

**STATE OF MAINE
DEPARTMENT OF MARINE RESOURCES**

John Jordan

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

CAS GCx

Findings of Fact, Conclusions of Law, and Decision

John Jordan applied to the Department of Marine Resources (DMR) for a three-year experimental aquaculture lease on 3.97¹ acres located west of Great Chebeague Island in Casco Bay. The proposal is for the suspended culture of sugar kelp (*Saccharina latissima*), skinny kelp (*Saccharina angustissima*), winged kelp (*Alaria esculenta*), horsetail/fingered kelp (*Laminaria digitata*), shotgun kelp (*Agarum clathratum*)², dulse (*Palmaria palmata*), Irish moss (*Chondrus crispus*), and sea lettuce (*Ulva lactuca*). The proposal is for commercial research and development.

1. Proceedings

DMR accepted the final application as complete on September 5, 2023. Notice of the completed application and the 30-day public comment period was provided to state agencies, the Town of Chebeague Island, and subscribers to DMR's aquaculture email listserv³. On September 19, 2023, DMR sent a Harbormaster Questionnaire to the Harbormaster for the Town of Chebeague Island, requesting information about designated or traditional storm anchorages, navigation, riparian ingress and egress, fishing or other uses of the area, among other considerations and received a response from the Harbormaster on October 17, 2023. Notice of the complete application and comment period was published in *The Northern Forecaster* on September 21, 2023. Title 12 M.R.S.A. §6072-A(6) provides that the Commissioner shall hold a public hearing if five or more persons⁴ request a public hearing within the 30-day comment period. The comment deadline ended on October 21, 2023. DMR did not receive any requests for a public hearing during the comment period, and did not conduct a hearing. The evidentiary record regarding this lease application includes the application, DMR's site report dated April 2, 2025, and the case file. The evidence from each of these sources is summarized below.⁵

¹ Applicant originally requested 3.98 acres. DMR calculations indicate the area is 3.97 acres.

² Application states the scientific name as *Agarum cribosum*, however, the current accepted scientific name is *Agarum clathratum*.

³ There are no riparian landowners within 1,000 feet of the proposed site.

⁴ Title 12 M.R.S.A. §6072-A (6) now requires 10 or more hearing requests to be received for the Commissioner to hold a hearing, however, at the time of this comment period, the requirement was five or more.

⁵ These sources are cited, with page references, as App (Application), CF (case file), and SR (site report).

List of Exhibits

1. Case file (CF)
2. Application (App)
3. DMR site report, issued on April 2, 2025 (SR)

The case file, application and site report are referred to in the decision with their designated abbreviations.

2. Description of the Project

A. Site History

Based on DMR records, no prior aquaculture activities have occurred in the area of this proposed lease site.

B. Proposed Operations

The purpose of the proposed experimental lease site is to determine the viability of culturing marine algae at this location (App 5). The applicant is proposing to culture sugar kelp, skinny kelp, winged kelp, horsetail/fingered kelp, shotgun kelp, dulse, Irish moss, and sea lettuce using fifteen 1,000-foot longlines. The applicant also proposes to use counterweights, PVC pipe, moorings with lines, and buoys. According to the application, all gear except moorings (with buoys and lines) will be removed from June 1 to September 30 every year (App 14). Mooring lines left onsite will be tied to corner or middle buoys to reduce the farm's off-season profile (SR 2).

No power equipment is proposed to be used at this lease site.

The applicant proposes to use a 38-foot lobster boat with a hauler or mast and boom at the lease site. A second lobster boat and a skiff may be used during seeding and harvesting (App 6-7).

The applicant intends to seed the site from October to December for a period of 2-4 days. Harvesting the marine algae is proposed from April to May and will take 8 to 10 days. A hauler or mast and boom will be used to retrieve the lines and the marine algae will be cut from the lines by hand. Site monitoring and routine maintenance will be completed at least twice per month in the winter growing season as well as after major storm events (App 6).

C. Site Characteristics

Description. On August 14, 2024, DMR scientists assessed the proposed lease site. Chebeague Island, in the vicinity of the proposal, is a populated island with residential homes and a large, sandy beach and a rocky shoreline that leads to forested uplands.

Water depths at the corners of the proposal at mean low water (MLW) are predicted to be 23 to 25 feet. The bottom of the lease site is primarily composed of mud with an overlay of sheet algal beds (SR 2).

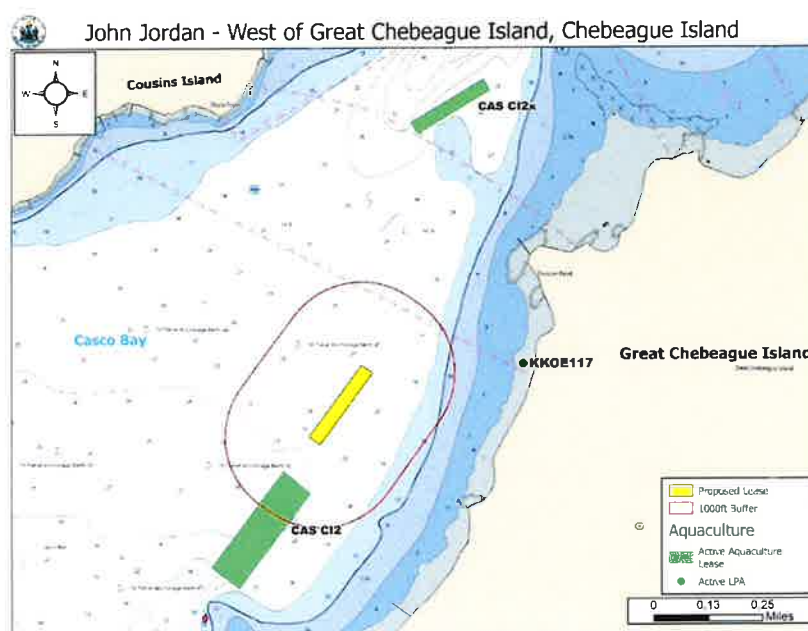


Figure 1. Proposed lease site and surrounding area⁶

3. Legal Criteria and Findings of Fact

Approval of experimental aquaculture leases is governed by 12 M.R.S.A. §6072-A and DMR Regulations. The statute and regulations provide that a lease for commercial aquaculture research and development or for scientific research 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; other aquaculture uses in the area; the ability of the lease site and surrounding areas to support existing ecologically significant flora and fauna; and 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.

⁶ 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.

A. Riparian Owners Ingress and Egress

When examining riparian access, the Commissioner considers whether the proposed lease will unreasonably interfere with the ingress and egress of riparian owners. 12 M.R.S.A. § 6072-A(13)(A). The Commissioner shall examine whether the riparian owners can safely navigate to their shore and consider the type of shore, the type of vessel that can reasonably land on that shore and the types of structures proposed for the lease and their potential impact on the vessels which would need to maneuver around those structures. Chapter 2.37(1)(A)(1).

The land nearest to the proposal is Great Chebeague Island approximately 1,597 feet to the east at MLW. During the site visit, DMR observed one unoccupied mooring approximately 987 feet northeast of the proposal. This was the closest mooring to the proposal. DMR also observed several other moorings further from the proposal that span the Great Chebeague Island shoreline to the northeast and southeast of the proposal (Figure 2) (SR 4).



Figure 2. Proposed lease area with site visit observations.⁷

A Harbormaster Questionnaire was received by DMR from the local Harbormaster on October 17, 2023. The Harbormaster stated there are no permitted moorings within the boundary of the proposal and

⁷ The two sets of double white lines observed in the imagery (south of Cousins Island and just west of the proposal) are wake lines or water bubble residue from vessels that navigated through the area shortly before the imagery was taken.

there are no riparian owners within 1,000 feet of the proposal⁸. DMR received no comments related to interference with riparian access during the public comment period.

Given the distance from the proposed lease to any riparian land and/or structures, the proposed lease activities will not impede access.

Therefore, the aquaculture activities as proposed will not unreasonably interfere with riparian owner ingress and egress.

B. Navigation

When examining navigation, the Commissioner considers whether the proposed lease will interfere with navigation. 12 M.R.S.A. § 6072-A(13)(B). 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 and consider the current uses of the navigational channels in the area. Chapter 2.37(1)(A)(2).

The proposal is located approximately 1,597 feet west of Great Chebeague Island at MLW. There is approximately 4,266 feet of navigable water between the proposal and the eastern shore of Cousins Island at MLW. The eastern edge of the main navigational channel is located immediately to the west of proposal (Figure 3) (SR 5).

During DMR's site visit, four recreational powerboats were observed transiting in the main navigational channel to the north of Great Chebeague Island. Two recreational sailboats were observed transiting to the west of the proposal (SR 5).

The Harbormaster stated in the Harbormaster Questionnaire that the proposal would not impact navigation during the proposed growing season from October through May.

⁸ The Harbormaster Questionnaire has since been updated to reflect *Maquoit Bay v. Department of Marine Resources*, 2022 ME 19, 271 A.3d 307 (Me. 2022), which held that consideration of riparian impacts is not limited to shorefront properties whose parcels are within 1,000 feet of the proposed lease site.

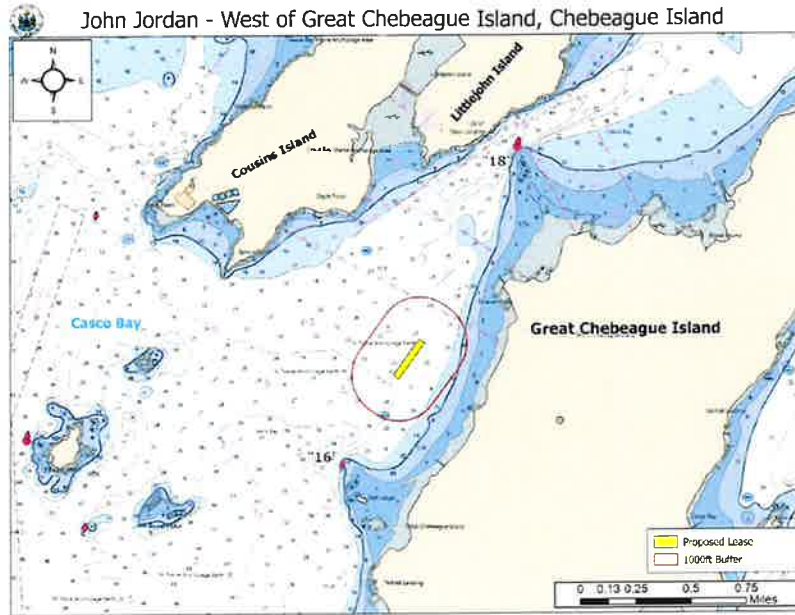


Figure 3. Navigational channels in the vicinity of the proposed lease area.

Given the water depths and open water available for navigation surrounding the proposed lease site, and the seasonal nature of the gear deployment, the proposed lease will not unreasonably interfere with navigation.

Therefore, the aquaculture activities as proposed will not unreasonably interfere with navigation.

C. Fishing and Other Uses

When examining fishing and other uses, the Commissioner considers whether the proposed lease activities will unreasonably interfere with fishing or other uses of the area. 12 M.R.S.A. § 6072-A(13)(C). The Commissioner shall examine whether the lease activities would unreasonably interfere with commercial or recreational fishing or other uses, including water-related uses of the area. Chapter 2.37(1)(A)(3).

Fishing. During the site visit, DMR observed five lobster buoys in the general vicinity of the proposal. The closest buoy was located approximately 359 feet northeast of the proposal (Figure 2).

The Harbormaster stated in the Harbormaster Questionnaire that there is limited commercial and recreational fishing in the vicinity of the proposal. However, both commercial and recreational fishing would not be affected during the proposed growing season from October through May (SR 6).

The application states there is limited lobstering in this area from June through October. The application also states that no recreational fishing has been observed in the fall/winter (App 8).

Given the limited level of activity reported and the timing of gear deployment, the proposed lease will not unreasonably interfere with commercial and recreational fishing activities in the area.

Other Uses. According to the application, no recreational activities have been observed in the area, but it is likely they are common in the summer months. The application also states the activities would be rare between October and May (App 8).

Given the timing of gear deployment and available area surrounding the lease, the lease as proposed would not prevent recreational activities from occurring in the area.

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

D. Other Aquaculture Uses

Pursuant to 12 M.R.S.A. § 6072-A(13)(C), in evaluating the proposed lease, the commissioner shall take into consideration the number and density of aquaculture leases in an area. The Commissioner shall consider any evidence submitted concerning other aquaculture uses of the area, the intensity and frequency of such uses, the degree of exclusivity required for each use as well as the number, size, location, and type of other aquaculture leases. Chapter 2.37(1)(A)(4).

There is one standard aquaculture lease approximately 508 feet southwest of the proposal. CAS CI2 is operated by Stewart Hunt and is permitted to grow marine algae and Atlantic sea scallops (*Placopecten magellanicus*). There are no other aquaculture leases or limited purpose aquaculture (LPA) sites within 1,000 feet of the proposal (Figure 1)(SR 6).

Given the considerable distance to the nearest aquaculture activities, the lease as proposed will not interfere with existing aquaculture in the area.

Therefore, the aquaculture activities as proposed will not unreasonably interfere with other aquaculture uses in the area.

E. Existing System Support

When examining existing system support, the Commissioner considers whether the proposed lease activities will unreasonably interfere with significant wildlife and marine habitat or with the ability of the lease site and surrounding marine and upland areas to support existing ecologically significant flora and fauna. 12 M.R.S.A. § 6072-A(13)(D). 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 2.37(1)(A)(5).

Site Observations. On August 14, 2024, DMR scientists utilized a remotely operated vehicle (ROV) to assess the epibenthic ecology of the proposed lease. The relative abundance of epibenthic flora and fauna observed in the video footage is described below in Table 1 (SR 7).

Table 1. Species observed by DMR staff during the site visit on August 14, 2024.

Species Observed	Abundance
Mysid Shrimp (<i>Mysis sp.</i>)	Abundant
Sand Shrimp (<i>Crangon septemspinosa</i>)	Common
American Lobster (<i>Homarus americanus</i>)	Occasional
Rock Crab (<i>Cancer irroratus</i>)	Occasional

Marine Vegetation. Records of seagrass collected by the Maine Department of Environmental Protection (MDEP) in 2022⁹ shows no mapped eelgrass presence in the vicinity of the proposal. The nearest mapped eelgrass is approximately 1,215 feet east of the proposal (Figure 5). No eelgrass was observed on underwater camera footage within the proposal boundaries during DMR’s site visit (SR 7).

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 (MEGIS), the proposed lease is located approximately 1,131 feet west of mapped Tidal Waterfowl and Wading Bird Habitat (TWWH). Data collected by the United States Fish and Wildlife Service in 2023 by aerial nest survey shows no mapped bald eagle nesting site in the vicinity of the proposal. On October 23, 2023, a Resource Biologist with MDIFW responded by email to a “Request for Agency Review and Comment” stating minimal impacts to wildlife are anticipated for this project.¹⁰

During the site visit, DMR scientists observed harbor seals (*Phoca vitulina*) and herring gulls (*Larus argentatus*) in the general vicinity of the proposal (SR 8).

Given the absence of mapped significant wildlife habitat, MDIFW’s comment, and the absence of eelgrass, the proposed activities will not unreasonably interfere with the ability of the lease site and surrounding areas to support existing ecologically significant flora and fauna.

⁹ Data obtained from The Maine Office of GIS “GISVIEW.MEDEP.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.

¹⁰ Email correspondence between MDIFW and DMR

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

F. Source of Organisms to be Cultured

Pursuant to 12 M.R.S.A. § 6072-A(13)(E), in evaluating the proposed lease, the commissioner shall determine that the applicant has demonstrated there is an available source of organisms to be cultured for the lease site. The Commissioner shall include but not be limited to, consideration of the source's biosecurity, sanitation, and applicable fish health practices. Chapter 2.37(1)(A)(6).

The applicant proposes to obtain sugar kelp (*Saccharina latissima*), skinny kelp (*Saccharina angustissima*), winged kelp (*Alaria esculenta*), horsetail/fingered kelp (*Laminaria digitata*), shotgun kelp (*Agarum clathratum*), dulse (*Palmaria palmata*), Irish moss (*Chondrus crispus*), and sea lettuce (*Ulva lactuca*) from Atlantic Sea Farms (ASF) (Biddeford, Maine). ASF is an approved source of stock for all of these species except *Ulva lactuca*. ASF has a land-based aquaculture license for the culture of *Ulva fenestrata*, a different species of sea lettuce, replacing the previously cultured *Ulva lactuca*. Due to this change in source for sea lettuce, *Ulva fenestrata*, not *Ulva lactuca* will be approved for the lease.

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

G. Interference with Public Facilities

When examining interference with public facilities, the Commissioner considers whether the proposed lease will unreasonably interfere 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 governmental agency. 12 M.R.S.A. § 6072-A(13)(F). Chapter 2.37(1)(A)(7) and 2.64(11)(A)).

The proposed lease is not within 1,000 feet of any beach, park, or docking facility owned by federal, state, or municipal governments.

Therefore, the aquaculture activities as proposed will not unreasonably interfere with the public use or enjoyment within 1,000 feet of beaches, parks or docking facilities owned by federal, state, or municipal government.

4. Conclusions of Law

Based on the above findings, DMR concludes that:

- a. The aquaculture activities proposed for this site will not unreasonably interfere with the ingress and egress of riparian owners.
- 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 uses of the area, including water-related uses of the area.
- d. The aquaculture activities proposed for this site will not unreasonably interfere with other aquaculture uses of the area.
- e. 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.
- f. 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 federal, state, or municipal government.
- g. 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 to John Jordan, for 3.97 acres for three years, the term of the lease to begin within 12 months of the date of this decision, on a date chosen by the lessee; 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 sugar kelp (*Saccharina latissima*), skinny kelp (*Saccharina angustissima*), winged kelp (*Alaria esculenta*), horsetail/fingered kelp (*Laminaria digitata*), shotgun kelp (*Agarum clathratum*), dulse (*Palmaria palmata*), Irish moss (*Chondrus crispus*), and sea lettuce (*Ulva fenestrata*) using suspended culture techniques. The lessee shall pay the State of Maine rent at \$100.00 per acre per year. The lessee shall post a bond or establish an escrow account pursuant to 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. Lease Conditions

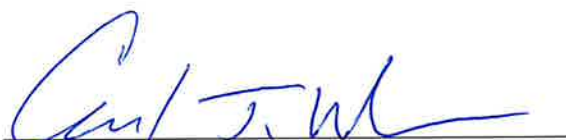
The Commissioner may establish conditions that govern the use of the lease area and impose limitations on aquaculture activities, pursuant to 12 M.R.S.A. §6072-A(15) and Chapter 2.64(11)(B). Conditions are designed to encourage the greatest multiple compatible uses of the lease area, while preserving the exclusive rights of the lessee to the extent necessary to carry out the purposes of the lease. No conditions have been imposed on this lease.

7. Revocation of 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 marine organisms, or that any condition of the lease or any applicable laws or regulations have been violated.

Dated: _____

11.6.25



**Carl J. Wilson, Commissioner
Department of Marine Resources**

Appendix

Granted Lease Coordinates

<u>Corner</u>	<u>Latitude</u>	<u>Longitude</u>	
NW	43.74182°	-70.13515°	then 162.7 feet at 123° True to
NE	43.74157°	-70.13464°	then 1,063.9 feet at 216° True to
SE	43.73919°	-70.13697°	then 162.7 feet at 303° True to
SW	43.73944°	-70.13748°	then 1,063.9 feet at 036° True to NW