

**STATE OF MAINE**  
**DEPARTMENT OF MARINE RESOURCES**  
Experimental Aquaculture Lease Application  
Suspended culture of shellfish and kelp,  
New Meadows River, West Bath

**Peter Francisco**  
**LEASE NMR EMGx**  
Docket # 2014-16-E  
May 8, 2015

## **FINDINGS OF FACT, CONCLUSIONS OF LAW, AND DECISION**

Peter Francisco applied to the Department of Marine Resources (“DMR”) for a three-year experimental aquaculture lease on 3.52 acres located in the coastal waters of the State of Maine, east of Middle Ground in the New Meadows River in West Bath, Sagadahoc County, for the purpose of cultivating American oysters (*Crassostrea virginica*), blue mussels (*Mytilus edulis*) and sugar kelp (*Saccharina latissima*), using suspended culture techniques. DMR accepted the application as complete on Sept. 8, 2014. No public hearing was held on this application.

### **1. PROCEDURAL HISTORY**

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 West Bath 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 comment period was published in the *Brunswick Times Record* on Sept. 29, 2014. No comments or requests for a public hearing were received by the Department.

The evidentiary record before the Department regarding this lease application includes the application and the Department’s site report dated January 22, 2015, as well as the case file. The evidence from all of these sources is summarized below.<sup>1</sup>

### **2. DESCRIPTION OF THE PROJECT**

On November 11, 2014, DMR biologists visited the proposed lease site and assessed it and the surrounding area in light of the criteria for granting an experimental aquaculture lease, as described in the site report.

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<sup>1</sup> These sources are cited below, with page references, as CF (case file), App (application), and SR (site report).

## **Site Characteristics**

The proposed lease site is located adjacent to the applicant's shore in West Bath, north of Foster Point and 400-500 feet east of the Middle Ground shoals, on the east side of the New Meadows River. The site is approximately 900 feet east of the navigational channel of the New Meadows River, which lies to the west of the Middle Ground shoals (SR 5).

The rectangular site lies parallel to shore and measures 250 feet from east to west and 695 feet from north to south, comprising 3.52 acres (SR 1, 2; App 9, 10A). The surrounding waters are currently classified by the Department of Marine Resources Water Quality Classification program as "open/approved for the harvest of shellfish" (SR 6).

The applicant describes the site as having three parts: the nearshore area at the seaward edge of the intertidal zone, with mudflats that are frequently exposed at low tide; the shallow subtidal area in the middle of the site; and the deeper area at the western edge of the site. The site report found water depths of 11-13 feet at mean low water in the deeper area and 8 feet at mean low water in the shallow center area. The report notes that the nearshore portion of the site is exposed on low tides lower than approximately one foot (SR 2).

According to the application, the bottom of the site drops off steeply before leveling out in deeper water to the west (App 5). The site report confirms this (SR 5). The bottom is mud with shell and gravel. The shore to the east is hard, with the intertidal zone composed of rock rubble, sand, and pockets of mud. The upland is pine forest and ledge rising to over 60 feet above the shore opposite the north end of the proposed lease site. The current runs north-south at less than 0.5 knots (App 5).

The application includes the written consent of the municipal officers for a lease site in the intertidal zone in West Bath (App 7, 8), as required by 12 M.R.S. §6072-A (11) and DMR Rules, Chapter 2.64 (6) for sites in municipalities with municipal shellfish ordinances. The applicant owns the adjacent upland, so his consent to the lease, which is required by 12 M.R.S. §6072-A (8) and DMR Rule Chapter 2.64 (2)(C)(6) is evidenced by his signature on the lease application. No riparian land other than the applicant's will be used for access to the proposed lease site (App 2).

## **Proposed Operations**

Mr. Francisco proposes to experiment with commercial aquaculture, growing American oysters (*Crassostrea virginica*), blue mussels (*Mytilus edulis*) and sugar kelp (*Saccharina latissima*) using suspended culture techniques. Oysters, the primary species to be cultured, will be grown in floating bags in shallow water and on racks and bags in the shallowest areas, including the

intertidal zone. Mussels will be grown on suspended dropper ropes in deeper water; and kelp will be grown on submerged longlines in the deepest water in the western portion of the site. The kelp lines will be removed after harvest in spring and reinstalled for the next crop in the fall (App 3, 4).

Oysters will be overwintered in cages on the bottom of the site in deeper water and possibly also in cold storage. Mr. Francisco also intends to experiment using long lines and oyster bags suspended below the surface for overwintering. Oysters will be harvested directly from the bags (App 3).

Boats used at the site may include two 14-foot skiffs with 7.5 horsepower motors; an 18-foot center console boat with a 70 horsepower motor, and possibly a 23-foot lobster boat with a diesel engine. According to the application, a small barge may also be used (App 4).

### **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 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**

The adjacent shore is owned by the applicant. Lease activities will be conducted in the water and in the intertidal zone, with access over the applicant's land (App 2). According to the site report, there are no docks or moorings within the proposed lease site. There is one dock approximately 150 feet southeast of the southeast corner of the lease. To the north, the nearest dock is approximately 280 feet north of the northern boundary (App 4-5). No riparians submitted comments on the application or otherwise expressed concerns about the effect of the proposed lease on their ingress and egress.

Although the site report notes that no moorings were observed during the November site visit, the application states that one mooring is located 200 feet south of the site and others more than 300 feet to the north. The applicant moors a boat at the northwest corner of the proposed lease site (App 5).

The West Bath Harbormaster answered the Harbormaster Questionnaire provided by the Department, indicating that the proposed lease would not interfere with the ability of any riparians owners to get to and from their property by water (CF, Harbormaster Questionnaire).

Based on this evidence, it appears that the proposed lease will not hamper access by riparians to and from their shore.

**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 site report describes navigation in the vicinity of the proposed lease site as follows:

The proposed lease site is located "hard against" the eastern shore of the New Meadows River and is located well to the east (~875 feet) of the marked navigational channel delineated by buoys "12" and "13". Between the proposed lease and the navigational channel is a shoal-area known as "Middle-Ground". The western boundary of the proposed lease would be located approximately 450-525 feet from the eastern edge of Middle Ground.

Most vessels would likely transit through the marked navigational channel. Mariners would also retain the ability to transit the unmarked route between the proposed lease and the Middle Ground (SR 5).

The application indicates that there is ample room west of the site for navigation in the unmarked channel and that kayaks can navigate to the east of the site at high tide and across the site at all tides (App 4-5). According to the Harbormaster, the proposed lease will not interfere with any traditional storm anchorages or with navigation in designated channels (CF, Harbormaster Questionnaire).

It appears from this evidence that navigation in the area will not be unduly affected by the presence of the proposed lease site. 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. The lease site must be marked in accordance with U.S. Coast Guard requirements.

### **C. Fishing & Other Uses**

The site report notes that

On November 19, 2014 no fishing within the boundaries of the proposed lease site was observed. Due to the soft mud bottom, lobster fishing is likely poor to moderately productive. Similarly, dragging for commercial species such as urchins, scallops, or mussels is unlikely. Clamming is likely to occur on the small flats to the east of the proposed lease area; however access to this resource would be maintained from the north and south of the lease site, from land, or perhaps through open areas of the lease.

Recreational angling for striped bass (*Morone saxatilis*) likely occurs on a limited basis in the summer months (SR 5).

The application confirms that lobster fishing is not significant or successful in the area, that clamming occurs on the eastern shore, and that very limited striper fishing takes place in the vicinity. No shellfish harvesting occurs on the proposed lease site (App 4). The Harbormaster also indicates that there is no commercial or recreational fishing on the proposed lease site (CF, Harbormaster Questionnaire).

**Exclusivity.** According to the application, there will be little room for setting lobster traps within the site. Both the site report and the application note that the intertidal area to the east will be accessible by boat and by foot for clamming. The applicant does not intend to restrict hook-and-line fishing or kayaking on the site, but he requests that motor boating and sailing in the site be prohibited (App 5). Since the lease will include gear on the surface, in the water column, and on the bottom, dragging and similar activities would conflict with the aquaculture gear. Therefore, the lobster and crab fishing and dragging will be prohibited on the lease site. Navigation, other than by hand-powered watercraft, will be prohibited in areas on the lease site where floating gear is present. These restrictions are 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). Conditions implementing these restrictions will be included in the lease.

**Other aquaculture leases.** The site report notes that:

The applicant currently operates two limited purpose aquaculture licenses (LPAs) within the boundaries of the proposed lease. Two other LPAs for the suspended culture of oysters are located across the river from the proposed lease. These two sites are approximately 1,700 and 2,050 feet due west from the proposed lease. Other aquaculture sites within the river are at least 3 miles from the proposed lease site location. No interference between the proposed lease and the existing operations would be anticipated (SR 5).

Based on this evidence, it appears that the proposed lease will not unreasonably interfere with fishing or other uses of the area. The lease must be marked in accordance with DMR Rule 2.80<sup>2</sup>

**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**

The application notes that species commonly occurring on the lease site but not in commercially viable amounts include quahogs, mussels, periwinkles, rock crabs, and rock shrimp. Green crabs are abundant. Rarely observed species include striped bass, Tommy cod, smelts, sculpin, flounder, and sand and bloodworms (App 5). According to the application, no eelgrass, kelp, or other marine flora, except for some rockweed, grows on the proposed lease site (App 5).

The site report notes that “Current and historical records of eelgrass (*Zostera marina*) distribution indicate a presence in the general vicinity, but not within the boundaries of the proposed lease” (SR 5).

DMR sent a copy of the application to the Maine Department of Inland Fisheries & Wildlife (MDIF&W) for their review and comment. No comments were received. Normally MDIF&W comments on aquaculture applications when it has concerns about potential effects on wildlife. DMR interprets the absence of any comment as indicating that MDIF&W has no such concerns in this instance.

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#### **2.80 Marking Procedures for Aquaculture Leases**

1. When required by the Commissioner in the lease, aquaculture leases shall be marked with a floating device, such as a buoy, which displays the lease identifier assigned by the Department and the words SEA FARM in letters of at least 2 inches in height in colors contrasting to the background color of the device. The marked floating device shall be readily distinguishable from interior buoys and aquaculture gear.
2. The marked floating devices shall be displayed at each corner of the lease area that is occupied or at the outermost corners. In cases where the boundary line exceeds 100 yards, additional devices shall be displayed so as to clearly show the boundary line of the lease. In situations where the topography or distance of the lease boundary interrupts the line of sight from one marker to the next, additional marked floating devices shall be displayed so as to maintain a continuous line of sight.
3. When such marking requirements are unnecessary or impractical in certain lease locations, such as upwellers located within marina slips, the Commissioner may set forth alternative marking requirements in an individual lease.
4. Lease sites must be marked in accordance with the United State's Coast Guard's Aids to Private Navigation standards and requirements.

The site report notes:

According to Maine Department of Inland Fisheries and Wildlife (MDIF&W) data available through the Maine Office of GIS there are no eagle (*Haliaeetus leucocephalus*) nests within 1 mile of the proposed lease site.

There are no intertidal zones categorized as Tidal Wading Bird and Waterfowl Habitat under the Natural Resources Protection Act in the vicinity of the proposed lease (SR 6).

The application states that since the proposed aquaculture activities will consist of suspended culture, "the harvesting will not involve raking or dragging gear on the bottom," so the project "should have no detrimental effect on the area" (App 5).

Based on this evidence, it appears that the culture of oysters, mussels, and kelp as proposed for this lease site will not interfere with the ecological functioning 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 the Harbormaster and the site report, there are no public parks, docking facilities, or beaches within 1,000 feet of the proposed lease site (CF, Harbormaster Questionnaire; SR 6).

**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**

According to the application, oyster seed stock for this proposed lease site will be obtained from Basket Island Oyster Company in Peaks Island, Maine. Mussel seed stock will be obtained from wild spat collected on the lease site in the New Meadows River. Sugar kelp sporophytes will be obtained from Ocean Approved, LLC in Portland, Maine.

**Therefore, I find** that the applicant has demonstrated that there is an available source of American oysters (*Crassostrea virginica*), blue mussels (*Mytilus edulis*), and sugar kelp (*Saccharina latissima*) 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. The lease site must be marked in accordance with U. S. Coast Guard requirements.
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.
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 American oysters (*Crassostrea virginica*), blue mussels (*Mytilus edulis*), and sugar kelp (*Saccharina latissima*) 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 3.52 acres to Peter Francisco 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 applicant<sup>3</sup>; 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 American oysters (*Crassostrea virginica*), blue mussels (*Mytilus edulis*), and sugar kelp (*Saccharina latissima*), using suspended culture techniques. The applicant shall pay the State of Maine rent in the amount of

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<sup>3</sup> 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."

\$100.00 per acre per year. Since this is an experimental lease with more than 400 sq. ft. of structures and no discharge, the applicant is required to 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 his 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)<sup>4</sup>. 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:

1. The lease site must be marked in accordance with both U.S. Coast Guard requirements and DMR Rule 2.80.
2. Lobster and crab fishing and dragging are prohibited on the lease site.
3. Navigation, except by hand-powered watercraft, is prohibited in areas on the lease site where floating gear is present.

Other public uses that are not inconsistent with the purposes of the lease are permitted.

**7. REVOCAION 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: 5/8/15

  
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Patrick C. Keliher, Commissioner  
Department of Marine Resources

<sup>4</sup> 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.”