

STATE OF MAINE
DEPARTMENT OF MARINE RESOURCES

Colby Davidson
MUS HIX

Experimental Aquaculture Lease Application
Suspended Culture of Marine Algae
Muscongus Bay, Bremen, Maine

FINDINGS OF FACT, CONCLUSIONS OF LAW, AND DECISION

Colby Davidson applied to the Department of Marine Resources (DMR) for a three-year experimental aquaculture lease located east of Hog Island, in Muscongus Bay, Bremen, Lincoln County. The proposed lease is 3.93 acres¹ and is for the suspended cultivation of marine algae (*Saccharina latissimi* and *Saccharina angustissima*) for commercial aquaculture research and development.

1. THE PROCEEDINGS

DMR accepted the application as complete on May 13, 2022. Notice of the application and the 30-day public comment period was provided to state agencies, riparian landowners within 1,000 feet of the lease site,² the Town of Bremen and its Harbormaster, and others on DMR's mailing list. Notice of the complete application and comment period was published in the September 29, 2022, edition of *The Lincoln County News*. Title 12 M.R.S.A. §6072-A (6) provides that the Commissioner shall hold a public hearing if five or more persons request a public hearing within the 30-day comment period. No requests for a public hearing were received, and no hearing was conducted. A Harbormaster Questionnaire was sent to the Bremen Harbormaster on September 27, 2022, requesting information about designated or traditional storm anchorages, navigation, riparian ingress and egress, fishing or other uses of the area, ecologically significant flora and fauna, beaches, parks, and docking facilities in proximity to the proposed lease. The evidentiary record regarding this lease application includes the application, DMR's site report dated October 2, 2023, and the case file. The evidence from each of these sources is summarized below.³

LIST OF EXHIBITS

1. Case file
2. Application

¹ Applicant originally requested 4 acres. DMR calculations indicate the area is 3.93 acres.

² For purposes of notice, the Department defines "riparian owner" as a shorefront property owner whose property boundaries are within 1,000 feet of the proposed site.

³ These sources are cited, with page references, as App (Application), CF (case file), and SR (site report).

3. DMR site report, issued on October 2, 2023

2. DESCRIPTION OF THE PROJECT

A. Proposed Operations

The purpose of the proposed experimental lease site is to determine the viability of the site for marine algae cultivation (App 4). The applicant is proposing to culture marine algae using twenty-three 300-foot longlines as well as moorings, depth control weights, and marker buoys (App 19, 23). All gear, with the exception of the moorings (including lines, chains, and balls) and the corner markers, will be removed from June 1st to November 1st (App 5). The applicant intends to seed, tend, and harvest from November to June, with weekly site visits plus approximately one week each for seeding and harvesting (App 4). Marine algae will be harvested from a lobster-style boat with mounted reels (App 5).

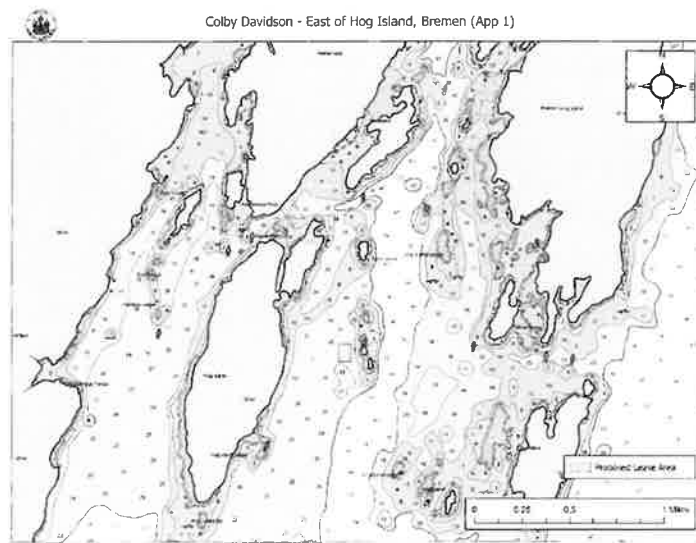


Figure 1: Vicinity map. Image generated by DMR staff.⁴

B. Site Characteristics

On July 17, 2023, DMR assessed the proposed lease site. DMR arrived on site at approximately 11:55 AM. The eastern shore of Hog Island, in the vicinity of the proposal, consists of rocky coastline leading to coniferous uplands. Crotch Islands, located east of the proposal, are small, undeveloped subtidal

⁴Unless otherwise noted, all figures in this report were created in ArcGIS Pro version 2.9 using digitized NOAA Nautical Charts or geo-referenced aerial photographs provided by The Maine Office of GIS.

islands with some coniferous trees (SR 2). The application states approximate depths at mean low tide are 24-31 feet (App 8).

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 for commercial aquaculture research and development or for scientific research 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 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 applicants have demonstrated that there is an available source of organisms to be cultured for the lease site.⁵

A. Riparian Access

During the site visit, DMR did not observe any docks, houses, or moorings in the vicinity of the proposal. Nearby Crotch Islands, located to the east of the proposal, are owned by the State of Maine and no docks or other structures were observed at the time of the site visit. Nearby Hog Island, located to the west of the proposal, is owned by the National Audubon Society and no docks or other structures were observed in the vicinity of the proposal at the time of the site visit (SR 4).

A Harbormaster Questionnaire was sent to the Bremen Harbormaster on September 27, 2022. No response was received. No comments on riparian access were received by DMR.

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 site is located approximately 240 feet to the west of Crotch Islands at mean low water (MLW). There is approximately 1,400 feet of navigable water between the proposed lease site and the eastern shore of Hog Island at MLW. The main navigational channel is located to the east of Crotch Islands. The center of the main navigational channel is approximately 1,200 feet to the east of the proposal. During DMR's site visit, recreational powerboats were observed transiting in the main

⁵ In any municipality with a shellfish conservation program, the Commissioner may not issue an experimental lease for the intertidal zone within the municipality without the consent of the municipal officers. 12 M.R.S.A. §6072-A(11). This site is not located within the intertidal zone.

navigational channel to the east of Crotch Islands. One recreational powerboat was observed transiting between Hog Island and the western boundary of the proposal (SR 5).

All gear, with the exception of the moorings (including lines, chains, and balls) and the corner markers, will be removed from June 1st to November 1st. A Harbormaster Questionnaire was sent to the Bremen Harbormaster on September 27, 2022. No response was received. No comments on potential impacts to navigation were received by DMR. There is sufficient distance between the project site and the navigable channel for vessels to transit without interference with the proposed gear.

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

C. Fishing & Other Uses

Fishing. During the site visit, DMR documented lobster buoys within the boundaries of the proposed lease site and in the general vicinity of the site. DMR recorded the location of buoys closest to the proposed lease site. One lobster buoy was located within the proposed site's boundaries and one buoy was located on the eastern boundary of the proposed site. There were approximately ten lobster buoys located between Crotch Islands and the eastern boundary of the proposed site. There were approximately 30 buoys located to the north of the proposed site and approximately 30 located to the west of the proposed site. DMR observed lobster within the proposal boundaries (*Homarus americanus*) on the underwater camera footage collected during the site visit (SR 5, 6).

The application states lobster fishing activity occurs frequently within 100 feet of the site from May to October (App 6). A Harbormaster Questionnaire was sent to the Bremen Harbormaster on September 27, 2022. No response was received. No comments concerning fishing were received by DMR. Most gear associated with the project will be removed by June 1 and then redeployed no earlier than November 1, so it is unlikely the lease will unreasonably interfere with fishing activity.

Other aquaculture uses. There are no aquaculture leases or limited purpose aquaculture (LPA) sites located within 1,000 feet of the proposed lease site (SR 6).

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

D. Flora & Fauna

On July 17, 2023, DMR conducted a drop-camera transect to assess the epibenthic ecology of the proposed lease. Occasional American lobster (*Homarus americanus*) and crab (*Cancer spp.*) were observed in the transect. In addition to the epibenthic flora and fauna observed, there were double-crested

cormorants (*Nannopterum auritum*), osprey (*Pandion haliaetus*), an osprey nest, and gulls (*Larinae* spp.) in the general vicinity of the proposal (SR 7).

Historical records of eelgrass collected by DMR in 2010 indicate mapped eelgrass presence in the vicinity of the proposal. The nearest mapped eelgrass is approximately 165 feet east of the proposal.⁶ Eelgrass blades were observed drifting on the surface of the water in the vicinity of the proposal. No eelgrass was observed on underwater camera footage within the proposal boundaries during the site assessment (SR 7).

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), the proposed lease is located approximately 165 feet to the west of mapped tidal waterfowl and wading bird habitat. Data collected by the United States Fish and Wildlife Service in 2022 by aerial nest survey shows the closest mapped Bald Eagle nesting site to be approximately 0.63 miles northwest of the proposal.

On October 12, 2022, a Wildlife Biologist with MDIFW responded by email to a “Request for Agency Review and Comment” stating minimal impacts to wildlife are anticipated for this project.⁷ No other comments concerning flora and fauna were received by DMR.

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 federal, state, or municipal 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 proposes to obtain stock at Summit Point LLC in Falmouth, Maine. This facility is currently listed as an approved source for the proposed stock. If the applicant is unable to obtain stock from this facility, then it must come from another DMR approved source.

⁶ Data obtained from The Maine Office of GIS “GISVIEW.MEDMR.Eelgrass”. This is the most current record of mapped eelgrass within the vicinity of the proposal.

⁷ Email correspondence between MDIFW and MDMR

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

4. CONCLUSIONS OF LAW

Based on the above findings, the Department concludes 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.
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 the requested experimental lease of 3.93 acres for commercial aquaculture research and development to Colby Davidson, 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 lessee⁸; however, no aquaculture rights shall accrue in the lease area until the lease is fully executed.

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.”

This lease is granted to the lessee for the suspended cultivation of marine algae (*Saccharina latissima* and *Saccharina angustissima*). The lessee shall pay the State of Maine rent in the amount of \$100.00 per acre per year. Because this is an experimental lease with more than 400 square feet 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)(A) 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 M.R.S.A §6072 (7-B). 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 purposes of the lease. No conditions are imposed on this lease.

7. REVOCATION OF EXPERIMENTAL LEASE

The Commissioner may commence revocation procedures upon determining pursuant to 12 MRSA §6072-A (22) 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: _____

12/11/23



Patrick C. Keliher, Commissioner
Department of Marine Resources