

STATE OF MAINE
DEPARTMENT OF MARINE RESOURCES
Experimental Aquaculture Lease Application
Suspended culture of American oysters
Middle Bay, Harpswell

Timothy Johnson
Lease MIDD C1x
Docket #2015-08-E
March 9, 2016

FINDINGS OF FACT, CONCLUSIONS OF LAW, AND DECISION

Timothy Johnson of Brunswick, Maine applied to the Department of Marine Resources (“DMR”) for a 3-year experimental lease on 4.0 acres located in the coastal waters of the State of Maine in Middle Bay, south of Simpson’s Point and east of Crow Island, in Harpswell, Cumberland County, for the purpose of cultivating American oysters (*Crassostrea virginica*) using suspended culture techniques. DMR accepted the application as complete on May 8, 2015. No hearing was held on this application.

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 Harpswell 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 Times Record* on June 2, 2015. No written comments or requests for public hearing were received during the comment period.

The evidentiary record before the Department regarding this lease application includes the application and the Department’s site report (SR) dated December 9, 2015, as well as the case file. The evidence from all of these sources is summarized below.¹

2. DESCRIPTION OF THE PROJECT

A. Site Characteristics

The proposed lease includes two rectangular tracts located within two subtidal channels that drain the surrounding extensive intertidal mudflats in the northwestern corner of Middle Bay. The north tract is 1.9 acres, and the south tract is 2.1 acres; they lie more than 1,400 feet and 1,800 feet southeast of Crow Island, respectively (App 6).

Water depths at mean low water (MLW) are 4 to 10.5 feet within the north tract and 6 to 13 feet within the south tract (SR 2). The proposed lease is in an area currently classified by the Department of Marine Resources Water Quality Classification program as “open/approved for the harvest of shellfish.” (SR 8, App14).

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

The application indicates that the lease tracts are located in the Town of Harpswell. The Harpswell/Brunswick town boundary shown on the Maine GIS website places most of the lease in the Town of Brunswick. The Brunswick Marine Resource Officer provided the Department with a map and legal description of the boundary that place the lease site entirely in the Town of Harpswell and indicated that the Town of Brunswick supports the granting of the lease application.² Based on this information, the Department will treat the lease site as being located in the Town of Harpswell.

B. Proposed Operations

The proposed lease will be used for suspended culture of American oysters (*Crassostrea virginica*) in floating and submerged mesh bags. The applicant plans to use floating bags at the surface for oysters in their first year of growth and larger mesh bags submerged above the bottom but at least four feet below the surface at MLW for oysters in their second and third years.

The surface bags will float in extended lines along the outer portions of each tract. By submerging the larger oyster bags along the center of the channel in which each tract is located, the applicant intends to facilitate access through the channels to the adjacent intertidal areas by shallow-draft boats of the type used by clam and worm harvesters to reach the flats. This arrangement of submerged gear will effectively maintain a passage approximately 80 feet wide through the center of each proposed lease tract between the deeper waters to the east and the intertidal flats to the west of the tracts (App 11, 17).

A maximum of 1,500 surface and 2,000 submerged mesh bags are proposed for each lease tract. The applicant also proposes to install a 20-foot by 20-foot work float in the south tract (SR 2, App 15-19).

The surface bags will be deployed in “strings” consisting of three parallel lines attached at the ends to 8-foot spreaders. Each string consists of a double row of 250 bags clipped at one end to the center line and at the other end to one of the outer lines of the string. Up to six strings will be deployed on each tract, three each along the northeast and southwest sides of the north tract and on the south tract along the north and south sides. The bags will be flipped periodically to clean them of any algae and other fouling material (App 8, 15-18). These surface bags will be removed from the water by early December each year.

The submerged bags will be clipped to a single line and held below the surface but above the bottom by a system of alternating floats and anchors (App 8). On the north tract, eight strings of 250 bags each will occupy an 80-foot by 120-foot section running lengthwise along the center of the tract, at a minimum of four feet below the surface. On the south tract, a similar array of submerged bags will occupy an area 500 feet long and ranging from 80 to 193 feet wide through the center of the tract, also at a minimum of four feet below the surface.

² CF, e-mail from Daniel Devereaux to Diantha Robinson, DMR, 2-26-16.

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

The proposed lease tracts are separated from the surrounding land to the north, west, and south by shoal water leading to extensive tidally exposed mudflats. There are no riparian lands within 1,000 feet of the proposed lease site (App 6). No docks or moorings with which the proposed activities would interfere were noted during the DMR site visit (SR 5). Access to and from the upland shores “would be hindered more by tidal stage and shallow water depths than [by] the proposed lease activities” (SR 5). To the east of the tracts, more than 3,200 feet of navigable waters stretch across Middle Bay to the eastern shore. Clearly, the aquaculture project will not affect access to and from the upland shores; at higher tidal stages, shore access will be unrestricted; at lower tidal stages, the shore is not accessible by boat.

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 tracts occupy narrow secondary channels that terminate into extensive shoal and intertidal waters. With the exception of local traffic wishing to access the surrounding tidal mudflats for the harvest of worms and shellfish, the majority of navigation in the immediate vicinity is likely confined to mid to high tidal stages when water depths are more conducive to shorefront access.

In an effort to maintain a corridor for local shellfish harvesters and other shallow draft vessels, the applicant has proposed to submerge a portion of shellfish gear on each tract a minimum of four feet below the surface at low water. Shallow draft vessels would have the ability to transit directly over the submerged oyster bags (SR 5).

According to the Harpswell Harbormaster, the lease tracts will not interfere with navigation in designated channels, and there are no permitted moorings within the boundary of the lease site (CF, Harbormaster Questionnaire, p. 2).

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.³

C. Fishing & Other Uses

The Harpswell Harbormaster indicated that there is minimal recreational fishing in the vicinity of the lease area, and no commercial fishing activities (CF, Harbormaster Questionnaire, p. 2). According to the applicant, clam diggers access the area at the north end of White Island, and lobstermen do not place traps in the proposed lease site, as they prefer deeper waters (App 11). During high tide, recreational use such as swimming, canoeing, kayaking, and paddling occurs in the vicinity of Simpson's Point on the Brunswick shore, approximately 1200 feet north of the nearest border of the north tract (App 11).

On September 10, 2015, DMR Staff observed limited lobster/crab fishing, as evidenced by the presence of 3 trap buoys adjacent to the southern boundary of the south tract. No other fishing activity within or near the boundaries of the proposed lease was noted during the DMR site visit (SR 5).

It appears from this evidence that commercial and recreational fishing are minimal on and around the proposed lease site and that the aquaculture project is unlikely to significantly affect fishing or other activities in the area.

Other Aquaculture Leases. The applicant holds two limited purpose aquaculture licenses (LPAs) for the suspended culture of American oysters in Middle Bay. JOHN-6-15 is located east of Crow Island, within the south lease tract; JOHN-7-15 is located in Duck Cove, off the south end of Birch Island, approximately two miles southwest of the south tract. There are no other aquaculture activities in Middle Bay (SR 5); thus, the proposed lease will not interfere with aquaculture there.

Exclusivity. The application requests that "lobster gear, sport fishing, and recreational motor boating" be excluded from the lease tracts, since these uses may "tangle the oyster gear" (App 11). The applicant notes, however, that "Access by recreational paddlers and commercial fishermen using the drains to access the flats will not be restricted. Sport fishermen will have access to the site perimeter and will likely find the oyster gear an attraction to both bait and sport species. All moving or handling of gear will be restricted" (App 11).⁴ The applicant later advised DMR, however, that he would not seek to exclude any vessels from operating in the center portion of the lease tracts where no surface gear is deployed.⁵ Prohibitions on recreational and commercial fishing on the lease site would still be needed in order to protect the aquaculture gear, and all forms of navigation would need to be prohibited in the portions of the lease containing floating gear.

³ For information on the Approval for Private Aids to Navigation (PATON), please refer to USCG Webpage: <http://www.uscg.mil/D11/dp/PatonOne.asp> (last visited 10/29/2015); see Title 33 of the Code of Federal Regulations, Part 66 (33CFR66).

⁴ Title 12 MRS §6073(2) provides "It shall be unlawful to interfere with the rights provided by a lease." Knowing violations of this section are subject to a minimum fine of \$1,000.00.

⁵ CF, e-mail from Timothy Johnson to Diantha Robinson, DMR, February 25, 2016: "Within the section regarding limited use; I request the application be amended to read 'the channel center be open to the passage of boats.'"

By submerging more than half of the oyster gear, the applicant is making a considerable effort to allow for access across the center of each tract for clam and worm harvesters wishing to reach the flats via the channels in which the lease tracts are situated. Therefore, conditions will be placed on this lease that will prohibit, within the lease boundaries, commercial and recreational fishing, including shellfish harvesting except by authorization of the leaseholder, and navigation in areas of the site occupied by surface gear. These conditions will 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, as provided in 12MRS §6072-A (15).

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 2.80.⁶

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. The applicant dove at the site and found the bottom composed of mud and shells. He observed “a few snails” (App 12). During the site visit, DMR biologists observed sand (mud) shrimp (*Crangon septemspinosa*), mud snails (*Littorina spp.*), hard clams (*Mercenaria mercenaria*), and hermit crabs (*Pagurus spp.*) The applicant noted that “The subtidal flats near the sites had been abundant with eel grass, until 2013 when the eel grass almost completely disappeared. While on site on December 15, 2014, I observed very sparse growth of eel grass on the sub tidal flats at the confluence of the north and south drains” (App 12).

Figure 3 of the site report shows dense eelgrass in the area around the proposed lease tracts in 2002, but eelgrass does not appear at that time to have been growing where the lease tracts would now be located (SR 6). Figure 4 shows a single, small, sparse bed of eelgrass east of the south tract in 2013, in the area where the applicant observed eelgrass in December of 2014 (SR 7).

⁶2.80 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 States Coast Guard’s Private Aids to Navigation standards and requirements.

At the time of the DMR site visit on September 10, 2015, DMR scientists conducted a survey by SCUBA dive on the north tract (which the site report notes is slightly shallower than the south tract) and observed no eelgrass. The site report observes that “High turbidity (such that it made diver navigation difficult, limited light penetration, and the soft mud bottom likely contribute to the lack of eelgrass” (SR 6).

Fisheries and Wildlife. According to the site report, the proposed lease tracts are over 2,000 feet southwest of an area designated as shorebird roosting and feeding habitat by the Maine Department of Inland Fisheries and Wildlife (MDIF&W), over 3,600 feet north of the nearest bald eagle nest, and outside the shallow subtidal waters classified by MDIF&W as Tidal Wading Bird and Waterfowl Habitat (SR 7-8).

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 the site report:

There are no public docking facilities or beaches within 1,000 feet of the proposed lease. The town of Brunswick maintains a launch for hand-carry watercraft at Simpson Point. The proposed lease is located more than 1,500 feet to the southwest of this landing (SR 8).

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 Stock

According to the application, seed stock will be obtained from Muscongus Bay Aquaculture, located in Bremen, Maine (App 3).

Therefore, I find that the applicant has demonstrated that there is an available source of American oysters (*Crassostrea virginica*) 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.

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*) 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 4.0 acres to Timothy Johnson 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; however, no aquaculture rights shall accrue in the lease area until the lease is fully executed (DMR Rule 2.64(14)).

This lease is granted to the applicant for the purpose of cultivating American oysters (*Crassostrea virginica*) using suspended culture techniques. 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 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).⁷ 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.

⁷ 12 MRSA §6072-A (15) provides that:

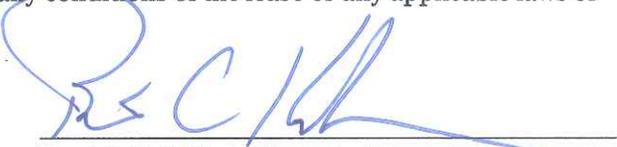
“The commissioner may establish conditions that govern the use of the leased area and limitations on the aquaculture activities. These conditions must encourage the greatest multiple, compatible uses of the leased area, but must also address the ability of the lease site and surrounding area to support 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.”

2. Commercial and recreational fishing, including shellfish harvesting except by authorization of the leaseholder, are prohibited within the lease boundaries.
3. Navigation is prohibited in areas of the lease site occupied by surface gear.
4. 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: March 9, 2016



Patrick C. Keliher, Commissioner
Department of Marine Resources