

**STATE OF MAINE
DEPARTMENT OF MARINE RESOURCES**

MUSCONGUS BAY KELP

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

MUS LI2x

Findings of Fact, Conclusions of Law, and Decision

Muscongus Bay Kelp applied to the Department of Marine Resources (DMR) for a three-year experimental aquaculture lease on 3.95¹ acres located west of Louds Island, Muscongus Bay, Bristol, Lincoln County. The proposal is for the suspended culture of sugar kelp (*Saccharina latissima*), skinny kelp (*Saccharina angustissima*), winged kelp (*Alaria esculenta*), horsetail kelp (*Laminaria digitata*), shotgun kelp (*Agarum clathratum*), Irish moss (*Chondrus crispus*), dulse (*Palmaria palmata*), nori/laver (*Porphyra spp*) and sea lettuce (*Ulva lactuca*). The proposal is for commercial research and development.

1. Proceedings

On May 6, 2024, DMR accepted the final application as complete. Notice of the completed application and the 30-day public comment period was provided to state agencies, the Town of Bristol, riparian landowners within 1,000 feet of the proposed site, and subscribers to DMR's aquaculture email listserv, and it was published in the *Lincoln County News* on May 16, 2024. On May 14, 2024, DMR sent a Municipal Questionnaire to the Town of Bristol, requesting information about designated or traditional storm anchorages, navigation, riparian ingress and egress, fishing or other uses of the area, among other considerations. DMR did not receive a response.

The version of 12 M.R.S.A. § 6072-A(6) that was in effect when this application was deemed complete provided that the Commissioner may hold a public hearing, and that they shall hold a public hearing if ten or more persons request a public hearing within the 30-day comment period. On June 15, 2024, the comment period ended. 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 June 25, 2025, and the case file. The evidence from each of these sources is summarized below.

A. List of Exhibits

1. Case file (CF)
2. Application (App)

¹ Applicant originally requested 4.0 acres. DMR calculations indicate the area is 3.95 acres.

3. DMR site report, issued on June 25, 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 site (App 6). The applicant is proposing to culture marine algae using up to fifteen 1,000-foot longlines, PVC pipes, counterweights, moorings with lines and chains, and buoys (App 17). The depth control and mooring buoys, counterweights, PVC pipes, and longlines would be removed from June 16 through October 31 (App 17). Mooring blocks and required lease corner markers (with their associated moorings) would remain on site year-round (App 17). Mooring lines and chains will also stay on-site year-round but will be submerged from June 16 to October 31 (App 17). Seeding would be conducted between November and March (species dependent) and would take approximately 2-6 days (App 6). Harvesting would take up to 10 days between mid-April and June 15 (App 6). At least once every two weeks, a site visit will be conducted to tend the site between seeding and harvesting (App 6).

Table 1. Power equipment proposed for the lease site

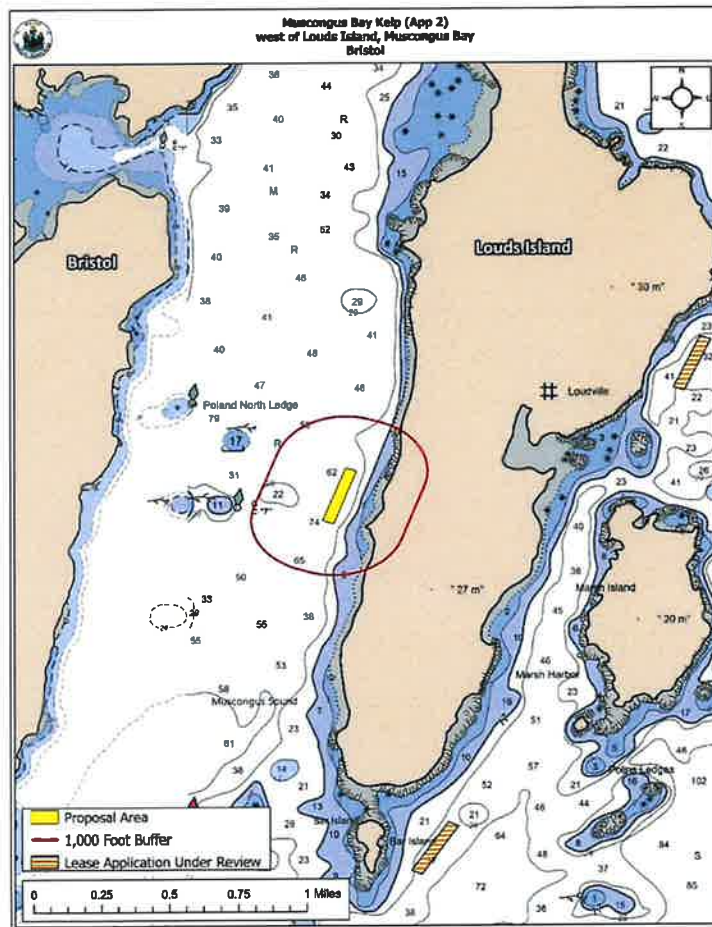
Equipment	Description	Frequency of Use
Pot hauler	Hydraulic	1-3 days during seeding and 5-10 days during harvest

C. Site Characteristics

Description. On September 25, 2024, DMR scientists visited the proposed lease site (SR 2). The proposal is located in subtidal waters in Muscongus Bay approximately 363 feet west of Louds Island at mean low water (MLW) (SR 2; Figure 1). The area in the vicinity of the proposal was observed to consist of a rocky shoreline with mixed forest uplands (SR 2). Correcting for tidal variations derives depths at mean low water (MLW, 0.0 feet) to be between 39 to 66 feet at the proposed lease site (SR 2).

DMR scientists observed the bottom characteristics of the proposed lease site via a remotely operated vehicle (ROV) (SR 2). Sediment information was determined based on visual analysis of the video (SR 2). The bottom of the proposed lease site is primarily composed of mud (SR 2).

Growing Area Classification. Growing Area Classifications are pertinent to bivalve shellfish species cultured and harvested for human consumption. The proposal does not include the cultivation or harvest of any bivalve shellfish species, so Growing Area Classifications do not apply.



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, Chapter 2.37 and 2.64.³ 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.

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).

During the site visit, DMR scientists did not observe any docks, houses, or moorings within the vicinity of the proposal (SR 4). Aerial imagery⁴ indicates the nearest residential pier and dock is located on the western shore of Louds Island approximately 2,314 feet to the north-northeast of the proposal (SR 4). Imagery indicates there are at least four moorings in the vicinity of the pier (SR 4). Imagery also indicates there is a residential property on Louds Island approximately 1,145 feet to the southeast of the proposal, and a residential property approximately 1,051 feet east of the proposal (SR 4-5).

A Municipal Questionnaire was sent to the Town of Bristol (SR 5). DMR did not receive a response (SR 5).

³ Chapter 2 of DMR Regulations is published at 13-188 C.M.R. ch. 2 and may be found at <https://www.maine.gov/dmr/rules-enforcement/regulations-rules>.

⁴ ESRI World Imagery (Firefly)

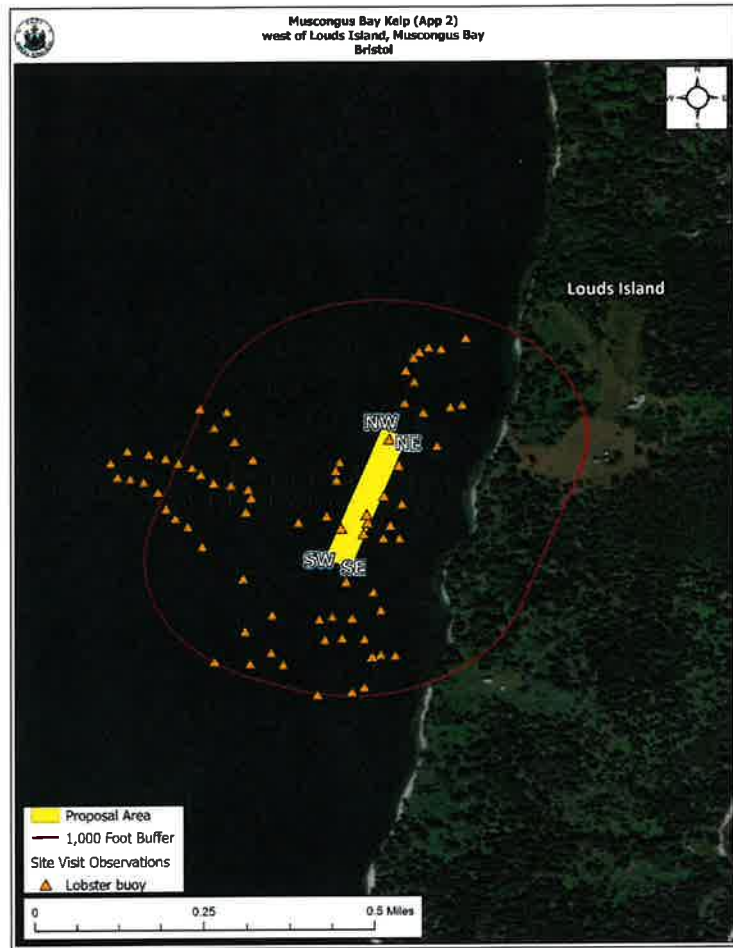


Figure 2. Proposed lease area with site visit observations.

Given the considerable distance to riparian structures, the lease as proposed will not interfere with riparian ingress and egress.

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 unreasonably 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 and different degrees of use

of the navigational channels in the area. Chapter 2.37(1)(A)(2). High tide “short cuts” shall not be considered navigational ways for purposes of this section. Chapter 2.37(1)(A)(2).

The proposal is located in subtidal, navigable waters approximately 363 feet west of Louds Island at MLW (SR 5). There are two primary marked channels in western Muscongus Bay that provide access to upper Muscongus Bay and the Medomak River (SR 5). One is west of Louds Island and the other is east of Louds and Marsh Islands (SR 5). The proposal is located entirely within the channel to the west of Louds Island (SR 5). There is approximately 1,218 feet of navigable water between the proposal area and Poland Ledge to the west which is marked by green navigation buoy “7” (SR 5; Figure 3).

During DMR’s site visit, scientists observed one powerboat transiting to the south in the channel and one powerboat transiting to the north in the channel within the vicinity of the proposal.

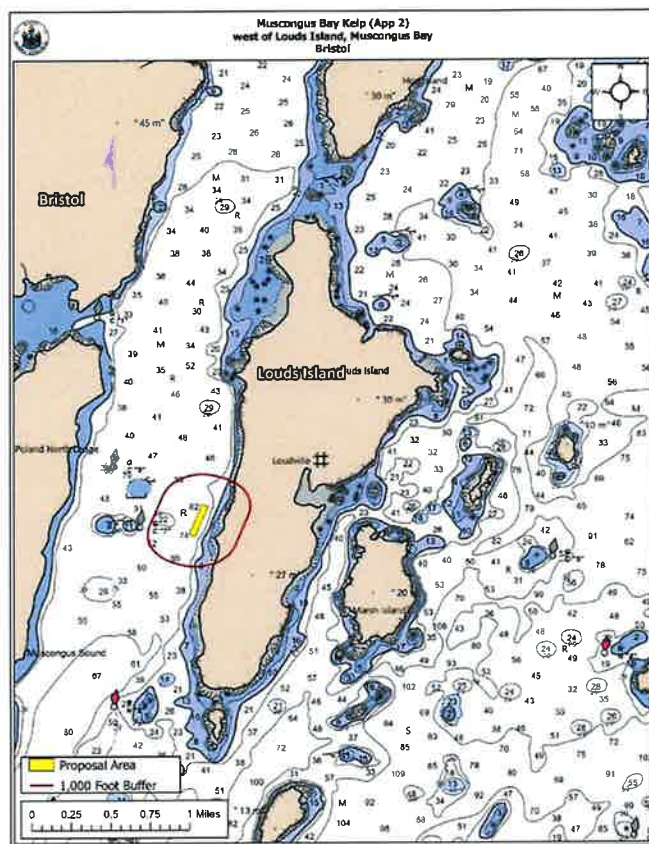


Figure 3. Navigational channels in the vicinity of the proposed lease area.

Because the proposed lease site is surrounded by ample navigable waters, there will not be any adverse impacts to 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 water-related uses of the area. Chapter 2.37(1)(A)(3).

Fishing. With respect to fishing, 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 2.37(1)(A)(3).

During DMR's site visit on September 25, 2024, scientists observed 78 lobster buoys within the vicinity of the proposal, five of which were located within the proposal boundaries (Figure 2; SR 6). During the site visit, DMR observed two lobster boats actively working in the vicinity of the proposal (SR 6).

According to the application, no recreational fishing has been observed at the site (App 8). The application stated that lobster fishing in the vicinity is moderate to heavy (characterized as 25-100 traps) during the summer, but minimal from September to June (App 8).

While there was documented lobster fishing in the area at the time of the DMR visit, it was largely observed outside of the proposed lease boundaries. The application states that mooring blocks and state-required lease markers would remain on site year-round with mooring lines and chains sunk to the seafloor (App 17). However, all other gear will be removed from the site between June 16 and October 31 (App 17). If granted, the lease will be conditioned for gear removal from June 16 to October 31 with mooring lines and chains sunk to the seafloor. Therefore, given the ample space available for commercial fishing outside of the proposed lease area and the seasonal nature of the gear deployment, the proposed lease activities will not unreasonably interfere with fishing.

Other Uses. According to the application, no recreational activities have been observed within 1,000 feet of the lease site, but kayaking may occur in the area rarely in the summer months (App 9).

Given the abundant area to kayak around the site when gear is present and the seasonal nature of sea kayaking in Maine, no other uses of the area will be impacted by the lease activities.

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 are not any licensed aquaculture leases or limited purpose aquaculture (LPA) sites within 1,000 feet of the proposed lease site (SR 7; Figure 1).

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. DMR scientists utilized an ROV to assess the epibenthic ecology of the proposed lease (SR 8). The relative abundance of epibenthic flora and fauna observed in the video footage is described below in Table 2 (SR 8).

Table 2. Species observed on underwater video footage.

Species Observed	Abundance
Mysid shrimp (<i>Mysis</i> spp.)	Common
American lobster (<i>Homarus americanus</i>)	Occasional
Spotted hake (<i>Urophycis regia</i>)	Occasional
Winter flounder (<i>Pseudopleuronectes americanus</i>)	Occasional
Sugar kelp (<i>Saccharina latissima</i>)	Rare
Eelgrass (<i>Zostera marina</i>)	Rare

Marine Vegetation. Records of eelgrass collected by the Maine Department of Environmental Protection (MDEP) in 2023⁵ indicate there is eelgrass mapped within 1,000 feet of the proposal (SR 8). The nearest mapped eelgrass is approximately 249 feet east of the proposal (SR 8; Figure 4).

During DMR's site visit, seven blades of very sparse, unhealthy-looking eelgrass were observed on underwater video footage in the vicinity of the proposal (SR 8). The eelgrass was on the bottom, but scientists were unable to determine if it was rooted to the seafloor (SR 8). Water depth in the general area is approximately 39.2-66.0 feet at MLW (SR 8).

Eelgrass is typically found in shallower water depths in subtidal to low intertidal areas to allow for adequate light penetration (SR 8). DMR expects seasonal regrowth of eelgrass to occur in April/May and seasonal senescence of eelgrass to occur in October/November (SR 8). The applicant is proposing to seasonally culture marine algae on longlines from November to June (SR 8).

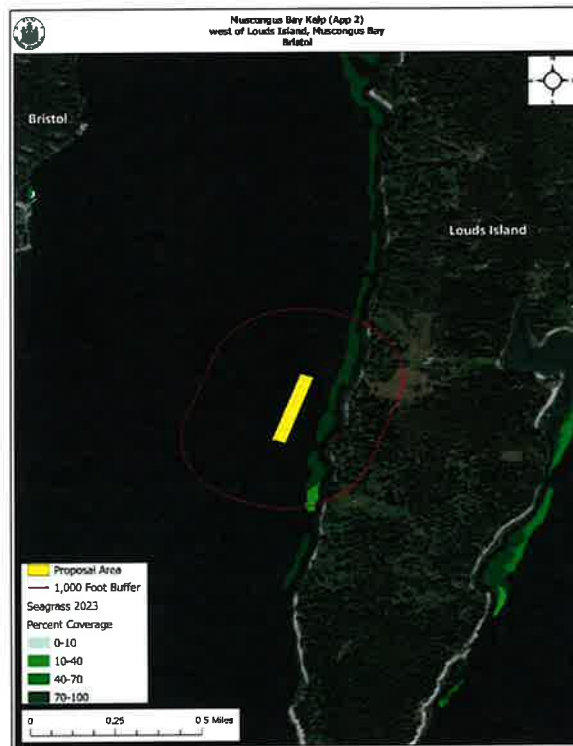


Figure 4. Mapped eelgrass (*Z. marina*) in the vicinity of the proposed lease area.

Wildlife. During the site visit, DMR scientists observed common eider (*Somateria mollissima*), a loon (*Gavia immer*), a bald eagle (*Haliaeetus leucocephalus*), double crested cormorants (*Nannopterum*

⁵ Data obtained from The Maine Office of GIS "GISVIEW.MEDEP.Seagrass2023". This is the most current record of mapped eelgrass within the vicinity of the proposal.

auritum), a sturgeon (*Acipenser* sp.), and a harbor seal (*Phoca vitulina*) in the general vicinity of the proposal (SR 11).

The Maine Department of Inland Fisheries and Wildlife (MDIFW) has jurisdiction over inland fisheries and wildlife resources of the state (SR 11). MDIFW also has the authority to conserve wildlife populations and their ecosystems through applicable state laws and rules (SR 11). DMR provides MDIFW with notice and the opportunity to comment on all complete lease applications (SR 11). In addition, the site report also includes MDIFW designated and mapped habitat types that are within 1,000 feet of the lease proposal, if applicable (SR 11).

According to Geographic Information System (GIS) data maintained by MDIFW and available through the Maine Office of GIS (MEGIS), there is one mapped habitat type within 1,000 feet of the lease proposal (SR 11). The proposal is near Tidal Waterfowl and Wading Bird Habitat (TWWH), which is a type of Significant Wildlife Habitat designated and regulated by MDIFW (SR 11).⁶ Based on data maintained by MDIFW, the nearest TWWH is approximately 300 feet east of the proposal (SR 11; Figure 5).

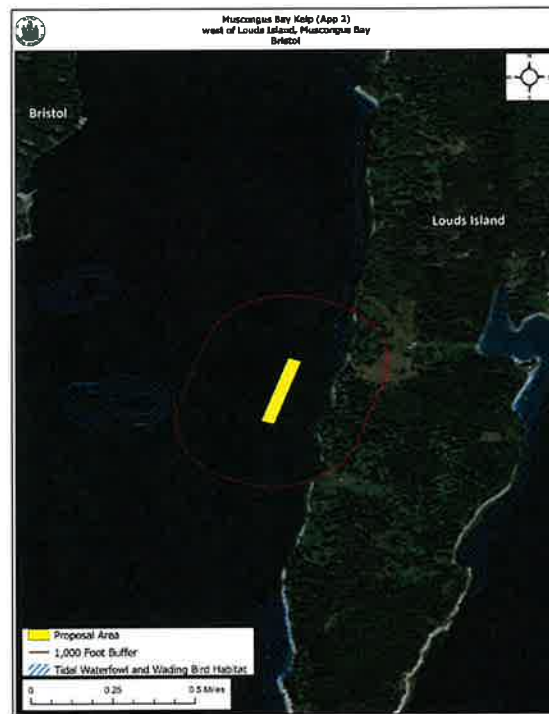


Figure 5. Mapped habitats in the vicinity of the proposed lease area.⁷

⁶ <https://www.maine.gov/ifw/programs-resources/environmental-review/significant.html>

⁷ Data obtained from USFWS “Bald_Eagle_Nests_-_Maine_2023” and MDIFW “EHRTERN”, “EHPLVTRN”, “GISVIEW.MEIFW.Twwh”, “ShorebirdAreas”, and “SNI”.

MDIFW was provided with the opportunity to comment on this proposal (SR 11). On May 29, 2024, a Resource Biologist with MDIFW responded by email to a “Request for Agency Review and Comment” stating that minimal impacts to wildlife are anticipated for this project (SR 11).⁸

Though bald eagles are no longer listed on Maine’s Endangered and Threatened Species List, the United States Fish and Wildlife Service (USFWS) may also have jurisdiction over the management and conservation of the species based on applicable law and rule (SR 11). Data collected by USFWS in 2023 by aerial nest survey shows there is no mapped bald eagle nesting site in the vicinity of the proposal (SR 11).

Based on the record, including the absence of robust eelgrass and mapped significant wildlife habitats in the lease footprint, IFW’s comment, and the seasonal nature of the gear deployment, the proposed lease activities will not interfere with the ecological functioning of the area.

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).

According to the application, sugar kelp (*Saccharina latissima*), skinny kelp (*Saccharina angustissima*), winged kelp (*Alaria esculenta*), horsetail kelp (*Laminaria digitata*), shotgun kelp (*Agarum clathratum*), Irish moss (*Chondrus crispus*), dulse (*Palmaria palmata*), and sea lettuce (*Ulva fenestrata*)⁹ will be sourced from Atlantic Sea Farms (ASF)¹⁰ in Biddeford, Maine (App 2-3). This is currently an approved source for these species. The application also states that nori/laver (*Porphyra spp*) will be sourced from ASF. This is not an approved source for nori/laver. However, there is a facility currently approved for nori/laver. If the lease is granted, the applicant is required to obtain this species from a DMR approved source.

⁸ Email correspondence between MDIFW and DMR

⁹ The application listed *Ulva lactuca*. Atlantic Sea Farms previously cultured *Ulva lactuca* but has amended their land-based aquaculture license to culture *Ulva fenestrata*.

¹⁰ Since the application was submitted, this facility has changed its name to Seaweed Cultivation Center.

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 for this site, as conditioned, 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 Muscongus Bay Kelp, for 3.95 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 kelp (*Laminaria digitata*), shotgun kelp (*Agarum clathratum*), Irish moss (*Chondrus crispus*), dulse (*Palmaria palmata*), nori/laver (*Porphyra spp*), and sea lettuce (*Ulva fenestrata*) using suspended culture techniques. The granted lease coordinates are contained in the Appendix to this decision. 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 leased 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 addressing the ability of the lease site and surrounding area to support ecologically significant flora and fauna, and preserving the exclusive rights of the lessee to the extent necessary to carry out the purposes of the lease. The following condition shall be incorporated into the lease:

1. All gear, except moorings and mooring lines/chains that must be sunk, and the corner markers, shall be removed from the site between June 16 and October 14.

7. Revocation of Lease

The Commissioner may initiate revocation proceedings and revoke the lease 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 has been violated.

Dated: 9.29.2026



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

Appendix

Granted Lease Coordinates

<u>Corner</u>	<u>Latitude</u>	<u>Longitude</u>				
NW	43.926210°	-69.441650°	then	160	feet at	110° True to
NE	43.926056°	-69.441081°	then	1,064	feet at	197° True to
SE	43.923270°	-69.442290°	then	164	feet at	290° True to
SW	43.923430°	-69.442870°	then	1,063	feet at	017° True to NW