

Figure 1. Vicinity map.¹

Location: South of The Nubbin, Casco Bay, Yarmouth, Cumberland County, Maine

Purpose: Standard lease for suspended culture of sugar kelp (*Saccharina latissima*) and skinny kelp (*Saccharina angustissima*).

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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 georeferenced aerial photographs provided by The Maine Office of GIS.



Application Overview

The applicant, Summit Point LLC, is requesting a 9.25-acre² standard lease south of The Nubbin in Casco Bay, within the town of Yarmouth, for the suspended culture of marine algae. Seasonal gear and gear related to algae production is intended to be on site from November 1 – June 1. The required lease corner markers will remain in place year-round, as well as all mooring blocks, staples, and lines connecting the mooring blocks.³

General Characteristics

On June 5, 2024, Maine Department of Marine Resources (MDMR) scientists assessed the proposed lease site. MDMR scientists arrived on site at approximately 10:59 AM. The proposal is located approximately 152.9 feet south of The Nubbin at mean low water (MLW). The Nubbin is an islet consisting of a rock ledge with an area of bare soil and a small patch of dead trees. At the time of the site visit, numerous cormorants and herring gulls were observed to be nesting and roosting in the trees and around the islet (Image 2). There is no other land within 1,000 feet of the proposal. Sunset Point and Prince Point, located approximately 1,515.8 feet and 1,395.7 feet to the northwest and north of the proposal, respectively, consist of rocky coastlines with forested uplands and residential properties.

Depth

On June 5, 2024, scientists began collecting depths at the proposed site shortly after high tide at approximately 11:00 AM. The tide was ebbing with the next low tide predicted at 4:43 PM (Table 1). Depths were determined to be between 26.0-32.4 feet. Correcting for tidal variations derives depths at mean low water (MLW, 0.0 feet) to be between 16.5-22.9 feet.

Table 1. Predicted tidal heights in Casco Bay, Maine.⁴

Date	Time	Height (ft)
2024/06/05	4:37 AM	-0.9 L
2024/06/05	10:51 AM	9.5 H
2024/06/05	4:43 PM	0.3 L
2024/06/05	11:00 PM	11.1 H

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 lease site is primarily composed of mud.

² Applicant originally requested 9.3 acres. MDMR calculations indicate the area is 9.25 acres.

³ Application pages 4, 5, 9

⁴ <https://www.usharbors.com/harbor/maine/portland-harbor-me/tides/?tide=2024-06#monthly-tide-chart>



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 geodesic 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) – 9.25 Acres

<u>Corner</u>	<u>Latitude</u>	<u>Longitude</u>	
NW	43.757561°	-70.175711°	then 404.5 feet at 123° True to
NE	43.756951°	-70.174431°	then 1,001.5 feet at 214° True to
SE	43.754693°	-70.176590°	then 400.5 feet at 303° True to
SW	43.755297°	-70.177856°	then 1,001.3 feet at 34° True to NW

Table 3. Approximate distances from proposal corners to surrounding features (Figure 3).

Feature	Distance
NE corner to Birch Point closest point MLW	~4,626.6 feet to the southeast
SE Corner to Sturdivant Island closest point MLW	~3,287.5 feet to the south
SW corner to Anderson Rock closest point MLW	~3,749.9 feet to the northwest
NW corner to The Nubbin closest point MLW	~152.9 feet to the north
NW corner to Sunset Point closest point MLW	~1,515.8 feet to the northwest
NW corner to Prince Point closest point MLW	~1,395.7 feet to the north

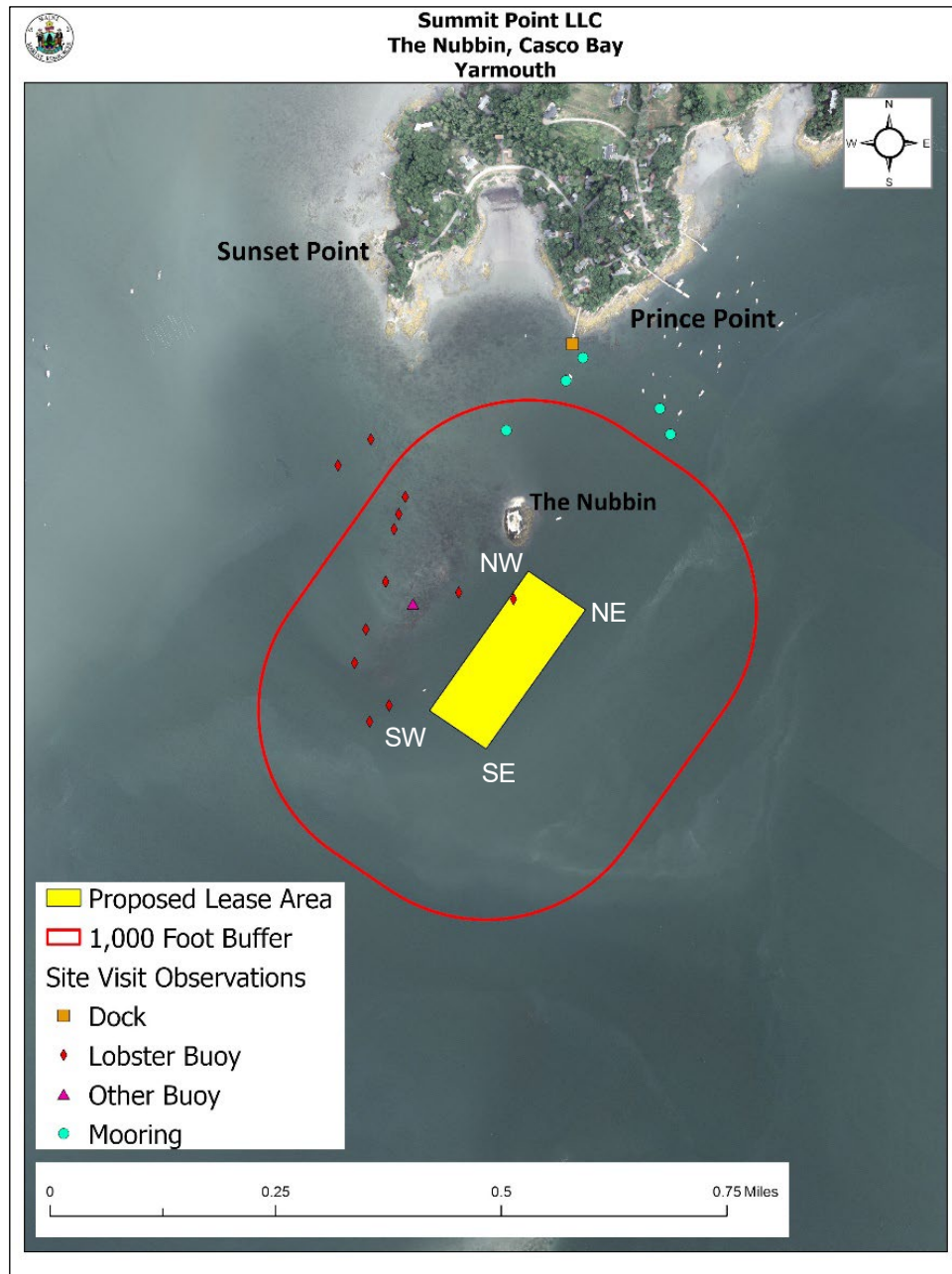


Figure 2. Proposed lease area with site visit observations.

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

The proposed lease area is not within 1,000 feet of any piers, docks, or residential land. During the site visit, MDMR scientists observed one mooring within 1,000 feet of the proposal located approximately 832.5 feet to the north. There were additional moorings over 1,000 feet northeast of the proposal (Figure 2). Navigational charts indicate that part of a designated mooring field is within 1,000 feet of the proposal (Figure 3), but MDMR scientists did not observe any moorings in this area during the site visit. A pier with a dock was observed approximately 1,353.4 feet to the north of the proposal with two moorings in the general vicinity of the dock (Figure 2).

A Harbormaster Questionnaire was completed by the local harbormaster and submitted to MDMR on May 5, 2023. The harbormaster indicated that riparian ingress and egress would not be impacted.

(2) Navigation

The proposal is located in subtidal, navigable waters approximately 152.9 feet south of The Nubbin at MLW. There is approximately 4,626.6 feet of navigable water between the proposal and Birch Point to the southeast and approximately 3,749.9 feet of navigable water between the proposal and Anderson Rock to the northwest. The proposal is also located directly to the southeast of marked subtidal hazards near The Nubbin (Figure 3).

The harbormaster indicated in the Harbormaster Questionnaire that the proposal would not affect navigation in the area.

During MDMR's site assessment, scientists observed a powerboat transiting to the northwest of the proposal.

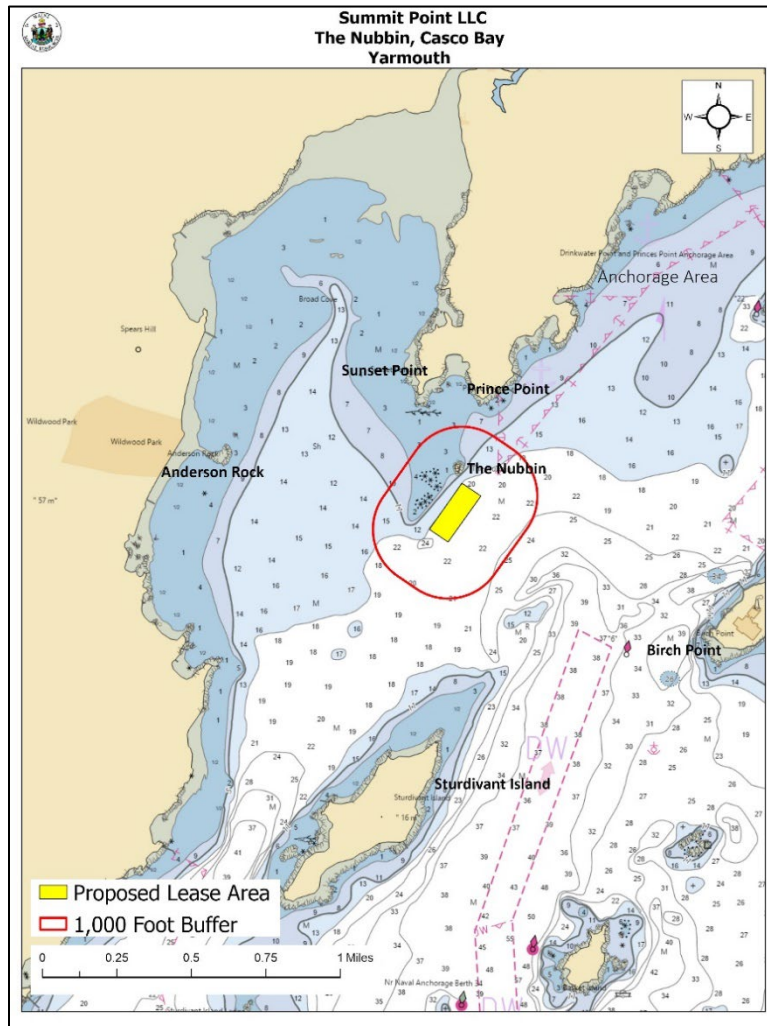


Figure 3. Charted navigational channels in the vicinity of the proposed lease area.

(3) Fishing and Other Uses

During MDMR’s site assessment, scientists observed light lobstering activity to the west of the proposal in the vicinity of the submerged ledges near The Nubbin. MDMR scientists observed ten lobster buoys within 1,000 feet of the proposal with one lobster buoy within proposal boundaries (Figure 2). Scientists also observed a small cluster of unmarked, unknown buoys located approximately 442.6 feet to the west of the proposal (Figure 2, Image 1).

The harbormaster indicated in the Harbormaster Questionnaire that no commercial fishing occurs in the area during the time of year that the proposal would be active and seasonal gear would be on site.



Image 1. Unknown buoys observed during MDMR's site assessment

(4) Other Aquaculture Uses

There are no active aquaculture leases or Limited Purpose Aquaculture (LPA) licenses within 1,000 feet of the proposal (Figure 4). During MDMR's site assessment, scientists observed an aquaculture boat and crew working lease CAS BC3 to the northwest of the proposal.

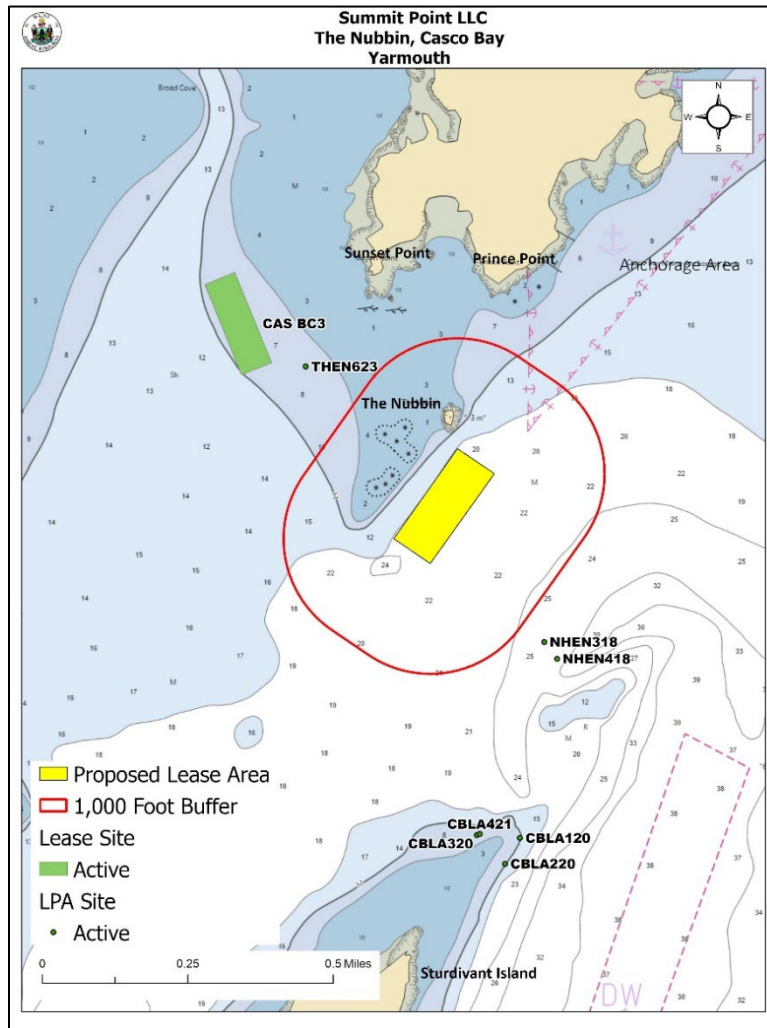


Figure 4. Aquaculture leases and LPA licenses in the vicinity of the proposed lease area.

(5) Existing System Support

Epibenthic Flora and Fauna

M DRM scientists observed the bottom characteristics in the vicinity of the proposed lease site via ROV. The relative abundance of epibenthic flora and fauna observed in the video is described below in Table 4.

Table 4. Species observed on underwater video footage.

Species Observed	Abundance
Sand shrimp (<i>Crangon septemspinosa</i>)	Rare
Sheet algal bed	Occasional



Eelgrass (*Zostera marina*)

Seagrass data collected in 2022⁵ indicates that there is mapped eelgrass within 1,000 feet of the proposal. The nearest mapped eelgrass is approximately 130.2 feet to the northwest of the proposal (Figure 5). During MDMR’s site assessment, scientists did not observe any eelgrass within proposal boundaries. No eelgrass was observed on underwater footage.

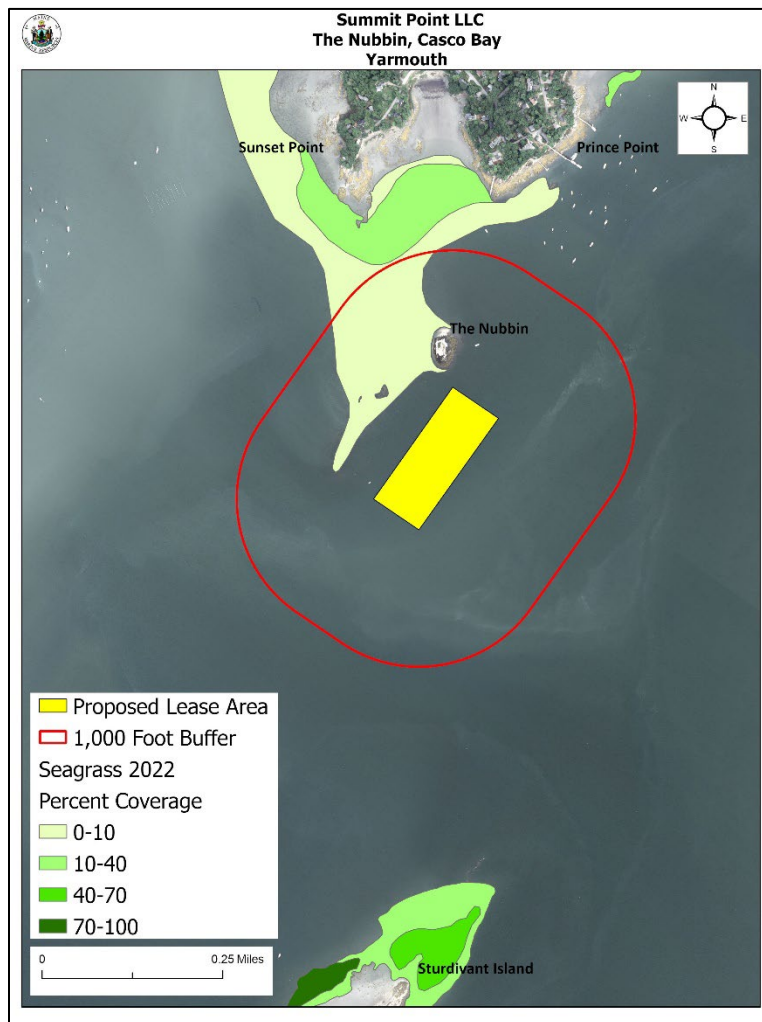


Figure 5. Mapped eelgrass in the vicinity of the proposed lease area.

⁵ Data obtained from The Maine Office of GIS “GISVIEW.MEDEP.Seagrass2022”. Widgeon grass was observed only in the New Meadows River area off Old Brunswick Road near shore. 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.



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), there is mapped Tidal Waterfowl and Wading Bird Habitat (TWWH) within 1,000 feet of the proposal. The nearest mapped TWWH is located approximately 114.5 feet to the northwest of the proposal. The proposal is also located almost entirely within mapped roseate tern (*Sterna dougallii*) habitat (Figure 6). MDMR scientists did not observe any roseate tern during the site visit. The nearest mapped bald eagle (*Haliaeetus leucocephalus*) nest is located approximately 2.3 miles to the south of the proposal. No bald eagles were observed during the site visit.

During MDMR's site assessment, scientists observed herring gull (*Larus argentatus*), double-crested cormorant (*Nannopterum auritum*), great cormorant (*Phalacrocorax carbo*), American black duck (*Anas rubripes*), and a common loon (*Gavia immer*) in the vicinity of the proposal. On The Nubbin, MDMR scientists observed at least 15 cormorant nests both on the ground and in a desiccated tree (Image 2). Scientists also observed several herring gulls throughout the islet.



Image 2. The Nubbin as observed during MDMR's site assessment.

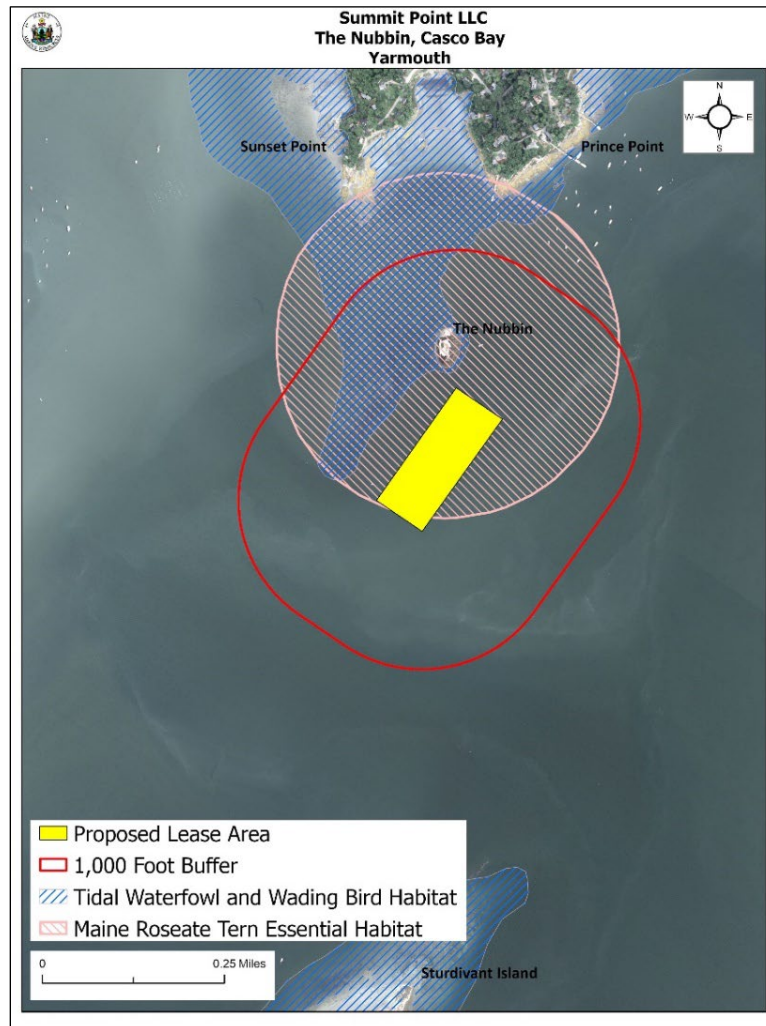


Figure 6. Mapped TWWH and roseate tern essential habitat. ⁶

(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. The proposed lease is within 1,000 feet of conserved lands owned by the state government. The Nubbin (parcel name “Nubbin Islands”) is owned by MDIFW and is located approximately 152.9 feet to the north of the proposal (Figure 7).

⁶ Data obtained from USFWS “Bald_Eagle_Nests_-_Maine_2023” and MDIFW maintained SDE Feature Classes “GISVIEW.MEIFW.Twwh” and “EHRTERN Roseate Tern Essential Habitat Layer”

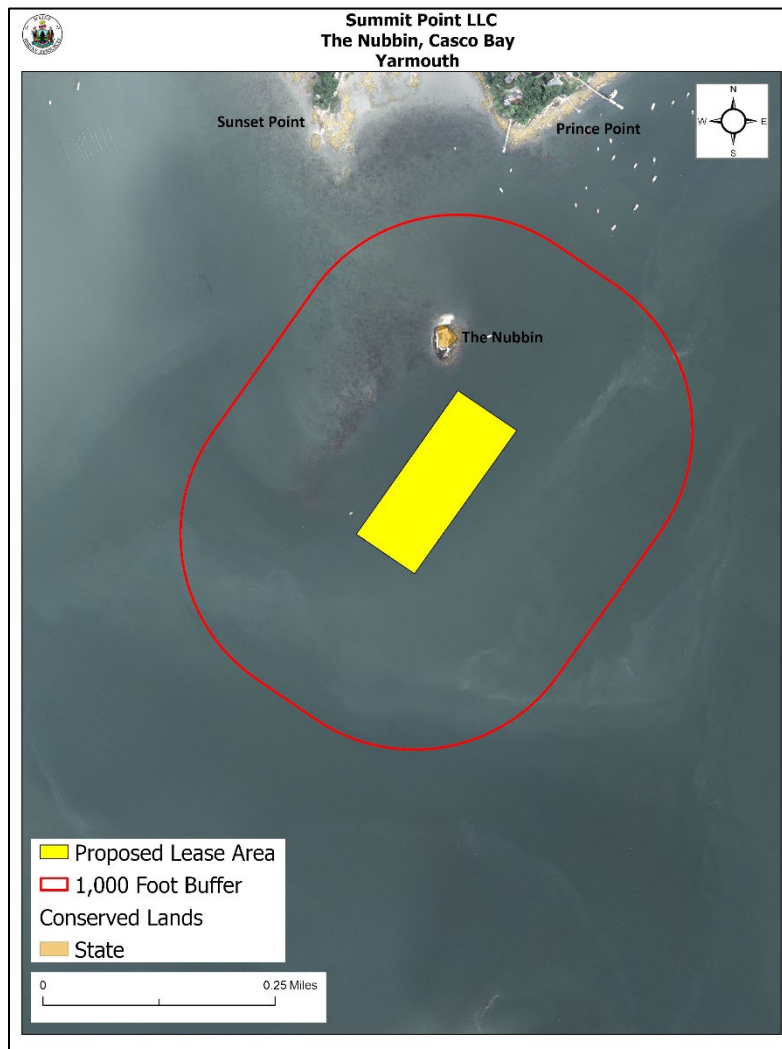


Figure 7. Conserved lands in the vicinity of the proposal.

(7) Water Quality

The proposed lease is located within an area that is currently classified as Open/Approved by the MDMR Bureau of Public Health and Aquaculture.