

STATE OF MAINE

Muscongus Bay Aquaculture

DEPARTMENT OF MARINE RESOURCES

DAM DL3x

Experimental Aquaculture Lease Application
Suspended and Bottom Culture of Shellfish
Damariscotta River, Edgecomb, Lincoln County

FINDINGS OF FACT, CONCLUSIONS OF LAW, AND DECISION

Muscongus Bay Aquaculture applied to the Department of Marine Resources (DMR) for a 3-year experimental aquaculture lease on 3.94¹ acres. The proposed site is located northwest of Glidden Ledge, on the western shore of the Damariscotta River, Edgecomb, Lincoln County, Maine, for the cultivation of American/eastern oysters (*Crassostrea virginica*), European oysters (*Ostrea edulis*), hard clams (*Mercenaria mercenaria*), and bay scallops (*Argopecten irradians*) using suspended and bottom culture techniques. DMR accepted the application as complete on September 9, 2021.

1. THE PROCEEDINGS

Notice of the application and the 30-day public comment period were provided to state and federal agencies, the Town of Edgecomb and its Harbormaster, riparian landowners within 1,000 feet of the proposed site, and others on DMR's mailing list. Notice of the application and comment period was published in the October 7, 2021 edition of the *Lincoln County News* and was posted on DMR's website and distributed to subscribers of DMR's aquaculture list-serve. In accordance with 12 M.R.S.A. §6072-A(6), public hearings for experimental leases are optional unless DMR receives five or more written requests for a public hearing during the comment period. DMR did not receive any requests for a public hearing. Therefore, no public hearing was held. The evidentiary record regarding this lease application includes the completed lease application, DMR's site report dated January 27, 2022, and the Department's case file. The evidence from each of these sources is summarized below.²

2. DESCRIPTION OF THE PROJECT

A. Proposed Operations

¹ The Application requested 3.93 acres, but DMR calculations, based on the application coordinates, indicates the area is 3.94 acres.

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

The applicant proposes to culture American/eastern oysters (*Crassostrea virginica*), European oysters (*Ostrea edulis*), hard clams (*Mercenaria mercenaria*), and bay scallops (*Argopecten irradians*) using both suspended and bottom culture techniques. The proposed lease area is divided into three distinct sections, plus a 104-foot-wide navigation lane. The application describes the distinct areas as “pen area”, “bottom plant”, and “nearshore” (App 14). A map showing the proposed lease area and adjacent shoreline is included in Figure 1.

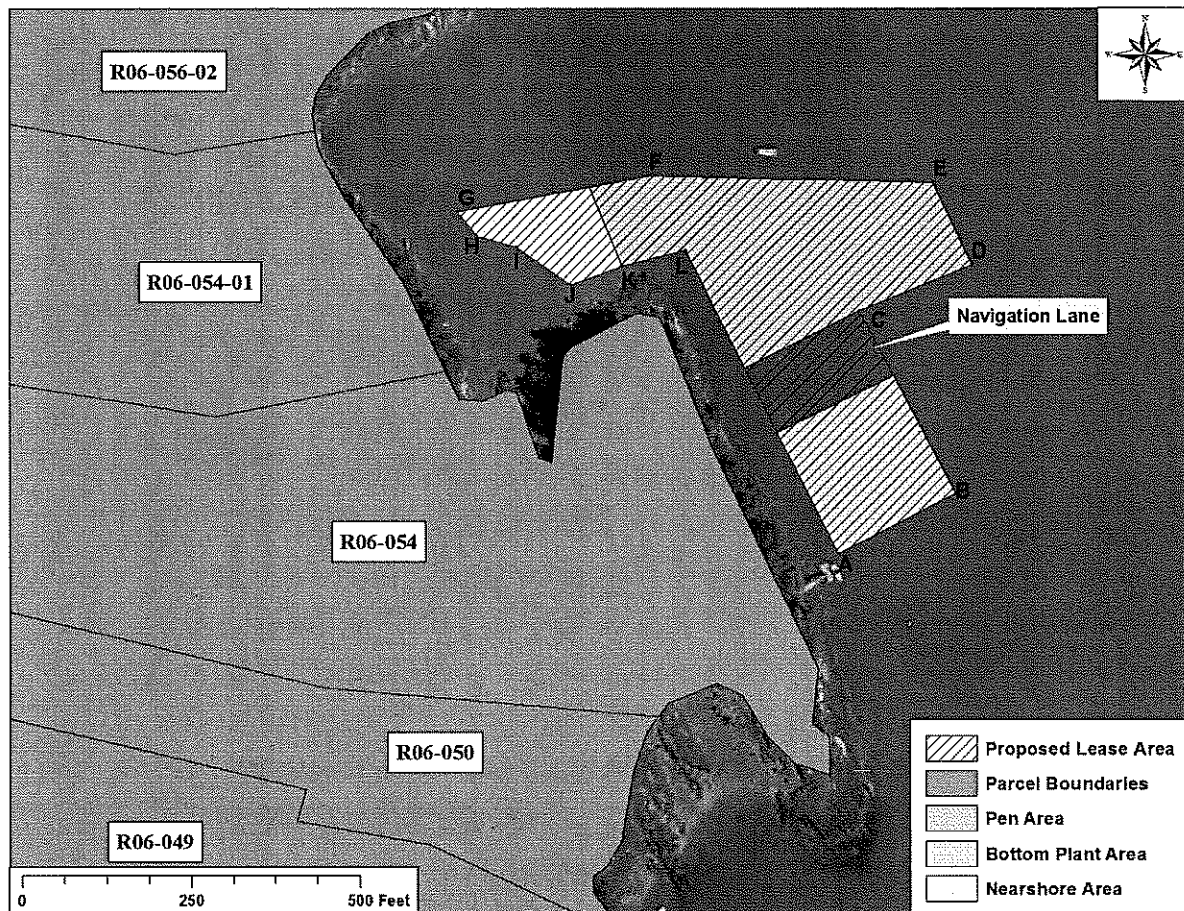


Figure 1: Map of proposed lease area

The area identified as “bottom plant” is approximately 0.92 acres in size, is located on the southern end of the proposed site and would not contain any floating or submerged gear (App 14). The area identified as “pen area” is approximately 2.10 acres and would contain nine storage rafts (25’ x 20’ x 46”) and 107 bottom cages (50” x 50” x 45”). Each bottom cage would contain up to 40 individual trays (24” x 24” x 4”) and be marked with an individual toggle buoy (App 15-21). The “nearshore” area is approximately 0.46 acres and would contain 20 longlines between 85-200’ long that would hold either 750 Zapco tubes (13”x 35”) or 850 soft mesh bags

(21" x 28" x 5"). Longlines would be arranged in five sets of four (App 17). The 104' wide navigation corridor would be located between the bottom plant and pen area sections of the site and would lead to the applicant's dock (App 14).

According to the application, oysters will be placed into the bottom cages or Zapco tubes or soft mesh bags before eventually being moved to the bottom planting section of the site (App 6). A similar process will follow for the other species proposed for the site. Bay scallops will be placed into the nearshore section of the site before eventually being planted on the bottom, but the application indicates that scallops may also be placed in the bottom cages or the storage rafts (App 6). Hard clams will be grown directly on the bottom or in a bag or cage (App 6). Activities at the proposed site would occur throughout the year, and the applicant expects to be onsite daily (App 6). For the nearshore area of the site, the applicant expects most activity to occur in the spring (when stocking occurs) and fall (when harvesting occurs) (App 6). Activity on the bottom planting area of the site would be similar, with seeding activity occurring in the fall, and harvesting occurring the following fall/winter. For the "pen area" of the site, tending and maintenance will occur year round, with stocking and harvesting operations occurring constantly (App 6). During the winter, all gear from the nearshore section of the lease and the floating storage rafts from the pen area of the site will be removed. Bottom cages will remain on the site year round (App 7).

The applicant proposes to harvest from the bottom cages by hoisting the cage into a boat or float, while Zapco tubes would be brought to the shore/dock for offloading. The bottom planted section of the site is proposed to be harvested using a 42 inch drag with a 12 inch opening (App 7).

The applicant expects to service the site from Carolina skiffs with four-stroke engines. A knuckle boom with a 10hp powerpack may be attached to a boat to aid in harvesting bottom cages, and the applicant has also proposed to use a Honda EU220i generator. According to the application, the generator cannot be heard over the boat engines, and the powerpack and generator would likely be used a couple times per week but may be used daily depending on harvesting schedules (App 7).

B. Site Characteristics

DMR scientists conducted a site visit of the proposed lease area on September 17, 2021 and the site was visited again December 1, 2021. The proposed lease is in subtidal waters northwest of Glidden Ledge, along the western shore of the Damariscotta River, in Edgecomb, Maine. The shoreline near the proposal is rocky and leads to forested uplands and the

applicant's commercial facility (SR 2). Both the eastern and western shorelines of the river in the vicinity of the proposal are scattered with residential houses and docks (SR 2). During DMR's visit to the site, depths ranged from 7.2 to 26.8 feet across different corners of the site. Correcting for tidal variation derives depths between 0.26 to 26.3 feet at mean low water (SR 7). According to the NOAA chart, portions of the proposal appeared to overlap with intertidal land. However, the applicant submitted evidence showing that the proposal is located below mean low water (App 54-56), and DMR's site report confirmed that the proposed lease location is subtidal.

According to the site report, the nearest point on land is 15 feet to the southeast of corner K. The nearest dock, outside of the proposed lease area, is approximately 20 feet southwest of Corner A. This dock is owned by Tonie Simmons, who is an employee of Muscongus Bay Aquaculture, and is listed as a contact person on the application. The nearest dock owned by an individual not associated with the proposal is approximately 400 feet north of the proposed F-G boundary (SR 9).

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

The proposed lease is located on the western shoreline of the Damariscotta River, near the applicant's upland facility (SR 9). Encompassed by the proposed lease area are the applicant's dock, several storage floats and vessel moorings, and approximately 20 feet southwest of the proposed 'Corner A' is a dock owned by Tonie Simons, who is an employee of the applicant (SR 9). DMR's site report indicates that no negative impact to the use of these structures is expected if the proposal were to be granted (SR 9).

The nearest dock and structures not associated with the applicant appear to be a dock located roughly 400 feet to the north of the proposed F-G boundary, and a mooring and storage

rafts located approximately 270-370 feet to the north of the proposed E-F boundary (SR 10). DMR's site report indicates that the distance between the proposal and the dock, mooring, and storage rafts to the north is likely sufficient to allow for unimpeded access. However, the report also notes that some traditional access routes, especially those from the south, may require some adjustment to avoid the 'pen area' of the proposed lease (SR 10).

During the public comment period, a comment was received from Richard and Marjorie Thompson, who identified as the landowners of Edgecombe lot R06-054-01, which is adjacent to the 'nearshore area' of the proposed lease. Their letter indicates that they acquired a feasibility study for the potential construction of a pier along their shoreline³. Included with their letter was a diagram detailing the proposed location of a pier along the shoreline of the property, and comments indicate that any pier extending from their property may intersect with the 'nearshore area' proposed by the applicant. According to details in the comment, the feasibility study was conducted prior to their purchasing the property, indicating that the study was likely conducted well before the aquaculture lease application was submitted to DMR. The comment from the Thompsons indicates that while they have not developed their property, they want to ensure access to their shoreline is retained and that, as proposed, they have concerns the aquaculture activities would interfere with their riparian access and navigation. DMR's site report echoes some of the same concerns and indicates that access to, or the ability to install a dock on a portion of lot R06-054-01 may be hindered by the presence of aquaculture gear in the 'nearshore' area of the proposed lease (SR 10). DMR's site report finds that based on the feasibility assessment details included in the comment letter, it appears the potential dock would extend slightly over 132 feet from the high waterline and, based on visual approximation of where the dock would be constructed, the nearest proposed aquaculture gear would be approximately 110 feet away (SR 10).

The comment letter from the Thompsons indicated that they and the applicant had engaged in discussions about their concerns regarding riparian ingress/egress and navigation. Subsequently, in both the comment letter and follow up communication DMR received on November 1, 2021 from Jeff Auger⁴ (who is employed by the applicant), it appears that if a dock were to be constructed the applicant is willing to remove any aquaculture gear from the section of the proposal nearest the proposed dock location to ensure access and safe navigation is possible. Mr. Auger provided DMR with a figure outlining where gear would be removed

³ CF: Public comment from R. and M. Thompson received by DMR on 11.2.21

⁴ CF: email to DMR Aquaculture program from J. Auger on 11.1.2021

(shown in figure 2) and requested that if the lease is approved, that the following lease condition be included to address the Thompsons concerns:

“Should the owner of plot 54.1 (map 6) wish to build a dock off their property, MBAQ agrees to remove any aquaculture gear southwest of points F (43 58 32.7//69 34 23.6) and I (43 58 31.77//69 34 26.28) (see diagram).”

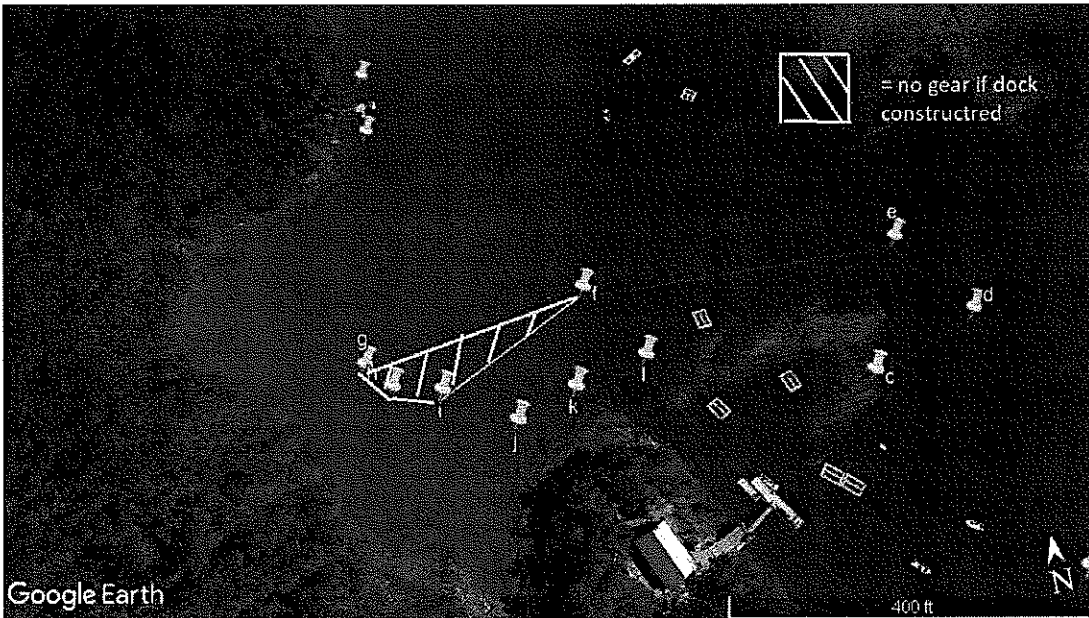


Figure 1: Proposed gear free area of the pending lease if a dock were to be constructed on Edgecomb lot R06-054-01. Figure created by the applicant.

In accordance with 12 M.R.S.A. §6072-A(15), the Commissioner may establish conditions that govern the use of the lease area and place limitations on the aquaculture activities. Chapter 2.37(1)(B) of DMR’s regulations further specify the types of restrictions and requests the Commissioner may consider in evaluating whether to place conditions on a lease site. Any conditions need to comply with the provisions set forth in Chapter 2.37(1)(B) and are based on the applicable evidence in the record. While a dock does not currently exist on lot Edgecomb lot R06-054-01, evidence in the record supports that the owners have some intention to construct one, given a feasibility study was acquired prior to the submission of the aquaculture lease application from Muscongus Bay Aquaculture. As such, a condition will be imposed on the lease requiring Muscongus Bay Aquaculture to accommodate a dock, should the owners of lot R06-054-01 build one, and the safe ingress and egress from said dock.

One additional comment was received from a nearby landowner regarding ingress and egress and safe navigation to their shorefront considering the proposed aquaculture activities.⁵ However, the comment mainly requested confirmation that the proposed activities would not interfere with riparian ingress or egress or an ability to install a dock or mooring in the future, it did not provide detail as to how the proposed activities may interfere with those uses. While the comment came from a landowner within 1,000 feet, it appears that their property is not immediately adjacent to the proposal. DMR's site report did not indicate that riparian ingress or egress to any other shorefront property within 1,000 feet would be prevented by the proposal but did state that traditional access routes to Edgecomb lot R-06-56-02 may be altered by the presence of the proposed aquaculture gear. However, the proposed activities are unlikely to prevent ingress and egress to this property.

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

B. Navigation

The proposed lease is located along the western shore of the Damariscotta River, northwest of Glidden Ledge. According to DMR's site report, the proposal is located 55 feet to the west of the 63-foot contour line associated with the navigational channel within the river (SR 11). While the Damariscotta River experiences heavy commercial and recreational traffic because the proposed site is outside of the main navigation channel, it is unlikely to interfere with vessel flow in the area (SR 11). Because the proposal is located adjacent to the applicant's upland facility, most mariners entering the cove are unlikely to have need to transit directly through the proposed lease (SR 11). However, because some portions of the proposed lease site are adjacent to lot R06-054-01, navigating to some sections of the shoreline of that lot may be challenging. However, as discussed in the previous section of this decision, in their comment letter, owners of lot R06-054-01 indicated that with the inclusion of a condition related to gear placement in the nearshore area of the lease if they were to construct a dock, safe navigation to and from their property can be achieved.

One other comment was received from a nearby landowner indicating they want confirmation that safe navigation in the area will not be hindered by the proposal. However, their letter did not detail ways in which they felt the proposal would create unsafe navigation. The portions of the cove not utilized by the proposed lease would remain open and available for navigation.

⁵ CF: Email from S. Conrad to DMRAquaculture@maine.gov on 11.6.21

Because a condition has been imposed to ensure dock access remains for one of the parcels closest to the proposed lease activities, and no other specific concerns regarding navigation have been detailed, it appears that navigation in the area should not be unduly obstructed by the proposed aquaculture activities.

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

C. Fishing & Other Uses

Fishing. During DMR's visit to the site on September 17, 2021, approximately 8 lobster traps were observed near the proposal, and more moderate lobstering activity was noted in the channel to the east of the proposal (SR 11). No lobster buoys were observed within the boundaries of the proposed site.

The "nearshore area" of the proposal is in very shallow water, and DMR's site report notes that this portion of the site may drain during negative tides. According to a DMR Area Biologist, they have no concerns about wild shellfish harvesting occurring within the proposed lease area⁶. DMR's site report notes that according to the DMR Recreational Fishing Program, striped bass fishing does occur in the Damariscotta River, and often close to shore in waters less than 20 feet deep (SR 12). No recreational fishing was observed by DMR during their visit to the site in September 2021, and the site report notes that the site does not exhibit any distinct topographical features that would make it a likely attraction for recreational anglers (SR 12). The application states that some recreational fishing does occur on the eastern edge of the proposed lease but can occur all around the site, but that it is generally infrequent, and occurs mainly from June-August (APP 8). Additionally, the application indicates that recreational fishing would be permitted within the lease boundaries if approved (APP 10).

During the comment period, no comments from commercial or recreational fishermen were received. Based on the lack of public comments, evidence from DMR's site report and the application, it is reasonable to conclude that the proposed aquaculture activities will not unreasonably interfere with fishing.

Exclusivity. The applicant has requested that no commercial shellfishing activities occur within the proposed lease area (APP 10).

Other aquaculture uses. There are 4 Limited Purpose Aquaculture (LPA) licenses and 1 aquaculture lease within 1,000 feet of the proposed lease (SR 12). The closest aquaculture

⁶ Email from A. Leach to C. Adams on 11/15/2021

to the proposed site is LPA license BSCU318 which is approximately 345 feet to the north and is approved for the bottom and suspended culture of shellfish. The completed application included a note indicating that Barb Scully, the license holder of BSCU318 and two other nearby LPAs, had concerns over silting she has experienced at her nearby dock, and is worried that the proposed lease activities would further increase silting (App 57). The application indicated the proposed operations had been scaled back to address some of Barb Scully's concerns and that while dragging for oysters does release a silt cloud, research has shown it dissipates quickly and should have minimal impacts, and that the presence of oysters in the proposed lease should also filter out any silt in the water (App 57). No comment letter was received from Barb Scully during the comment period.

DMR's site report included reference to some scientific literature on the ecological effects of drag harvesting cultured shellfish, which indicate that the effects of drag harvesting are typically minimal, localized, and with quick recovery rates (SR 13). However, the site report notes that potential for increased siltation rates appears to exist near the proposed site, depending on the sediment type and hydrodynamics (SR 13). Sediment observed along the drop camera transect conducted by DMR was visually characterized as mud (SR 13). The site report further describes that a geophysical survey of the Damariscotta River found that the substrate in Lower Dodge Cove is largely composed of softer sediment (with firmer sediment found in the areas close to the main river channel and shore), and that a hydrodynamic study of the area documented the occurrence of a counterclockwise gyre during flood tides northwest of the constriction at Glidden Ledge (SR 13). The study referenced in the site report found that during flood tides, the flow of the gyre resulted in landward/northward current directions in the main river channel and seaward/southward current directions in the shoal areas to the west of the channel, including Lower Dodge Cove (SR 13). While the specific implications of this gyre, local sediment characteristics, and suspension of particles in the water from dragging at the proposed site has not been studied, DMR's site report notes that drag harvesting may be less likely to increase siltation in Lower Dodge Cove if it occurs during the ebb tidal stage when southward/seaward flow is observed at the site (SR 13). As such, a condition will be included on the lease to limit when dragging at the site can occur. DMR's site report notes that monitoring for increased siltation within the cove could corroborate the effectiveness of dragging on an ebb tide and help identify any potential impacts from dragging at the site. While monitoring by the leaseholder will not be required, the leaseholder is encouraged to conduct regular monitoring regarding sedimentation in and around Lower Dodge Cove to evaluate what impact their

aquaculture activities may be having on the area. Such information may be especially useful if the applicant intends to apply for a standard lease in this location.

Other water-related uses. During the review period, DMR received one comment from nearby landowners that expressed concerns about the effects of aquaculture development in the vicinity and seeks confirmation that recreational activities such as swimming and boating would not be impacted by the proposal. However, the comment did not indicate in which ways the proposed activities may impact these uses, or that those uses would be prevented should the proposal be approved. Navigation in the area has already been discussed in other sections of this decision. In addition, portions of the cove not utilized for aquaculture will remain available for recreational uses such as swimming.

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

Based on historical eelgrass (*Zostera marina*) data collected by the Maine Department of Marine Resources in 2005, the closest documented eelgrass beds are located 1,490 feet from the proposed site. DMR conducted drop three drop camera transects within the proposed lease site on December 1, 2021, and no evidence of eelgrass was observed (SR 16).

According to data maintained by the Maine Department of Inland Fisheries and Wildlife (MDIFW), Tidal Wading Bird and Waterfowl Habitat, which is defined as significant wildlife habitat by Maine's Natural Resource Protection Act, overlaps with the proposed site by approximately 15 feet (SR 15). DMR sent the application to the MDIFW for their review and comment, to which they responded that minimal impacts to wildlife are anticipated for the project⁷.

No public comments were received regarding the flora and fauna in the area. Based on the evidence that the proposed lease does not interfere with significant wildlife, 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 interfere with the ecological functioning 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.

⁷ CF: Email to DMRAquaculture@maine.gov from R. Settele on October 8, 2021

E. Public Use & Enjoyment

There are no beaches, parks, or docking facilities owned by federal, state, or municipal governments within 1,000 feet of the proposed lease site. In addition, no comments were received to indicate there is a concern regarding the public use and enjoyment of this area if the proposed lease is approved.

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/eastern oysters, European oysters, hard clams, and bay scallops from their Muscongus Bay Aquaculture hatchery. This is an approved source by DMR.

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. Given the condition related to dock construction, 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. Given the condition related to dragging, 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.

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 an experimental lease of 3.94 acres to Muscongus Bay Aquaculture 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:⁸ 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/eastern oysters (*Crassostrea virginica*), European oysters (*Ostrea edulis*), hard clams (*Mercenaria mercenaria*), and bay scallops (*Argopecten irradians*) using suspended and bottom 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)⁹. Conditions

⁸ 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.”

⁹ 12 MRSA §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

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 imposed on this lease.

1. Should the owner of Edgecomb lot R06-054-01 wish to construct a dock off their property, the leaseholder is required to reasonably accommodate the installation of such a dock, in accordance with any specifications authorizing the dock, by removing aquaculture gear from the immediate 'nearshore' area of the lease. At a minimum, gear will be removed from the area of the lease enclosed by lease corners F-G-H-I-F. Gear must be removed within two weeks from the start of any dock construction.
2. Harvesting product via drag may occur only during the ebb tidal stage.

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: _____

7/20/22



Patrick C. Keliher, Commissioner

Department of Marine Resources

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.”