

**STATE OF MAINE
DEPARTMENT OF MARINE RESOURCES**

Robert Baines and Cole Baines

PEN CL

Standard Aquaculture Lease Application
Suspended Culture of Marine Algae
West Penobscot Bay
Unorganized Territory, Maine

FINDINGS OF FACT, CONCLUSIONS OF LAW, AND DECISION

Robert and Cole Baines applied to the Department of Marine Resources (DMR) for a twenty-year standard aquaculture lease on 7.19¹ acres located in West Penobscot Bay, west of Hewett Island, Unorganized Territory, Maine. The proposal is for the suspended culture of marine algae (*Saccharina latissima*, *Saccharina angustissima*, *Alaria esculenta*, *Laminaria digitata*, *Agarum clathratum*², *Palmaria palmata*, *Chondrus crispus*, *Porphyra spp.*, *Gracilaria tikvahiae*, and *Ulva lactuca*).

1. THE PROCEEDINGS

The pre-application meeting on this proposal was held on July 14, 2021, and a scoping session was held on November 23, 2021. DMR accepted the final application as complete on December 16, 2021. Notice of the completed application and public hearing was provided to state agencies (including the Property Tax Division because the project is located in unorganized territory)³, and subscribers to DMR's aquaculture email listserv. Notice of the hearing was published in the *Courier-Gazette* on October 5 and October 12, 2023. The public notice for the hearing indicated that the proceeding would be conducted in-person and directed interested persons to register in order to provide testimony or ask questions during the proceeding. No applications for intervenor status were received by DMR. A public hearing on this application was held on November 9, 2023. Two individuals registered to participate in the hearing, but ultimately did not attend.

Sworn testimony was given at the hearing by Robert and Cole Baines. Additional members of the public and DMR staff attended the hearing but did not offer testimony. The hearing was recorded by DMR. The Hearing Officer was Maria Eggett.

¹ Applicants originally requested 7.33 acres. DMR calculations indicate the area is 7.19 acres.

² The application lists the scientific name for "Shotgun Kelp" as *Agarum cribosum*. Accepted species name is *Agarum clathratum*.

³ Notice was also provided to the Town of Thomaston because the hearing was located in the town.

The evidentiary record before DMR regarding this lease application includes three exhibits introduced at the hearing and the record of testimony at the hearing. The evidence from all sources is summarized below.⁴

LIST OF EXHIBITS

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

2. DESCRIPTION OF THE PROJECT

A. Proposed Operations

The applicants propose to culture marine algae (*Saccharina latissima*, *Saccharina angustissima*, *Alaria esculenta*, *Laminaria digitata*, *Agarum clathratum*, *Palmaria palmata*, *Chondrus crispus*, *Porphyra spp.*, *Gracilaria tikvahiae*, and *Ulva lactuca*) using suspended culture techniques (App 1). A maximum of seventeen 1,000 linear foot longlines are proposed for the site as well as moorings and depth control buoys and lines. Yellow lease marking buoys will be deployed at the corners (App 5).

The applicants anticipate seeding in November and December. Some seeding may occur in March depending on species availability. Routine tending and maintenance will occur approximately every two weeks from December to May. Harvesting will occur April to May and will take five to 12 days. All gear will be removed from the site between May 31 and November 1 every year.

On October 16, 2019, DMR granted a 3.74-acre experimental lease (PEN CLx) to Robert Baines. The decision provided authorization to cultivate marine algae using suspended culture. Thirteen 1,000 foot longlines, spaced 10 feet apart, depth control lines and stabilizing weights, and 22 concrete moorings and associated lines and chains were authorized to be deployed on PEN CLx. A subsequent amendment approved the use of mushroom anchors in place of the concrete moorings. The applicants intend to replace the experimental lease with this expanded proposal in the same area.

B. Site Characteristics

On June 20, 2023, DMR assessed the proposed lease site. Underwater video footage was collected by conducting a 290-foot transect line within the proposed lease area using SCUBA. The proposal is located approximately 1,860 feet to the west of Hewett Island at mean high water (MHW) and approximately 4,000 feet to the east of Muscle Ridge Channel. There are no intertidal areas or land within 1,000 feet of the

⁴ Exhibits 1, 2, and 3 are cited below as: Case file – “CF”, Application – “App”, site report – “SR”.

proposal. The surrounding Muscle Ridge Islands are sparsely inhabited with primarily rocky shorelines and forested uplands with areas of low-lying brush and grass (SR 2).

DMR assessed depths at the site beginning at 12:10 PM. The tide was rising with the next high tide predicted at 1:33 PM. Depths were recorded at the proposal corners and determined to be between 39.1 feet and 40.1 feet. Correcting for tidal variations derives depths ranging from 31.6 feet to 32.6 feet at mean low water (MLW, 0.0 feet) and from 40-41 feet at high tide (SR 2).

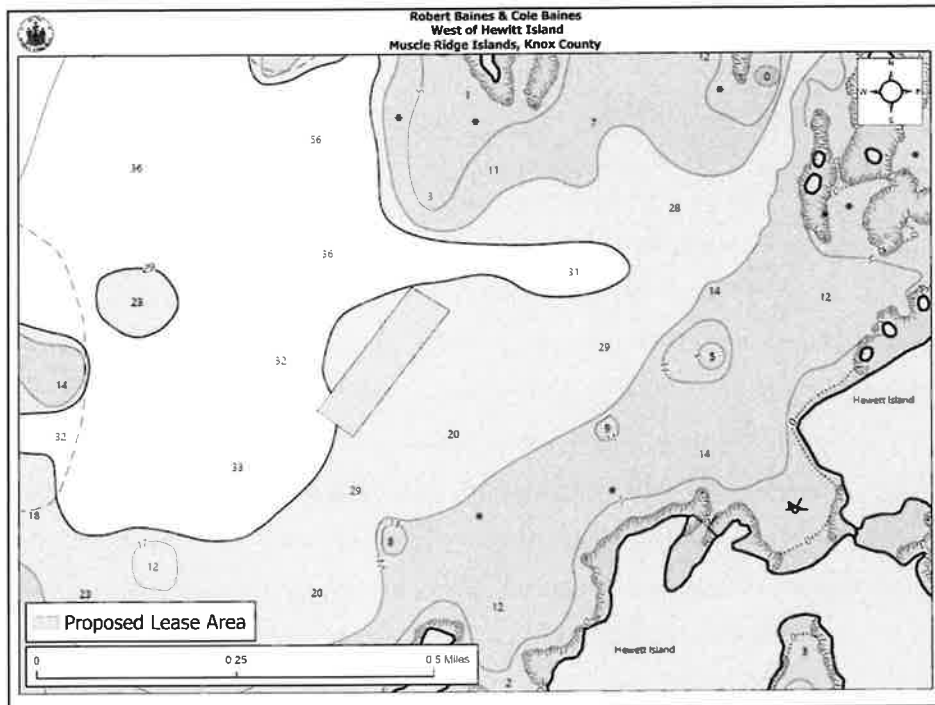


Figure 1: Proposed lease site and surrounding area. Image taken from DMR site report.

3. STATUTORY CRITERIA & FINDINGS OF FACT

Approval of standard aquaculture leases is governed by 12 M.R.S.A. §6072. This statute provides that a lease may be granted by the Commissioner upon determining that the project will not unreasonably interfere with: the ingress and egress of riparian owners; navigation; fishing or other uses of the area, taking into consideration other aquaculture uses of the area; the ability of the lease site and surrounding areas to support existing ecologically significant flora and fauna; or the public use or enjoyment within 1,000 feet of beaches, parks, docking facilities, or conserved lands 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 for the lease site; that the lease will not result in an unreasonable impact from

noise or lights at the boundaries of the lease site; and that the lease will comply with visual impact criteria adopted by the Commissioner.

A. Riparian Access

Maine law and DMR's Chapter 2 regulations⁵ ("Chapter 2") require the Commissioner to examine whether riparian owners can safely navigate to their shore. 12 M.R.S.A. § 6072(7-A)(A); Chapter 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 2.37(1)(A)(1).

The location of the proposal is on the western side of the Muscle Ridge Islands chain. There are no docks or moorings within 1,000 feet of the proposal. The pier observed nearest to the proposal is approximately 1,755 feet to the southeast, on the eastern shore of Flag Island. Hewett Island is inhabited and there were approximately six houses observed on the island in satellite imagery. There were no piers or docks observed on the western side of Hewett Island. The riparian parcels on Hewett Island nearest to the proposal are over 2,000 feet away at mean high water and there were no docks or piers observed on the shoreline facing the proposal. There is a small mooring field in a cove on the western side of Hewett Island approximately 2,400 feet to the east of the proposal (SR 4).

A Harbormaster Questionnaire was completed by the local Marine Patrol Officer (MPO) on January 4, 2022. The MPO commented that the proposal would have no effect on riparian access. During the public hearing, no one offered testimony or evidence regarding 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

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(7-A)(B); Chapter 2.37(1)(A)(2)). According to the site report, the proposal is located approximately 4,150 feet to the east of the Muscle Ridge channel in a partially enclosed area surrounded by the Muscle Ridge Islands. There is over 1,800 feet of navigable water between the proposal and Hewett Island at MLW, over 1,300 feet of navigable water between the

⁵ 13-188 C.M.R. ch. 2.

proposal and Clam Ledges at MLW and over 1,300 feet of navigable water between the proposal and Flag Island.

During DMR's site assessment conducted on June 20, 2023, scientists observed several boats transiting to the south of the proposal between Bar and Flag Islands. DMR also observed a lobster boat transiting through the proposed lease area (SR 5).

A Harbormaster Questionnaire was completed by the local MPO on January 4, 2022. The MPO commented that the proposal would have no effect on navigation. During the public hearing, no one offered testimony or evidence regarding potential impacts to navigation.

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

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(7-A)(C); Chapter 2.37(1)(A)(3)). Additionally, the Commissioner considers any evidence concerning other aquaculture uses of the area (Chapter 2.37(1)(A)(4)).

Fishing. During DMR's site assessment on June 20, 2023, no commercial fishing activity was observed within the boundaries of the proposed lease. A lobster boat was observed transiting through the proposed lease area but was not observed working any gear in the vicinity (SR 6).

A Harbormaster Questionnaire was completed by the local MPO on January 6, 2022. The MPO stated that they have not observed any commercial or recreational fishing within the proposed lease area.

No testimony was given at the public hearing concerning impacts to commercial or recreational fisheries.

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

Other aquaculture uses: Robert Baines currently operates a 3.74-acre experimental lease, PEN CLx, within the boundaries of this proposal. The standard lease proposal is intended to replace PEN CLx. There are no other active leases or LPAs within 1,000 feet of the proposal (SR 6).

No testimony was received by other aquaculture lease or license holders in the area to indicate they have concerns regarding the proposed activities. Based on this evidence, it appears that the proposed lease will not unreasonably interfere with other aquaculture activities in the area.

Other water-related uses. The application states there is some kayaking during the summer months (App 13). However, all gear will be removed from the site between May 31 and November 1 every year. No evidence or testimony was provided concerning kayaking in the area.

Therefore, the aquaculture activities proposed for this site will not unreasonably interfere with fishing, existing aquaculture operations, 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(7-A)(D); Chapter 2.37(1)(A)(5)).

Site observations. During the site assessment on Jun 20, 2023, DMR conducted a SCUBA transect to collect underwater video footage and assess the epibenthic ecology of the area. Numerous lobster burrows were observed and occasionally lobsters (*Homarus americanus*) were observed within the burrows. Sugar kelp (*Saccharina latissima*) holdfasts and stipes were observed in the sediment without blades attached, as well as organisms with the blade attached. In addition to epibenthic flora and fauna, lion’s mane jellyfish (*Cyanea capillata*) were observed in the water prior to the SCUBA dive (SR 7). The relative abundance of epibenthic flora and fauna observed in the video transect is described in the table below.

Species observed on underwater footage collected by DMR

Species Observed	Abundance
Hermit Crab (<i>Paguroidea</i> spp)	Rare
Sea raven (<i>Hemitripterus americanus</i>)	Rare
Sugar Kelp (<i>Saccharina latissima</i>)	Occasional
Lobster (<i>Homarus americanus</i>)	Common
Crab (<i>Cancer sp.</i>)	Common

Eelgrass. According to data collected in 2010, there is no eelgrass (*Z. marina*) located within 1,000 feet of the proposal. In 2010, eelgrass was observed approximately 1,475 feet to the southeast of the proposal. During the site visit conducted on June 20, 2023, DMR did not observe any eelgrass (SR 8).

Wildlife. 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, the proposed lease area is not located within tidal waterfowl and wading bird habit. Data collected by the

United States Fish and Wildlife Service in 2023 by aerial nest survey shows the closest mapped Bald Eagle nesting site to be approximately 1.7 miles to the northeast of the proposal.

During the site assessment, DMR observed black guillemots (*Cepphus grylle*), gulls (*Larus sp.*), as well as occasional common terns (*Sterna hirundo*). A bald eagle (*Haliaeetus leucocephalus*) was also observed flying in the vicinity of the proposal. Harbor seals (*Phoca vitulina*) were common in the vicinity of proposed lease area.

On January 14, 2022, a Wildlife Biologist with MDIFW responded by email to a “Request for Agency Review and Comment”, stating that minimal impacts to wildlife are anticipated.⁶

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, the Commissioner considers the degree to which the lease interferes with public use or enjoyment within 1,000 feet of beach, park, docking facility, or certain conserved lands owned by the Federal Government, the State Government, or a municipal government (12 M.R.S.A. § 6072(7-A)(F); Chapter 2.37(1)(A)(7)).

The proposal is not within 1,000 feet of any beach, park, docking facility, or other conserved lands owned by federal, state, or municipal governments (SR 9).

Therefore, the aquaculture activities proposed for this site will not unreasonably interfere with the public use or enjoyment within 1,000 feet of beaches, parks, docking facilities, or certain conserved lands owned by municipal, state, or federal 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(7-A)(E); Chapter 2.37(1)(A)(6)).

According to the application, the source for all stock is Atlantic Sea Farms. This is currently an approved source for these species. If the applicants are unable to obtain stock from this facility, then it must come from another DMR approved source.

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

⁶ Email correspondence between MDIFW and DMR (CF)

G. Light

The Commissioner evaluates lighting in accordance with 12 M.R.S.A §6072-A(G) and the regulatory standards specified in Chapter 2.37(1)(A)(8). The statute specifies that a lease must not result in an unreasonable impact from light at the boundaries of the proposed site. The applicable regulation imposes specific requirements related to lighting, including a requirement that the applicant demonstrate that all reasonable measures will be taken to mitigate light impacts associated with the lease activities.

According to the application, no lights would be used on the proposed lease site.

Therefore, the proposed aquaculture activities will not result in an unreasonable impact from light at the boundaries of the lease site.

H. Noise

The Commissioner evaluates noise in accordance with 12 M.R.S.A §6072-A(G) and the regulatory standards specified in Chapter 2.37(1)(A)(9). The statute specifies that a lease must not result in an unreasonable impact from noise at the boundaries of the proposed site. The applicable regulation imposes specific requirements related to noise, including a requirement that the applicant take all reasonable measures to mitigate noise impacts associated with the lease activities.

According to the application, no powered equipment will be used on the site. The only source of noise would be a lobster boat and/or skiff used to service the proposed site.

Based on this information, it appears that any noise generated by the proposed operations is unlikely to have a significant effect at the boundaries of the lease site.

Therefore, the aquaculture activities proposed for this site will not result in an unreasonable impact from noise at the boundaries of the lease.

I. Visual Impact

The Commissioner evaluates visual impact in accordance with 12 M.R.S.A §6072-A(H) and the regulatory standards specified in Chapter 2.37(1)(A)(10).

No on-site support structures are proposed. The gear proposed, including buoys, complies with DMR's height and visual impact limitations.

Therefore, the equipment utilized on the proposed lease site will comply with the DMR's visual impact criteria.

6. CONCLUSIONS OF LAW

Based on the above findings, I conclude that:

- a. The aquaculture activities proposed for this site will not unreasonably interfere with the ingress and egress of any riparian owner.
- b. The aquaculture activities proposed for this site will not unreasonably interfere with navigation.
- c. The aquaculture activities proposed for this site will not unreasonably interfere with fishing or other water-related uses of the area, taking into consideration other aquaculture uses in the area.
- d. The aquaculture activities proposed will not unreasonably interfere with the ability of the lease site and surrounding areas to support existing ecologically significant flora and fauna.
- e. The aquaculture activities proposed for this site will not unreasonably interfere with the public use or enjoyment within 1,000 feet of beaches, parks, docking facilities, or certain conserved lands owned by municipal, state, or federal governments.
- f. The applicants have demonstrated that there is an available source for organisms to be cultured for the lease site.
- g. The aquaculture activities proposed for this site will not result in an unreasonable impact from light at the boundaries of the lease site.
- h. The aquaculture activities proposed for this site will not result in an unreasonable impact from noise at the boundaries of the lease site.
- i. The aquaculture activities proposed for this site will comply with the visual impact criteria contained in DMR Regulation 2.37(1)(A)(10).

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.

7. DECISION


Based on the foregoing, the Commissioner grants a lease to Robert and Cole Baines for 7.19 acres for twenty years for the cultivation of marine algae (*Saccharina latissima*, *Saccharina angustissima*, *Alaria esculenta*, *Laminaria digitata*, *Agarum clathratum*, *Palmaria palmata*, *Chondrus crispus*, *Porphyra spp.*, *Gracilaria tikvahiae*, and *Ulva lactuca*) using suspended culture techniques. The lessees shall pay the State of Maine rent in the amount of \$100.00 per acre per year. The lessees shall post a bond or establish an escrow account pursuant to DMR Rule 2.40 (2)(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.

8. 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).⁷ 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 shall be imposed on this lease.

9. REVOCAION OF LEASE

The Commissioner may commence revocation procedures upon determining, pursuant to 12 M.R.S.A §6072 (11), that no substantial aquaculture has been conducted within the preceding year, that the lease activities are substantially injurious to marine organisms, or that any of the conditions of the lease or any applicable laws or regulations have been violated.

Dated: January 8th, 2024 
Patrick C. Keliher, Commissioner
Department of Marine Resources

⁷ 12 MRSA §6072 (7-B) states: "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."