

Standard Aquaculture Lease Application
Suspended culture of marine algae
Casco Bay, Chebeague and Long Islands, Maine

CAS ELC
August 24, 2021

FINDINGS OF FACT, CONCLUSIONS OF LAW, AND DECISION

Shearwater Ventures, LLC has applied to the Department of Marine Resources (DMR) for a twenty-year standard aquaculture lease on 3.83¹ acres east of Little Chebeague Island in Casco Bay in Chebeague Island and Long Island, Cumberland County, Maine. The proposal is for the suspended culture of sugar kelp (*Saccharina latissima*), skinny kelp (*Saccharina angustissima*), horsetail kelp (*Laminaria digitata*), winged kelp (*Alaria esculenta*), dulse (*Palmaria palmata*), Irish moss (*Chondrus crispus*), and laver (*Porphyra sp.*).

1. THE PROCEEDINGS

The pre-application meeting on this proposal was held on June 7, 2019, and a scoping session was held on September 3, 2019. DMR accepted the final application as complete on October 3, 2019. A public hearing was scheduled for July 26, 2021. Notice of the completed application and public hearing were provided to state and federal agencies, the Towns of Chebeague Island and Long Island, riparian landowners within 1,000 feet of the proposed site, and subscribers to DMR's aquaculture email listserv. Notice of the hearing was published in *The Northern Forecaster* on June 24 and July 15, 2021. Due to the COVID-19 pandemic, and to limit any potential public health risks associated with gathering in groups, DMR elected to conduct the public hearing on this application remotely, using a virtual meeting platform.² The public notice for the hearing indicated that the proceeding would be conducted remotely, and directed interested persons to contact DMR to sign up to participate in the proceeding by July 11, 2021.

The remote public hearing was held on July 26, 2021. No one intervened in this case. Sworn testimony was given at the hearing by the following witnesses:

Name	Affiliation
Nathan Johnson	Shearwater Ventures, LLC; applicant
Cheyenne Adams and Flora Drury	DMR Aquaculture Scientists

¹ The applicant originally requested 3.79 acres. DMR calculations, based on the coordinates provided by the applicant indicate the area is 3.83 acres.

² The Department of Marine Resources uses Microsoft Teams for all virtual conferencing, so this was the platform used for the Shearwater Ventures, LLC remote hearing.

Colin Greenan, United States Army Corps of Engineers (ACOE), attended the hearing but did not offer testimony. Additional DMR staff and members of the public attended the hearing but did not offer testimony. The hearing was recorded by DMR. The Hearing Officer was Erin Wilkinson.

The evidentiary record before DMR regarding this lease application includes four exhibits introduced at the hearing and the record of testimony at the hearing. The evidence from these sources is summarized below.³

LIST OF EXHIBITS

1. Case file
2. Application
3. DMR site report
4. PowerPoint presentation with pictures used by the applicant during their testimony

2. DESCRIPTION OF THE PROJECT

A. Site Characteristics

The proposed site is located within the footprint of experimental lease CAS ELCx, which is approved for the suspended culture of marine algae and is held by the applicant. On November 21, 2019 DMR staff assessed the proposed lease site and the surrounding area in consideration of the criteria for granting a standard aquaculture lease. The proposed lease is in subtidal waters in Chandler Cove, a protected area surrounded by Great Chebeague, Little Chebeague, and Long Islands (SR 3). Little Chebeague, an unpopulated island owned by the State of Maine Bureau of Parks and Lands, is located west of the proposed lease. A tidally-exposed sandbar that connects Great Chebeague and Little Chebeague Islands is located north of the proposal (SR 3). Great Chebeague Island, to the north of the proposal, is residential and dominated by fields and mixed forest. Docks and moorings are present at the head of Chandler Cove on Great Chebeague Island to the northeast of the proposed site (SR 3). DMR staff assessed the bounds of the proposed lease and found that the bottom of the area immediately outside the proposed lease is primarily composed of semi-firm mud and sand and some occasional gravel (SR 6). Firmer sediment was observed along the eastern boundary and softer sediment was observed on the western boundary (SR 6).

DMR did not collect depths during their visit to the site in November 2019. However, the site report for experimental lease CAS ELCx, which is located in the same location as the current proposal, stated that depths at the proposed site range from 24 to 35 feet, with deeper water found at the southern and eastern portions of the area (SR 6). When correcting for tidal variation, depth at mean low water is approximately 20 feet within the boundaries of the site (SR 6).

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

B. Proposed Operations

The applicant proposes to culture sugar kelp (*Saccharina latissima*), skinny kelp (*Saccharina angustissima*), horsetail kelp (*Laminaria digitata*), winged kelp (*Alaria esculenta*), dulse (*Palmaria palmata*), Irish moss (*Chondrus crispus*), and laver (*Porphyra sp.*) on up to fifteen, one-thousand foot longlines (App 10-11; Johnson testimony). At a minimum, the lines would be spaced 10 feet apart, but some lines may be spaced further apart, resulting in less than 15 total lines deployed on the site. Longlines would be suspended at least four feet below the surface of the water, but would likely be deeper (Johnson, testimony). Ten helical anchors, six 2,000 lb. gravity anchors, and thirty-six associated mooring lines and buoys would remain on site year round, while the longlines, depth control lines, and spreader lines would be on site from October 15th to June 15th annually (SR 2). The application indicated that, to date, no power equipment has been used, but that the use of power equipment to mechanize the harvesting process may be investigated, in which case a portable generator would be used on the site (App 21, Johnson testimony). At the hearing, Mr. Johnson testified that he envisions continuing to harvest by hand, but that if a generator were to be used, it would be a small, portable power pack, which he further described as being quiet (Johnson, testimony). An 18 foot skiff would be used for setting long lines, inspection, maintenance, and support on the site, while a lobster style vessel would be used during harvesting (App 20).

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; with navigation; with fishing or other uses of the area, taking into consideration other aquaculture uses of 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, 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

Little Chebeague Island is the only shorefront land within 1,000 feet of the proposed lease site. This island is owned by the Maine Bureau of Parks and Lands and is open to public access (SR 8). Individuals visiting this island access the area via a tidally exposed sandbar that connects the island with Great Chebeague Island or by landing vessels directly on the island's shore (SR 8). The proposed lease is approximately 180 feet from Little Chebeague Island at mean low water, and therefore, boat access to the island should not be prevented by the proposed lease (SR 8). The applicant has indicated that most seasonal boats and overnight or weekend visitors to Little Chebeague Island access the area to the southwest of the proposed site (SR28).

During DMR's visit to the site in November 2019, no docks or residences were observed with which the proposed activities would interfere. The proposal is located approximately 1,650 feet from Long Island, and 2,400 feet from Great Chebeague Island.

During the hearing, no testimony was provided from riparian landowners, or others, indicating that riparian ingress or egress was a concern. Given that the evidence in the site report indicates access to and from the Little Chebeague Island shoreline should not be prevented by the proposal, and there appears to be ample space to navigate around the proposed site, riparian access should not be prevented or unduly affected by the proposed lease.

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

B. Navigation

The proposed lease is located to the east of Little Chebeague Island and to the west of the primary navigation channel within Chandler Cove (SR 9). While Chandler Cove experiences heavy boating traffic, the proposed location is outside of the channel and parallels the Little Chebeague Island shore (SR 9). This location minimizes the interference with boat traffic in the channel and does not impede access to a highwater cut-through between Little and Great Chebeague Islands as it is located more than 1,000 feet away from this tide-dependent route (SR 9). The application stated that most vessels transiting to/from Chandler Cove pass about 1,000 feet to the south of the proposed site (App 27). The proposal is also approximately 180 feet from Little Chebeague Island at mean low water, so there is room for vessels to navigate between the proposal and the island (SR 9). According to the applicant, there is seasonal recreational boating in the area, but this activity mainly occurs to the southwest of the proposed site, and during the summer and early fall when aquaculture operations at the site do not occur (App 28).

The applicant has requested that all vessel traffic be restricted from occurring within the boundaries of the proposed site between October 15 and June 15 each year, when longlines are deployed (App 29). Because the applicant is proposing to have lines deployed, at a minimum, 4 feet below the surface of the water, shallow draft vessels would be able to transit over the lines (SR 9). However, as an experimental lease has already been in operation at this site, and due to the presence of the longlines and depth control buoys, it is likely boaters will avoid the area all together when gear is present. At the hearing, Mr. Johnson indicated that he has not experienced issues with individuals trying to navigate within his existing experimental lease site (Johnson, testimony).

During the hearing, no testimony was provided to indicate there is a concern regarding impacts to navigation if the proposed lease is approved.

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

C. Fishing & Other Uses

Fishing. During their visit to the site, DMR staff did not observe any commercial or recreational fishing activity in the vicinity of the proposed lease (SR 9). Lobstering activity has been observed by DMR staff on other visits to Chandler Cove, so it is possible that this activity occurs within the proposed lease area. DMR's site report did note the presence of what appeared to be a lobster buying station with two boats to the south of the proposal on November 21, 2019, but the distance between this station and the proposal appears to be sufficient to prevent interference with this business (SR9). The applicant testified that his children set traps within the proposed lease boundaries during the summer (Johnson, testimony), and the application indicates that lobstering occurs within the vicinity of the proposal, but is not common during the growing season for marine algae when the majority of gear would be deployed, and this activity would be welcome to continue within the proposed boundaries between June 16 and October 14 each year (App 27, 29).

A Harbormaster Questionnaire completed by the Chebeague Island Harbormaster for a different pending lease application in the area indicated that Chandler Cove is used by commercial and recreational fishermen, and that some of these activities include lobstering and scallop fishing (SR 9). DMR staff did observe scallops in drop camera footage taken along the boundaries of the proposal in November 2019, and DMR scallop harvester reports indicate scallops have been caught in almost all of Chandler Cove, but the greatest catch rates are in the cove's deeper waters (SR 9). According to the information provided in the application, scallop fishing occurs seasonally east of the proposed site, and fishermen were consulted when applying for the experimental lease CAS ELCx, which this proposal would replace if approved (App 27). At the hearing, Mr. Johnson testified that he has not had issues with individuals wanting to fish within his proposed boundaries and not being able to do so. He did indicate that there was one incident with a scallop fisherman when his experimental lease was first approved, but that he has not had any issues since (Johnson, testimony).

No testimony was provided from any commercial or recreational fishing during the hearing. The applicant has also indicated that fishing would be permissible within the proposed boundaries between June 16 and October 14 annually (App 29).

Based on this evidence, the proposed lease will not unreasonably interfere with commercial or recreational fishing activities around the proposed lease area.

Other aquaculture uses: When the site report was written, there were 7 Limited Purpose Aquaculture (LPA) licenses and 8 active aquaculture leases within 1 mile of the proposed site (SR 10). The proposal overlaps experimental lease CAS ELCx, which is held by the applicant, and which will expire when a decision is reached on this proposal. The closest aquaculture activity to the proposal not held by the applicant is lease CAS CHANx, which is an experimental lease for the suspended culture of marine algae. CAS CHANx is approximately 305 feet to the northeast and was granted after CAS ELCx. No testimony was received from the holder of CAS CHANx or other aquaculture leaseholders in the area.

Based on this evidence, the proposed lease will not unreasonably interfere with other aquaculture activities in the area.

Other water-related uses. During the site visit on November 21, 2019, DMR staff did not observe other water-related uses of the proposed lease area. The application indicates that kayaking and swimming occurs but that these activities mainly take place to the southwest of the proposed site on the sandy beach located on Little Chebeague Island and that these activities occur mainly during the summer and early fall when aquaculture operations at the site do not occur (App 28).

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

Site observations. DMR scientists conducted observations of the epibenthic ecology of the surrounding area by drop camera on November 21, 2019 (SR 11). The bottom of the area is composed of semi-firm mud and sand (SR 11). Marine algae, colonial tunicates, and benthic diatoms were observed in the highest abundance during the drop camera transect. Sea scallops were also observed along the bounds of the proposal (SR 11).

Eelgrass. In their application Shearwater Ventures noted that the proposed lease area falls outside of mapped eelgrass beds (App 25). Data collected by the Casco Bay Estuary Project indicate that, in 2018, eelgrass was present in varying amounts around most of Little Chebeague Island (SR 13). DMR observed dead eelgrass present along the boundaries of the proposal in the drop camera transect conducted in November 2019 (SR 13), and the site report indicates that while the majority of the eelgrass appears to have washed into the site from nearby beds it is possible that some eelgrass grew within the proposed lease area (SR 13). However, as the site has been operating as an experimental lease CAS ELCx since 2016, if eelgrass did grow within the proposed lease boundaries since the 2018 survey was conducted, it appears to have done so while the current aquaculture lease operated (SR 13). The site report also notes that proposed aquaculture operations do not occur during most of the eelgrass growing season, so if any eelgrass is growing within the proposed lease boundaries, shading concerns are minimal (SR 13). No testimony was offered to indicate there is concern regarding eelgrass in the area of the proposed lease operations. Because no live eelgrass was observed during DMR's site visit, and the site report and ACOE did not indicate any concern regarding eelgrass, the proposed aquaculture activities should not adversely impact eelgrass within the proposed site.

Wildlife. Data maintained by the Maine Department of Inland Fisheries and Wildlife (MDIFW) indicate that the proposed lease is located more than 80 feet to the east of Tidal Wading Bird and Waterfowl Habitat, and there is designated habitat for purple sandpipers (*Calidris maritima*) over 1,000 feet to the southeast of the proposed lease. The Department sent a copy of the lease application to MDIFW for their review and comment and MDIFW indicated that "As there are no apparent direct impacts to wildlife resources under MDIFW jurisdiction, we have no comment on this project."⁴

⁴ CF: Email to C. Burke from R. Settele dated October 9, 2019.

Based on this evidence, it appears that the proposed lease site will not 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

Little Chebeague Island is the only shorefront land within 1,000 feet of the proposed lease site and is also owned by the Maine Bureau of Parks and Lands and is open to public access (SR 8). Individuals visiting this island access the area via a tidally exposed sandbar that connects the island with Great Chebeague Island or by landing vessels directly on the island's shore (SR 8). The proposed lease is approximately 180 feet from Little Chebeague Island at mean low water, and therefore, boat access to the island should not be prevented by the proposed lease (SR 8). DMR's site report indicates that due to its location, the proposed lease is unlikely to obstruct access to or use of this public space (SR 25).

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

The applicant lists Atlantic Sea Farms in Saco, Maine as the source of stock (App 2). This source is approved by DMR.

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

G. Light

According to the application, no lights would be used on the proposed site (App 21).

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

H. Noise

The application and Mr. Johnson's testimony indicated that to date, no power equipment has been used in the operations of the experimental site CAS ELCx, but that the use of power equipment to mechanize the harvesting process may be investigated, in which case a portable generator would be used on the site (App 21, Johnson testimony). At the hearing, Mr. Johnson testified that he envisions continuing to harvest by hand because that has worked well for his operations in the past, but that if a generator were to be used, it would be a small, portable power pack, which he described as being quiet (Johnson, testimony). An 18 foot skiff will be used for setting long lines, inspection, maintenance, and support on the site, while a lobster style vessel will be used during harvesting (App 20). At the hearing, there was no testimony offered to

indicate there is concern about levels of noise from within the boundaries of the proposed lease site. Based on this evidence, 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 gear proposed by the applicant 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.

4. 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 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. 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 applicant has demonstrated that there is an available source of stock 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.

5. DECISION

Based on the foregoing, the Commissioner grants the requested lease to Shearwater Ventures, LLC for 3.83 acres for twenty years for the cultivation of sugar kelp (*Saccharina latissima*), skinny kelp (*Saccharina angustissima*), horsetail kelp (*Laminaria digitata*), winged kelp (*Alaria esculenta*), dulse (*Palmaria palmata*), Irish moss (*Chondrus crispus*), and laver (*Porphyra sp.*) using suspended culture techniques. The lessee shall pay the State of Maine rent in the amount of \$100.00 per acre per year. The lessee 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.

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 (7-B).⁵ 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. 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: 8/24/21



**Patrick C. Keliher, Commissioner
Department of Marine Resources**

⁵ 12 M.R.S.A §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."