



Maine Department of Marine Resources Site Report

Robert Brewer
Southwest of Andrews Island
Stonington

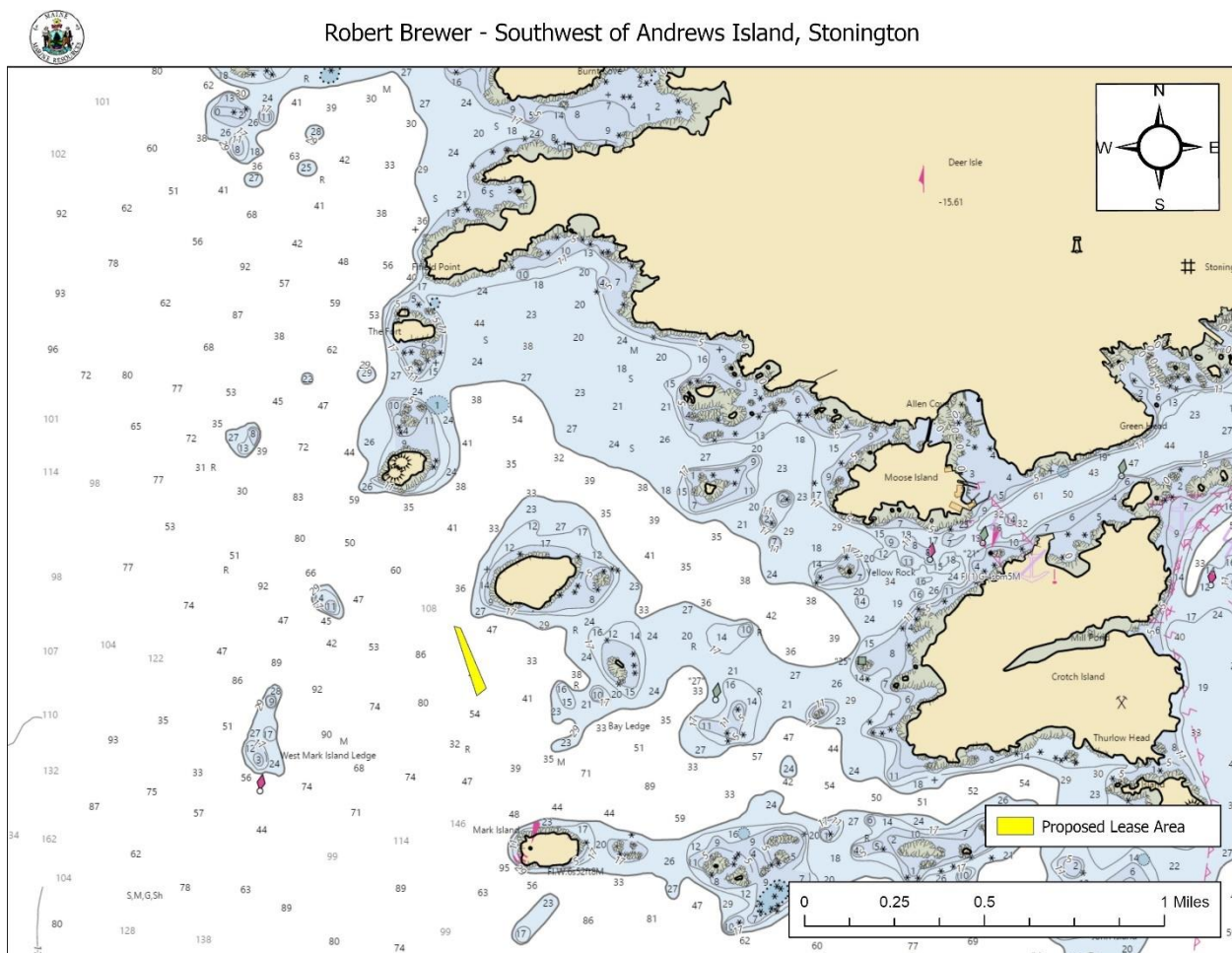


Figure 1. Vicinity map.¹

Location: Southwest of Andrews Island, Penobscot Bay, Stonington, Hancock County, Maine

Purpose: Standard lease for suspended culture of Atlantic Sea Scallop (*Placopecten magellanicus*), Sugar Kelp (*Saccharina latissima*), and Blue Mussels (*Mytilus edulis*)

Site Review: Geoff Shook and Molly Waters

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.



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Application Overview

The applicant, Robert Brewer, is requesting 2.89² acres southwest of Andrews Island in Penobscot Bay for suspended culture. This standard lease proposal is intended to replace the existing experimental lease, PEN Alx, which is held by the applicant.

General Characteristics

On August 2, 2023, Maine Department of Marine Resources (MDMR) scientists assessed the proposed lease site. MDMR scientists arrived on site at approximately 11:03 AM. Nearby Andrews Island is predominantly coniferous forest with a rocky shoreline. Deer Island Thorofare Lighthouse is approximately 2,100 feet southeast of the proposal at mean low water (MLW, 0.0 feet).

Depth

MDMR staff began collecting depths at the proposed site at approximately 11:04 AM on August 2, 2023. The tide was in the late flood stage. Depths at the proposed lease site ranged from 61.9 feet at the southeast corner to 76.2 feet at the northwest corner. Correcting for tidal variation derives water depths at the next high tide to be a range from 62.4 feet to 76.7 feet. Water depths at MLW range from 52 to 66.3 feet (Table 1).

Table 1. Tide data from Deer Isle, Stonington, ME.³

Date	Time	Height (ft)
2023/08/02	5:44 AM	-1.1 L
2023/08/02	11:56 AM	10.4 H
2023/08/02	5:57 PM	-0.1 L

Bottom Characteristics

MDMR staff observed the bottom characteristics of the proposed lease site via a remotely operated vehicle (ROV) (Figure 2). 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 soft mud (Image 1).

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 3.26 acres. DMR calculations indicate the area is 2.89 acres.

³ <https://www.usharbors.com/harbor/maine/stonington-me/tides/>



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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) – 2.89⁴ Acres

<u>Corner</u>	<u>Latitude</u>	<u>Longitude</u>
NW	44.143283°	-68.707467° then 100.9 feet at 107° True to
NE	44.143200°	-68.707100° then 955.9 feet at 157° True to
SE	44.140783°	-68.705683° then 177.6 feet at 233° True to
SW	44.140483°	-68.706217° then 1,071.8 feet at 342° True to NW

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

Feature	Distance
NE corner to Andrews Island at MLW	~620 feet to the northeast
SE corner to Western Deer Island Ledge at MLW	~1,800 feet to the east
SW corner to Deer Island Thorofare Light (Mark Island) at MLW	~2,100 feet to the southeast

⁴ Applicant originally requested 3.26 acres. DMR calculations indicate the area is 2.89 acres.



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Figure 2. Proposed lease area with corner labels, 1000' buffer, and ROV transect.

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

Andrews Island, located approximately 620 feet northeast of the proposal at MLW, is a privately owned, uninhabited island. It is denoted as a Maine Coast Heritage Trust island preserve and open to the public. There were no docks observed during MDMR's site assessment.

(2) Navigation

The proposal is located approximately 620 feet southwest of Andrews Island at MLW and approximately 1,800 feet west of Western Deer Island Ledge at MLW (Figure 3). Red navigational



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aid “2” marking West Mark Island Ledge is approximately 0.66 miles to the southwest of the proposal.

MDMR observed a wide variety of approximately 20 recreational vessels operating in the navigational channel approximately 1,200 feet southeast of the proposal. The vessels observed ranged from smaller outboard powered recreational vessels to mid-sized cruising sailboats.

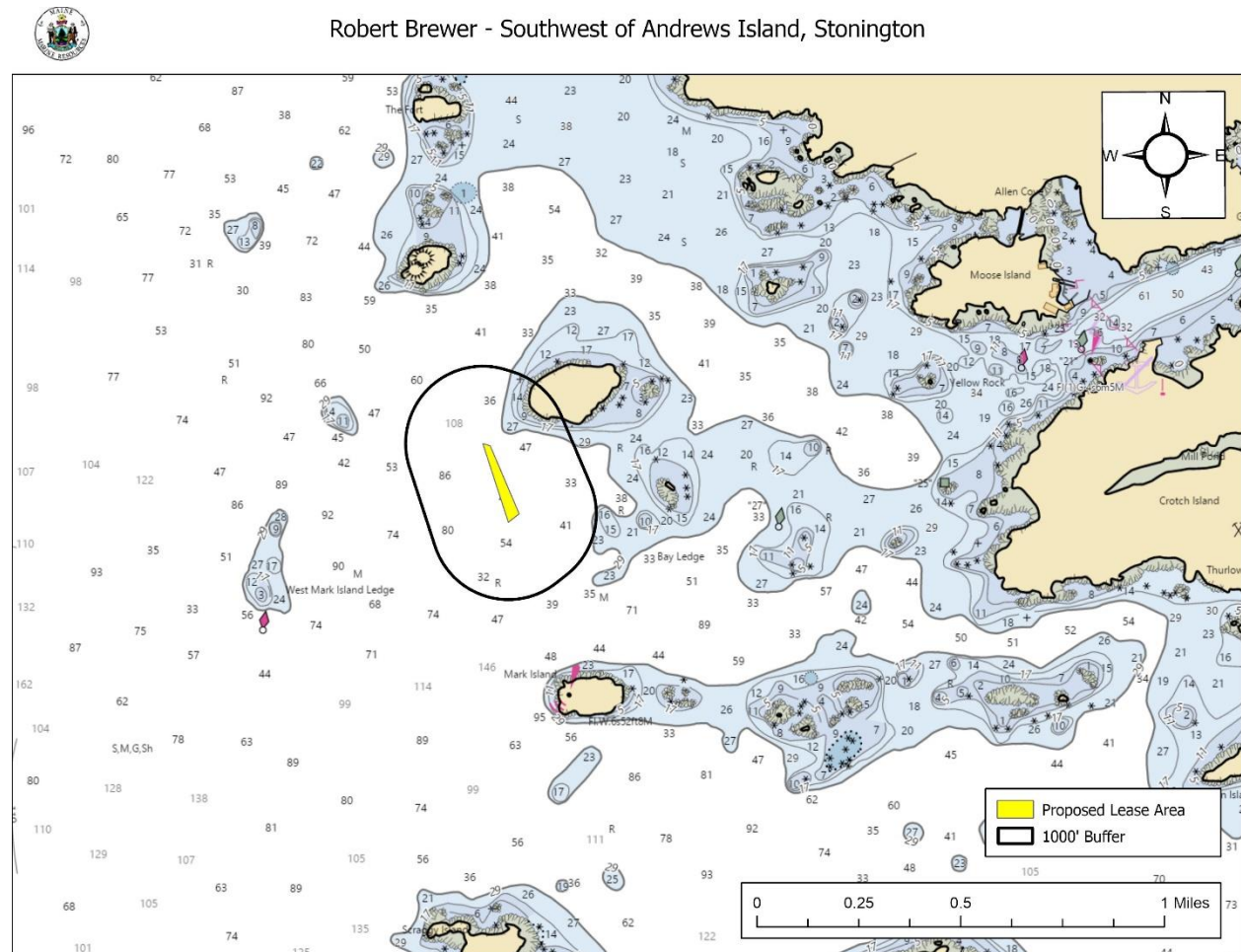


Figure 3. Proposed lease area, 1000’ buffer, navigation channels, and channel markers.

(3) Fishing and Other Uses

During the site assessment, MDMR scientists observed moderate lobstering activity to the north and northwest of the proposal. The buoys nearest to the proposal were approximately 300 feet to the west. No lobster buoys were located within the proposed lease area (Figure 2).



(4) Other Aquaculture Uses

There is one active aquaculture lease, PEN A1x, within 1,000 feet of the proposed lease site (Figure 4). This standard lease proposal would replace the experimental lease PEN A1x, which is held by the applicant.



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Figure 4. Aquaculture leases and Limited Purpose Aquaculture (LPA) licenses in the general area of the proposal.

(5) Existing System Support

Epibenthic Flora and Fauna

On August 2, 2023, MDMR scientists conducted an ROV transect to assess the epibenthic ecology of the proposed lease. The observed bottom was soft mud. The relative abundance of epibenthic flora and fauna observed in the video transect is described below in Table 4. In addition, several lobster burrows were seen on the underwater footage.



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Table 4. Species observed using underwater camera footage.

Species Observed	Abundance
American Lobster (<i>Homarus americanus</i>)	Common

Eelgrass (*Zostera marina*)

Data records of eelgrass collected by MDMR in 2010 indicate no mapped eelgrass presence within 1,000 feet of the proposal (Figure 5).⁵ No eelgrass was observed within the proposal boundaries during MDMR's site assessment.

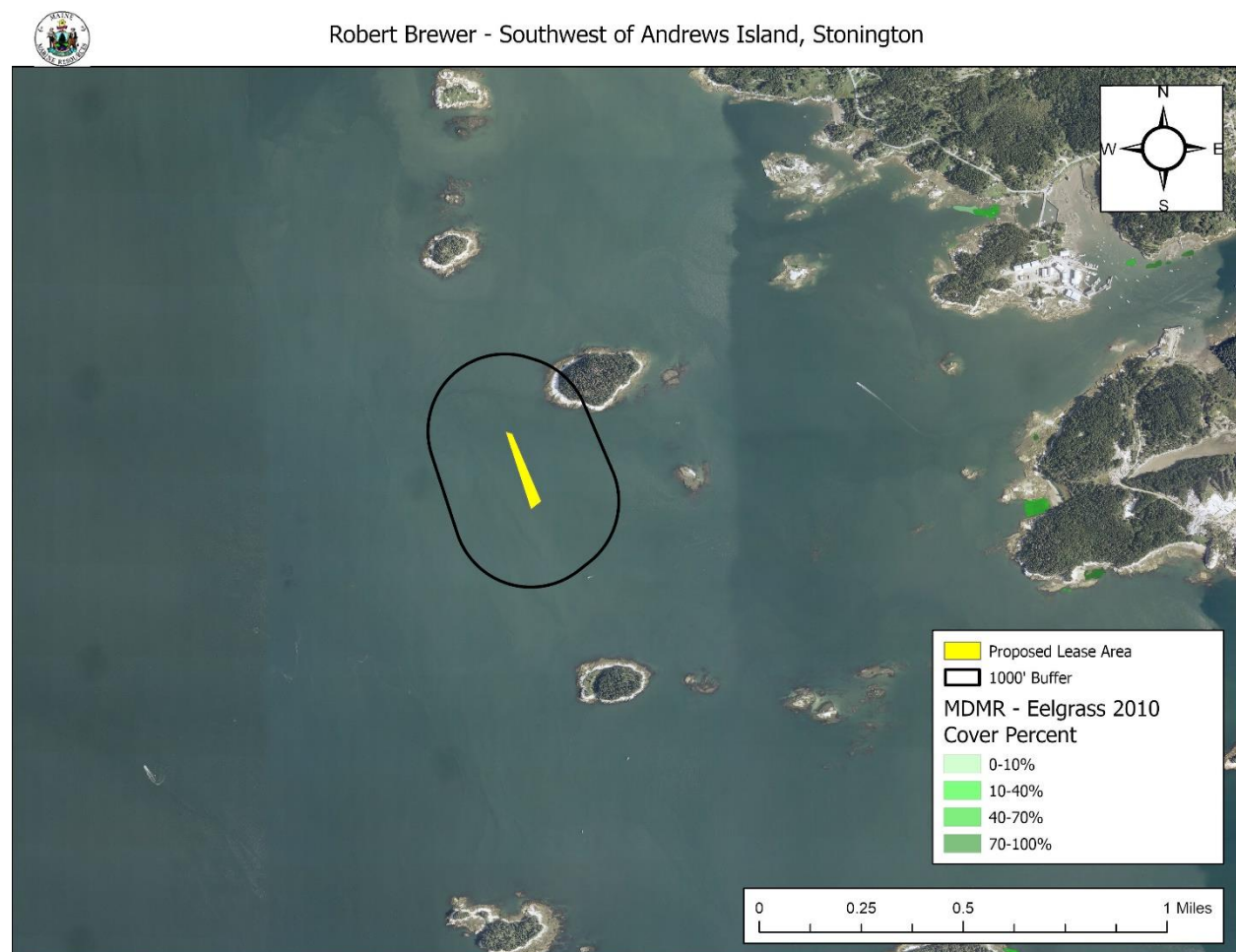


Figure 5. Mapped eelgrass (*Z. marina*) near the proposed lease utilizing 2010 data.

⁵ Data obtained from The Maine Office of GIS "GISVIEW.MEDMR.Eelgrass"



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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 not located within 1,000 feet of tidal waterfowl and wading bird habitat. Data collected by the United States Fish and Wildlife Service in 2022 by aerial nest survey shows the closest Bald Eagle nesting site to be over three miles away from the proposal (Figure 6).

On October 22, 2021, a Wildlife Biologist with MDIFW responded by email to a “Request for Agency Review and Comment”, stating the proposal is located near purple sandpiper habitat. If total exclusion nets will be used to deter predatory sea ducks, it is recommended to use a maximum mesh size of 6 inches with a minimum of 3mm twine to exclude eiders, and a maximum mesh size of 4 inches with a minimum of 3mm twine to exclude scoters. A mesh size of larger than 6 inches paired with twine of less than or equal to 2 mm has been shown to cause sea bird entanglement.⁶

During MDMR’s site assessment, staff observed Common Tern (*Sterna hirundo*), Osprey (*Pandion haliaetus*), Bald Eagles (*Haliaeetus leucocephalus*), and Herring Gulls (*Larus argentatus*).

⁶ Email correspondence between MDIFW and MDMR



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Figure 6. Mapped Bald Eagle nests with a 330' and 660' buffer⁷ and Tidal Waterfowl and Wading Bird Habitat⁸ in the general vicinity of the proposed lease site.

(6) Interference with Public Facilities

The proposed lease is located approximately 620 feet to the southwest of private conserved land on Andrews Island. The proposal is not within 1,000 feet of any beach, park, docking facility, or other conserved lands owned by federal, state, or municipal governments (Figure 7).

⁷ Data obtained from USFWS "Bald_Eagle_Nests_-_Maine_2023"

⁸ Data obtained from MDIWF maintained SDE Feature Class "GISVIEW.MEIFW.Twwh"



Figure 7. Public facilities near the proposed lease site.⁹

(7) Water Quality

The proposed lease area is currently classified as “Open/Approved” for the harvest of shellfish by the MDMR Bureau of Public Health.

On October 19, 2020, a staff member from the Bureau of Public Health responded by email to a “Request for Agency Review and Comment”, stating that the applicant is proposing to harvest whole or roe on scallops and will require a memorandum of understanding and self-funding for testing. The staff member also stated the proposal is located within the typical regional mussel closure area so the applicant may have to pay for samples to remain open for harvest.¹⁰

⁹ Data obtained from The Maine Office of GIS “GISVIEW.MECONSLANDS.Conserved_Lands”

¹⁰ Email correspondence MDMR Bureau of Public Health