

STATE OF MAINE

Colby Davidson

DEPARTMENT OF MARINE RESOURCES

MEDO HI2x

Experimental Aquaculture Lease Application

Suspended culture of sugar kelp (*Saccharina latissima*)
and skinny kelp (*Saccharina angustissima*)

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 on the east side of Hog Island, in Muscongus Bay, Bremen, Lincoln County. The proposed lease is 3.89 acres and is for the suspended culture of sugar kelp (*Saccharina latissima*) and skinny kelp (*Saccharina angustissima*) for commercial aquaculture research and development. DMR accepted the application as complete on August 15, 2022.

1. THE PROCEEDINGS

Notice of the application and the 30-day public comment period was provided to state agencies, riparian landowners within 1,000 feet of the proposed lease site, 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. Two comments were received during the comment period, but no requests for a public hearing. Therefore, DMR did not elect to conduct a hearing. The evidentiary record regarding this lease application includes the application, DMR's site report dated November 7, 2023, and the case file. The evidence from each of these sources is summarized below.¹

LIST OF EXHIBITS

1. Case file
2. Application
3. DMR site report, issued on November 7, 2023

2. DESCRIPTION OF THE PROJECT

¹ These sources are cited, with page references, as App (Application), CF (case file), and SR (site report).

A. Proposed Operations

The purpose of the proposed experimental lease site is to determine the viability of a lease design with removable tackle and to determine the viability of growing kelp in the area (App 4). The applicant is proposing to culture kelp using twenty-three, 300 foot longlines, each spaced twenty feet apart (App 19). Each longline would have nine depth control buoys attached, each spaced 33 feet apart (App 19). Every other long line, starting with the first line, will be moored to the sea floor and have a mooring marker (App 19). The moorings will each be 1,800lb concrete blocks attached to each other with a 1/4" chain (App 25). Lines without moorings and mooring markers will be attached to lines with mooring and mooring marks with bridle line (App 19). Kelp will be seeded onto horizontal long lines in the fall (App 4). These long lines will be checked weekly throughout the winter to measure both quality and growth (App 4). The kelp will be harvested in the spring, prior to June 1st (App 4). The applicant will use either a small Carolina skiff or lobster style boat (App 5). Overall, the applicant states the proposed activities will all occur between November 1st and June 1st (App 4).

In the off season, from June 1st to October 31st, only the site markers, mooring blocks, chains connecting the mooring blocks, four mooring lines, and four mooring balls would remain on the site (App 5). All removed gear would be stored on land (App 5).



Colby Davidson (App 2)
East of Hog Island, Muscongus Bay, Bremen

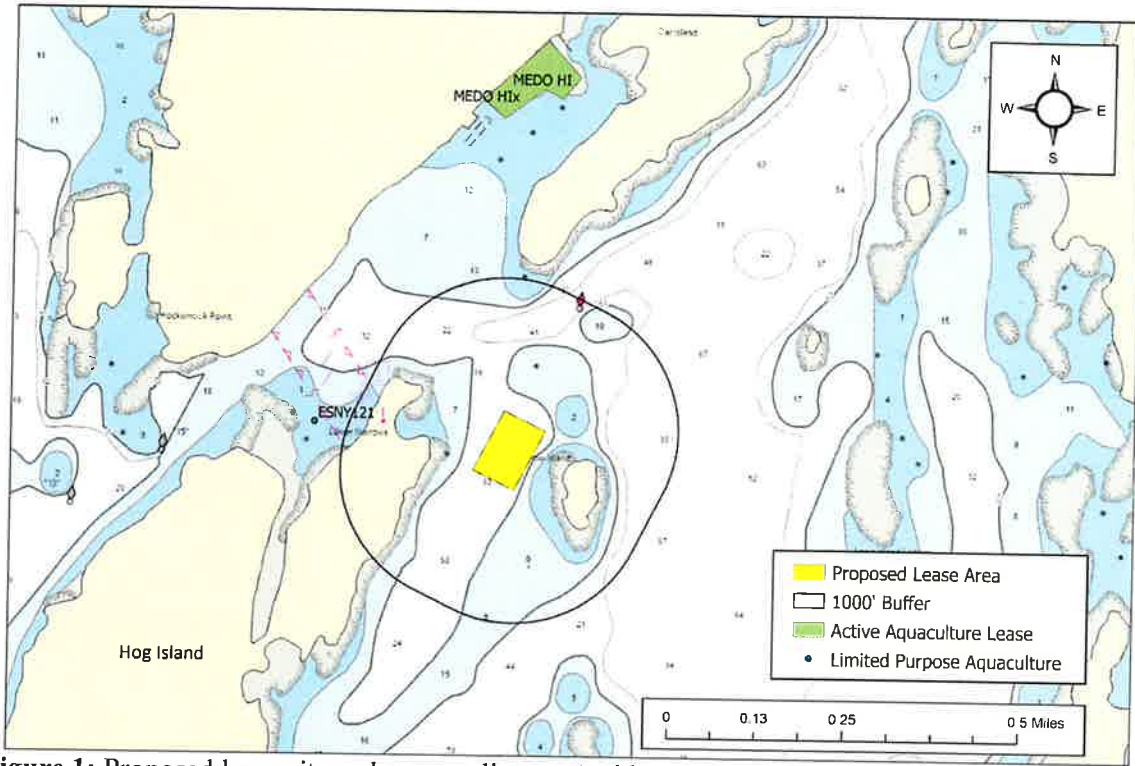


Figure 1: Proposed lease site and surrounding area with aquaculture leases and LPA licenses in the general vicinity of the proposal. Image taken from DMR’s site report.

B. Site Characteristics

The proposed lease area is located east of Hog Island, in Muscongus Bay, in the Town of Bremen (SR 1). On July 17, 2023, DMR scientists assessed the proposed lease area. DMR scientists arrived on site at approximately 10:30 a.m. (SR 2). The surrounding area is comprised of rocky coastline leading to coniferous uplands (SR 2). DMR scientists observed the bottom characteristics of the proposed lease site via drop camera transects (SR 2). The bottom of the proposed lease area is mud with clam/oyster rubble (SR 2).

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 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 applicants have demonstrated that there is an available source of organisms to be cultured on the lease site.

A. Riparian Access

Maine law and DMR's Chapter 2 regulations² require the Commissioner to examine whether riparian owners can safely navigate to their shore. 12 M.R.S.A. § 6072-A(13)(A); Chapter 2, § 2.37(1)(A)(1). In examining riparian owner ingress and egress, the Commissioner "shall consider the type of structures proposed for the lease [site] and their potential impact on the vessels which would need to maneuver around those structures." Chapter 2, § 2.37(1)(A)(1).

During the site visit on July 17, 2023, DMR did not observe any docks within the vicinity of the proposal (SR 4). DMR scientists did observe seven buildings on Hog Island, the closest being approximately 300 feet to the west of the proposal (SR 4). DMR scientists also observed a mooring field approximately ¼ mile northwest of the proposal (SR 4).

A Harbormaster Questionnaire was sent to the Bremen Harbormaster on September 27, 2022. DMR did not receive a response. DMR did not receive any comments from members of the public regarding riparian access.

While there are buildings within close proximity, approximately 300 feet, to the proposal, DMR scientists did not observe any docks or moorings that were directly associated with the buildings seen on Hog Island. Due to there being no observed access points that riparian landowners are using to access their land near the proposed lease site, it is unlikely that this site would interfere with the riparian landowners accessing their land.

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

B. Navigation

When examining navigation, the Commissioner considers whether the lease activities would interfere with commercial or recreational navigation around the lease area and considers the current uses of the navigational channels in the area. 12 M.R.S.A. § 6072-A(13)(B); Chapter 2.37(1)(A)(2). DMR's Chapter 2 regulations require the Commissioner to examine whether any lease activities requiring surface and or subsurface structures would interfere with commercial or recreational navigation around the lease area. In examining navigation, the Commissioner "shall consider the current uses and different degrees of

² 13-188 C.M.R. ch. 2.

use of the navigational channels in the area in determining the impact of the lease operation.” Chapter 2, § 2.37(1)(A)(2).

The main navigational channel is located approximately 700’ east of the proposal (SR 5). However, vessels often travel between Hog Island and Crow Island (SR 5). The proposal is located approximately 220 feet to the east of Hog Island at mean low water (MLW) and approximately 160 feet northwest of Crow Island at MLW (SR 5). Red navigation buoy “16” is located approximately 950 feet northeast of the proposal (SR 5).

During the site visit, DMR observed twelve vessels navigating near or within the proposal boundaries (SR 5). One commercial fishing vessel and one recreational powerboat transited through the proposal (SR 5). One commercial fishing vessel was observed to the east of the proposal, one commercial fishing vessel was documented traveling north of the proposal, and one commercial fishing vessel was traveling south of the proposal (SR 5). Three commercial fishing vessels were observed transiting easterly near the southern end of Crow Island (SR 5). Three recreational powerboats were observed transiting easterly near the main navigational channel and one recreational powerboat was traveling north in the main navigational channel (SR 5).

A Harbormaster Questionnaire was sent to the Bremen Harbormaster on September 27, 2022. DMR did not receive a response.

DMR received a comment from a member of the public stating that they have observed mid to large sized marine vessels using the area where the proposal is located from April through to November, and that this channel is the only deep waterway between Hog Island and Crow Island (CF – Public Comment: J. Li). Audubon Seabird Institute also stated that they make frequent use of the area between Crow Island and Hog Island each year from April 15 to October 15 for educational programs on Hog Island and by researchers boating in connection with their seabird research, and have additionally seen commercial and recreational boaters making frequent use of this area, noting that the boaters often use the public access areas of Crow Island, Hog Island, and Oar Island (CF – Audubon Seabird Institute).

All comments from the public indicate that the area in which the proposal is located, the channel between Hog Island and Crow Island, is used frequently for commercial and recreational navigation from April through to November. The applicant has stated that their gear would be in the proposal area from November 1st to June 1st. This leaves an overlap of two months, April and May, in which gear will be present during the time when navigation occurs frequently in this channel. Because of the volume of navigation that occurs in this channel from April through to November, it is likely that the placement of this proposal would unreasonably interfere with the navigational activities during the April and May overlap period. If the gear and marker buoys were to be removed on or before March 31st, it would allow for the navigational activities to continue to occur in the channel without being impeded by the placement

of the proposal. During the rest of the season popular for navigation in the channel, the gear and marker buoys will not be present, and the entire channel will be free to navigate by all vessels.

The original proposed operation was to have the gear in the proposal from November 1st to June 1st. For the reasons above, DMR finds that to prevent unreasonable interference with navigation in the channel, a condition should be imposed if this lease is granted requiring that all gear, site markers, and mooring balls must be removed on or before March 31st. With this condition, only the mooring blocks, chains connecting the mooring blocks, and four mooring lines would be allowed to remain on the site from April 1st to October 31st.

Therefore, the aquaculture activities proposed for this site will not unreasonably interfere with navigation provided that applicant's gear, site markers, and mooring balls are removed from the site on or before March 31.

C. Fishing & Other Uses

When examining fishing and other uses, the Commissioner considers whether the lease activities would unreasonably interfere with commercial or recreational fishing or other water-related uses of the area. 12 M.R.S.A. § 6072-A(13)(C). In examining fishing and other uses, the Commissioner "shall consider such factors as the number of individuals that participate in recreational or commercial fishing, the amount and type of fishing gear utilized, the number of actual fishing days, and the amount of fisheries resources harvested from the area." Chapter 2, § 2.37(1)(A)(3).

Fishing. During the site visit conducted on July 17, 2023, DMR observed approximately 30-40 lobster buoys within the proposal boundaries and approximately 50 lobster buoys south of the proposal (SR 6). DMR staff observed an abundant amount of lobsters within the proposal boundaries during their site visit on July 17, 2023 (SR 7). Additionally, DMR scientists observed active seaweed harvesting to the east around Crow Island (SR 6).

The application states there is a high frequency of lobster fishing in the proposed lease area from May to October (App 6). The applicant has not observed any recreational fishing occurring in the area of the proposal (App 6).

A Harbormaster Questionnaire was sent to the Bremen Harbormaster on September 27, 2022. DMR did not receive a response. DMR did receive a comment that expressed concerns regarding fishing. In this comment, a member of the public stated that the lobster fishing season will occasionally extend past November or start before June (CF – Public Comment: J. Li).

The proposal will have aquaculture activities occurring from November 1st to June 1st (App 4). Lobstering activities have been observed in the area from May through October (App 6). As noted

previously, the applicant stated that there was a high amount of lobster fishing in the area, and DMR staff observed an abundant amount of lobsters located in the area while conducting their site report. While the lobstering activity in the area may extend into November, it was stated that this happens only occasionally (CF – Public Comment: J. Li). In consideration of the condition that would be imposed on this lease related to navigation, gear that could interfere with fishing activity would only be present from November 1 through March 31 when fishing activity is likely less frequent.

Therefore, given the condition placed on the timing of gear deployment, it is reasonable to conclude that there are no unreasonable impacts from the proposed lease on commercial and recreational fishing activities in the area.

Other aquaculture uses. DMR’s Chapter 2 regulations require the Commissioner to consider any evidence submitted concerning other aquaculture uses of the area. “The intensity and frequency of such uses as well as the degree of exclusivity required for each use shall be a factor in the Commissioner’s determination of whether any interference is unreasonable. The number, size, location, and type of other aquaculture leases shall be considered by the Commissioner.” Chapter 2, § 2.37(1)(A)(4).

There are no existing Limited Purpose Aquaculture (LPA) sites or aquaculture leases within 1,000 feet of the proposed lease site (SR 6).

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

When examining existing system support, the Commissioner considers the degree to which the use of the lease site will interfere with significant wildlife habitat and marine habitat or with the ability of the lease site and marine and upland areas to support ecologically significant flora and fauna. 12 M.R.S.A. § 6072-A(13)(D); Chapter 2.37(1)(A)(5). “Such factors as the degree to which physical displacement of rooted or attached marine vegetation occurs, the amount of alteration of current flow, increased rates of sedimentation or sediment resuspension, and disruption of finfish migration shall be considered by the Commissioner in this determination.” Chapter 2, § 2.37(1)(A)(5).

On July 17, 2023, DMR conducted underwater video transects utilizing a drop camera to assess the epibenthic ecology of the proposed lease (SR 7). Observed in the video was an abundant amount of American Lobster (*Homarus americanus*) and the occasional rock barnacle (*Balanus balanoides*), seaweed (*Ascophyllum sp.*), and crab (*Cancer sp.*) (SR 7). In addition to the epibenthic flora and fauna, DMR scientists also observed double-crested cormorants (*Nannopterum auritum*), osprey (*Pandion haliaetus*), herring gulls (*Larinae argentatus*), common tern (*Sterna hirundo*), harbor seal (*Phoca*

vitulina), and deceased gulf menhaden (*Brevoortia patronus*) in the general vicinity of the proposal (SR 7).

Historical records of eelgrass (*Zostera marina*) collected by Maine DMR in 2010 indicated mapped eelgrass presence in the vicinity of the proposal (SR 7). The nearest mapped eelgrass is approximately 85 feet east of the proposal (SR 7). During the site assessment, DMR scientists observed eelgrass drifting on the surface of the water within the proposal boundaries, as well as eelgrass drifting in the vicinity of the proposal (SR 7). No eelgrass was observed attached to the seafloor on the underwater camera footage (SR 7).

There are no documented bald eagle nests within 1,000 feet of the proposed lease area (SR 8). 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 closest tidal waterfowl and wading bird habitat is approximately 1,650 feet north of the proposal (SR 8).

On October 11, 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 proposal]” (CF – RE: Notice of Experimental Lease Applications and Comment Period-Colby Davidson).

Based on the evidence the proposed aquaculture activities for this lease site will not unreasonably 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.

E. Public Use & Enjoyment

When examining interference with public facilities in the context of an experimental lease, the Commissioner considers the degree to which the lease interferes with public use or enjoyment within 1,000 feet of a beach, park, or docking facility owned by the Federal Government, the State Government, or a municipal government. 12 M.R.S.A. § 6072-A(13)(F); Chapter 2, § 2.37(1)(A)(7) and § 2.64(11)(A).

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

When examining the source of organisms, the Commissioner shall include but not be limited to, consideration of the source's biosecurity, sanitation, and applicable fish health practices. 12 M.R.S.A. § 6072-A(13)(E); Chapter 2, § 2.37(1)(A)(6).

The applicant proposes to obtain stock from Summit Point LLC. Summit Point LLC is currently an approved source of stock. If the applicant is unable to obtain stock from Summit Point LLC, then it must come from another DMR approved source.

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, with the imposed condition, will not unreasonably interfere with navigation.

3. The aquaculture activities proposed for this site, with the imposed condition, 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 3.89 acres 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 lessee³; 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 suspended cultivation of sugar kelp (*Saccharina latissima*) and skinny kelp (*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 Chapter 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-A(15) and Chapter 2.64(11)(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. The following condition is imposed on this lease:

1. All gear, site markers, and mooring balls must be removed from the lease area on or before March 31st.

7. REVOCATION OF EXPERIMENTAL LEASE

The Commissioner may commence revocation procedures upon determining pursuant to 12 M.R.S.A §6072-A (22) that no substantial aquaculture or research has been conducted on the site over the course of the lease, that aquaculture has been conducted in a manner substantially injurious to the environment or to marine organisms, or that any condition of the lease or any applicable laws or regulations have been violated.

³ 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.”

Dated: 5/31/24



A handwritten signature in blue ink, consisting of the letters 'P', 'C', and 'K' in a stylized, cursive font. The signature is written above a horizontal line.

Patrick C. Keliher, Commissioner
Department of Marine Resources