

Figure 1. Vicinity map.¹

Location: Northern Branch of Johns River, South Bristol, Lincoln County, Maine

Purpose: Lease expansion of standard lease JOHN NB3 for gear storage and relocation of rafts

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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, Johns River Shellfish LLC, is requesting a 0.68² acre expansion to Tract 2 of the existing standard lease, JOHN NB3. JOHN NB3 is a 6.83-acre standard lease located in the Johns River and contains two tracts (Figure 1). The proposed expansion is for the addition of a gear storage raft and the relocation of rafts currently on JOHN NB3 to create an oyster plex.³

General Characteristics

On August 22, 2023, Maine Department of Marine Resources (MDMR) scientists assessed the proposed expansion beginning at 12:09 PM. The proposal is situated in the northern branch of the Johns River in South Bristol. The nearby western shore consists of forested uplands. There is one house located northeast of the proposal on the tip of a peninsula. Nearby Peabow Island, east of the proposal, has one cottage.

Depth

MDMR scientists began collecting depths at 12:11 PM, which was approximately 2.5 hours after low tide. Measured depths at corners of the proposed expansion ranged from 13.0 to 17.1 feet. Correcting for tidal variation derives water depths at the corners of the proposal at the next high tide to be from 17.1 to 21.2 feet and from 8.1 to 12.2 feet at mean low water (MLW, 0.0 feet) (Table 1).

Table 1. Predicted tidal heights in South Bristol, Maine.⁴

Date	Time	Height (ft)
2023/08/22	3:18 AM	8.6 H
2023/08/22	9:27 AM	0.9 L
2023/08/22	3:38 PM	9.0 H
2023/08/22	9:57 PM	0.9 L

Bottom Characteristics

MDMR scientists observed the bottom characteristics of the proposed lease expansion via SCUBA. 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 0.69 acres. MDMR calculations indicate the area is 0.68 acres.

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⁴ <https://www.ussharbors.com/harbor/maine/south-bristol-me/tides/?tide=2023-08#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 expansion corners. Distances to shore were determined using the geodesic 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) – 0.68 Acres

<u>Corner</u>	<u>Latitude</u>	<u>Longitude</u>	
NW	43.905759°	-69.547832°	then 74.6 feet at 104° True to
NE	43.905706°	-69.547559°	then 398.2 feet at 198° True to
SE	43.904661°	-69.548002°	then 74.2 feet at 290° True to
SW	43.904726°	-69.548269°	then 393.7 feet at 18° True to NW

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

Feature	Distance
NE corner to eastern shoreline at MLW	~855' to the northeast
SE corner to Peabow Island shoreline at MLW	~1,010' to the east
SW corner to nearest shoreline at MLW	~276' to the west
NW corner to nearest shoreline at MLW	~255' to the west

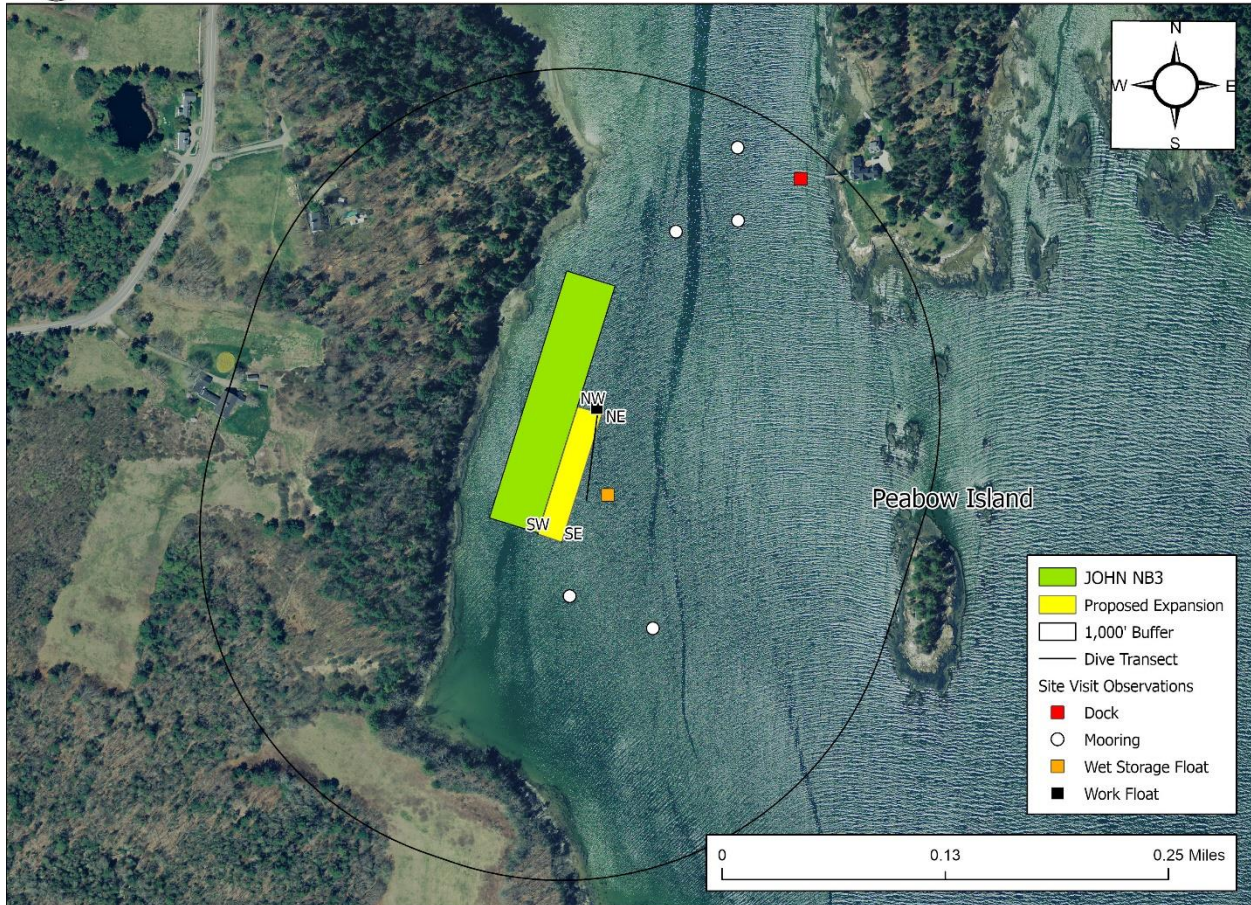


Figure 2. Proposed lease area with site visit observations.⁵

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 structures on the shoreline to the west of the proposed expansion. MDMR observed one cottage on Peabow Island approximately 1,010 feet east of the proposed expansion. No dock was observed on the western shore of Peabow Island. MDMR observed five moorings during the site visit. One mooring, approximately 580 feet north of the proposed expansion, had a sailboat moored to it at the time of the site visit. All other moorings were vacant. Mooring distances from the proposed expansion are as follows: 161 feet southeast, 372 feet

⁵ For clarity purposes, only Tract 2 of JOHN NB3 is shown in this figure.



southeast, 580 feet north, 698 feet north, and 883 feet north. There was one dock observed 910 feet northeast of the proposed expansion. There was a small powerboat and skiff tied to the dock and pier. MDMR scientists also observed a work float and a wet storage float associated with JOHN NB3 (Figure 2).

(2) Navigation

The shoreline of South Bristol is approximately 255 feet west of the expansion proposal at MLW. The expansion proposal expands towards and into the navigational channel that leads to the northern branch of the Johns River (Figure 3).

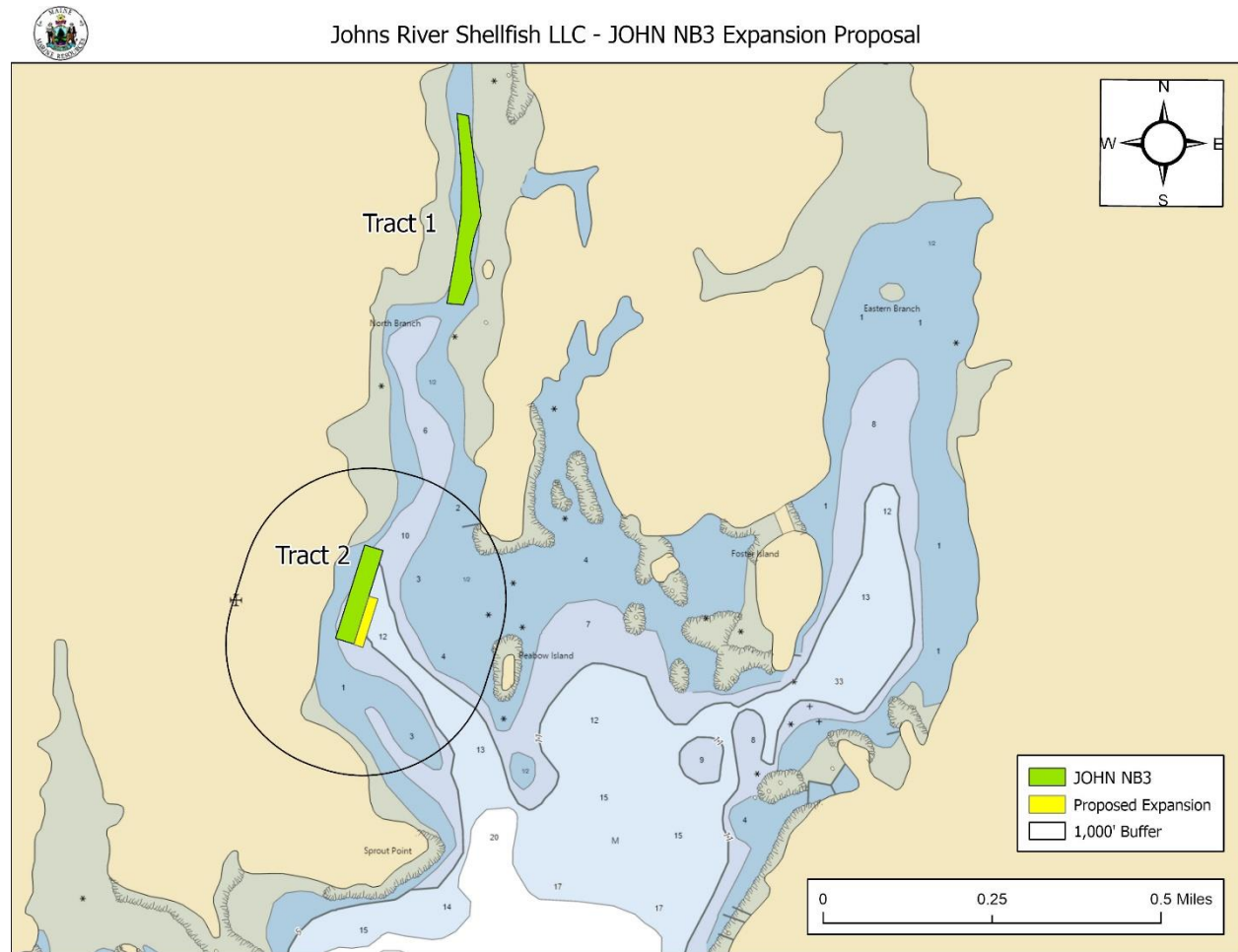


Figure 3. Proposed lease expansion and nearby navigational channels.



(3) Fishing and Other Uses

During MDMR’s site assessment on August 22, 2023, no commercial or recreational fishing activity was observed in the vicinity of the proposed expansion. There was one individual observed working at JOHN NB3 during the site visit.

(4) Other Aquaculture Uses

The expansion applicant currently operates standard lease JOHN NB3. There are no other leases or Limited Purposed Aquaculture (LPA) sites within 1,000 feet of the expansion proposal (Figure 4).

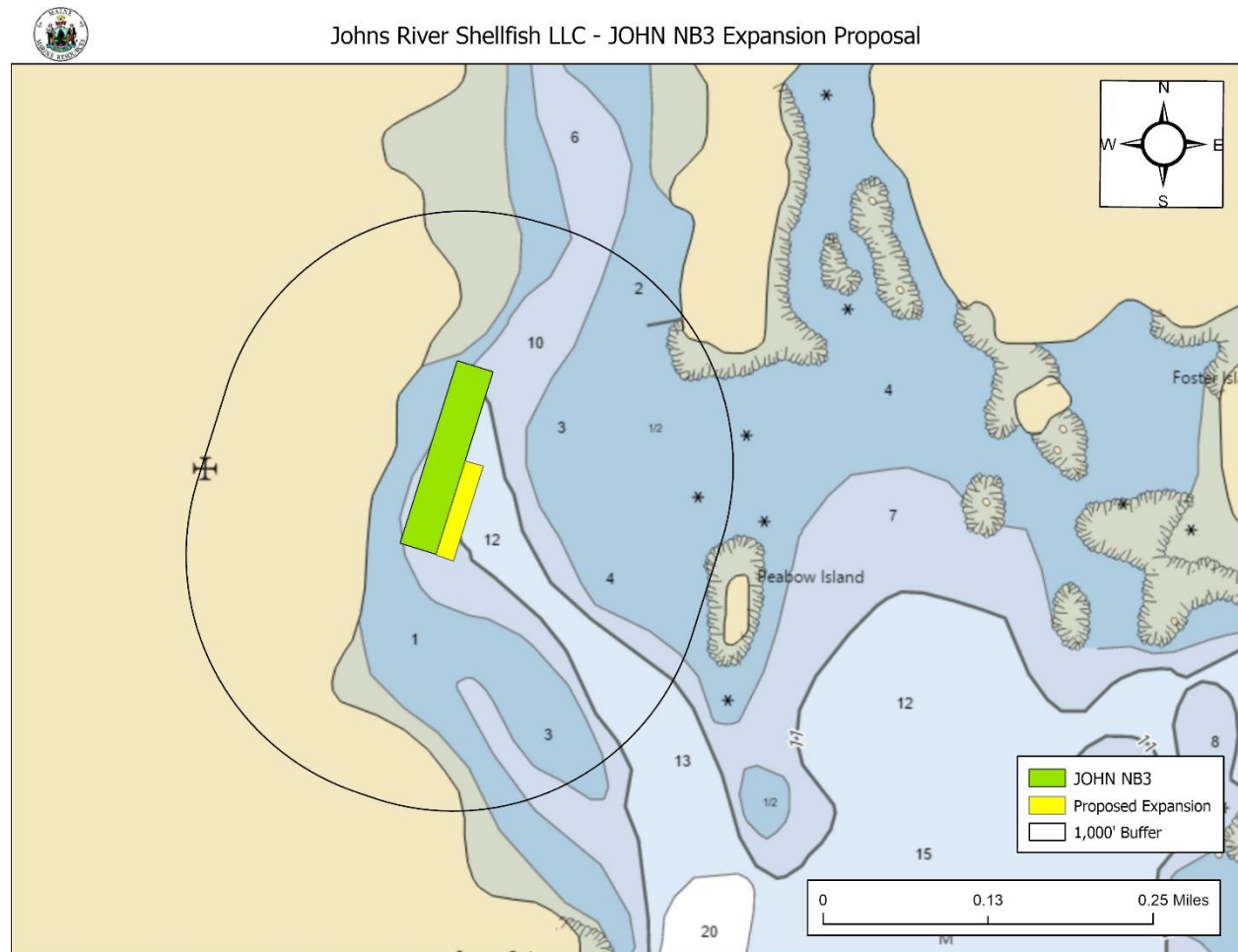


Figure 4. Aquaculture leases and LPA licenses in the general vicinity of the proposal.⁶

⁶ For clarity purposes, only Tract 2 of JOHN NB3 is shown in this figure.



(5) Existing System Support

Epibenthic Flora and Fauna

On August 22, 2023, MDMR scientists conducted a transect utilizing SCUBA to assess the epibenthic ecology of the proposed lease expansion. 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 footage.

Species Observed	Abundance
Crab (<i>Cancer</i> sp.)	Occasional
Sugar Kelp (<i>Saccharina latissima</i>)	Occasional
American oyster (<i>Crassostrea virginica</i>)	Occasional
Seaweed (<i>Ascophyllum</i> sp.)	Occasional

Eelgrass (*Zostera marina*)

Historical records of eelgrass collected by MDMR in 2010 indicate mapped eelgrass approximately 916 feet east of the proposal (Figure 5).⁷ No eelgrass was observed during MDMR’s site assessment.

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.

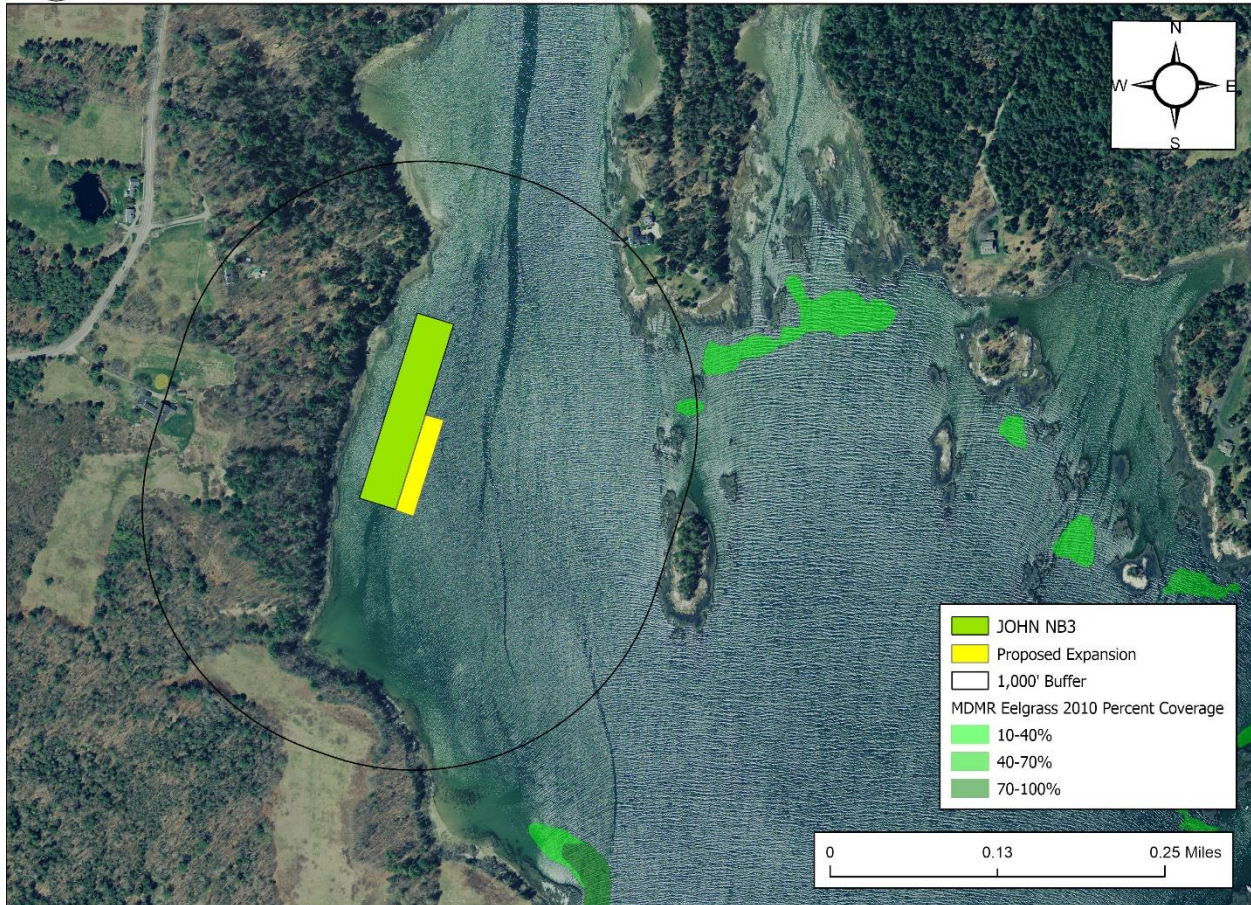


Figure 5. Mapped eelgrass (*Z. marina*) near the proposed lease expansion.

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 closest mapped tidal waterfowl and wading bird habitat is approximately 470 feet northwest of the proposal (Figure 6). 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 1.38 miles southwest of the proposal.

On December 7, 2022, 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

⁸ Email correspondence between MDIFW and MDMR.



During the site assessment, MDMR scientist observed double-crested cormorant (*Nannopterum auritum*), a bald eagle (*Haliaeetus leucocephalus*), common tern (*Sterna hirundo*), and a seal (*Pinnipedia sp.*) in the vicinity of the expansion proposal.



Johns River Shellfish LLC - JOHN NB3 Expansion Proposal



Figure 6. Mapped Tidal Wading Bird and Waterfowl Habitat.⁹

(6) Interference with Public Facilities

The proposed lease expansion is not within 1,000 feet of any beach, park, docking facility, or conserved lands owned by federal, state, or municipal governments (Figure 7).

⁹ Data obtained from MDIWF maintained SDE Feature Class "GISVIEW.MEIFW.Twwh".

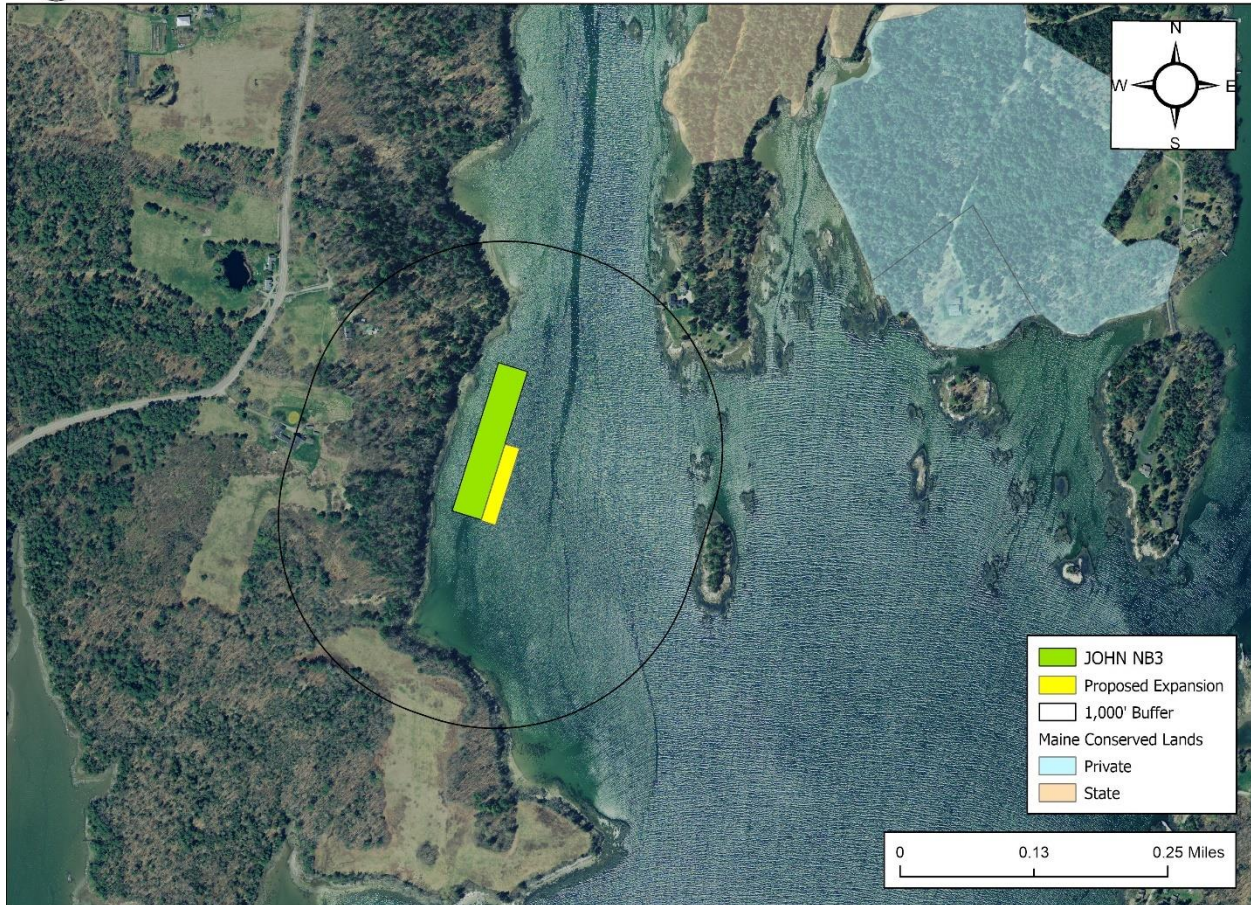


Figure 7. Public facilities near the proposed lease site.¹⁰

(7) Water Quality

The proposed lease expansion is currently located within an area classified as “Open/Approved” by the MDMR Bureau of Public Health.

¹⁰ Data obtained from The Maine Office of GIS “GISVIEW.MECONSLANDS.Conserved_Lands”.