

STATE OF MAINE
DEPARTMENT OF MARINE RESOURCES
 Experimental Aquaculture Lease Application
 Suspended and bottom culture of shellfish,
 Scarborough River

Nonesuch Oysters, LLC
Lease SCAR WLS
 Docket # 2011-04E

FINDINGS OF FACT, CONCLUSIONS OF LAW, AND DECISION

On February 4, 2011, the Department of Marine Resources (“DMR”) received an application from Nonesuch Oysters, LLC of Biddeford Pool for a 3-year experimental aquaculture lease on 4 acres located in the coastal waters of the State of Maine, in the Scarborough River in the Town of Scarborough in Cumberland County, for the purpose of cultivating American oysters (*Crassostrea virginica*) and European oysters (*Ostrea edulis*), using suspended and bottom culture techniques. The application was accepted as complete on February 4, 2011.¹

1. THE PROCEEDINGS

The application was advertised for a 30-day public comment period in the *Portland Press Herald* on March 14, 2011. No comments or requests for a hearing on this experimental lease were received. The Department chose not to hold a hearing. Department biologists visited the site on March 10, 2011 and prepared the site report.

The evidentiary record before the Department regarding this lease application includes the application and the Department’s site report. Notices and copies of both of these documents were sent to numerous state and federal agencies for their review, as well as to various educational institutions, aquaculture and environmental organizations, the Town of Scarborough and the Scarborough Harbormaster, members of the Legislature, representatives of the press, riparian landowners, and private individuals. The evidence is summarized below.

LIST OF EXHIBITS

1. Case file, # 2011-04E (Cited below as “CF”)
2. Application, signed and dated February 3, 2011 (Cited below as “A” with page number)
3. DMR site report, dated March 24, 2011 (Cited below as “SR” with page number)

¹The applicant had previously worked with DMR for several months to prepare an acceptable lease application.

2. DESCRIPTION OF THE PROJECT

A. Proposed Operations

The proposed lease is intended as a commercial experiment in raising oysters (A5). Bottom planting will be the primary culture method, but floating bags will be used, as well. The shallower, northern end of the lease tract will be used for bottom planting of American oysters in an area approximately 300 ft. x 170 ft. Up to 750 floating mesh shellfish bags will be installed on the remainder of the lease to raise both American and European oysters (A4).

European oysters grow wild in the Scarborough River, according to the applicant, who believes that it is likely that aquaculture of this species will also succeed at this location. All European oysters on the proposed lease site will be grown in floating bags; approximately 15,000 European oysters are proposed to be cultured in the first year of the lease. (A4).

The applicant plans to grow oyster spat in floating spat bags on the lease. She will also bottom-plant approximately 250,000 juvenile American oysters initially and install approximately 400,000 oysters in 500 floating bags. Bottom-planted oysters will be tended by hand at low tide, as the site is in shallow water. Oysters will be harvested by hand or with rakes, usually at low tide (A9).

The floating bags will be deployed in up to 50 lines of 15 bags, arrayed in 5 groups of 10 lines each, with 12-14' ft. of space between the lines (A7). Each line will be moored at each end to two 5-gallon cement blocks (A7). A floating work platform approximately 8 ft. x 16 ft. with a galvanized steel lobster cage beneath it may be moored on the site, using chain and helix anchors at each corner (A8).

The applicant notes that the Scarborough River has not frozen over solidly for more than ten years, so she plans to keep the floating bags in the water through the winter. To maintain a more constant temperature in the coldest months and to protect the gear from any ice that may flow down from the upper part of the river, she will remove the foam flotation from one side of each bag. This causes the bag to float below the water's surface, avoiding direct exposure to changes in air temperature and any floating ice. Should an ice flow develop, the bags, having less resistance, will sink below the ice, allowing it to flow past (A9).

B. Site Characteristics

The proposed 4-acre lease site is located in shallow, subtidal waters in the Scarborough River, south of the railroad trestle that crosses the marsh and the river. The surrounding salt marsh is owned by the State of Maine, Department of Inland Fisheries & Wildlife (MDIF&W) and operated as a wildlife management area. The area of both marshland and water surrounding the site is designated by MDIF&W as Essential Habitat for piping plovers and least terns (PPLT04) (SR6).

The lease coordinates in the application describe an area of 4.27 acres, larger than the 4-acre maximum allowed by statute for an experimental lease. Consultations between the applicant and DMR staff resulted in a reconfigured site of 4 acres, which is described by the coordinates appearing in the site report (SR2-3).

The proposed lease site is a long, narrow rectangle stretching from northeast to southwest in an area of shoal water and tidal flats near the west bank of the river. The applicant selected the site on the advice of the Scarborough Harbormaster, as an area out of the main navigational channel that experiences only very light kayak and canoe traffic. There are no moorings in the area (A5). There is a shoal along the southeast side of the proposed lease site; to the northwest of the site lie intertidal flats leading to the upland marsh and the railroad causeway. The water is deeper on the southwest end of the proposed site, becoming shallower toward the northeast end. Current speed varies; the site is in a back eddy where the current runs northwest as high as 3 knots, according to the applicant. There is no eelgrass in the area (A6).

The site report describes this area as “a narrow arm of deeper water beyond the primary navigational channel to the east” (SR4). Water depths at the site range from 1.0 to 2.2 feet at mean low water (SR3) and 11 to 13 feet at high water (A6). According to the site report, the proposed lease site is:

...bounded by shoal water to the east and tidal flats leading to salt marsh to the north and west (Figure 2). The bottom is comprised of compressed peat-bog sediments at the southern end transitioning to sand at the northern end. The bottom is generally smooth scoured sediments with little or no relief (SR3).

The report also notes:

The proposed lease is located in the Scarborough River and bordered by salt marsh. By nature, the surrounding environment is highly dynamic. Currents in the area are responsible for both erosion of the riverbank and suspension and re-deposition of sand and silt. Water depths, the topography of the river bank and locations of sand bars continually fluctuate. For example, the distance of the southeastern boundary to the nearest upland, based on aerial photography provided by Google Earth, was ~398 feet in 2003, yet ~418 feet from the same point in 2010. ...At low water the proposed lease abuts the intertidal along the east bank of the river (SR3).

Distances from the site to the nearest shore, as estimated “based on the currently available aerial photography (Google Earth, May 2010) and observations made during the site assessment” are approximately 40 ft. from the southwest corner and 418 ft. from the southeast corner to the nearest uplands. The distance from the northwest corner to the railroad trestle is approximately 295 feet; the distance from the same corner to the railroad causeway is 97 ft. Distance from the northeast corner to the proposed Nate Perry lease (Docket No. 2010-33E) across the channel is approximately 365 ft (SR3).

Water quality at the site as currently classified by the Department of Marine Resources Water Quality Classification program is “open/approved for the harvest of shellfish”.

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 if s/he determines 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

According to the site report, “The surrounding uplands are owned by the State of Maine. There are no houses, docks nor moorings with which the proposed activities might interfere” (SR4).

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 observes:

Considering tidal limitations, the restriction at the railroad trestle and the lack of commercially exploitable species, vessel traffic in the area of the proposed lease site is dominated by canoes/kayaks, sport fishing boats and outboard skiffs. The proposed lease site is located along the west bank of the Scarborough River and bordered by shoal waters to the east. It is located in a narrow arm of deeper water beyond the primary navigational channel to the east (Figure 2). The majority of vessels transiting the area are expected to follow the western arm of the channel leading under the railroad trestle and further upstream.

Depths in the area range from one foot to six feet at low water and nine to fourteen feet at high water. The majority of navigation, except for individuals with local knowledge, would be limited to the primary channels or mid to high tidal stages. At mid to high water, navigation around the proposed farm and gear would not be prohibited. (SR4).

Although DMR mailed a questionnaire to the Scarborough Harbormaster requesting his observations about the potential effect of the proposed site on navigation, fishing and other uses, and riparian access, it was not returned. To the Department’s knowledge, however, the Scarborough Harbormaster has been actively involved in his professional capacity with this and

other aquaculture projects in the Scarborough River and is familiar with both the two proposed leases and the existing oyster aquaculture operations being conducted there under various LPA licenses by Ms Carroll and others (see “Other aquaculture leases” under section 3C, below). The Harbormaster has been in close communication with Department staff about the development of aquaculture license sites in the river over the past year. If the Harbormaster had significant concerns regarding the proposed lease, Department staff members are confident that he would have made them known.

The evidence supports the conclusion that vessels navigating in the area have unrestricted access to the main channel and can easily navigate around the proposed lease site at the higher tidal stages when the majority of boat traffic is likely to occur.

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

C. Fishing & Other Uses

Department biologists note in the site report that the timing of their site visit in March did not coincide with the active fishing season. They note that “Fishing for lobster and crab and drag harvesting of shellfish, however, is unlikely to occur in such shallow waters where navigation is severely limited and such commercially exploitable species are not present. The proposed activities, should the lease be granted, will not prevent digging for clams and worms in the surrounding tidal flats” (SR4).

The site report states that recreational hook-and-line fishing for striped bass is common in the waters around the railroad trestle, so that the potential exists for “occasional entanglement of hooked fish in lines and gear associated with the proposed farm.” Fish may be attracted to the floating oyster bags as a refuge and find a source of food in the fouling organisms that grow on the oyster gear (SR4-5).

This evidence indicates that the proposed oyster aquaculture operation will not hamper such local fishing activities as exist in the area.

Exclusive Use. The applicant’s main concern is that gear and shellfish not be “tampered with” (A5). Accordingly, dragging, shellfish harvesting, and anchoring, except by the leaseholder or its authorized agents, will be prohibited on the lease site. To encourage multiple, compatible uses of the site as provided by 12 MRSA § 6072-A (15), recreational boating and fishing will be allowed within the open areas of the lease site.

Other aquaculture leases. Two LPAs held by Nate Perry (PER-2-09 and PER-3-10) are located downstream from the proposed lease site toward Pine Point on the western shore of the river. Mr. Perry also has a pending application for an experimental lease for American oysters located approximately 365 ft. east of this proposed lease site. Mr. Perry is aware of this application but did not provide comments.

As noted in the site report, Ernest Heether “holds three LPA licenses for the culture of American and European oysters to the northeast of the proposed aquaculture lease: HEE1 10 (~535 feet to the northeast) and HEE2 10 (~620 feet to the northeast) and HEE3 10 (above the railroad trestle)” (SR5). Mr. Heether is aware of this application but did not provide comments.

Ms Carroll holds three LPA licenses for the culture of American and European oysters within the boundaries of the proposed lease site (CAR1 10, CAR2 10 and CAR3 10). Should the lease be granted, those licenses would be terminated.

Ms Carroll has sited the proposed lease to avoid interfering with the other LPA license sites and the other proposed lease site in the area. There is a minimum of 365 ft. between the proposed lease site and the nearest aquaculture site, which is Mr. Perry’s proposed lease. Much greater distances separate the proposed lease site from the other aquaculture sites in the vicinity. There is no evidence to suggest that interference will occur.

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. Dragging, shellfish harvesting, and anchoring, except by the leaseholder or its authorized agents, will be prohibited on the lease site. Recreational boating and fishing will be allowed within the open areas of the lease site. The lease must be marked in accordance with DMR Rule 2.80²

D. Flora & Fauna

At the time of the site visit in March, DMR biologists inspected the proposed lease site and surrounding area by SCUBA diving and taking underwater video. They observed that:

Bottom sediments are soft compressed peat-bog material to the south transitioning to sand at the northern end. No rooted submerged aquatic vegetation such as eel grass (*Zostera marina*) was observed. During the site visit, the water in the area had non-detectable salinity by taste. Heavy rain and snow melt surely contributed to this (SR5).

²**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.

Species of fauna observed during the dive included sand shrimp (*Crangon septemspinosus*), mud snails (*Littorina* sp.), hermit crabs (*Pagurus* sp.), soft-shelled clams (*Mya arenaria*), and blue mussels (*Mytilus edulis*). Only the shrimp were abundant (SR5). To the north of the proposed lease site is a mussel bed which would not be affected by activities on the proposed lease site (SR5).

As noted above, the Scarborough River and Marsh area is designated by MDIF&W as “Essential Wildlife Habitat” for Piping Plovers and Least Terns (PPLT04). The site report notes that, according to MDIF&W, “the area also is a significant nesting site in the spring for many birds including the rare sharptail sparrow and is a significant feeding and resting site for migratory birds.” MDIF&W manages the surrounding salt marsh as a wildlife management area.

DMR sent a copy of this lease application to MDIF&W on February 25, 2011 with a request for comments by April 1, 2011. No comments were received. Following further contacts with the agency by DMR staff, Ms Carroll formally applied to MDIF&W to review her proposal to engage in aquaculture within the boundaries of the Essential Habitat.

By letter dated June 9, 2011, MDIF&W granted approval to DMR to issue the proposed lease, based upon a finding that “the proposed activities will not significantly alter” Essential Habitat PPLT 04 in the Scarborough River or violate the protection guidelines of MDIF&W. Should “substantial changes in cultural techniques” or “increased levels of activity due to changes in operations” occur, the letter advises Ms Carroll and DMR that “consultation with our Department should be reinitiated to update protection guideline review.”

This evidence supports the conclusion that the oyster farm will not impair the habitat or the activities of marine and non-marine species in 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

The site report notes that there are no public docks or beaches within 1,000 ft. of the proposed lease site. There is a public boat launching facility at Pine Point, more than 3,000 ft. downstream, and other launch sites exist at similar or greater distances in the river. While the Scarborough Marsh itself is owned by the State of Maine, it is operated as a wildlife management area, not a public park.

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, American oyster stock will come from Muscongus Bay Aquaculture in Bremen, Maine, and European oyster stock will come from Gary Arnold in Boothbay Harbor, Maine (A1). Because Mr. Arnold's aquaculture sites are located in prohibited areas, a relay permit, supervised relay, and closure of the relay site for six months will be required in order to move European oysters from Mr. Arnold's sites. The applicant will also obtain American oyster spat from Mook Sea Farm in Walpole, Maine.

Therefore, I find that the applicant has demonstrated that there is an available source of American oysters (*Crassostrea virginica*) and European oysters (*Ostrea edulis*) 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 shall 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. Dragging, shellfish harvesting, and anchoring, except by the leaseholder or its authorized agents, will be prohibited on the lease site. Recreational boating and fishing will be allowed within the open areas of the lease site. The lease must be marked in accordance with DMR Rule 2.80³

³**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.

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*) and European oysters (*Ostrea edulis*) 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 4 acres to Nonesuch Oysters, LLC, 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 applicant⁴; however, no aquaculture rights shall accrue in the lease area until the lease is fully executed. This limited-purpose (experimental) lease is granted to the applicant for the purpose of cultivating American oysters (*Crassostrea virginica*) and European oysters (*Ostrea edulis*) using suspended and bottom culture techniques. The applicant shall pay the State of Maine rent in the amount of \$100.00 per acre per year. As this is an experimental lease with structures and no discharge, the applicant 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 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

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:

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. Dragging, shellfish harvesting, and anchoring, except by the leaseholder or its authorized agents, will be prohibited on the lease site.
3. Recreational boating and fishing will be allowed within the open areas of the lease site.

7. REVOCATION OF 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: 7/26/11

/s/ Joseph Fessenden
Joseph Fessenden
Acting Deputy Commissioner
Department of Marine Resources

“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.”