



## Ryan McPherson - South of Perkins Point, Newcastle

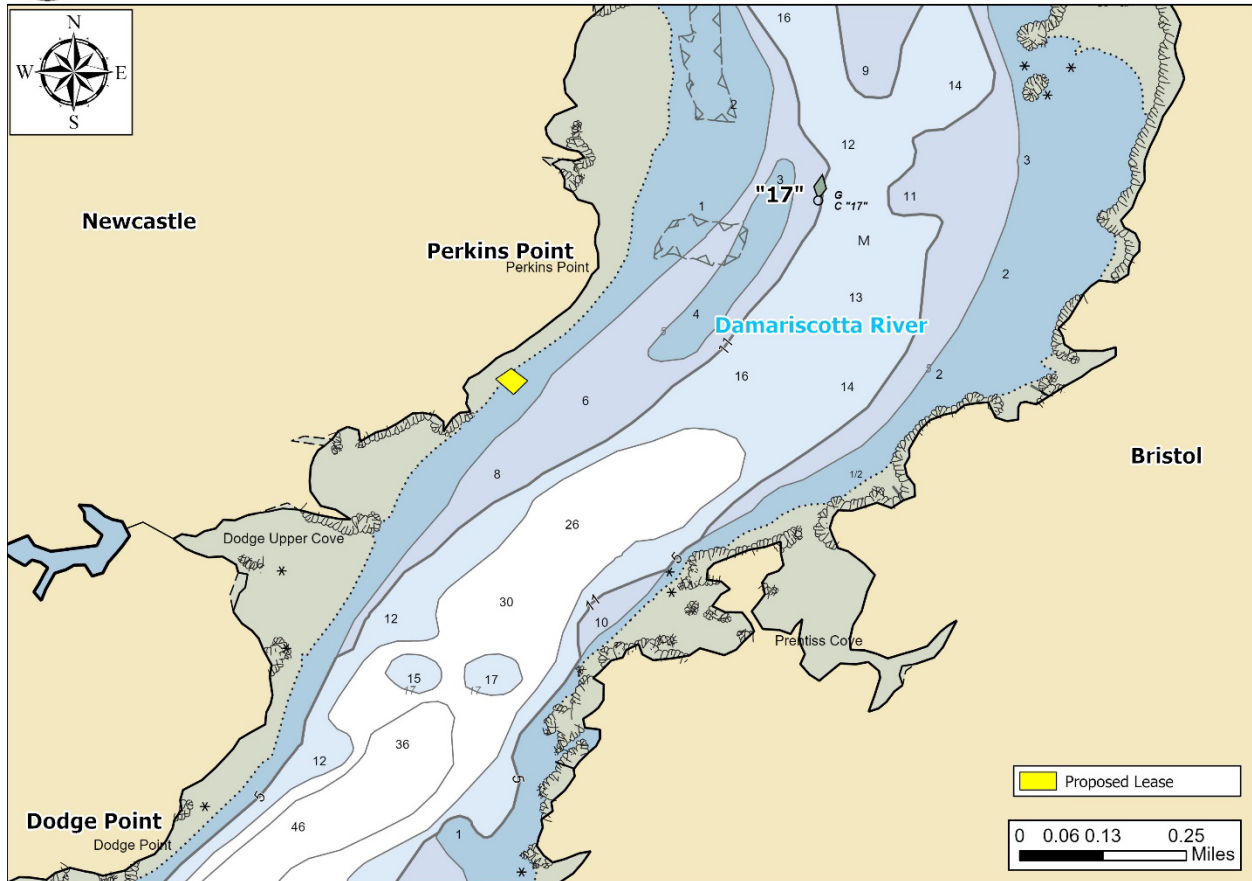


Figure 1. Vicinity map.<sup>1</sup>

**Location:** South of Perkins Point, Damariscotta River, Newcastle, Lincoln County, Maine

**Purpose:** Experimental lease for suspended culture of American Oysters (*Crassostrea virginica*).

Site Review: Meryl Grady and Katie VonHohenleiten

Report Preparation: Katie von Hohenleiten, Geoffrey Shook, and Meryl Grady

<sup>1</sup> Unless otherwise noted, all figures in this report were created in ArcGIS Pro version 3.3 using digitized NOAA Nautical Charts or georeferenced aerial photographs provided by The Maine Office of GIS.



**Application Overview**

The applicant, Ryan McPherson, is requesting a 0.43<sup>2</sup> acre experimental lease for the suspended culture of American Oysters (*Crassostrea virginica*) in the Damariscotta River. The proposal will use Zapco tubes to cultivate the oysters. The Zapco tubes and associated rebar staples will be onsite from March through December. No gear, or oysters, will be on site January – February, except the required lease corner markers. Oysters will either be sold to market or overwintered on other leases operated by Glidden Point.<sup>3</sup>

**General Characteristics**

On June 3, 2025, Department of Marine Resources (DMR) scientists assessed the proposed lease site. DMR scientists arrived on site at approximately 10:04 AM. The western shoreline of the Damariscotta River consisted of rocky coastline with two residential properties visible from the proposal.

**Depth**

DMR scientists began collecting water depths at the proposed site during a falling tide at approximately 10:28 AM (Table 1). Measured depths at corners of the proposed lease site ranged from 2.0 to 4.0 feet. Correcting for tidal variation derives approximate water depths at corners of the proposal at mean low water (MLW, 0.0 feet) to be from 0.2 to 2.2 feet. Approximate depths at mean high water (MHW, 9.4 feet<sup>4</sup>) at corners of the proposal are 9.6 to 11.6 feet (Table 2). The proposal is located in the subtidal.

**Table 1.** Predicted tidal heights in Walpole, Maine.<sup>5</sup>

Date	Time	Height (ft)
2025/06/03	-	-
2025/06/03	5:37 AM	8.7 H
2025/06/03	12:03 PM	0.5 L
2025/06/03	6:18 PM	8.5 H

**Table 2.** Collected and derived depths at corners of the proposed lease area.

Corner	Measured Depth (ft)	MLW Depth (ft)	MHW Depth (ft)
NW	2.2	0.4	9.8
NE	3.7	1.9	11.3
SE	4.0	2.2	11.6
SW	2.0	0.2	9.6

<sup>2</sup> Applicant originally requested 0.45 acres. DMR calculations indicate the area is 0.43 acres.

<sup>3</sup> Application pages 7,8 and 19.

<sup>4</sup> MHW in Walpole is 9.4 feet, NOAA Tide Station 8416731

<sup>5</sup> <https://tidesandcurrents.noaa.gov/stationhome.html?id=8416731>



**Bottom Characteristics**

DMR 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 3). Sediment information was determined based on visual analysis of the video. The bottom of the proposed lease site is composed of mud.

**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

**Position and Distances to Shore**

The measuring tool in ArcGIS Pro 3.3 was used to verify the distances and bearings between proposed lease corners. Distances to shore were determined using the measuring tool in ArcGIS Pro 3.3, a nautical chart provided by the National Oceanic and Atmospheric Administration (NOAA), and the application coordinates (Table 4, Figures 2,3).

**Application Coordinates (WGS84) – 0.43 Acres**

<u>Corner</u>	<u>Latitude</u>	<u>Longitude</u>	
NW	43.99759°	-69.54895°	then 136 feet at 136° True to
NE	43.99732°	-69.54859°	then 134 feet at 220° True to
SE	43.99703°	-69.54890°	then 158 feet at 319° True to
SW	43.99736°	-69.54929°	then 123 feet at 044° True to NW

**Table 4.** Approximate distances from proposal corners to surrounding features (Figures 2 & 3).

Feature	Distance
NW corner to western Damariscotta River shoreline at MLW <sup>6</sup>	~22' within
NW corner to Perkins Point at MLW	~938' to the northeast
NE corner to eastern Damariscotta River shoreline at MLW	~1,652' to the southeast
NE corner to green navigational aid "17"	~2,178' to the northeast
SE corner to eastern Damariscotta River shoreline at MLW	~1,616' to the southeast
SE corner to rocky shoreline point to the south of proposal at MLW	~285' to the southwest
SW corner to western Damariscotta River shoreline at MLW	~47' within
SW corner to rocky shoreline point to the south of proposal at MLW	~308' to the southwest

<sup>6</sup> Nautical charts indicate the proposal is located in the intertidal, but DMR observations and calculations indicate the proposal is located entirely in the subtidal.



## Ryan McPherson - South of Perkins Point, Newcastle

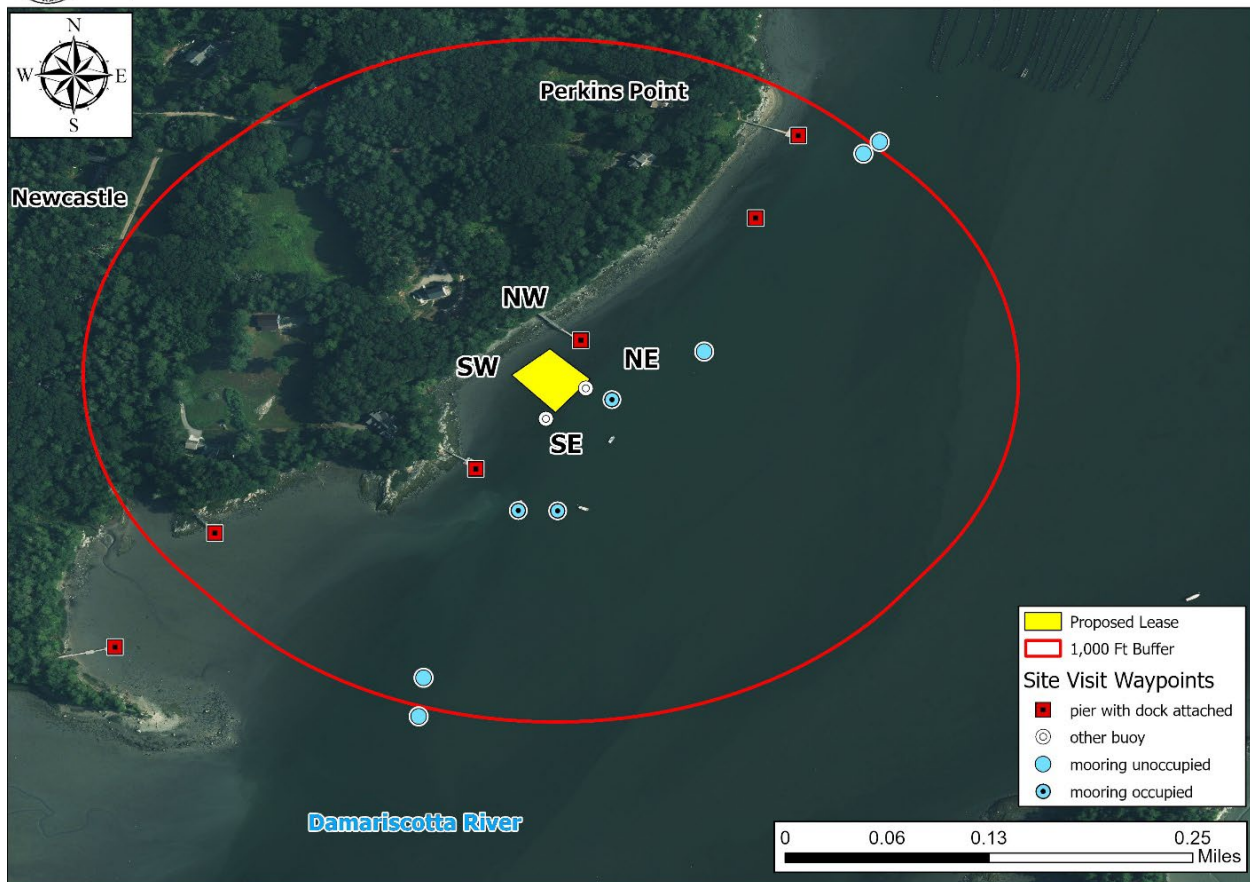


Figure 2. Proposed lease area with site visit observations.

***Pursuant to statute and regulation, aquaculture leases are evaluated in consideration of applicable decision criteria. The Site Report documents DMR’s observations of the area and other information, in consideration of those criteria, as noted below:***

### **(1) Riparian Ingress and Egress**

During the site visit on June 3, 2025, DMR scientists observed six piers with docks attached in the vicinity of the proposal. Approximate distances to the observed docks from the proposal are as follows, listed from north to south: 901 feet to the northeast, 648 feet to the northeast, 74 feet to the northeast with a dinghy on the dock, 260 feet to the southwest with a dinghy on the dock, 885 feet to the southwest with a kayak on the dock, and 1,277 feet to the southwest.<sup>7</sup> The observed dock approximately 648 feet northeast of the proposal appeared to be new construction, hence why it is not visible in Figure 2 utilizing orthorectified imagery from 2023.

<sup>7</sup> Due to shallow water depths at the time of the site visit, DMR scientists were not able to access the cove to the southwest of the proposal containing two docks, so DMR scientists recorded a description of the location of the docks. During data analysis, the dock waypoints were generated, located, and mapped using orthorectified imagery, as seen in Figure 2.



## Department of Marine Resources Site Report

Ryan McPherson  
South of Perkins Point, Damariscotta River  
Newcastle

DMR scientists also observed eight moorings in the vicinity of the proposal. Three moorings had vessels attached to them; One mooring was approximately 84 feet southeast of the proposal and had an approximate 20-foot powerboat attached, another mooring was approximately 318 feet southeast and had an approximate 24-foot powerboat attached, and a third mooring was approximately 328 feet to the southwest that had an approximate 12-foot sailboat attached to it. Approximate distances from the proposal to the five unoccupied moorings that were observed by DMR scientists are as follows, listed from north to south: 1,022 feet to the northeast, 968 feet to the northeast, 280 feet to the northeast, 911 feet to the southwest, and 1,032 feet to the south.

A Municipal Questionnaire was received by DMR from the Newcastle Harbormaster on March 13, 2025. The Harbormaster states that there are two riparian docks permitted in the vicinity of the proposal, approximately 60 and 240 feet from the proposal. The docks are accessed by recreational boats in the 14-26' range. The Harbormaster also stated there are no permitted moorings nearby or within the boundaries of the proposal.

### **(2) Navigation**

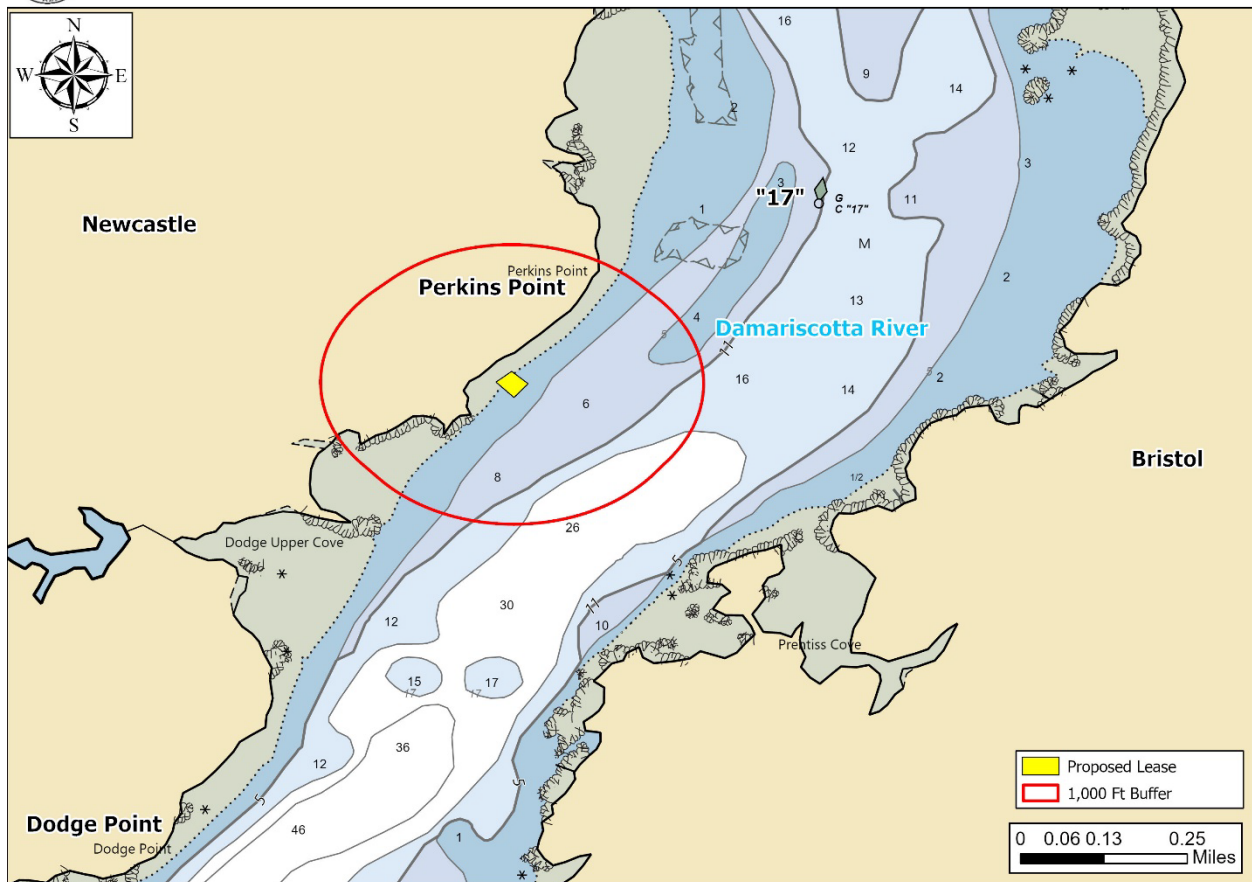
The proposal is located in the Damariscotta River, immediately adjacent to the Perkins Point shoreline at MLW. The proposal sits approximately 612 feet to the west of the navigational channel, as measured from the 11-foot depth contour that the green navigational aid "17" sits on top of. There is approximately 1,616 feet of water from the SE corner of the proposal to the eastern shore of the Damariscotta River at MLW (Figure 3).

No navigational vessel traffic was observed by DMR scientists during the site visit.

The Harbormaster stated in the Municipal Questionnaire that there is no commercial navigation in the area of the proposal. The Harbormaster also stated there is recreational navigation in the area of the proposal. On a peak day, there may be approximately 5-10 kayaks navigating in the area of the proposal, typically in a north-south direction.



## Ryan McPherson - South of Perkins Point, Newcastle



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

### (3) Fishing and Other Uses

During the site visit, DMR scientists did not observe any commercial or recreational fishing in the general vicinity of the proposal (Figure 2).

The Harbormaster stated in the Municipal Questionnaire that there is no commercial or recreational fishing in the area of the proposal. The Harbormaster stated that there is kayaking in the vicinity of the proposal. On a peak day, there may be approximately 5-10 kayaks navigating in the area of the proposal, typically in a north-south direction.

### (4) Other Aquaculture Uses

There are no Limited Purpose Aquaculture (LPA) sites or aquaculture leases under review by DMR within 1,000 feet of the proposal. Standard lease DAM PP2, held by Mook Sea Farms, Inc., is located approximately 759 feet northeast of the proposal (Figure 4). During the site visit, DMR scientists observed an aquaculture boat actively tending lease site DAM PP2.

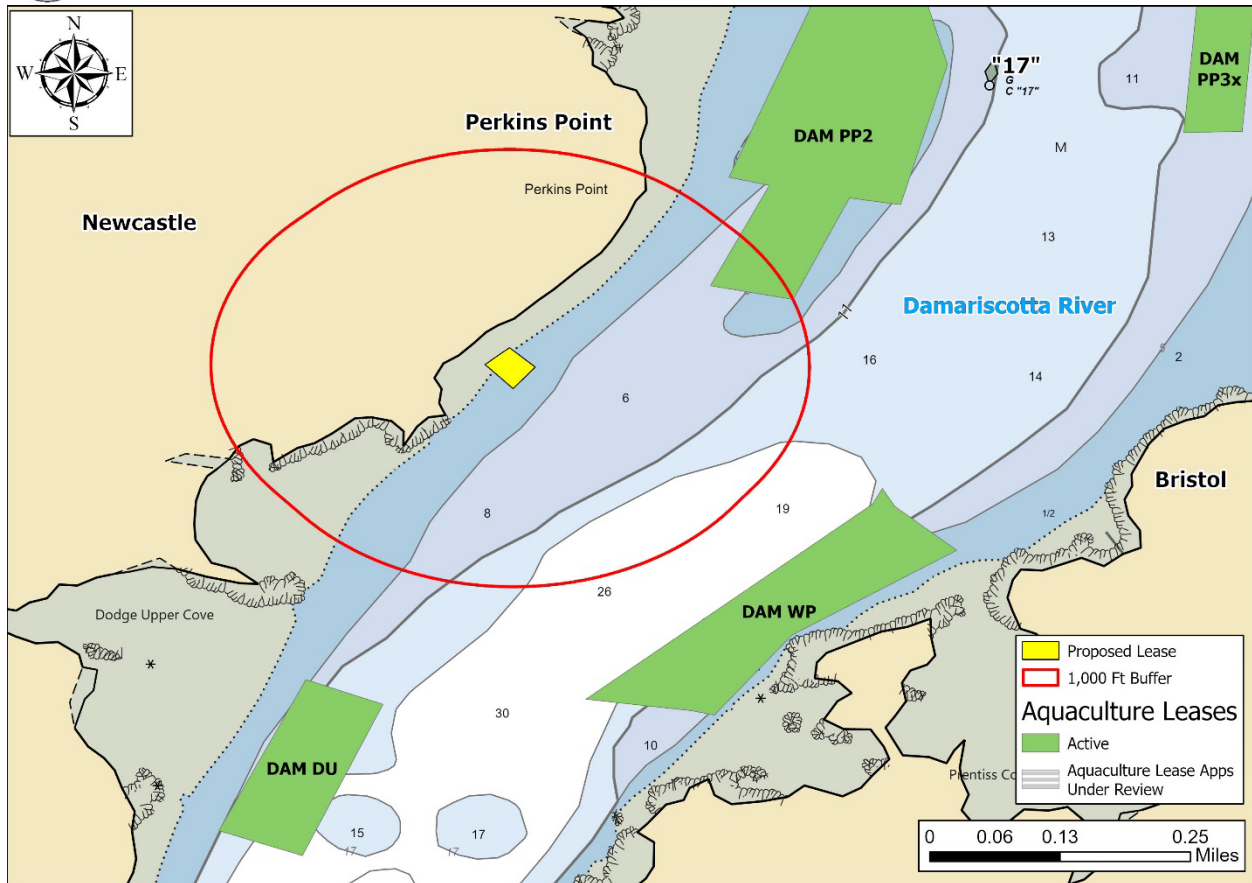


The applicant, Ryan McPherson, holds, or has an interest in, several leases and LPAs. The applicant will maintain all leases and LPAs, regardless of the outcome of this proposal.<sup>8</sup>

During the site visit, DMR scientists recorded the locations of two white buoys with unknown purposes (Images 1 and 2) near corners of the proposal (Figure 2). Due to the locations of the buoys, DMR scientists believe these observed buoys could have been marking corners of the proposal.

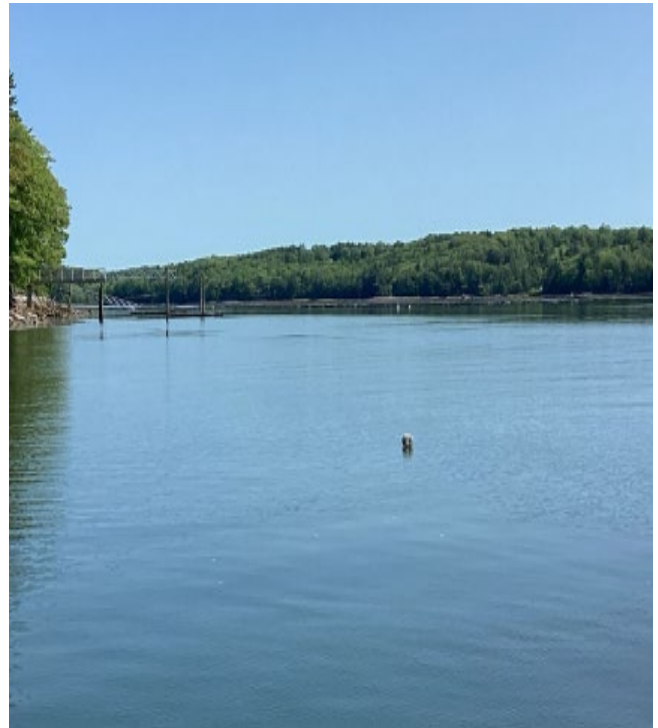


## Ryan McPherson - South of Perkins Point, Newcastle



**Figure 4.** Aquaculture leases, LPA licenses, and applications under review by DMR in the vicinity of the proposed lease area.

<sup>8</sup> Application page 11.



**Image 1 & 2.** Unknown white buoys observed by DMR scientists during the site visit. 1<sup>st</sup> buoy (left image), 2<sup>nd</sup> buoy (right image).

**(5) Existing System Support**

**Epibenthic Flora and Fauna**

On June 3, 2025, DMR scientists utilized an ROV to assess the epibenthic ecology of the proposed lease. The relative abundance of epibenthic flora and fauna observed in the video footage is described below in Table 5.

**Table 5.** Species observed on underwater video footage.

Species Observed	Abundance
Sand Shrimp ( <i>Crangon septemspinosa</i> )	Common
Rockweed ( <i>Ascophyllum nodosum</i> )	Occasional
Long clawed hermit crab ( <i>Pagurus longicarpus</i> )	Occasional
Sugar kelp ( <i>Saccharina latissima</i> )	Occasional



**Eelgrass (*Zostera marina*)**

Records of seagrass collected by the Department of Environmental Protection (DEP) in 2023<sup>9</sup> indicates no mapped eelgrass presence in the vicinity of the proposal (Figure 5). The closest mapped seagrass is approximately 3.6 miles upriver in Great Salt Bay. No eelgrass was observed on underwater video footage within the proposal boundaries during DMR’s site visit.



Ryan McPherson - South of Perkins Point, Newcastle



**Figure 5.** Mapped eelgrass (*Z. marina*) in the vicinity of the proposed lease area.

<sup>9</sup> 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.



## Department of Marine Resources Site Report

Ryan McPherson  
South of Perkins Point, Damariscotta River  
Newcastle

### Wildlife

During DMR's site visit, scientists observed an osprey (*Pandion haliaetus*), herring gulls (*Larus argentatus*), moon jellyfish (*Aurelia aurita*), lion's mane jellyfish (*Cyanea capillata*), and horseshoe crab (*Limulus polyphemus*) in the general vicinity of the proposal.

The Department of Inland Fisheries and Wildlife (IFW) has jurisdiction over inland fisheries and wildlife resources of the state. IFW also has the authority to conserve wildlife populations and their ecosystems through applicable state laws and rules. DMR provides IFW with notice and the opportunity to comment on all complete lease applications. In addition, the Site Report also includes IFW designated and mapped habitat types that are within 1,000 feet of the lease proposal, if applicable.

According to Geographic Information System (GIS) data maintained by IFW and available through the Maine Office of GIS (MEGIS), there is mapped habitat within 1,000 feet of the lease proposal. The proposal is located entirely within mapped Tidal Waterfowl and Wading Bird Habitat (TWWH), which is a type of Significant Wildlife Habitats designated and regulated by IFW (Figure 6).<sup>10</sup>

Though bald eagles are no longer listed on Maine's Endangered and Threatened Species List, the United States Fish and Wildlife Service (USFWS) may also have jurisdiction over the management and conservation of the species based on applicable law and rule. Data collected by USFWS in 2023 by aerial nest survey shows there is no mapped bald eagle nesting site within the vicinity of the proposal. The nearest mapped bald eagle nest is approximately 1.2 miles northeast of the proposal.

IFW was provided with the opportunity to comment on this proposal. On March 24, 2025, a Resource Biologist with IFW responded, stating that the proposal is within TWWH managed by IFW. However, minimal impacts to wildlife are anticipated <sup>11</sup>

---

<sup>10</sup> <https://www.maine.gov/ifw/programs-resources/environmental-review/significant.html>

<sup>11</sup> Correspondence between IFW and DMR



## Ryan McPherson - South of Perkins Point, Newcastle

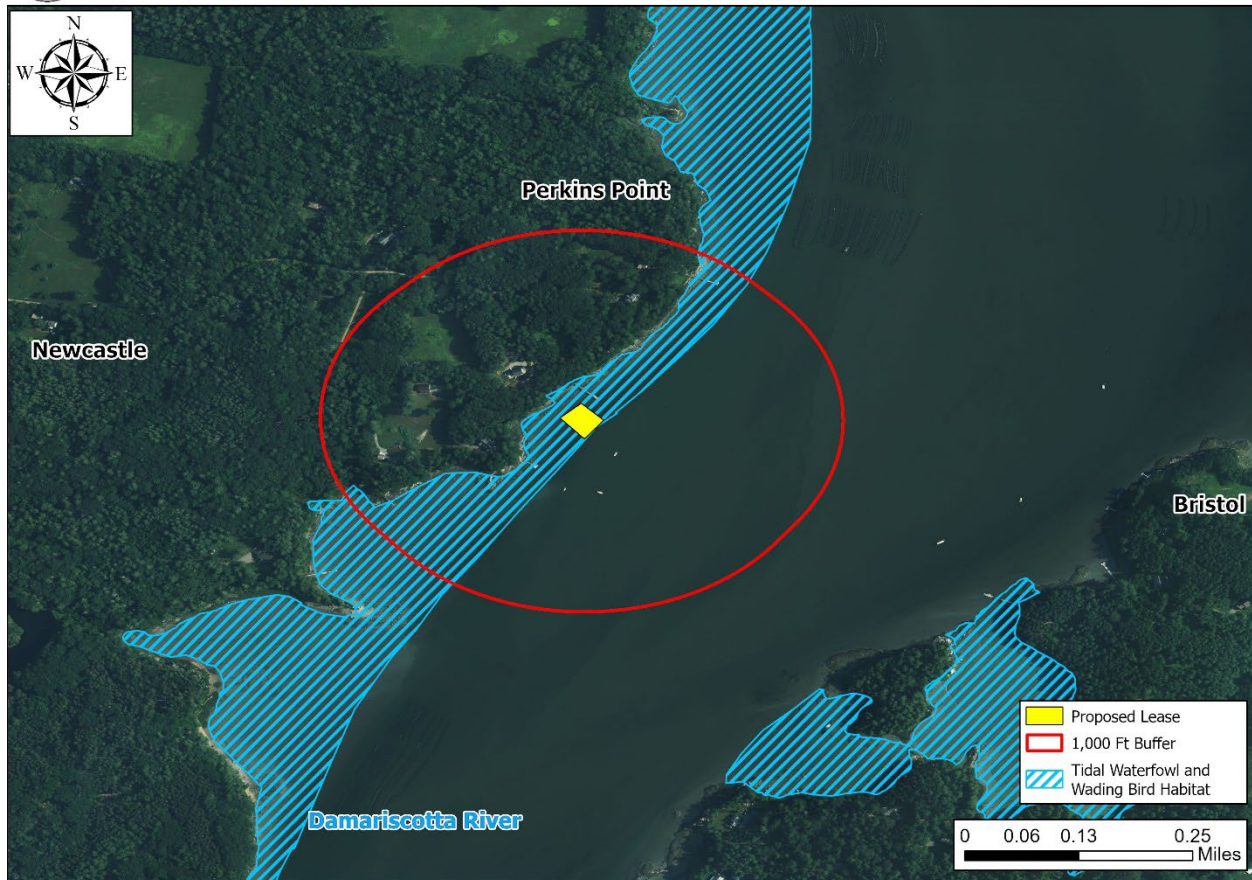


Figure 6. Mapped habitats in the vicinity of the proposed lease area. <sup>12</sup>

### (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) Growing Area Classification

The proposed lease is currently located within an area classified as Approved by the DMR Bureau of Public Health and Aquaculture (BPHA).

<sup>12</sup> Data obtained from USFWS "Bald\_Eagle\_Nests\_-\_Maine\_2023" and IFW "EHRTERN", "EHLVTRN", "GISVIEW.MEIFW.Twwh", "ShorebirdAreas", and "SNI".