

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

NATE PERRY
Lease SCAR ELS
Docket # 2010-33E

FINDINGS OF FACT, CONCLUSIONS OF LAW, AND DECISION

On October 29, 2010, the Department of Marine Resources (“DMR”) received an application from Nate Perry of Cape Elizabeth for a 3-year experimental aquaculture lease on 1.37 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*) using suspended and bottom culture techniques. The application was accepted as complete on November 2, 2010.

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, #2010-33E (cited below as “CF”)
2. Application, signed and dated October 27, 2010 (cited below as “A” with page number)
3. DMR site report, dated March 24, 2011 (cited below as “SR” with page number)

2. DESCRIPTION OF THE PROJECT

A. Proposed Operations.

Mr. Perry plans to experiment with raising American oysters both in floating ADPI bags and planted on the bottom of the proposed lease site. This experiment is commercial in nature (A3). Mr. Perry will deploy six arrays of 136 standard ADPI bags each, arranged in 8 rows of 17 bags per row. The bags measure 2 ft. x 3 ft. x 0.5 ft. each. Each array occupies an area approximately 6 ft. wide by 51 ft. long, plus 5 ft. at each end for mooring gear (A6-7). The “longlines” of bags will be connected at each end to a single spreader and bridle and moored to one or two 200-lb. cement-filled trays at each end of the entire array (A 6-7). The arrays are sited in various locations on the site, as shown in the plan view (A5).

As is typical in oyster aquaculture, the bags will be deployed in April with oyster seed approximately 10-15 mm in size. As the oysters grow, they will be sorted periodically by size and replaced in the bags. In late fall, the oysters will be removed from the bags and either planted directly on the bottom or stored in an overwintering cage, to be placed back in floating bags for further growth the following spring. Oysters will be harvested at market size of approximately three inches. The bottom-planted oysters will be harvested by dragging with a small, hand-hauled bucket drag approximately 2' x 2' x 6" high (A3).

The overwintering cage is suspended beneath a 24' x 8' pontoon boat which will be deployed either on the proposed lease site or on the applicant's existing nearby LPA license site, PER-3-10 (A3). The pontoon boat will be moored to a 1,500-lb. granite block (A7-9).

Ongoing maintenance at the site will consist of flipping the floating bags over to dry any fouling material, cleaning gear and oysters with a brush, sorting oysters, repairing gear, and taking inventory. Access to the site will be by boat from the public launching ramp at Ferry Beach, on the southeastern side of the river's mouth (A3).

B. Site Characteristics

The proposed 1.37-acre lease site is located in shallow, subtidal waters in the Scarborough River, west of Nonesuch Point in the Scarborough Marsh and southeast of the railroad trestle that crosses the marsh and the river. The application states that “The site is located on the east bank of the river and out of the main channel a few hundred feet” (A4). 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 (SR5). 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).

The site is subtidal, with water depth of 0.6 to 3.6 feet at mean low water, deeper at the western side of the site (SR3). The shallowest part of the lease has approximately 11 ft. of water at mean high tide, and the deepest part has approximately 19 feet at mean high tide (A4). According

to the site report, the proposed lease site is bounded by “the primary navigational channel to the west, tidally exposed flats to the north and salt marsh to the east.” The bottom “is comprised of tidally scoured, undulating sand”; it deepens from east to west (SR2).

The application notes that the site is located just out of the area of faster current, in order to maintain adequate water flow for feeding and filtering by the oysters but with less shifting sand, which can hamper filtration and bury and suffocate juvenile oysters (A4).

The site report describes the nature of 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. For example, the distance of the southeastern boundary to the nearest upland, based on aerial photography provided by Google Earth, was ~28 feet in 2003, yet ~50 feet from the same point in 2010. ...At low water the proposed lease abuts the intertidal along the east bank of the river (SR3).

The report also notes:

During the flood stage, currents run in a northeast direction at the southern portion of the proposed lease and swing north to northwest - following the contours of the salt marsh. Directions are reversed during the ebb tide. Currents are strong and in concert with the firm scoured bottom may make bottom planting of anything but the largest oysters on the bottom problematic. Without some sort of containment, smaller oysters that are planted directly on the bottom are likely to be washed off the proposed lease site (SR2-3).

The application states that the current is approximately 2.5 knots on a mean ebb tide, when it combines with the normal seaward flow of the river. Current on a flood tide is slower, reaching about 1.5 knots. “Most shell matter and seaweed of any kind is cleaned down river by the current” (A4). The application further describes the dynamic process at work in the environment:

The shorelines are either gradually filling niches, where sand is deposited, from which marsh grass will root, or eroding mud/clay river banking atop of which is the marsh grass that makes up the vast majority of the land portion of the marsh estuary itself (A4).

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 50-70 ft. on the east and southeast sides; and 205 feet on the north corner. The distance from the northwest boundary to the railroad trestle is approximately 530 feet; distance from the western corner to the western boundary of the navigational channel is approximately 185 ft. Distance from the west corner to the proposed Nonesuch Oyster Co. lease 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 east bank of the Scarborough River. While the site would encroach into the eastern arm of the subtidal channel (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 eight feet at low water and eight to fifteen 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 inhibited (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 Mr. Perry 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, western channel and can easily navigate around the proposed lease site in the eastern channel 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).

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 requests that the following be prohibited on the lease site: dragging, shellfish harvesting by others than Mr. Perry or those permitted by him, and anchoring, except in an emergency. He notes that “Recreational boating and fishing will not interfere with regular operations on the lease site” (A4).

These restrictions are reasonable in order to protect the oyster farm from activities that could damage gear or stock or interfere with operations. Accordingly, dragging, shellfish harvesting, and anchoring, except by the leaseholder or his 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. Mr. Perry was the first aquaculturist to obtain a site in the Scarborough River when he was granted an LPA in 2009 (PER-2-09). In 2010, he obtained a

second LPA, PER-3-10, and applied for this lease. These two LPAs are located downstream from the proposed lease site toward Pine Point on the western shore of the river. Mr. Perry plans to continue to operate his two LPA sites in conjunction with the experimental lease.

LPA sites HEE-1-10 and HEE-2-10, held by Ernest Heether, are located 150 ft. and 400 ft. northwest of the proposed lease site, respectively. A third site, HEE-3-10 is located farther upriver, beyond the railroad trestle. All of these sites are authorized for the culture of both American and European oysters. Mr. Heether is aware of this application but did not provide comments.

Three other LPA sites, CAR-1-10, CAR-2-10, and CAR-3-10, for American and European oysters, are operated by Abigail Carroll more than 830 feet southwest of Mr. Perry's proposed lease site, on the opposite side of the channel. Ms. Carroll's company, Nonesuch Oysters, LLC, also has pending with the Department a 4-acre experimental aquaculture lease application for the suspended and bottom culture of American and European oysters (DMR Docket#2011-04E) on a site encompassing her three LPAs, plus additional space. Ms Carroll is aware of Mr. Perry's application but did not provide comments.

Mr. Perry 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 150 ft. between his proposed lease site and the nearest LPA site; much greater distances separate his site from others, existing and proposed, 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 his 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 2.80¹

¹ **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.

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 scoured sand with 2-8 inch ripples caused by tidal action. 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).

Species of fauna observed during the dive included sand shrimp (*Crangon septemspinosus*), mud snails (*Littorina* sp.), soft-shelled clams (*Mya arenaria*), and blue mussels (*Mytilus edulis*). Only the shrimp were abundant (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 November 15, 2010 with a request for comments by December 18, 2010. No comments were received. Following further contacts with the agency by DMR staff, Mr. Perry formally applied to MDIF&W to review his 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 Mr. Perry 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

Oyster seed for the proposed project will come from Muscongus Bay Aquaculture in Bremen, Maine, Mook Sea Farm in Walpole, Maine, and from Eric Moran of Bagaduce River Oysters in Brooksville, Maine.

Therefore, I find that the applicant has demonstrated that there is an available source of American oyster seed (*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. 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. The lease boundaries must be marked in accordance with the requirements of DMR Rule 2.80. Dragging, shellfish harvesting, and anchoring, except by the leaseholder or his authorized agents, will be prohibited on the lease site. Recreational boating and fishing will be allowed within the open areas of the lease site.
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.A. §6072-A.

5. DECISION

Based on the foregoing, the Commissioner grants the requested experimental lease of 1.37 acres to Nate Perry 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 applicant²; 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*) 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 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)³. 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. Recreational boating and fishing are allowed within the open areas of the lease site.
3. Dragging, shellfish harvesting, and anchoring, except by the leaseholder or his authorized agents, are prohibited on the lease site.

² 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.”

³ 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.”

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: 7/1/11

/s/ Norman H. Olsen
Norman H. Olsen
Commissioner
Department of Marine Resources