

STATE OF MAINE
DEPARTMENT OF MARINE RESOURCES

Shearwater Ventures, LLC
CAS LOx

Experimental Aquaculture Lease Application
Suspended Culture of Marine Algae
Casco Bay, Long Island, Maine

FINDINGS OF FACT, CONCLUSIONS OF LAW, AND DECISION

Shearwater Ventures, LLC applied to the Department of Marine Resources (DMR) for a 3.90¹ acres experimental lease west of Little Chebeague Island in Casco Bay for the suspended culture of sugar kelp (*Saccharina latissima*), skinny kelp (*Saccharina angustissima*), winged kelp (*Alaria esculenta*), shotgun kelp (*Agarum clathratum*)², horsetail/fingered kelp (*Laminaria digitata*), Irish moss (*Chondrus crispus*), dulse (*Palmaria palmata*), and sea lettuce (*Ulva lactuca*) for commercial aquaculture research and development.

1. PROCEDURAL HISTORY

DMR accepted the application as complete on March 8, 2023. 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 site, the Town of Long Island and its harbormaster, and others on DMR's email listserv. Notice to the municipality included a Harbormaster Questionnaire requesting information related to designated or traditional storm anchorages, navigation, riparian ingress and egress, and fishing or other uses of the area, among other considerations. No response was received from the harbormaster. Notice of the complete application and comment period was published in the March 23, 2023, edition of *The Northern Forecaster*. 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 during the comment period, and no hearing was conducted. The evidentiary record regarding this lease application includes the application, DMR's site report dated May 2, 2024, 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 3.86 acres. DMR calculations indicate the area is 3.90 acres.

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

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

3. DMR site report, issued on May 2, 2024

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 aquaculture (App 6). The applicant is proposing to culture marine algae using seventeen 1,000 linear foot longlines plus buoys, depth control weights, and moorings and mooring lines.

The helical anchor moorings and buoys would remain on-site year-round, but all other gear would be removed from June 1-October 15 (App 6). The applicant intends to seed the lines in October to December for 2-5 days and to tend the farm from December to April approximately twice a month, weather depending (App 6). Harvesting would occur in April to early June and would take approximately 10-15 days (App 6, 7). No machinery is proposed for on-site use (App 8).



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

B. Site Characteristics

⁴ Unless 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.

On August 29, 2023, DMR scientists assessed the proposed lease site. The western shore of Little Chebeague Island, in the vicinity of the proposal, consists of rocky coastline leading to forested uplands, beaches, and is undeveloped.



Figure 2. Proposed lease area with site visit observations. Image from DMR site report.

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

A. Riparian Access

Before granting a lease, the Commissioner must determine that the proposed project “will not unreasonably interfere with the ingress and egress of riparian owners[.]” 12 M.R.S.A. § 6072-A(13)(A).

DMR did not observe any docks, houses, or moorings in the vicinity of the proposal. Nearby Little Chebeague Island, located to the east of the proposal, is uninhabited and no docks or other structures were observed at the time of the site visit (SR 4).

In evaluating riparian ingress and egress, the commissioner must consider the following pursuant to Chapter 2.37(1)(A)(1)⁵:

The Commissioner shall examine whether the riparian owners can safely navigate to their shore. The Commissioner shall consider the type of shore involved and the type of vessel that can reasonably land on that shore. The Commissioner shall consider the type of structures proposed for the lease and their potential impact on the vessels which would need to maneuver around those structures.

The helical anchor moorings and buoys would remain on-site year-round, but all other gear would be removed from June 1-October 15. During the comment period, DMR did not receive any comments from riparian owners stating that access to their shorefront property would be adversely impacted by the proposal. Furthermore, Little Chebeague island is uninhabited, and DMR did not observe any docks, houses, or mooring in the vicinity of the proposal. The evidence in the record demonstrates that riparian ingress and egress will not be adversely affected.

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).

The proposal is located approximately 905.5 feet to the west of Little Chebeague Island at mean low water (MLW). There is approximately 2,977.8 feet of navigable water between the proposal and the charted navigational channel to the west. During the site visit, two sailboats were observed in the vicinity of the proposal. One sailboat was under sail to the west of the proposal and one to the east under power.

⁵ 13-188 C.M.R. ch. 2. The Commissioner considers the applicable criteria contained in Chapter 2.37 pursuant to Chapter 2.64(11)(A).

Additionally, two recreational powerboats and a Coast Guard vessel conducting patrol were observed to the west of the proposal (SR 4, 5).

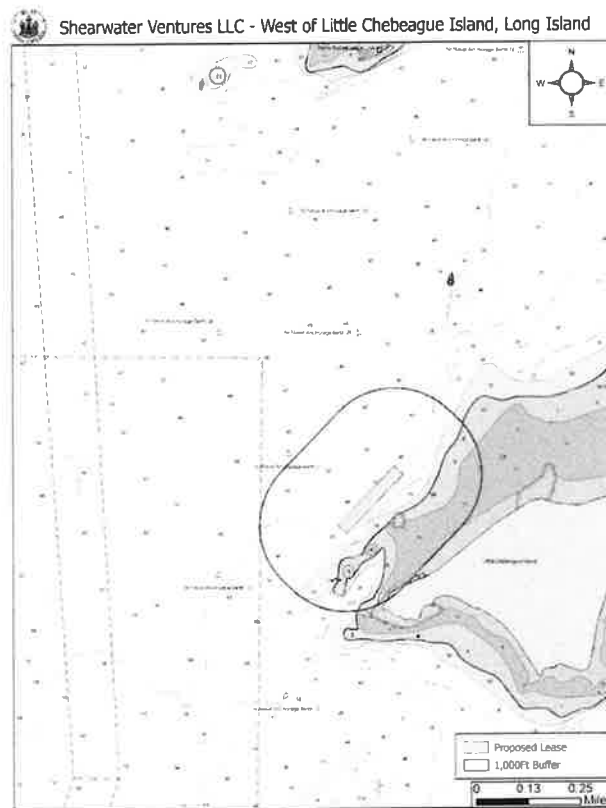


Figure 3. Navigational channels in the vicinity of the proposal. Image from DMR site report.

In evaluating navigation, the commissioner must consider the following pursuant to Chapter 2.37(A)(2):

The Commissioner shall examine whether any lease activities requiring surface and or subsurface structures would interfere with commercial or recreational navigation around the lease area. The Commissioner shall consider the current uses and different degrees of use of the navigational channels in the area in determining the impact of the lease operation.

A Harbormaster Questionnaire was sent to the Town of Long Island. No response was received by DMR. No comments regarding impacts to navigation were received by DMR. The helical anchor moorings and buoys would remain on-site year-round, but all other gear would be removed from June 1-October 15.

Given the distance to the navigation channel, the seasonal nature of the operations, and that no comments were received from the public concerning impacts to navigation, it is unlikely the proposed lease will unreasonably interfere with navigation.

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

C. Fishing & Other Uses

Fishing. When examining fishing and other uses, the Commissioner considers whether the lease activities would unreasonably interfere with commercial or recreational fishing or other uses, including water-related uses, of the area (12 M.R.S.A. § 6072-A(13)(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)).

During the site visit, DMR documented lobster buoys within the general vicinity of the proposal. DMR recorded the location of buoys closest to the proposal, as seen in Figure 2. A cluster of lobster buoys were observed 348.5 feet to the southwest of the proposal boundaries. Two additional lobster buoys were approximately 446.5 feet and 462.2 feet to the southeast of the proposal (SR 5).

The application states that there is limited to no commercial fishing in the lease area during the months the full gear would be deployed. The application also states that no recreational fishing has been observed in the area (App 9).

In evaluating fishing, the commissioner must consider the following pursuant to Chapter 2.37(A)(3):

The Commissioner shall examine whether the lease activities would unreasonably interfere with commercial or recreational fishing or other water-related uses of the area. This examination 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.

No comments regarding impacts to fishing were received by DMR. Additionally, no response was received from the harbormaster about impacts from the proposed lease on fishing in or near the proposed lease area. Given the lack of public comment, the light level of fishing activity observed, and the timeframe that full gear will be deployed on-site, it is unlikely that the proposed lease will interfere with commercial and recreational fishing activities in the area.

Other uses. According to the application, swimming and kayaking would occur primarily when gear is not deployed (App 9). No comments regarding impacts to other uses of the lease area were received by DMR.

Other aquaculture uses. In evaluating other aquaculture uses, the Commissioner must consider the following pursuant to Chapter 2.37(1)(A)(4):

The Commissioner shall 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 factors 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.

There is one experimental aquaculture lease located 411.1 feet to the northeast of the proposal (CAS NLC3x) held by Chebeague Island Oyster Company LLC. There are four Limited Purpose Aquaculture (LPA) licenses within the boundaries of the proposed lease: NJOH120, NJOH220, NJOH320 and NJOH420 (Figure 4). All four LPAs are held by an individual associated with the company applying for this site and will be relinquished if the proposal is granted (App 13). No comments were received concerning existing aquaculture sites in the area.

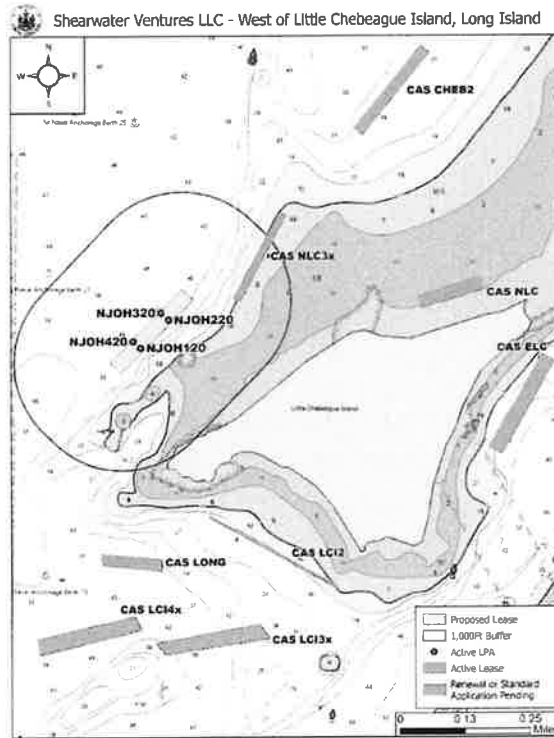


Figure 4. Aquaculture leases and LPA licenses in the vicinity of the proposed lease area. Image from DMR site report.

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

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)).

On August 29, 2023, DMR utilized a remotely-operated vehicle to assess the epibenthic ecology of the proposed lease. Crab (*Cancer* sp.), sand worm (*Alitta virens*), and shrimp (*Crangon septemspinosa*) were common at the proposed lease site (SR 7).

Eelgrass (*Zostera marina*)

Recent records of seagrass collected by Maine Department of Environmental Protection (MDEP) in 2022 indicate mapped eelgrass presence in the vicinity of the proposal. The nearest mapped eelgrass is approximately 401.9 feet east of the proposal.⁶ During the site assessment, eelgrass was observed floating (unattached from bottom) on the surface of the water. No eelgrass was observed on underwater camera footage within proposal boundaries (SR 7).

Eelgrass (*Zostera marina*) is a perennial and is typically biologically active from early summer to early fall. Given the lack of eelgrass in the proposed lease area and the seasonality of the proposed lease activity, it is unlikely the proposal will adversely impact eelgrass.

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 203.3 feet to the west of mapped Tidal Waterfowl and Wading Bird Habitat. 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 1.42 miles northwest of the proposal; and another nest located 2.05 miles to the east.

During the site assessment, DMR observed common eiders (*Somateria mollissima*), harbor porpoise (*Phocoena phocoena*), and double-crested cormorants (*Nannopterum auritum*) in the general vicinity of the proposal (SR 8).

On June 22, 2023, 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

Considering MDIFW’s review and the site report, it is unlikely the proposed activities will unreasonably interfere with the ability of the lease site and surrounding areas to support existing ecologically significant fauna.

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

⁶ Data obtained from The Maine Office of GIS “GISVIEW.MESEP.Seagrass2022”. Widgeon grass was observed only in the New Meadows River area off Old Brunswick Road near shore. Eelgrass was the dominant vascular species in all other locations. This is the most current record of mapped eelgrass within the vicinity of the proposal.

⁷ Email correspondence between MDIFW and DMR

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 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 2.37(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 2.37(1)(A)(6)).

The applicant proposes to obtain all marine algae stock from Atlantic Sea Farms in Biddeford, Maine. This is an approved source for stock.

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 riparian owners.
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 3.90 acres to Shearwater Ventures, LLC, 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.

This lease is granted to the lessee for the suspended cultivation of sugar kelp (*Saccharina latissima*), skinny kelp (*Saccharina angustissima*), winged kelp (*Alaria esculenta*), shotgun kelp (*Agarum clathratum*), horsetail/fingered kelp (*Laminaria digitata*), Irish moss (*Chondrus crispus*), dulse (*Palmaria palmata*), and sea lettuce (*Ulva lactuca*). 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 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. No conditions are imposed on this lease.

7. REVOCATION OF EXPERIMENTAL LEASE

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.”

The Commissioner may commence revocation procedures upon determining pursuant to 12 MRSA §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 marine organisms, or that any condition of the lease or any applicable laws or regulations have been violated.

Dated: 10/2/24



Patrick C. Keliher, Commissioner

Department of Marine Resources