

**STATE OF MAINE  
DEPARTMENT OF MARINE  
RESOURCES**

**Jeffrey Schroeder**

STG BC1x

August 19, 2020

Experimental Aquaculture Lease Application  
Suspended Culture of American oysters  
Broad Cove, St. George River, Cushing

**FINDINGS OF FACT, CONCLUSIONS OF LAW, AND DECISION**

Jeffrey Schroeder applied to the Department of Marine Resources (“DMR”) for a three-year experimental aquaculture lease located at the mouth of Broad Cove in the St. George River, Cushing, Knox County, Maine. The proposed lease is 3.97<sup>1</sup> acres and is for the suspended culture of American oysters (*Crassostrea virginica*). DMR accepted the application as complete on January 3, 2020. No requests for a public hearing were received during the comment period and no hearing was held.

**1. THE PROCEEDINGS**

Notice of the application and the 30-day public comment period were provided to state and federal agencies, the Town of Cushing and its Harbormaster, and others on DMR’s mailing list. Notice of the application and comment period were published in the January 16, 2020 edition of the *Village Soup*. The evidentiary record regarding this lease application includes the application, DMR’s site report dated July 21, 2020, and the case file. The evidence from each of these sources is summarized below.<sup>2</sup>

**2. DESCRIPTION OF THE PROJECT**

**A. Proposed Operations**

The applicant proposes to culture American oysters using suspended culture techniques (App 1, 2). The applicant intends to place oysters in floating black oyster bags (17”x 33” x 3.5”) and OysterGro cages. Densities of oysters within the bags and cages will vary to determine the best “system” for the site (App 4). According to the gear diagrams included with the application, a maximum of 2,400 floating mesh bags, arranged in 12 rows that are spaced 10 meters apart

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<sup>1</sup> Applicant requested 4.0 acres. DMR calculations indicate the area is 3.97 acres.

<sup>2</sup> These sources are cited, with page references, as CF (case file), App (Application), SR (site report).

will be deployed on the site (App 18). Each row would be 100 meters long and consists of 3 parallel longlines that secure 2 strings of mesh bags (App 19). Rows of bags would be deployed May – November, annually (App 4, 10). The maximum number and proposed layout for OysterGro cages was not provided in the application. Once river temperatures drop below 50 degrees, or by the end of November, all surface gear will be removed from the site and oysters will be consolidated into 6-bag oyster condos or OysterGro cages and sunk to the bottom for the winter (App 4). The applicant does not specify the maximum number of oyster condos that will be deployed on site, but each condo holds up to six bags of oysters (SR 2). The applicant has also proposed to deploy a 12'x16' floating raft, that would be placed in the NW or SW quadrant of the proposed site. The raft would contain 4 mesh inserts that would be used to hold oysters prior to bagging them for sale (App 5). The applicant indicates that the raft would be used for grading, washing, and bagging oysters. While the applicant expects that these activities will initially occur by hand, by years 2-3 of the lease the applicant expects that the raft will hold a motorized tumbler for sorting (App 5). The applicant also intends to use a low-pressure water pump for washing oysters every 2-3 weeks (App 5).

## **B. Site Characteristics**

The proposed lease is in Broad Cove, northeast of Bailey Point, in the St. George River (SR 2). Tidally exposed ledges are located to the southwest, and the Cushing shoreline surrounds the proposal from the southwest to the northeast (SR 2). Bradford Point is located to the northeast, and the St. George shoreline is across the river to the east (SR 2). According to the site report, the tidally exposed ledges are used as a haul-out site by harbor seals (*Phoca vitulina*) (SR 2). Residential properties and a few docks are present along the shoreline surrounding Broad Cove (SR 2), and there is a small beach extending from Bailey Point to the south of the proposed lease (SR 2). The uplands to the south and west of the proposal are composed of mixed forest, while mixed forest and fields comprise the uplands to the north and northwest (SR 2). Across the river, the shoreline is mixed forest and residential (SR 2).

DMR Scientists visited the site on June 16, 2020 at approximately 10:40 am (SR 2). During their visit, depths at the corners of the proposed site ranged from approximately 12.6 feet to 13.4 feet. When correcting for tidal variation, depths are approximately 2.25 feet higher at the nearest high tide, and 6.21 feet lower at mean low water (SR 7). According to the applicant, the bottom of the proposed site is relatively flat, with about 12" of soft mud (App 7). DMR's site report also noted that the bottom of the proposed lease site was comprised primarily of soft mud (SR 7).

### **3. STATUTORY CRITERIA & FINDINGS OF FACT**

Approval of experimental aquaculture leases is governed by 12 M.R.S.A. §6072-A. This statute provides that a lease may be granted by the Commissioner of DMR upon determining that the project will not unreasonably interfere with the ingress and egress of riparian owners; with navigation; with fishing or other water related uses of the area, taking into consideration other aquaculture uses in the area; with the ability of the lease site and surrounding areas to support existing ecologically significant flora and fauna; or with the public use or enjoyment within 1,000 feet of beaches, parks, or docking facilities owned by municipal, state, or federal governments. The Commissioner must also determine that the applicant has demonstrated that there is an available source of organisms to be cultured on the lease site.

#### **A. Riparian Access**

During DMR's site visit, approximately 20 residential houses and 3 docks were observed along the Broad Cove shoreline (SR 10). One dock, located approximately 1,800 feet to the northwest of the proposed lease, had two moorings nearby and a small skiff tied to the dock (SR 10). DMR staff did not closely inspect the other docks, but the site report indicates that all are located at a great enough distance that they are unlikely to be impacted by the proposed lease (SR 10). The site report notes that shore landing throughout Broad Cove is unlikely to be impacted by the proposed lease, because the proposal is located toward the center of the cove, and adjacent to a ledge outcropping that functions as a navigational hazard (SR 10). If the lease is granted, vessels may be required to alter course to reach certain points along the shore, however, it is more likely that shoal water and tidally exposed flats present a greater obstacle than the proposed aquaculture activities (SR 10). In his review of the application, the Harbormaster for the Town of Cushing commented that there appears to be room on either side of the proposed lease for safe passage.<sup>3</sup>

During the site visit, DMR staff observed one poly ball to the west of the proposed lease, and another within the proposed lease boundaries (SR 11). A heavily fouled polystyrene buoy was also observed within the boundaries of the proposed lease, but it was not clear what this buoy may be used for. In his review of the application, the Harbormaster indicated there are no permitted moorings within the boundaries of the proposed lease site<sup>4</sup>, and the site report

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<sup>3</sup> Completed Harbormaster Questionnaire, signed by Austin Donaghy on January 10, 2020.

<sup>4</sup> Completed Harbormaster Questionnaire, signed by Austin Donaghy on January 10, 2020.

indicates that these buoys are not associated with the applicant's Limited Purpose Aquaculture (LPA) license operations (SR 11).

During the comment period, DMR did not receive any comments regarding riparian access. Based on the lack of public comments, and the evidence presented in DMR's site report and the Harbormaster comments, it is reasonable to conclude that there are no concerns regarding the effects the proposed lease may have on riparian ingress and egress.

**Therefore**, the aquaculture activities proposed for this site will not unreasonably interfere with the ingress and egress of any riparian owner.

## **B. Navigation**

A marked navigation channel in the St. George River is located more than 1,600 feet away from the proposed lease. According to the site report, most vessel traffic is expected to remain within the channel, but some boaters are likely to enter Broad Cove for recreational or commercial purposes (SR 10). If the lease is granted, there would be approximately 1,670 feet of navigable water between the proposal and Bradford Point to the northeast (SR 10). This distance would likely allow vessel access to and from the cove. In addition, Cushing's Harbormaster commented that Broad Cove is rarely travelled except for small boat launching by shell fishermen and seaweed harvesters, or the occasional recreational boating by a few Broad Cove shoreline residents with navigable access. The Harbormaster indicated that there appears to be ample clearance on either side of the proposed farm area for navigation.<sup>5</sup>

During the review period, DMR did not receive any comments regarding navigation. Based on the lack of public comments, the evidence in the site report, and the Harbormaster comments, it is reasonable to conclude that navigation in the area will not be unduly affected by the proposed application.

**Therefore**, the aquaculture activities proposed for this site will not unreasonably interfere with navigation.

## **C. Fishing & Other Uses**

**Fishing.** During DMR's site visit on June 16, 2020, one lobster boat was observed in the channel to the east of the proposal and DMR staff observed one lobster buoy within Broad Cove (SR 10). DMR staff also observed a lobster style buoy just outside the western boundary of the

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<sup>5</sup> Completed Harbormaster Questionnaire, signed by Austin Donaghy on January 10, 2020.

proposed lease (SR 10). The Harbormaster for the Town of Cushing commented that there is limited commercial fishing in the area of the proposed lease due to the depth and the mud bottom, and they have never seen significant recreational fishing in the area.<sup>6</sup>

In their review of the proposal, DMR's Bureau of Public Health commented that the area surrounding the proposed lease is heavily used by local shellfish harvesters.<sup>7</sup> However, given the depths at the proposed site, it is likely too deep to allow for harvesting by hand or rake at low tidal stages (SR 11). In addition, there is likely enough distance between the proposed lease and the surrounding tidal flats that access to these resources would not be prevented by the proposed lease, if granted.

During the review period, DMR did not receive any comments regarding fishing in the area. Based on the lack of public comments, and the evidence in the record, it is reasonable to conclude that the proposed aquaculture activities will not unreasonably interfere with fishing.

**Exclusivity.** The applicant has requested that any recreational or commercial boating or fishing activities be excluded from occurring within the boundaries of the proposed lease site (App 7). However, evidence in the record indicates Broad Cove is not heavily used for commercial or recreational activities, and therefore conflicts with the aquaculture operations proposed for this site are unlikely. In addition, if this proposal is granted, it will need to be marked in accordance with U.S. Coast Guard and DMR regulations. Marking the site in accordance with these regulations will alert mariners and commercial or recreational fishermen to the boundaries of the site. According to information in the site report, as described earlier in this decision, there is enough space to navigate around the lease to access the shoreline or other areas within Broad Cove. As such, the lease will not be conditioned to expressly prohibit these uses.

**Other aquaculture uses.** There are 4 LPA licenses within 1 mile of the proposal (SR 12). All four of these LPAs are operated by the applicant, and there is no other aquaculture activity within 1 mile of the proposed lease (SR 12).

**Other water-related uses.** During the review period, DMR did not receive any comments detailing other water-related uses that are not already contemplated in other sections of this decision. Based on the absence of public comments, it is reasonable to conclude that there are no concerns regarding the effects the proposed lease may have on other water-related uses of the area.

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<sup>6</sup> Completed Harbormaster Questionnaire, signed by Austin Donaghy on January 10, 2020.

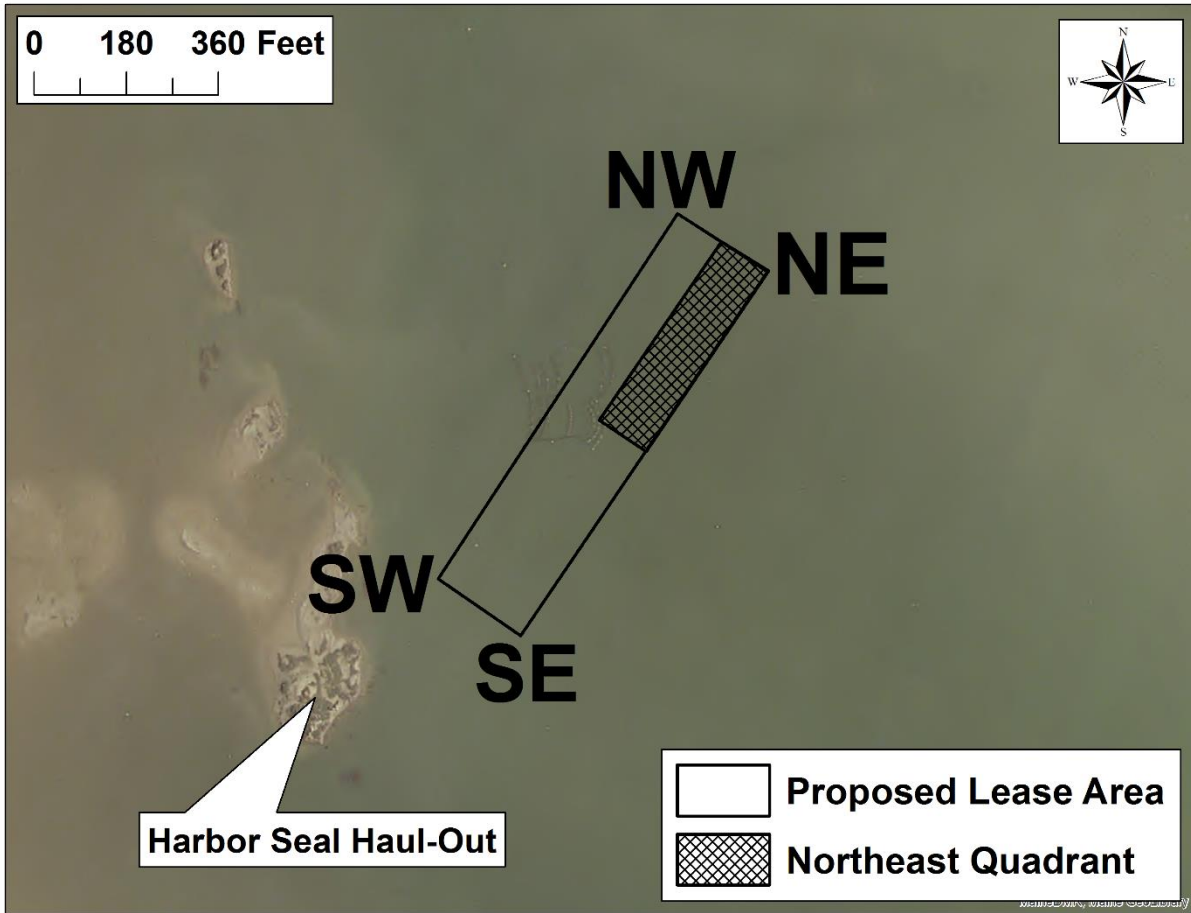
<sup>7</sup> Email from K. Kanwit to [DMRAquaculture@Maine.gov](mailto:DMRAquaculture@Maine.gov) on January 17, 2020.

**Therefore**, considering the other aquaculture uses of the area, the activities proposed for this site will not unreasonably interfere with fishing or other water related uses of the area.

#### **D. Flora & Fauna**

Historical eelgrass (*Zostera marina*) data collected by DMR in 2005 indicate that the nearest eelgrass to the proposed lease was approximately 790 feet to the south. According to historical records of eelgrass collected by DMR in 1995, no eelgrass beds were documented near the proposal (SR 13). During their June 2020 visit to the proposed site, DMR scientists did not observe any eelgrass during their underwater assessment (SR 13).

During their visit to the site, DMR staff observed various gull species (*Larus sp.*) in the general vicinity and an unidentified tern species on floating mesh bags that are associated with the applicant's LPA licenses (SR 14). DMR staff also observed approximately 20 harbor seals hauled out on a nearby ledge and swimming in the water between the ledge and the proposed lease boundaries (SR 14). The seals were observed on a ledge approximately 200 feet southwest of the SW corner of the proposed lease site. The ledge appears to be exposed during most tidal stages, but at lower tidal stages more of the ledge becomes exposed, and as a result extends to approximately 155 feet west of the proposed SW corner (SR 14). The Marine Mammal Protection Act (MMPA, 16 U.S.C. 1361-1423h) prohibits the hunting, harassing, capturing, or killing of harbor seals. The National Marine Fisheries Service (NMFS) guidelines for viewing harbor seals recommend maintaining a minimum distance of 50 yards (150 feet) from harbor seals and limiting the amount of time spent near an individual or group of animals to 30 minutes or less (SR 14-15). If the proposed lease is granted, the applicant will be operating within the distance recommendations, but is likely to be onsite for longer than the recommended 30 minutes. As such, the applicant should be aware that any disruption in harbor seal behavior patterns is considered harassment under the MMPA, and any activity on the proposed site, if granted, that results in a change in seal behavior patterns, such as increased alertness and flushing from the haul-out ledge into the water, should be avoided. Because of the proximity of the lease site to harbor seals, the DMR site report recommends that any work float, and use of a motorized tumbler, water pump, and gas engine should only occur in the NE quadrant of the proposed lease and within two hours of high tide, when seals are less likely to be hauled out (SR 14). A condition reflecting this recommendation will be included in the lease, and Figure 1 shows the location on the lease where these activities are permitted.



**Figure 1:** Proposed lease area showing the northeast quadrant and the location of the harbor seal haul-out

During the review period for this application, DMR sent the application to the Maine Department of Inland Fisheries and Wildlife for their review and comment, but no response was received.

Based on the evidence that the proposed lease does not interact with historical eelgrass beds, and because the lease will include a condition related to activities on the lease and proximity to harbor seals, and because no other comments were received regarding the flora and fauna in the area, it appears that the proposed aquaculture activities for this lease site will not unreasonably interfere with the ecological function of the area.

**Therefore,** the aquaculture activities proposed for this site will not unreasonably interfere with the ability of the lease site and surrounding areas to support existing ecologically significant flora and fauna.

### **E. Public Use & Enjoyment**

There are no beaches, parks, or docking facilities owned by municipal, state, or federal government within 1,000 feet of the proposed lease site.

**Therefore**, the aquaculture activities proposed for this site will not unreasonably interfere with public use or enjoyment within 1,000 feet of beaches, parks, or docking facilities owned by federal, state, or municipal governments.

### **F. Source of Organisms**

The applicant intends to source American oysters from Basket Island Oysters, in Portland, Maine.

**Therefore**, the applicant has demonstrated that there is available source of stock to be cultured for the lease site.

## **4. CONCLUSIONS OF LAW**

Based on the above findings, I conclude that:

1. The aquaculture activities proposed for this site will not unreasonably interfere with the ingress and egress of any riparian owner.

2. The aquaculture activities proposed for this site will not unreasonably interfere with navigation.

3. The aquaculture activities proposed for this site will not unreasonably interfere with fishing or other uses of the area, taking into consideration the number and density of aquaculture leases in the area.

4. The aquaculture activities proposed for this site will not unreasonably interfere with the ability of the lease site and surrounding areas to support existing ecologically significant flora and fauna, taking into consideration the condition maximizing the distance between the proposed work float and the nearby seal haul-out.

5. The aquaculture activities proposed for this site will not unreasonably interfere with the public use or enjoyment within 1,000 feet of beaches, parks, or docking facilities owned by municipal, state, or federal governments.

6. The applicant has demonstrated that there is an available source of stock to be cultured for the lease site.



Accordingly, the evidence in the record supports the conclusion that the proposed aquaculture activities meet the requirements for the granting of an aquaculture lease set forth in 12 M.R.S.A. §6072-A.

## **5. DECISION**

Based on the foregoing, the Commissioner grants the requested experimental lease of 3.97 acres to Jeffrey Schroeder for three years, the term of the lease to begin within twelve months of the date of this decision, on a date chosen by the lessee<sup>8</sup>; however, no aquaculture rights shall accrue in the lease area until the lease is fully executed. This lease is granted to the lessee for the cultivation of American oysters (*Crassostrea virginica*) using suspended culture techniques. The lessee shall pay the State of Maine rent in the amount of \$100.00 per acre per year. Since this is an experimental lease with more than 400 sq. ft. of structures and no discharge, a bond or escrow account is required. The lessee shall post a bond or establish an escrow account pursuant to DMR Rule 2.64 (12)(B) in the amount of \$5,000.00, conditioned upon performance of the obligations contained in the aquaculture lease documents and all applicable statutes and regulations.

## **6. CONDITIONS TO BE IMPOSED ON LEASE**

The Commissioner may establish conditions that govern the use of the lease area and impose limitations on aquaculture activities, pursuant to 12 MSRA §6072-A (15)<sup>9</sup>. Conditions are designed to encourage the greatest multiple compatible uses of the lease area, while preserving the exclusive rights of the lessee to the extent necessary to carry out the purpose of the lease. The following conditions have been incorporated into the lease:

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<sup>8</sup> DMR Rule 2.64 (14) provides:

“The term of the lease shall begin within 12 months of the Commissioner’s decision, on a date chosen by the applicant. No aquaculture rights shall accrue in the lease area until the lease term begins and the lease is signed.”

<sup>9</sup> 12 MRSRA §6072-A (15) provides that:

“The commissioner may establish conditions that govern the use of the leased area and limitations on the aquaculture activities. These conditions must encourage the greatest multiple, compatible uses of the leased area, but must also address the ability of the lease site and surrounding area to support ecologically significant flora and fauna and preserve the exclusive rights of the lessee to the extent necessary to carry out the lease purpose. The commissioner may grant the lease on a conditional basis until the lessee has acquired all the necessary federal, state and local permits.”

1. Any work float and the use of a motorized tumbler, water pump, gas engine, or other noise generating equipment shall only occur in the NE quadrant of the lease and must be limited to use within two hours of high tide, when seals are less likely to be hauled out.

**7. REVOCATION OF EXPERIMENTAL LEASE**

The Commissioner may commence revocation procedures upon determining pursuant to 12 MRSA §6072-A (22) and DMR Rule Chapter 2.64 (13) that no substantial research has been conducted on the site within the preceding year, that research has been conducted in a manner injurious to the environment or to marine organisms, or that any conditions of the lease or any applicable laws or regulations have been violated.

Dated: 8/19/2020



Patrick C. Keliher, Commissioner

Department of Marine Resources