

**STATE OF MAINE
DEPARTMENT OF MARINE RESOURCES**

**Oceans Balance
CAS CIx**

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

September 12, 2018

FINDINGS OF FACT, CONCLUSIONS OF LAW, AND DECISION

Oceans Balance, Inc., a Maine company, applied to the Department of Marine Resources (DMR) for an experimental aquaculture lease on 3.93 acres¹ located in Casco Bay, west of Cow Island Ledge, Long Island, Cumberland County, Maine, for the cultivation of sugar kelp (*Saccharina latissima*), winged kelp (*Alaria esculenta*), rockweed (*Fucus vesiculosus*), and *Ascophyllum nodosum* using suspended culture techniques. DMR accepted the application as complete on February 13, 2018. No requests for a public hearing were received during the comment period and no hearing was held.

1. THE PROCEEDINGS

Notice of the application and the 30-day public comment period were provided to state and federal agencies, riparian landowners, the Town of Long Island, and others on the Department's mailing list. Notice of the application and comment period was published in the *Forecaster* on March 7, 2018.

The evidentiary record before the Department regarding this lease application includes the application, the Department's site report dated August 17, 2018, and the case file. The evidence from these sources is summarized below.²

2. DESCRIPTION OF THE PROJECT

A. Proposed Operations

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4C

¹ Applicant originally requested 4.61 acres. The NW coordinates were modified to ensure the acreage requested was four acres or less. Pursuant to statute, experimental leases are required to be four acres or less in size.

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

The purpose of the proposed lease is to explore the commercial feasibility of cultivating marine algae using suspended culture techniques (App 2). The applicant plans to deploy seven longlines measuring 1,000 feet in length (App 8). The longlines will be submerged seven feet below the surface of the water (App 8). The applicant intends to seed and harvest year-round and will visit the site on a weekly basis (App 2). Most aquaculturists who culture sugar kelp remove their gear during the summer months (SR 7). However, the applicant is also proposing to grow fucooids, a type of algae that would be cultivated throughout the year (App 2). Therefore, the applicant is proposing to have gear on the proposed lease site throughout the year. The applicant will access and service the site from an 18-foot skiff powered by a four-stroke outboard motor (App 2).

B. Site Characteristics

On June 27, 2018, DMR scientists visited the proposed lease site and assessed it and the surrounding area in consideration of the criteria for granting an experimental aquaculture lease. The proposed site occupies subtidal waters in Casco Bay, west of Cow Island Ledge (SR 2). Clapboard Island is situated to the north of the proposed site, Long Island and Chebeague Island are located to the east, and Great Diamond Island lies to the south (SR 2). At mean low water, the distance from the southeast corner of the proposed lease to Cow Island Ledge is ~110 feet (SR 5). Calculating for mean low water, depths ranged from 25.9 feet at the northeast corner and 36.6 feet at southwest corner (SR 6). According to the application, the bottom of the proposed site is characterized by mud that tapers to ledge near the proposed northeast corner (App 3).

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 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 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

Per the site report:

The closest parcel to the proposal is located 2,800 feet to the northeast, on Clapboard Island. Due to its distance from Clapboard Island and other surrounding properties, the proposed lease would not interfere with riparian ingress or egress (SR 7).

Activities at the proposed lease site in subtidal waters are unlikely to hamper access to and from the shore.

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

B. Navigation

Casco Bay is utilized frequently by commercial and recreational boaters, particularly during the summer (SR 7). During the site visit, staff observed sailboats, lobster boats, and motorized vessels within the vicinity of the proposed site (SR 7). However, the application indicates that there is little activity close to Cow Island Ledge (App 3). As noted in the site report, it is likely that most mariners try to avoid the ledge:

At the closest point, the proposed lease is located ~110 feet to the west of Cow Island Ledge in Casco Bay. Due to the proposed lease's proximity to this ledge, which is well marked by navigational aids, it is likely that most vessels already avoid the general area in which the proposed lease is located (SR 7).

Vessels that traverse northeast or southwest through the channel separating Cow Island Ledge from Clapboard Island would have ~1,900 feet of navigable area between the proposed site and the red/green nun buoy that marks the western side of the channel (SR 7).

Therefore, the aquaculture activities proposed for this site will not unreasonably interfere with navigation. The lease site must be marked in accordance with U.S. Coast Guard requirements.

C. Fishing & Other Uses

The application indicates that there “is light lobster fishing on the site in the summer and no lobster gear in the winter months” (App 3). The site report describes the following:

...lobster buoys were present around the proposed lease site in all directions. Three lobster buoys were located within, and two additional buoys were located just outside, the proposed lease boundaries...(SR 7).

Given that the applicant intends to cultivate marine algae year-round, lobstermen who deploy their traps to the west of Cow Island Ledge, within the 36-foot contour line, could be affected by the proposal (SR 7). If the lease is granted, the applicant is requesting that lobster fishing be prohibited within the boundaries of the proposed site (App 3). The applicant is requesting exclusive use to avoid lobster gear being deployed over the submerged longlines.

The site report indicates that if the applicant limited proposed operations to fall, winter, and spring months the potential impact to lobstermen would be substantially reduced (SR 7). Aquaculture Division staff discussed the proposal with Marine Patrol and Lobster Policy staff, who are familiar with lobster fishing activities in the area. Based on their feedback, the area is routinely fished by lobstermen during the summer and fall months. The deployment of longlines during the summer and fall months could create gear conflicts between the existing lobster fishery and the proposed operations.

The Department will condition the lease, so that the deployment of longlines from June 1 through October 31 is prohibited.³ Except for required marker buoys, no gear will be allowed on the site during that specified time. This condition is intended to mitigate potential impacts to lobstermen, while also allowing for the proposed aquaculture activities on a seasonal basis.⁴

Exclusivity. To avoid possible entanglement with submerged longlines, the applicant is requesting that lobster fishing be prohibited within the boundaries of the proposed lease site (App 3). For the reasons described above, the applicant will be prohibited from deploying longlines from June 1 through October 31. However, the Department will include a condition that prevents lobster fishing within the boundaries of the proposed lease from November 1

³ Based on feedback from Marine Patrol, this is when lobster fishing occurs in the area.

⁴ The U.S. Army of Corps of Engineers has limited gear deployment from October 15 to May 31 each year.

through May 31. The condition is intended to mitigate the potential of seasonal gear conflict between the existing lobster fishery and the proposed site.

Other aquaculture uses. There is one aquaculture lease located within one mile of the proposal.⁵ The lease is held for the suspended culture of blue mussels (*Mytilus edulis*), sea scallops (*Placopecten magellanicus*) and marine algae (SR 7). In addition, there are four Limited Purpose Aquaculture (LPA) licenses for the suspended culture of marine algae within one mile of the proposed site. The LPAs are held by the applicant for the suspended culture of marine algae⁶ (SR 7). Per the application, the two LPA licenses closest to the proposed site, TOLS316 and TOLS416, would be relinquished if the lease is granted (App 6). Given the distance to the existing lease and the remaining LPA's there is no likelihood of interference from the proposed lease with the activities at those sites.

Therefore, considering the conditions imposed on the lease, and existing aquaculture activities, the proposed site will not unreasonably interfere with fishing or other water related uses of the area.

D. Flora & Fauna

Site Observations. During the site visit, Department staff observed black-backed gulls (*Larus marinus*), herring gulls (*Larus argentatus*), eider ducks (*Somateria mollissima*), terns (*Sterna sp.*), and common loons (*Gavia immer*) near the proposed lease area (SR 8). Staff also noted two ospreys (*Pandion haliaetus*) and an occupied osprey nest located on Cow Island Ledge light (SR 8). Based on historical eelgrass (*Zostera marina*) data⁷, in 2013, the closest eelgrass beds were over ~1,900 feet to the northwest of the proposed area (SR 9).

Fisheries and Wildlife. Based on data maintained by the Maine Department of Inland Fisheries and Wildlife (MDIFW), bald eagle (*Haliaeetus leucocephalus*) nesting habitat is located 4,725 feet to the north of the proposed site (SR 9). The proposed site is also 1,970 feet from an area designated Tidal Waterfowl and Wading Bird Habitat, which is defined as Significant Wildlife Habitat under Maine's Natural Resources Protection Act (SR 8). DMR sent a copy of the lease application to MDIFW for their review and comment. MDIFW indicated that "minimal impacts to wildlife are anticipated."⁸

⁵ Lease acronym CAS CF2 held by Wild Ocean Aquaculture.

⁶ TOLS 116, 216, 316, and 416.

⁷ Data was collected by the Maine Department of Environmental Protection and Casco Bay Estuary Partnership (SR 13).

⁸ CF: Email from J. Perry (Environmental Review Coordinator, MDIFW) to C. Burke dated March 20, 2018.

Based on this evidence, it appears that the culture of marine algae as proposed for this lease site will not interfere with the ecological functioning of the area.

Therefore, given the provisions for gear deployment, 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

Per the site report, there are no beaches, parks, or docking facilities owned by federal, state, or municipal government within 1,000 feet of the proposed lease site (SR 10).

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, or docking facilities owned by municipal, state, or federal governments.

F. Source of Organisms

Seed stock for the proposed lease site will be sourced from the University of New England Marine Science Center located in Biddeford, Maine and Bigelow Laboratory in East Boothbay, Maine (App 1). Both institutions are an approved source of seed stock.

Therefore, the applicant has demonstrated that there is an available source of sugar kelp (*Saccharina latissima*), winged kelp (*Alaria esculenta*), rockweed (*Fucus vesiculosus*), and *Ascophyllum nodosum* to be cultured for the lease site.

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 riparian ingress and egress.
- B. The aquaculture activities proposed for this site will not unreasonably interfere with navigation.
- C. Given the conditions imposed on the lease, the aquaculture activities proposed for this site will not unreasonably interfere with fishing or other uses of the area, taking into consideration existing 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, or docking facilities owned by municipal, state, or federal governments.
- F. The applicant has demonstrated that there is an available source of sugar kelp (*Saccharina latissima*), winged kelp (*Alaria esculenta*), rockweed (*Fucus vesiculosus*), and *Ascophyllum nodosum* 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 3.93 acres to Oceans Balance Inc., 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 lessee⁹; 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*), winged kelp (*Alaria esculenta*), rockweed (*Fucus vesiculosus*), and *Ascophyllum nodosum* using suspended culture techniques. The lessee shall pay the State of Maine rent in the amount of \$100.00 per acre per year. Since this is an experimental lease with more than 400 sq. ft. 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 2.64 (10) (D) 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

⁹ 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.”

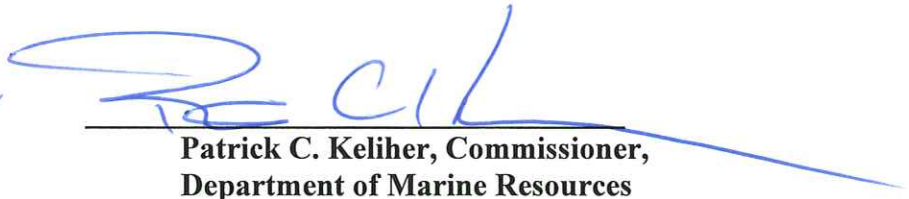
The Commissioner may establish conditions that govern the use of the lease area and impose limitations on aquaculture activities, pursuant to 12 MRSA §6072-A (15)¹⁰. Conditions are designed to encourage the greatest multiple compatible uses of the lease area, while preserving the exclusive rights of the lessee to the extent necessary to carry out the purposes of the lease. The following conditions shall be incorporated into the lease:

- A. The lease site must be marked in accordance with both U.S. Coast Guard requirements and DMR Rule 2.80.
- B. Other public uses that are not inconsistent with the purposes of the lease are permitted within the lease boundaries.
- C. Except for required marker buoys, no gear shall be deployed on the lease site from June 1 through October 31.
- D. Lobster fishing is prohibited within the lease boundaries from November 1 through May 31.

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: SEPT. 12, 2018



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

¹⁰ 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.”