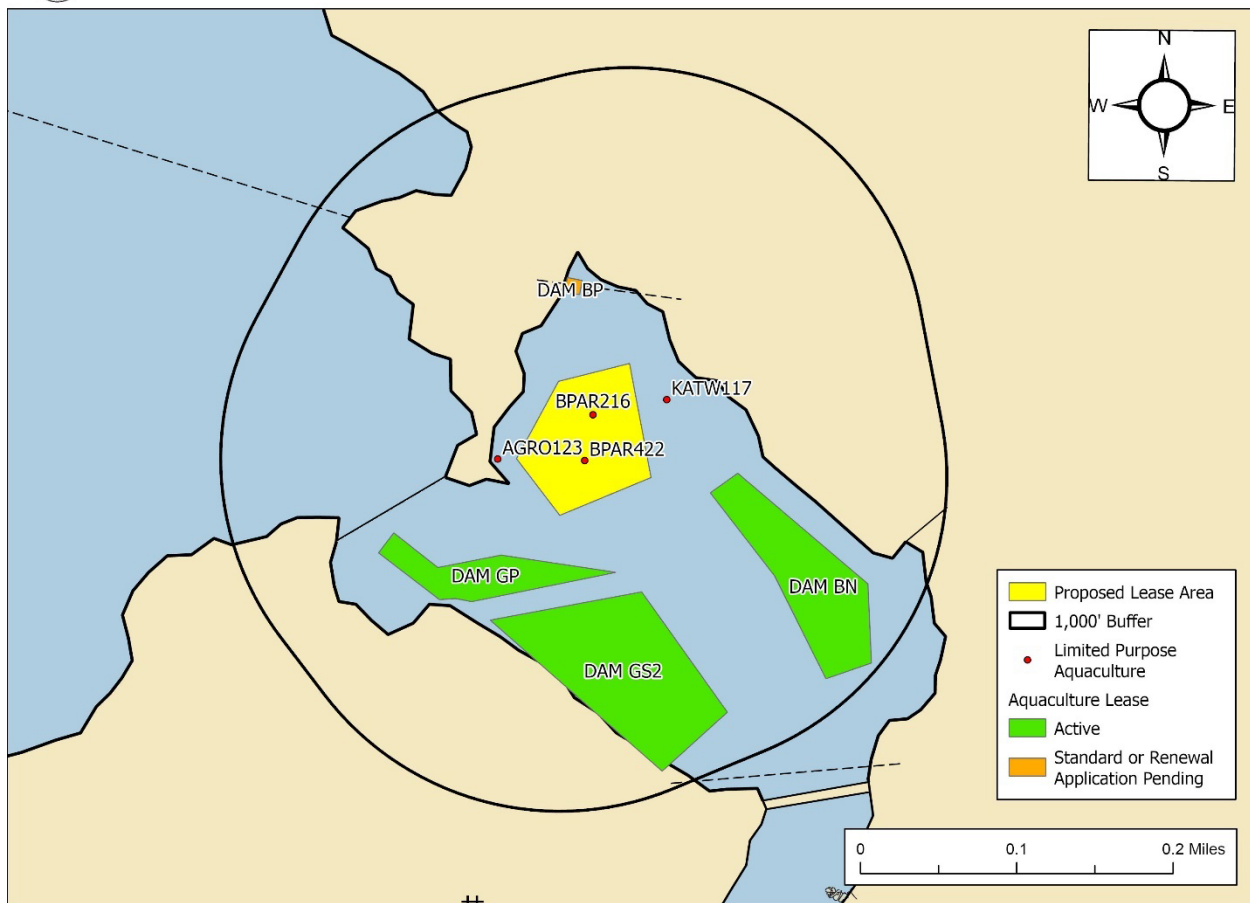


Figure 4. Aquaculture leases and LPA licenses in the vicinity of the proposed lease area.

⁶ Application page 10



(5) Existing System Support

Epibenthic Flora and Fauna

On July 17, 2024, MDMR scientists snorkeled to assess the epibenthic ecology of the proposed lease. On November 1, 2024, MDMR utilized an ROV. The relative abundance of epibenthic flora and fauna observed during both visits is described below in Table 4.

Table 4. Species observed on underwater camera footage.

Species Observed	Abundance
Periwinkle (<i>Littorina</i> spp)	Common
Green algae (<i>Cladophora</i> sp)	Common
Hermit crab (<i>Paguroidea</i> spp)	Common
Pancake batter tunicate (<i>Didemnum vexillum</i>)	Common
Gracilaria sp.	Occasional
Sea vase (<i>Ciona intestinalis</i>)	Occasional
Hard clam/quahog (<i>Mercenaria mercenaria</i>)	Occasional
Quahog shells	Occasional
Atlantic razor clam (<i>Ensis directus</i>)	Occasional
Atlantic razor clam shells	Occasional
Rockweed (<i>Ascophyllum nodosum</i>)	Occasional
Crab (<i>Cancer</i> sp)	Occasional
Horseshoe crab (<i>Limulus polyphemus</i>)	Occasional

Eelgrass (*Zostera marina*)

Recent records of seagrass collected by the Maine Department of Environmental Protection (MDEP) in 2023 indicate mapped eelgrass approximately 237 feet north of the proposal (Figure 5).⁷ During the site assessments, MDMR observed detached eelgrass floating on the surface of the water, drifting eelgrass submerged in the water column, as well as rooted eelgrass attached to the seafloor within the boundaries of the proposal.

On July 17, 2024, and November 1, 2024, in the northern portion of the proposal, MDMR observed numerous single blades of eelgrass rooted to the seafloor scattered throughout (Image 1). There were also larger, denser patches of eelgrass observed throughout the northern portion of the proposal (Images 2 and 3, Figure 5). The patches of observed eelgrass ranged in size from approximately two square inches up to one square foot. The northern portion of the proposal sits on a shelf. There is a steep drop off that leads to deeper water in the southern portion. The water depth in the northern portion is very shallow, estimated between four inches at MLW and approximately five feet at MHW, which is generally conducive to supporting the photosynthesis

⁷ 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.



of eelgrass. The applicant is proposing to use Zapco tubes attached to the seafloor by rebar staples in this area of the proposal.

In the southern portion of the proposal, where water depths are deeper, MDMR observed detached eelgrass floating on the surface of the water, drifting eelgrass submerged in the water column, as well as drifting eelgrass on the seafloor. The observed eelgrass was not attached to the seafloor in this area of the proposal, rather drifting across the seafloor and becoming entangled in bottom substrate (Image 4). There are dense patches of documented eelgrass in Great Salt Bay upstream of the proposal and could be the possible source of origin for the observed drifting eelgrass.



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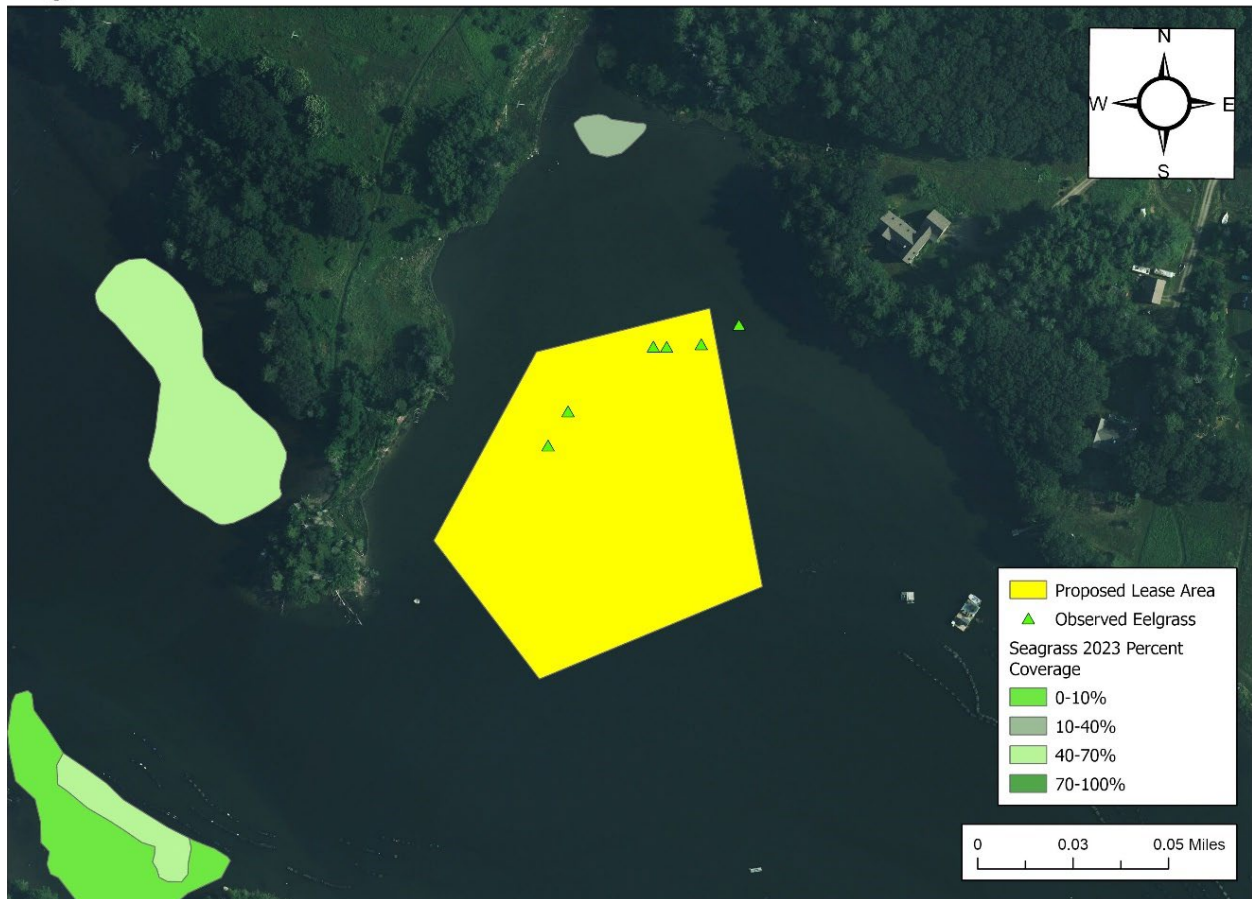


Figure 5. Mapped and observed eelgrass (*Z. marina*) in the vicinity of the proposal.



Image 1. A single blade of eelgrass attached to the seafloor within the proposal boundaries.



Image 2. A patch of eelgrass, approximately two square inches in size, observed within the proposal boundaries.





Image 3. A larger patch of eelgrass, approximately one square foot in size, observed within the proposal boundaries.



Image 4. Unattached eelgrass drifting along the seafloor entangled with bottom substrate within the proposal boundaries.





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 (TWWH). Data 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 0.35 miles northwest of the proposal (Figure 6). On August 4, 2023, a Resource Biologist with MDIFW responded by email to a “Request for Agency Review and Comment” stating a portion of the lease is within TWWH and MDIFW recommends the proposal be relocated outside of mapped TWWH.⁸

During the site assessment on July 17, 2024, MDMR scientists observed herring gull (*Larus argentatus*), osprey (*Pandion haliaetus*), laughing gull (*Leucophaeus atricilla*), great cormorant (*Phalacrocorax carbo*), and a seal (Unknown spp.) in the general vicinity of the proposal.



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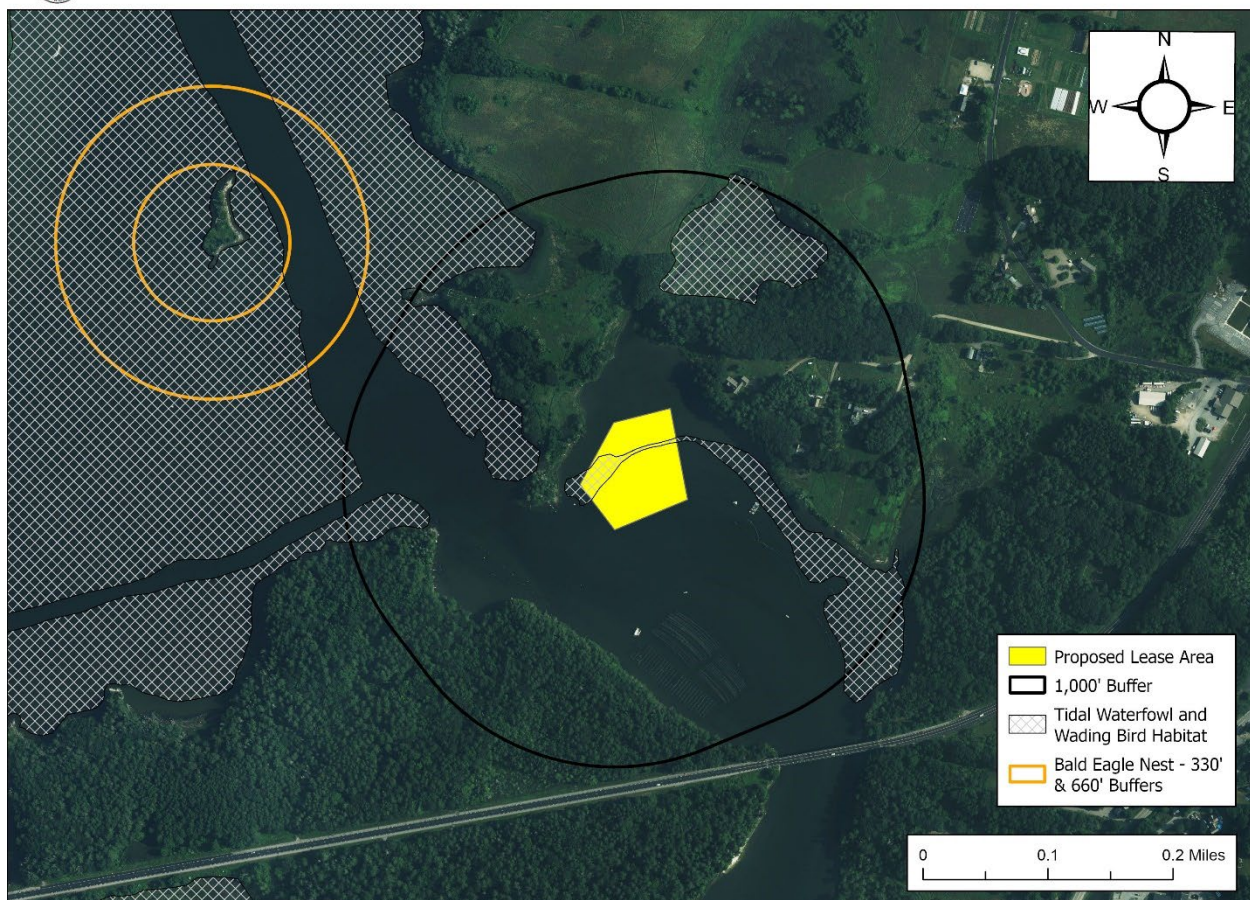


Figure 6. Mapped bald eagle nests and TWWH.⁹

⁸ Email correspondence between MDIFW and MDMR.

⁹ Data obtained from USFWS “Bald_Eagle_Nests_-_Maine_2023” and MDIFW maintained SDE Feature Class “GISVIEW.MEIFW.Twwh”



(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 Conditionally Approved by the MDMR Bureau of Public Health and Aquaculture. The area is closed to the harvest of shellfish following any malfunction or combined sewer overflow event at the Great Salt Bay Sanitary District (GSBSD) Damariscotta Mills Facility.



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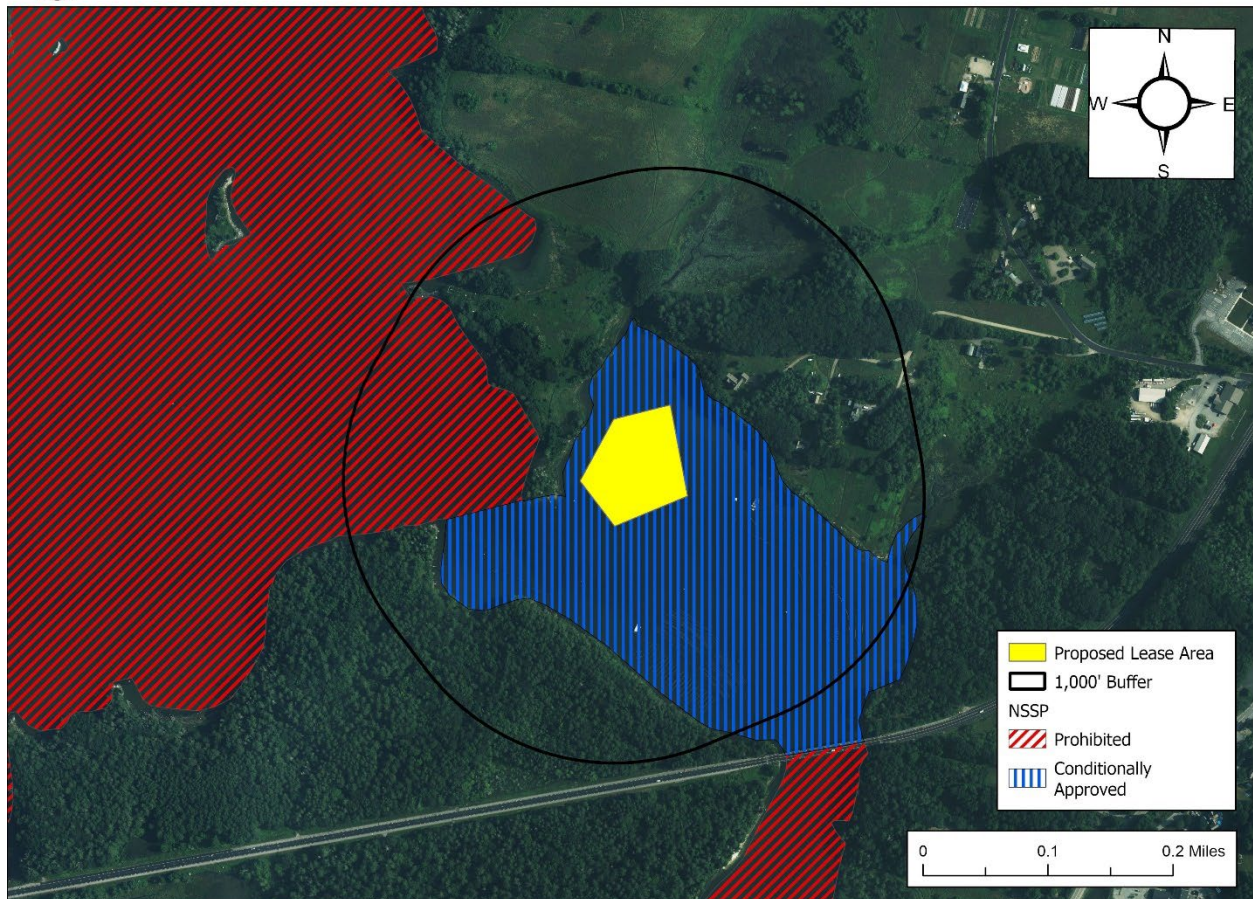


Figure 7. National Shellfish Sanitation Program (NSSP) water quality classifications.