

Figure 1. Vicinity map.<sup>1</sup>

**Location:** West of Hog Island, Penobscot Bay, Deer Isle, Hancock County, Maine

**Purpose:** Standard lease for suspended culture of Atlantic sea scallops (*Placopecten magellanicus*)

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Report Preparation: Geoffrey Shook and Meryl Grady

<sup>1</sup> Unless otherwise noted, all figures in this report were created in ArcGIS Pro version 2.9 using digitized NOAA Nautical Charts or aerial imagery provided by ESRI (Firefly World Imagery).



**Application Overview**

The applicant, Deep Blue Aquaculture LLC, is requesting a 41.27<sup>2</sup> acre standard lease west of Hog Island in Penobscot Bay, within the town of Deer Isle, for the suspended culture of Atlantic sea scallops (*Placopecten magellanicus*). Gear related to spat collection may be on site from September-May. Marker buoys and all other aquaculture gear will remain on site year-round.<sup>3</sup> The applicant currently operates experimental lease PEN Plx within the boundaries of the proposal and is involved with operating limited purpose aquaculture sites (LPAs) APET723, APET823, APET923, APET1023, SPET323, and SPET423 within the boundaries of the proposal (Figure 4).

**General Characteristics**

On August 2, 2024, Maine Department of Marine Resources (MDMR) scientists assessed the proposed lease site. MDMR scientists arrived on site at approximately 10:19 AM. The proposal is located generally to the south of three small islands in the area. It is approximately 1,180.9 feet to the west of Hog Island, 1,638.2 feet to the south of Pond Island, and 3,926.7 feet to the southeast of Western Island at mean low water (MLW). The shoreline of the surrounding islands was observed to be rock ledge with a mixture of grasslands and mixed forest uplands. No residential properties were observed on the nearby islands from the proposed lease area. There is no land within 1,000 feet of the proposal.

**Depth**

On August 2, 2024, MDMR scientists began collecting depths at the proposed site at approximately 10:22 AM. The tide was ebbing with the next low tide predicted at 4:09 PM (Table 1). Depths were determined to be between 68.5-72.2 feet. Correcting for tidal variations derives depths at mean low water (MLW, 0.0 feet) to be between 59.3-63.0 feet.

**Table 1.** Predicted tidal heights in Deer Isle, Maine.<sup>4</sup>

Date	Time	Height (ft)
2024/08/02	3:59 AM	0.0 L
2024/08/02	10:12 AM	9.2 H
2024/08/02	4:09 PM	1.1 L
2024/08/02	10:22 PM	10.6 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.

<sup>2</sup> Applicant originally requested 41.2 acres. MDMR calculations indicate the area is 41.27 acres.

<sup>3</sup> Application pages 4,5

<sup>4</sup> <https://www.usharbors.com/harbor/maine/stonington-me/tides/?tide=2024-08#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) – 41.27 Acres**

<u>Corner</u>	<u>Latitude</u>	<u>Longitude</u>	
N	44.284627°	-68.804680°	then 1,594.8 feet at 122° True to
E	44.282243°	-68.799574°	then 1,199.3 feet at 233° True to
S	44.280295°	-68.803264°	then 1,606.9 feet at 303° True to
W	44.282691°	-68.808414°	then 1,206.0 feet at 54° True to N

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

Feature	Distance
E corner to Hog Island closest point MLW	~1,180.9 feet to the east
N corner to Pond Island closest point MLW	~1,638.2 feet to the northeast
W corner to Western Island closest point MLW	~3,926.7 feet to the northwest
S corner to Beach Island closest point MLW	~1.6 miles to the southwest

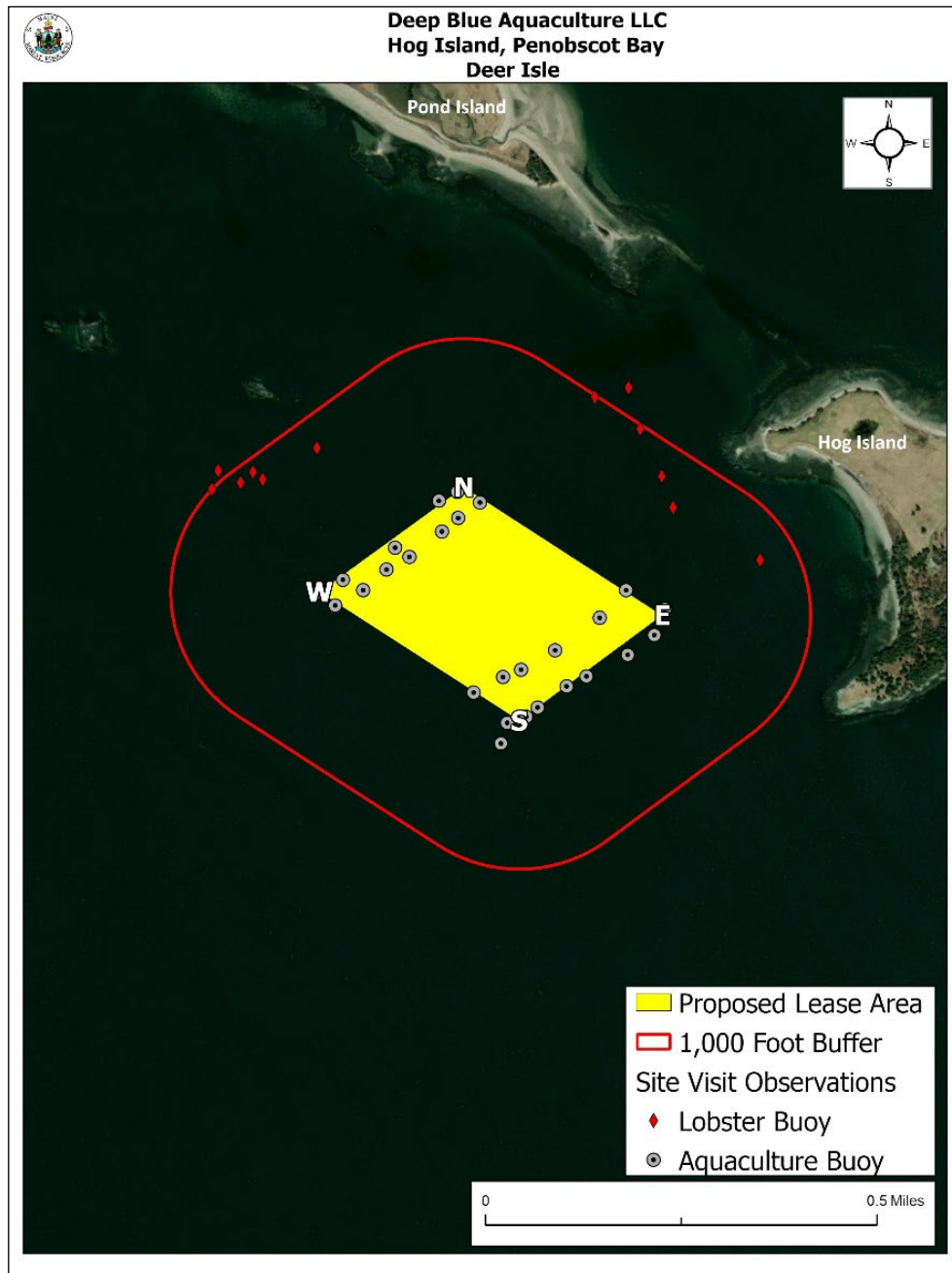


Figure 2. Proposed lease area with site visit observations.

*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 land. During the site visit, MDMR scientists did not observe any moorings, docks, or piers within the vicinity of the proposal area. No structures were observed on nearby Hog Island, Pond Island, and Western Island from the proposed lease area. Satellite imagery shows a structure located on Hog Island with a pier on the northern shore of the island, approximately 2,750 feet northeast of the proposed lease (Figure 5).

**(2) Navigation**

The proposal is located in subtidal, navigable waters approximately 1,180.9 feet to the west of Hog Island. There is over 1,000 feet of navigable water between the proposal area and the three nearest surrounding islands. There is a channel of approximately 1.6 miles of navigable water between the proposal area and Beach Island. The primary north-south navigational channel in eastern Penobscot Bay is located approximately 2.9 miles to the west of the proposal (Figure 3, Table 3).

During MDMR's site assessment, scientists observed two recreational powerboats navigating in the channel to the south and west of the proposal. Scientists also observed a sailboat and powerboat anchored to the north of the islands in the vicinity. During the site visit, the sailboat got underway and transited through the proposal area.

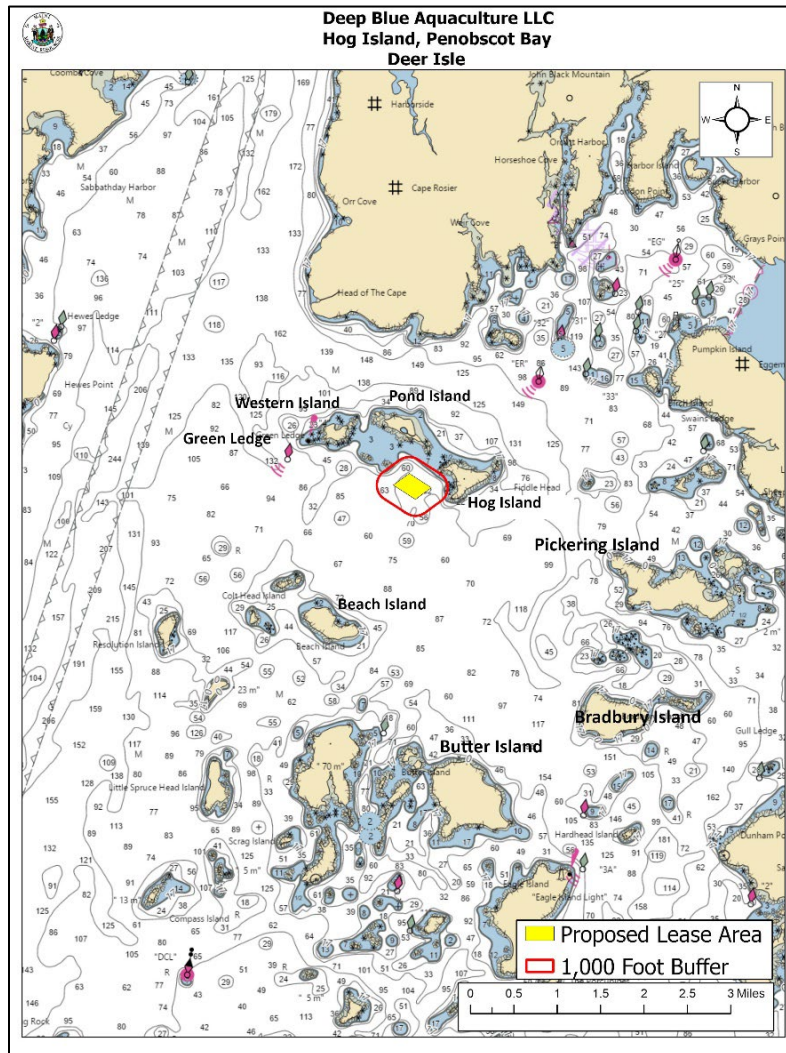


Figure 3. Charted navigational channels in the vicinity of the proposed lease area.

**(3) Fishing and Other Uses**

During MDMR’s site assessment, scientists observed light lobstering activity to the west and to the north of the proposal. MDMR scientists observed ten lobster buoys within 1,000 feet of the proposal, with the nearest one observed approximately 650.5 feet to the north (Figure 2).

**(4) Other Aquaculture Uses**

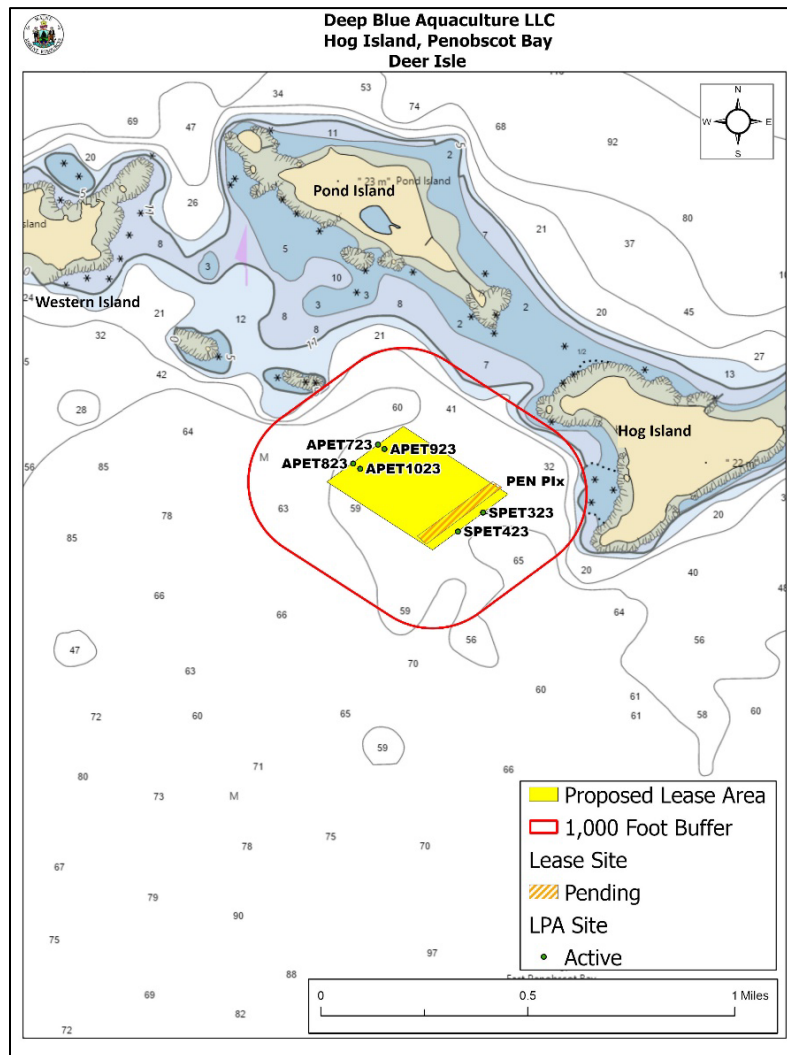
There is one active aquaculture lease and six LPAs within 1,000 feet of the proposal. Experimental lease PEN Pix is located within the boundaries of the proposed lease area and is operated by the applicant, Deep Blue Aquaculture LLC. The LPAs, APET723, APET823, APET923, APET1023, SPET323, and SPET423 are all located within the boundaries of the proposal area





(Figure 4). Andrew Peters is listed as the contact person in the application<sup>5</sup> and is the LPA license holder for all APET LPAs, as well as being listed as an assistant on the SPET LPA licenses held by Samantha Peters. At the time of application submission, the applicant indicated that they were operating on a single experimental lease with the potential to add up to four additional LPAs during the application process. The applicant intends to relinquish the experimental lease and the LPAs if the proposed lease is granted.<sup>6</sup>

During MDMR’s site assessment, scientists observed approximately 26 buoys within the vicinity of the proposal that appeared to be related to aquaculture (Figure 2).



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

<sup>5</sup> Application page 1  
<sup>6</sup> Application page 12



**(5) Existing System Support**

**Epibenthic Flora and Fauna**

MDMR 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
Northern krill ( <i>Meganyctiphanes norvegica</i> )	Common
Crangon shrimp ( <i>Crangon septemspinosa</i> )	Common
Frilled anemone ( <i>Metridium senile</i> )	Rare
Common sea star ( <i>Asterias rubens</i> )	Rare

**Eelgrass (*Zostera marina*)**

Seagrass data collected in 2010<sup>7</sup> indicates that there is not mapped eelgrass within 1,000 feet of the proposal. The nearest mapped eelgrass is approximately 1.74 miles to the north of the proposal (Figure 5). During MDMR’s site assessment, scientists did not observe any eelgrass. No eelgrass was observed on underwater footage.

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<sup>7</sup> Data obtained from The Maine Office of GIS “GISVIEW.MEDMR.Eelgrass”. Data from 2010 was the most current record of mapped eelgrass within the vicinity of the proposal at the time the site report was written.





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

### 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 1,000.0 feet to the northeast of the proposal (Figure 6). The nearest mapped bald eagle (*Haliaeetus leucocephalus*) nest is located approximately 1.0 mile to the west of the proposal.

During MDMR's site assessment, scientists observed herring gulls (*Larus argentatus*), double-crested cormorants (*Nannopterum auritum*), common eiders (*Somateria mollissima*) and a common loon (*Gavia immer*) in the vicinity of the proposal.

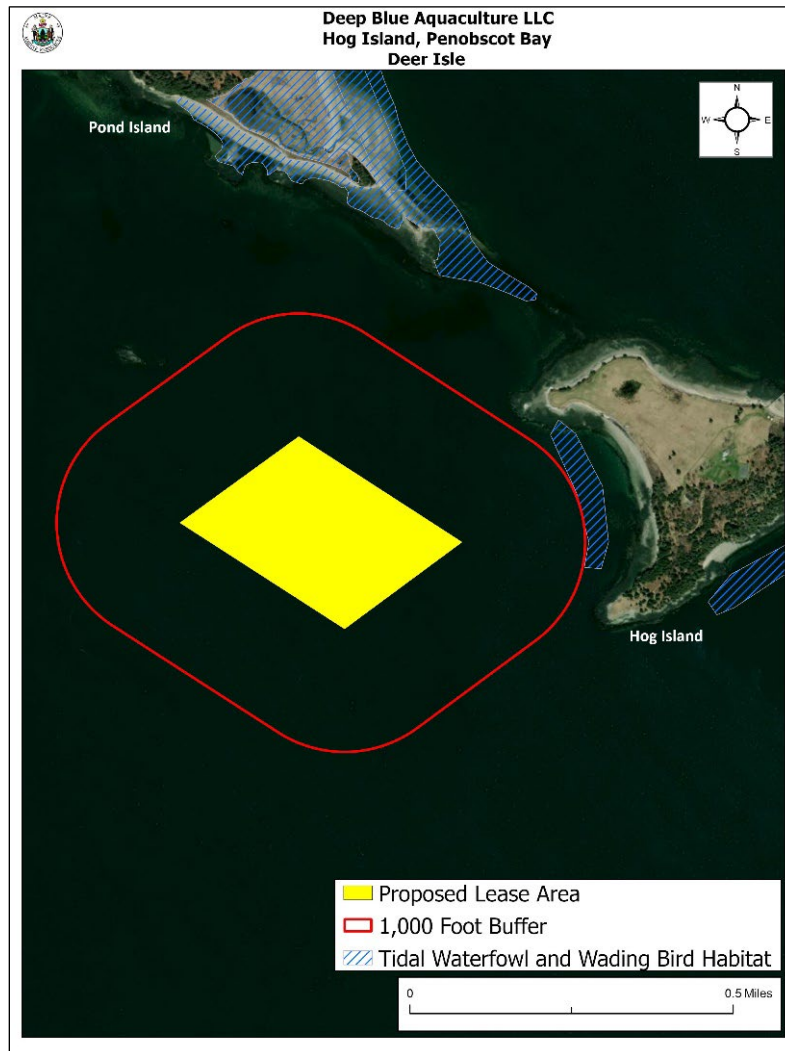


Figure 6. Mapped TWWH in the vicinity of the proposal.<sup>8</sup>

### (6) Interference with Public Facilities

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

<sup>8</sup> Data obtained from USFWS "Bald\_Eagle\_Nests\_-\_Maine\_2023" and MDIFW maintained SDE Feature Class "GISVIEW.MEIFW.Twwh"

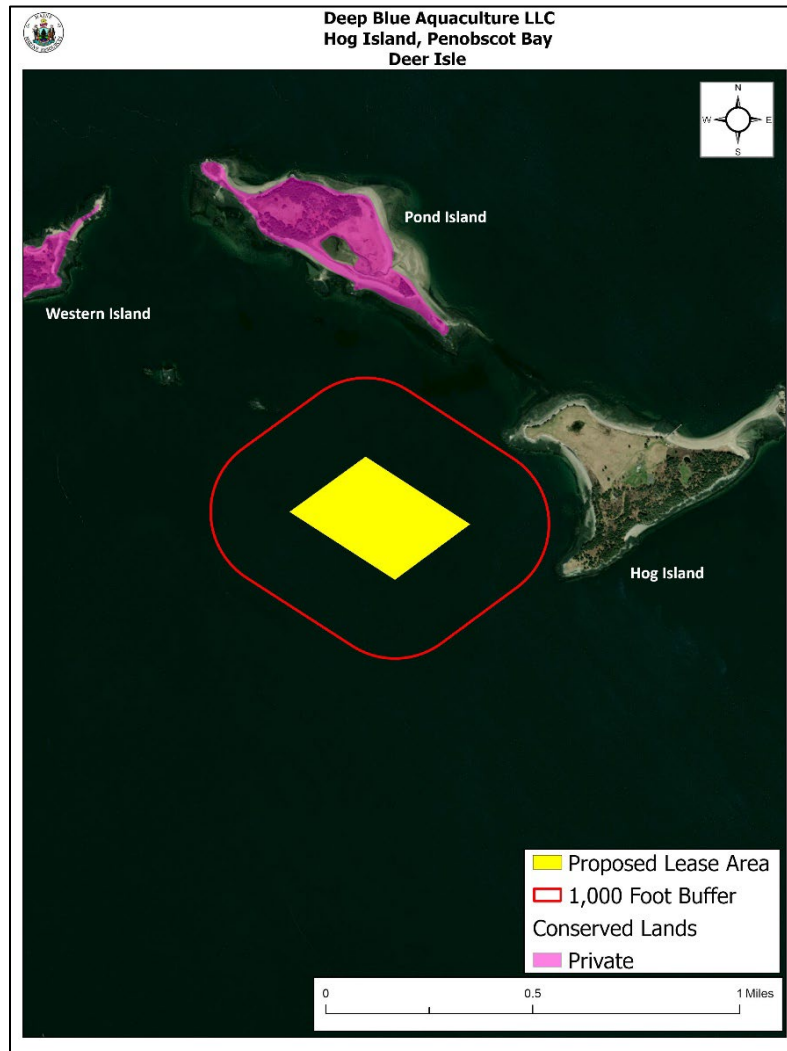


Figure 7. Conserved lands in the vicinity of the proposal.

**(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.