

STATE OF MAINE
DEPARTMENT OF MARINE RESOURCES
Experimental Aquaculture Lease Application
Suspended culture of kelp, Saco Bay, Saco

Timothy Harder
Lease SACO ERx
Docket #2015-12-E
March 31, 2016

FINDINGS OF FACT, CONCLUSIONS OF LAW, AND DECISION

Timothy Harder of Saco, Maine applied to the Department of Marine Resources (“DMR”) for a 3-year lease on 2.75 acres located in the coastal waters of the State of Maine between Eagle and Ram Islands, north of the jetty in Saco Bay, Saco, for the purpose of cultivating three species of kelp, *Saccharina latissima* (sugar kelp), *Alaria esculenta* (edible kelp), and *Palmaria* or *Rhodymenia palmata* (dulse), using suspended culture techniques.¹ DMR accepted the application as complete on June 9, 2015. No comments or requests for hearing were received in response to the public comment period, and no public hearing was held.

1. THE PROCEEDINGS

Notice of the application, the DMR site report, and the 30-day public comment period were provided to state and federal agencies which were requested to review the project, as well as to riparian landowners, the Town of Saco and its Harbormaster, members of the Legislature, representatives of the press, aquaculture and environmental organizations, and others on the Department’s mailing list. Notice of the application and 30-day comment period was published in the *Journal Tribune* on June 19, 2015.

The evidentiary record before the Department regarding this lease application includes the application, the U.S. Army Corps site report, and the Department’s site report dated December 17, 2015, as well as the case file which includes the correspondence with appropriate agencies asked to provide comment on the application. The evidence from all of these sources is summarized below.²

2. DESCRIPTION OF THE PROJECT

Site Characteristics

The proposed lease site is located between Eagle and Ram Islands in Saco Bay, north of the jetty. The site is a rectangle, 200 ft. by 600 ft., oriented with its long axis running approximately west to east, approximately 0.87 miles east of the Saco shore (App 9).

There are no riparian landowners within 1,000 feet of the lease site. The shore and upland characteristics include an “arcuate” [i.e., curved or bow-shaped] bay with sandy beaches; the developed

¹ The applicant added the latter two species to the application after the site report had been completed. See Section 3 (F), Source of Stock, below.

² These sources are cited below, with page references, as CF (case file), App (application), SR (site report).

marine forest at Ferry Beach State Park located directly shoreward of the site; Goosefare Brook, the Saco River, and the Scarborough River, which feed into the bay; and the watershed of the Saco River Valley which is well-forested (App 6).

Depth at the site at mean low water is approximately 30 feet and at high water, approximately 41 feet. The topography is gently sloping (App 5). The sea bottom within the proposed lease area consists primarily of mud and sand (SR 9). There are no historical records of eelgrass in the general vicinity of the site, though a bed was documented adjacent to the northwest side of Eagle Island in 2001 (SR 9).

The proposed lease site lies over 1,600 feet from Eagle Island to the northeast, over 2,000 feet from Ram Island to the southeast, and approximately 3,000 feet or more from the nearest mainland intertidal zones to the southwest (SR 3).

The proposed lease is in Pollution Zone #10, A.1, an area currently classified by the Department of Marine Resources Water Quality Classification program as "prohibited" to shellfish harvesting (App 6, SR 10). According to the site report, however, "Sugar kelp could legally be grown and harvested in this area" (SR 10).

The nearest shorefront, Eagle Island, is located approximately 1,680 feet to the northeast. The more heavily populated Camp Ellis and Ferry Beach are located greater than 2,950 feet west of the proposal (SR 8). There are no public docking facilities, beaches, or conserved lands within 1,000 feet of the proposed lease (SR 10).

Proposed Operations

The applicant proposes to culture three species of kelp on horizontal long lines submerged seven feet below the sea surface around the perimeter of the proposed lease site (SR 2) (App 10, 11). The applicant currently holds a limited-purpose aquaculture (LPA) license to grow kelp on long lines located at the eastern boundary of the proposed lease site (App 9). Over the course of the lease term, the applicant will increase the amount of long lines deployed at the site from 200-400 feet to 1,600 feet (App 4).

The applicant will access the site using a 17-foot center console vessel, with 40-hp motor. According to the application, he currently has a mooring permit application pending with the city of Saco (App 5-7).

The long lines will be seeded with kelp sporelings between late October and late November each year and grown out until late April. The crop will be harvested by cutting the kelp from the lines, placing it in mesh bags, and transporting it by boat back to the dock in Saco for transport to a processing facility. After the harvest is completed, the long lines will be removed, the mooring chains dropped, and only the moorings will remain to mark the site. The applicant plans to complete the harvest and line removal by early May, when the striped bass fishing season begins (App 7).

There are already two existing mooring ball and block pairs at the two easterly corners of the site as part of the LPA project. Additional mooring balls and mooring blocks will be added at 300 and 600 feet distances from these corners, outlining the site. In total, there will be four mooring balls and blocks

at the corners and two in the center of the long sides of a 200-foot by 600-foot rectangular layout. In addition, lobster buoys located every 100 feet along the lines at the surface of the water will serve as depth control devices and mark the positions of the grow lines beneath the surface of the water. Each of these buoys will be attached to the grow line by a 7-foot rigid PVC pipe (App 4, 12).

3. STATUTORY CRITERIA & FINDINGS OF FACT

Approval of experimental aquaculture leases is governed by 12 MRS §6072-A. This statute provides that a lease 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 the number and density of aquaculture leases in an 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

There is no land within 1,000 feet of the proposed lease site, so riparian access will not be an issue (App 4). Ferry Beach State Park is located more than 4,000 feet to the west northwest of the proposal (SR 10). The nearest shorefront, Eagle Island, is located more than 1,680 feet to the northeast. The more heavily populated Camp Ellis and Ferry Beach are located greater than 2,950 feet west of the proposal (SR 8).

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

B. Navigation

The application indicates that recreational boating occurs in the area of the lease site but not during the kelp growing season (App 5, 7). The site report states that “The proposed lease activities are not expected to interfere with navigation in the general vicinity” and describes navigation in the vicinity of the proposed lease site as follows:

A minimum of 1,300 feet of navigable waters would remain between the northern lease boundary and the 6 foot depth contour at Eagle Island. To the east greater than 1,800 feet of navigable waters (exceeding 6 feet in depth) would remain available, whereas over 2,000 feet separate the southern and western boundaries from the nearest navigational obstructions.

On October 15, 2015 two vessels were observed in the general area between Eagle and Ram Islands. A single lobster boat, the “Caroline E”, was witnessed hauling traps to the west of Eagle Island while US Army Corps of Engineers staff members, in a pontoon boat, were conducting surveys for a dredge disposal site to the west of Ram Island (SR 8-9).

It appears from this evidence that the project will not hamper recreational boating activity. Aquaculture lease sites are required to be marked for navigation purposes in accordance with U.S. Coast Guard requirements.

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

C. Fishing & Other Uses

According to the applicant, the site area is currently used by lobster fishermen, but over the course of 2014-2015, no lobster gear was observed in proximity to the structures, no lobster gear interacted with existing LPA structures, and the site will not interfere with lobstermen's riparian access (App 4). Recreational fishing for striped bass also takes place in the vicinity of the lease site, but the applicant intends to complete his kelp harvest in time to avoid overlapping his harvesting activities with recreational fishing activities (App 5, 7).

During the site review, limited lobster and crab fishing was observed by the presence of three trap buoys within the boundaries of the proposed lease site. Other traps were noted between the proposed lease site and Eagle Island. Recreational fishing for striped bass is prevalent during the summer months, but because the applicant is proposing to farm marine algae, culture activities will be concentrated between October and May and will not overlap with peak recreational and commercial fishing seasons (SR 9).

Exclusivity. According to the application, "Fishing would be prohibited directly on top of the site to avoid entanglements" (App 5). This restriction is reasonable in order to enable the aquaculture project to be carried out while encouraging the greatest number of compatible uses of the area, as provided in 12 MRS §6072-A (15).

Other Aquaculture Leases. Timothy Harder has held LPA license THAR-1-14 at the proposed lease location since before applying for the experimental lease. There are no other aquaculture activities

It appears from this evidence that the proposed lease site is unlikely to affect fishing in the area.

Therefore, considering the number and density of aquaculture leases in the area, I find that the aquaculture activities proposed for this site will not unreasonably interfere with fishing or other uses of the area.

D. Flora & Fauna

Site Observations. Current speed at the site is 2 knots at maximum tidal flow (App 5). The sea bottom within the proposed lease area consists primarily of mud and sand (SR 9). According to the site report, "There are no historical records of eelgrass (*Zostera marina*) within the general vicinity of the proposed lease site. A single bed was documented adjacent to the northwest side of Eagle Island in 2001 (SR 9)."

Fisheries and Wildlife. According to Maine Department of Inland Fisheries and Wildlife (MDIFW) data, Ferry Beach and associated shallow subtidal waters are listed habitat for the endangered

piping plover (*Charadrius melodrius*), but the proposed lease site would be located over 3,600 feet offshore from the designated habitat (SR 9). The proposed site is also over 1,600 feet from Eagle Island and Ram Island, which are listed as seabird nesting islands (SR 10).

Based on this evidence, it appears that the experimental lease as proposed for this site will not interfere with the ecology of the area.

Therefore, I find that 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

According to both the application and the site report, there are no government-owned beaches, parks or docks within 1,000 feet of the site (App 5, SR 9).

Therefore, I find that 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.

F. Source of Organisms

Sporelings for *Saccharina latissima* (sugar kelp), *Alaria esculenta* (edible kelp), and *Palmaria* or *Rhodymenia palmata* (dulse) will be acquired by the applicant from Ocean Approved, LLC of Portland, Maine. Seed stock for the latter two species may also be obtained from the Maine Cooperative Extension at the University of Maine's Center for Cooperative Aquaculture Research in Franklin, Maine. All three species of kelp are native to Maine coastal waters.³

Therefore, I find that the applicant has demonstrated that there is an available source of *Saccharina latissima* (sugar kelp), *Alaria esculenta* (edible kelp), and *Palmaria* or *Rhodymenia palmata* (dulse) to be cultured for the lease site.

4. CONCLUSIONS OF LAW

Based on the above findings, I conclude that:

1. The aquaculture activities proposed for this site will not unreasonably interfere with the ingress and egress of any riparian owner.
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, taking into consideration the number and density of aquaculture leases in the area.

³ CF, e-mail from Marcy Nelson, DMR, to Diantha Robinson, 3-30-16

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 *Saccharina latissima* (sugar kelp), *Alaria esculenta* (edible kelp), and *Palmaria* or *Rhododymenia palmata* (dulse) 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. §6072-A.

5. DECISION

Based on the foregoing, the Commissioner grants the requested experimental lease of 2.75 acres to Timothy Harder 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 lessee⁴; however, no aquaculture rights shall accrue in the lease area until the lease is fully executed.

This lease is granted to the applicant for the purpose of cultivating *Saccharina latissima* (sugar kelp), *Alaria esculenta* (edible kelp), and *Palmaria* or *Rhododymenia palmata* (dulse), using horizontal long lines. The applicant shall pay the State of Maine rent in the amount of \$100.00 per acre per year. The applicant shall post a bond or establish an escrow account pursuant to DMR Rule 2.64 (10)(D) in the amount of \$5,000.00, conditioned upon its 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 MRSA §6072-A (15).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.

The following conditions will be incorporated into the lease:

⁴ 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."

⁵ 12 MRSA §6072-A (15) provides that:

"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. The commissioner may grant the lease on a conditional basis until the lessee has acquired all the necessary federal, state and local permits."

1. The lease site must be marked in accordance with both U.S. Coast Guard requirements and DMR Rule 2.80.
2. Fishing is prohibited on the lease site when the longlines are deployed.
3. Other public uses that are not inconsistent with the purposes of the lease are permitted.

7. REVOCATION OF EXPERIMENTAL LEASE

The Commissioner may commence revocation procedures upon determining pursuant to 12 MRSA §6072-A (22) and DMR Rule Chapter 2.64 (13) that no substantial research has been conducted on the site within the preceding year, that research has been conducted in a manner injurious to the environment or to marine organisms, or that any conditions of the lease or any applicable laws or regulations have been violated.

Dated: 03/31/16


Patrick C. Keliher, Commissioner,
Department of Marine Resources