

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

Nonesuch Oysters, LLC
SCAR NELS
Docket # 2012-01E
July 16, 2012

FINDINGS OF FACT, CONCLUSIONS OF LAW, AND DECISION

Nonesuch Oysters, LLC, a Maine corporation, applied to the Department of Marine Resources (“DMR”) for a three-year experimental aquaculture lease on 0.41 acres¹ located in the coastal waters of the State of Maine, southeast of the railroad trestle in Little Split 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 culture techniques. DMR accepted the application as complete on January 6, 2012. No one intervened in this case, and no public 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 sent to state and federal agencies which were requested to review the project, as well as to riparian landowners, the Town of Scarborough 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 *Scarborough Leader* on January 20, 2012. No comments 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 April 4, 2012. The evidence from all of these sources is summarized below.²

2. DESCRIPTION OF THE PROJECT

Proposed Operations

According to the application (App 4), the proposed lease site will be used in conjunction with a research project the applicant is conducting with the University of New England to “to see if we can successfully extend the growing season, and stabilize growth, for very small spat (1.5mm) in an indoor nursery.” The spat will be raised in the indoor nursery in heated water

¹ The application lists 0.413 acres, but the DMR site report determined the lease size to be 0.41 acres.

² The application and site report are cited as “App” and “SR” with page numbers.

drawn from Cascade Brook, which the application describes as “the extension of Jones Creek”, a portion of the Scarborough River.

Because Cascade Brook is classified by the Department as “prohibited” for shellfish harvest, any spat raised in water from the brook must be subsequently allowed to purge itself of contaminants by being grown for six months on an aquaculture site located in water classified as “open” or “approved” for shellfish harvest and situated at least 10 meters from any area where shellfish are harvested (App 4)³. The site proposed in this application is intended to be that clean-water grow-out site.

Nonesuch Oyster plans to place seed (spat) one inch or smaller in size from its hatchery on this proposed lease site in batches throughout the growing season. All seed placed on the proposed lease site in a growing season will remain there for six months after the last batch arrives. Oysters will not be harvested from the proposed lease site but rather will be allowed to purge there while still small and then be moved to the applicant’s existing lease site, SCAR WLS, nearby, for continued grow-out to market size. The applicant expects to place a new series of seed batches on the proposed lease site each year.

The spat will be grown in floating mesh oyster bags arrayed in five sets of eighty bags, each set containing four parallel rows of twenty bags, as shown on page 7 of the application. The applicant will experiment with setting the bags vertically in the water for easier maintenance. Each line of bags will be moored at each end to three cement moorings, as shown on page 8 of the application. In winter, one float will be removed from each bag, leaving it with a single float. According to the application, this technique has enabled the bags to pass underneath any floating ice without damage. Alternatively, the remaining float can be removed and the bags of oysters overwintered on the bottom (App 8).

The applicant expects to grow approximately one million American oysters and 10,000 European oysters (Belons) (if available) at the proposed lease site. According to the application, the application is technically for commercial research, but the project is being conducted using the scientific method, and it is hoped that “with some luck this nursery will be a ‘living lab’ for UNE professors and students” (App 5).

Site Characteristics

Nonesuch Oyster’s proposed lease site is 150 ft. x 120 ft. in size (App 7) and is located in the Scarborough River, southeast of and beside the railroad trestle, in an area known as “Little Split”. The applicant selected this site in cooperation with the Scarborough Harbormaster as a location that would not conflict with other commercial or recreational uses of the river (App 4).

³ DMR Rule Chapter 21.05.A.2 requires that relay areas for shellfish originating in polluted waters be no closer than 10 meters from harvestable shellfish resources. The application erroneously refers to this distance as “300 ft.”

The site report describes the site as follows:

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 (SR 3).

The proposed lease occupies shallow subtidal waters in the Scarborough River and is bounded by shoal water to the southeast and tidal flats leading to salt marsh to the north (Figure 2). The majority of the proposed lease sits within the swift flowing waters of a tidally scoured channel. ...

The topography is that of a sand/mud bottom sloping to the southwest and the tidally scoured channel. ...water depths at the NW and NE corners of the proposed lease and edge of the tidal flats were approximately 3-4 feet as measured by paddle (Figure 2). Depth quickly deepens to >5 feet (SR 2-3).

Access to the site will be gained from the public pier at Pine Point in Scarborough and from Seavey's Landing, a public facility upriver of the proposed lease site (App 4).

The site report notes:

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". The applicant wishes to use the proposed site for the relay of oyster seed from waters classified as "prohibited" according to the DMR Water Quality Classification Program. If a lease is granted, the area would be closed to the harvest of shellfish for a period of 6 months following relay (SR 6).

According to the application, the bottom of the site is "a mix of mud and sand" with a strong current flow of about three knots. Water depths are about seven feet at low tide and sixteen feet at high tide. The nearest shore is "several hundred feet to the North East, and is characterized by a mud base with seagrass. There is no eelgrass in the vicinity." The application notes that "There should be no environmental impact here from this activity. Our activity is quiet and calm and the oysters are good for the environment" (App 6).

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 sole riparian landowner within 1,000 feet of the proposed lease site is the State of Maine (App 4, SR 4). The Scarborough Marsh is a wildlife management area supervised by the Maine Department of Inland Fisheries & Wildlife. The site report states:

The surrounding uplands are owned by the State of Maine. There are no houses, docks nor moorings with which the proposed activities might interfere (SR 4).

No riparian land will be used for access to the proposed lease site (App 4). The lease activities will be conducted solely in the water; Figure 2 of the site report indicates a broad area of tidal mudflats along the eastern side of the channel between the proposed lease site and the nearest upland shore. Activities at the lease site in subtidal waters will not hamper access to and from the uplands.

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 the limitations on existing navigation in the vicinity of the proposed lease site as follows:

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 and kayaks, sport fishing boats and outboard skiffs. The proposed lease site is located along the east bank of the Scarborough River and beyond the primary navigational channel to the southwest (Figure 2). The majority of vessels transiting the area, except for individuals with local knowledge, are expected to follow the channel leading under the railroad trestle and further upstream or be limited to mid to high tidal stages. At mid to high water, navigation around the proposed farm and gear would not be prohibited (SR 4).

Navigation in the area of the proposed lease site is restricted by the nature of the area, particularly at lower tidal stages. As the site report notes, the lease site is located northeast of the primary navigational channel that leads under the railroad trestle. Shoal water to the southeast of the site and intertidal flats to the north restrict navigation at low water. The lease has been sited with the advice of the Scarborough Harbormaster in order to avoid conflict with navigation, among other activities. It appears from this evidence that navigation in the area will not be unduly affected by the presence of the proposed lease site.

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

C. Fishing & Other Uses

The site report notes that

Fishing for lobster and crab and drag harvesting of shellfish ...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. (SR 4).

According to Bruce Joule, Coordinator of MDMR's Recreational Saltwater Fisheries Program, recreational hook and line fishing (i.e. striped bass) is prevalent in the areas around the railroad trestle (Figure 1). While the proposed activities will not restrict fishing in the area, there is the potential for occasional entanglement of hooked fish in lines and gear associated with the proposed farm. The floating ADPI bags may attract fish – similar to an artificial reef – seeking refuge or feeding upon the plethora of algae and invertebrates that may act as fouling organisms at shellfish aquaculture sites. (SR 4)

It appears from this evidence that the proposed lease site is unlikely to affect fishing in the area, except to the extent that hook-and-line fishing gear might possibly become entangled in the oyster bags. This possibility does not constitute unreasonable interference with fishing.

Exclusivity. The applicant welcomes fishing and kayaking around the gear, provided the oyster bags are not tampered with (App 6).

Other aquaculture leases. Oyster aquaculture activities began in the Scarborough River in 2009. The applicant holds a 4-acre experimental lease (SCAR WLS) for oysters approximately 590 ft. southwest of the proposed lease site. A second experimental lease (SCAR ELS) held by Nate Perry on 1.37 acres lies on the east side of the channel approximately 350 ft. southeast of the proposed lease. Mr. Perry also holds LPA licenses PER-2-09 and PER-3-10 farther downstream in the Scarborough River towards Pine Point (SR 4-5).

The proposed lease will be operated in conjunction with the applicant's existing lease, SCAR WLS. It is far enough from Mr. Perry's lease SCAR ELS to allow the purging of oyster seed from the prohibited area to occur without affecting the water quality on the SCAR ELS lease site.⁴ Likewise, it will not affect the two LPA sites that are located farther away.

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 2.80⁵ Navigation and fishing will be permitted on the lease site.

⁴ As described under D. Flora and Fauna, below, relayed shellfish must be kept at least ten meters (approximately 33 ft.) from the nearest harvestable shellfish resource, according to DMR Rule 21.05 (A) (2).

⁵ **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.

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

During the site visit on March 21, 2012 to the proposed lease site, the site report notes that “no rooted submerged aquatic vegetation was observed in the shallower northern portions of the area visible from the surface.” The report indicates that the benthic ecology of the proposed lease site is expected to be similar to that at lease site SCAR ELS, which is located 350 ft. to the south on the same side of the channel. Findings from the SCAR ELS site visit in March of 2011, which included a SCUBA dive, are noted in this site report (SR 5) as:⁶

- Bottom sediments of scoured sand with 2-to-8-inch ripples caused by tidal action.
- No eel grass or other rooted submerged aquatic vegetation.
- Low salinity, possibly from heavy rain and snow melt in spring 2011.
- Rare fauna; only sand shrimp in abundance, with occasional mud snails, soft-shelled clams, and blue mussels.

The site report also notes that during the 2012 site visit, a single harbor seal was observed to the south of the applicant’s existing lease, SCAR WLS, located approximately 590 feet to the southwest of the proposed lease site. The report states that while seals may be attracted to the site by fish using the oyster gear for “shelter and forage,” the proposed lease activities “are not expected to hinder the movement of seals within the area” (SR 6).

The proposed lease site is located within the boundaries of an area designated by the Maine Department of Inland Fisheries and Wildlife (MDIF&W) as “Essential Wildlife Habitat” for piping plovers and least terns (PPLT04). The site report notes that MDIF&W also considers the area to be “a significant nesting site in the spring for many birds including the rare sharptail

-
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.

⁶ Although SCUBA dives are not normally conducted during site visits to proposed experimental lease sites, DMR biologists did perform dives as part of the 2011 visits to what are now experimental lease sites SCAR ELS and SCAR WLS. These are the first aquaculture leases granted by DMR in the Scarborough River; the dives were conducted in order to better understand the environmental and ecological conditions of this area.

sparrow and is a significant feeding and resting site for migratory birds” and notes that the surrounding salt marsh is a wildlife management area owned by the State of Maine (SR 5).

As noted above and in the site report (SR 5), DMR sent a copy of this lease application to MDIF&W for their review and comment. DMR biologists also emailed the IF&W Regional Biologist for the Scarborough Marsh area and asked directly for any comments. 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.

The Department’s shellfish health rules require that shellfish seed raised in a prohibited area must be relayed to a lease or license site in clean water to purge for at least six months, during which time the site or portion of the site where the seed is located will be closed to shellfish harvesting. Department Rule Chapter 21.05 (A) (2) requires that the relay area be no closer than 10 meters (32.8 feet) from harvestable shellfish resources. In this case, the intertidal mud flats are more than 10 meters from the proposed lease site, as is the nearest aquaculture site, lease SCAR ELS, 350 ft. to the south.

Based on this evidence, it appears that the deployment of floating oyster bags 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 site report,

There are no public docking facilities or beaches within 1,000 feet of the proposed lease. Seavey’s Town Landing is located more than 1500 feet to the north of the proposed lease site, beyond the railroad trestle. The proposed lease is located more than 200 feet to the northeast of the primary passage under the Railroad Trestle (Figure 1).

The public boat launch located at Pine Point, Scarborough (Figure 1) is more than 4,000 feet downstream of the proposal (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, seed stock for this proposed lease site will be obtained from Muscongus Bay Aquaculture in Bremen, Maine (*Crassostrea virginica*) and Gary Arnold of Boothbay Harbor, Maine (*Ostrea edulis*).

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 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. Navigation and fishing will be permitted on the lease site. The lease boundaries must be marked in accordance with the requirements of DMR Rule 2.80.
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 0.41 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 applicant⁷; 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*) and European oysters (*Ostrea edulis*) using suspended culture techniques. The applicant shall pay the State of Maine rent in the amount of \$100.00 per acre per

⁷ 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.”

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 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)⁸. 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. Navigation and fishing are permitted on 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: _____

7/16/2012



Patrick C. Keliher
Commissioner,
Department of Marine Resources

⁸ 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.”