

**STATE OF MAINE
DEPARTMENT OF MARINE RESOURCES**

**Matthew Hassler
and
Robert Willette**

Experimental Aquaculture Lease Application
Suspended culture of American/Eastern oysters
Spurwink River, Scarborough, Maine

October 1, 2018

FINDINGS OF FACT, CONCLUSIONS OF LAW, AND DECISION

Matthew Hassler and Robert Willette applied to the Department of Marine Resources (DMR) for an experimental aquaculture lease comprised of 2.89¹ acres located in the Spurwink River, Scarborough, Cumberland County, Maine, for the cultivation of American/Eastern oysters (*Crassostrea virginica*) using suspended culture techniques. DMR accepted the application as complete on December 4, 2017. Four requests for a public hearing were received during the comment period. No public hearing was held.² For the reasons described below the application is denied and a lease will not be issued.

1. THE PROCEEDINGS

Notice of the application and the 30-day public comment period were provided to state and federal agencies, riparian landowners, the Town of Scarborough, and others on the Department's mailing list. Notice of the application and comment period was published in the *Forecaster* on December 20, 2017. The evidentiary record before the Department regarding this proposal includes the application, the Department's site report dated July 13, 2018, and the case file. The evidence from these sources is summarized below.³

2. DESCRIPTION OF THE PROJECT

A. Proposed Operations

The purpose of the proposed lease is to explore the commercial feasibility of oyster production using suspended culture techniques (App 3). From spring through fall, the applicants propose to cultivate oysters using a combination of floating cages and bags secured to longlines (App 3). The dimensions of the floating plastic mesh bags are 27" W x 36" L x 4"H, and the dimensions of the floating cages are 3'W x 4.5'L x 2'H (App 18). At full production, a

¹ Applicants originally requested 2.77 acres. DMR calculations based on the provided coordinates indicate the site is 2.89 acres.

² For experimental leases, the Department is required to hold a hearing when five or more written requests are received.

³ These sources are cited below, with page references, as CF (case file), App (application), and SR (site report).

combination of 4,000 bags and/or cages would be deployed in seven parallel rows (App 18). During the winter months, the bags and cages would be removed from the site and the oysters would be transferred to a land-based facility for refrigeration (App 3). If the applicants are unable to refrigerate the oysters during the winter, they intend to relocate larger oysters to a different lease site located in the Nonesuch River in Scarborough where they would be submerged (App 3).

The proposed site is in DMR Pollution Area 12, which is classified as “Conditionally Approved” for the harvest of shellfish (SR 19). The harvest of shellfish is prohibited from May 1 through November 30 (SR 19). The applicants intend to harvest during the closed period by selling their product to Moody’s Seafood, which according to the application, has constructed a depuration plant (App 3). Mr. Willette is a “certified depuration plan representative” (App 3).

B. Site Characteristics

On May 22, 2018, DMR scientists visited the proposed lease site and assessed it and the surrounding area in consideration of the criteria for granting an experimental aquaculture lease. The proposed site occupies subtidal and intertidal waters in the Spurwink River. The applicants intended for the entire site to be subtidal (App 2). However, during the site visit there were sections of the proposed lease area that were exposed prior to and during low water (SR 2). The uplands to the west of the proposed site are characterized by a tidally exposed sandbar, which gives way to salt marsh (SR 2). The Rachel Carson National Wildlife Refuge (RCNWR) is located to the west of the proposed site (SR 2). The RCNWR manages a hand-carry boat launch, which is located approximately one mile to the north of the proposed site (SR 12). Staff observed residential properties beyond the RCNWR and to the south of the proposed site (SR 2). Mixed forest, exposed ledge, and a tidally exposed sand beach comprise the eastern shore of the river (SR 2).

Water depths at mid to low tide were less than 3.5 feet (SR 8). Per the site report:

The area of the proposed lease bounded by corners 3-8 remained subtidal throughout the falling tide. Approximately 2 hours prior to observed slack low water, corner 1 occupied the sandy intertidal. The area of the proposed lease bounded by corners 2 and 3 crossed tidally exposed sandbars more than 1 hour and 30 minutes prior to low water (SR 8).⁴

⁴ According to the site report, staff arrived at 9:17 am and proceeded to make observations throughout the late ebb stage to slack low water, leaving the area at approximately 1:00 pm. The site report notes: “Due to limitations in the accuracy of tidal predictions and depth calculations for the Spurwink River, MDMR staff observed the proposed lease area through the falling tide, walking the boundaries and collecting depth measurements” (SR 7-8).

Therefore, at mid to low tidal stages the water will not be deep enough to support the floatation of suspended gear on the western and southern sections of the proposed lease site (SR 8).⁵ The bottom of the proposed lease site is comprised primarily of sand with sections of exposed rock, gravel, and shell hash observed (SR 8).

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 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. Navigation

During the site visit, staff observed kayaks, canoes, and small outboard powered vessels at several properties along the shoreline, suggesting that recreational boating is a regular occurrence throughout the area (SR 12). At the time of the site visit, staff observed two kayakers traveling south through the proposed lease area (SR 12). The kayakers were navigating closer to the eastern shore of the channel where the water is deeper (SR 2).

If the lease was granted, it would encompass all navigable waters within the area for at least two hours before and after low water (SR 13). Certain types of hand powered vessels, such as kayaks, capable of traversing through five inches of water or less might be able to travel to the west of the proposed site at low water (SR 13). However, these vessels would need to be pulled or carried over the tidally exposed sandbar between corners 2 and 3 (SR 13). Other vessels like stand-up paddle boards and canoes will have even greater difficulty with navigation given the depth and angle of paddle placement (SR 13). Per the site report, “navigation to the east of the proposed lease would be restricted at all tidal stages due to hazards posed by exposed ledges near corner 8” (SR 13). Given staff observations of kayakers and measured water depths, it is likely the deeper water along the eastern side of the channel is the preferred navigational route (SR 13).

⁵ As previously noted, the floating mesh bags measure: 27” W x 36” L x 4”H; while the cages measure: 3’W x 4.5’L x 2’H.

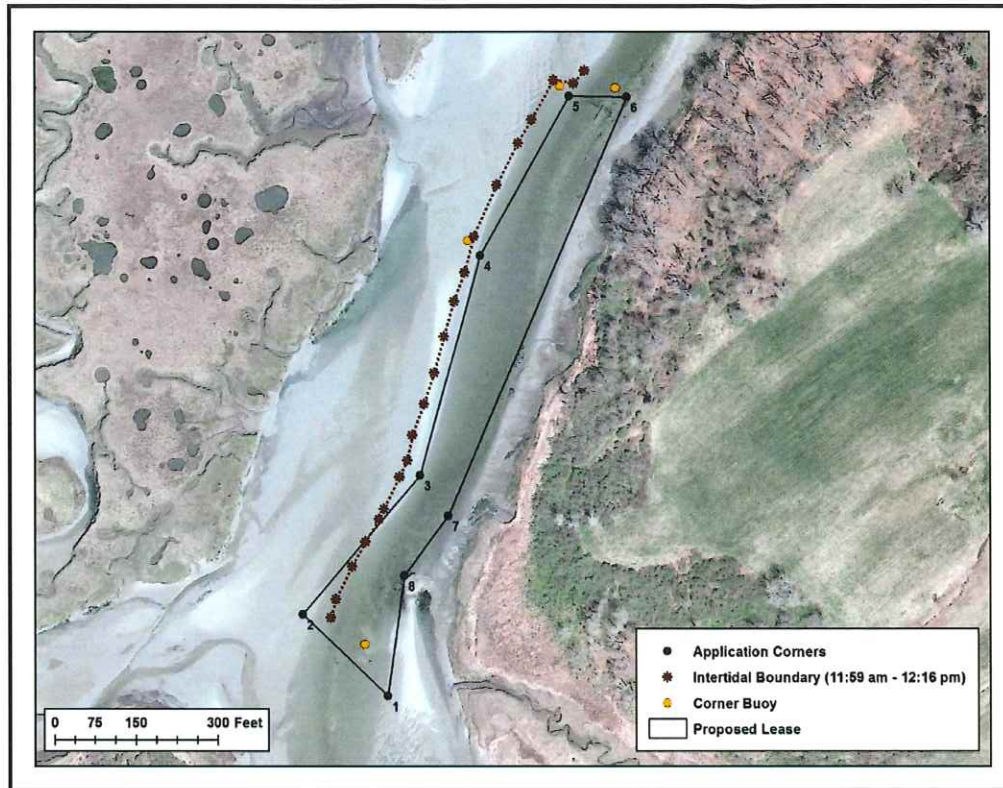


Figure 1: Depicting the proposed lease area in relation to intertidal mapping conducted during the site visit. Based on this image, the proposed lease appears to encompass most of the navigable waters in this section of the Spurwink River.

Prior to submitting their application to the Department, the applicants discussed their proposal with landowners, who were concerned about the effects the proposal would have on navigation (App 4). According to the application, “Several landowners made it clear that they want to be able to use the Spurwink at any point in the tide” (App 4). Based on this feedback, the applicants proposed to maintain an unmarked 10-foot navigational corridor, or “path” through the site to accommodate vessel traffic (App 4).⁶ The location of the corridor would change throughout the year as the applicants add or remove gear from the site (App 4). However, paddle boards, kayaks, and canoes are typically greater than 10 feet in length (SR 13). A comment submitted by the RCNWR indicates that most sea kayaks traversing the area are 15 to 17 feet in length.⁷ Although certain vessels may be able to navigate through the corridor, maneuverability would be hindered as they could not turn around.

⁶ Per the application: “The path will be unmarked, as the path through the site at low tide will be clear. We will mark the navigable path with buoys upon request if anyone feels marking is necessary” (App 4).

⁷ CF: Letter from RCNWF to DMR dated January 19, 2018.

In addition, there is a strong southwesterly current of several knots near proposed corner 1 (SR 9). Given the strong, tidally driven current, the site report indicates that the moorings proposed for the lease may not maintain suspended gear in a straight line with consistent spacing (SR 9). The site report concludes: “A 10-foot wide navigation corridor between lines of bags and/or cages coupled with strong tidally driven currents, will likely yield scenarios in which vessel operators have inadequate maneuverability” (SR 13).

The RCNWR submitted a comment indicating that non-motorized boaters paddle throughout the area, and that the hand carry in boat area they manage is utilized at all tides.⁸ The Department also received several comments from members of the public. In general, most comments noted that the area is heavily utilized by canoes, kayaks, and stand-up paddle boards. Many commenters indicated that the proposal would likely have adverse effects on navigation. One commenter who is a riparian landowner noted: “adding the proposed large lease would be a huge hindrance to the current uses and create an access/egress problem up and down the river and out to the ocean.”⁹ Some commenters felt that the proposed navigational corridor would be insufficient for the size of vessels that commonly utilize the area, including canoes, kayaks, and stand-up paddleboards.

Discussion:

Based on the evidence, the proposed lease is situated in an area that is heavily utilized by recreational vessels at all tidal stages. If the lease was granted, it would encompass the entire navigable area within this section of the Spurwink River for at least two hours before and after low tide. Although certain vessels like kayaks may be able to navigate to the west of the proposed lease at low water, it would be very difficult, and individuals would have to hand carry their vessels over a tidally exposed sand bar. Finally, navigation to the east of the proposed site would be completely restricted at all tidal stages. Based on this evidence, the proposed lease would significantly change how recreational boaters navigate the area.

The applicants attempted to address navigational concerns by proposing to maintain an unmarked 10-foot corridor through the proposed site, which vessels could utilize. However, the navigational corridor is not large enough to provide vessels with adequate maneuverability. Given the tidal currents and limitations of the proposed mooring system, it seems reasonable to conclude that it would be difficult to always maintain a 10-foot corridor, or any size corridor. It would also be difficult, if not impossible for individuals navigating the area to determine the location of the corridor, because it would be unmarked and the location would change

⁸ CF: Letter from RCNWR dated January 19, 2018.

⁹ CF: Email from T. Brown to C. Burke date January 8, 2018.

throughout the year. Based on frequency of use, it also seems unlikely that the proposed corridor could accommodate multiple vessels trying to traverse the lease at the same time, which could create unsafe conditions. It is unlikely given the scale of the project, tidal currents, and water depths that any navigational corridor could ameliorate the adverse effects the proposed site would have on navigation within this section of the river.

Therefore, the aquaculture activities proposed for this site will unreasonably interfere with navigation.

B. Flora & Fauna

Site Observations. During the site visit, Department staff walked and kayaked most of the proposed site and surrounding area (SR 14). Department staff observed a variety of marine flora and fauna including periwinkles (*Littorina sp.*), sand shrimp (*Crangon septemspinosa.*), and barnacles (*Balanus sp.*) (SR 10).¹⁰ Staff also noted Canada geese (*Branta canadensis*), gulls (*Larus sp.*), peeps (*Calidris sp.*), sandpiper (*Tringa sp.*), sparrows (*Ammodramus caudacutus*), and one snowy egret (*Egretta thula*) in the surrounding saltmarsh and along the intertidal shoreline (SR 16). Approximately four least terns (*Sternula antillarum*) and ten common terns (*Sterna hirundo*) were actively foraging in the shallow subtidal water throughout the proposed lease area (SR 16).

Fisheries and Wildlife. Based on data maintained by the Maine Department of Inland Fisheries and Wildlife (MDIFW), the proposed lease site is located within an area categorized as “Essential Habitat” for least terns and piping plovers, which are listed as endangered under the Maine Endangered Species Act (SR 17)¹¹. The proposed lease is almost entirely within saltmarsh sparrow (*Ammodramus caudacutus*) habitat, which is a species of special concern in the State of Maine (SR 17). In addition, the proposed lease and surrounding shallow subtidal and saltmarsh are also classified as Tidal Wading Bird and Waterfowl Habitat (TWWH), which is defined under Maine's Natural Resources Protection Act (NRPA) as Significant Wildlife Habitat (SR 17).

DMR sent a copy of the lease application to MDIFW for their review and comment. On June 26, 2018 MDIFW and DMR staff visited the proposed lease site. On August 22, 2018, MDIFW submitted the following comment regarding the proposal: “additional leases for oyster

¹⁰ For a complete list of observed species and their relative abundance, see page 14 of the site report.

¹¹ Pursuant to 12 M.R.S.A. §12806 state agencies may not permit, license, fund, or carry out projects that will significantly alter an Essential Habitat or violate protection guidelines that have been adopted for the habitat. MDIFW must review and approve pending permits or licenses before issuance. If the Department had granted the proposed lease, the decision would need to be reviewed by MDIFW prior to issuance. In consideration of the evidence, it seems unlikely that MDIFW would issue a permit, even if the Department had granted the lease.

culture in the Spurwink River may significantly alter and unreasonably harm foraging opportunities for the State Endangered least tern.”¹² RCNWR also raised concerns about the proposed operations disturbing a variety of wildlife, including least terns.

Discussion:

Essential Habitats are areas, established through rule-making, that have physical or biological features that are essential to the conservation of an endangered or threatened species.¹³ The proposed site is in an area essential to the nesting, feeding, and brood rearing for least terns and piping plovers, which are designated as state endangered species. During the site visit, staff observed least terns actively foraging within the proposed lease area. At full production, a combination of 4,000 bags and/or cages would be deployed from spring through fall. The site would also be serviced on a regular basis, as the applicants tend to the gear and harvest product. The gear and associated activities may displace and disturb the state endangered least tern. Considering the scale of the proposed operations, the location within an Essential Habitat, the documented presence of state endangered least terns with the boundaries of the proposed lease site, and feedback from MDIFW it is reasonable to conclude that the proposal will interfere with the ecological functioning of the area.

Therefore, the aquaculture activities proposed for this site will unreasonably interfere with the ability of the lease site and surrounding areas to support existing ecologically significant flora and fauna.

C. Fishing & Other Water Related Uses

During the site visit, Department staff did not observe any commercial or recreational fishing near the proposed lease site (SR 13). However, the site report indicates that shellfish harvesting is likely to occur in the intertidal area that surrounds the proposed lease (SR 13).¹⁴ Staff observed soft-shell clam (*Mya arenaria*) and blue mussel shells (*Mytilus edulis*) throughout the proposed lease site and surrounding intertidal (SR 13). In addition, European oysters (*Ostrea edulis*) and soft-shell clams were observed in the intertidal area to the east of corner 1 (SR 13). According to data maintained by DMR’s Recreational Fisheries Program, shoreline angling occurs from the Higgins Beach area through the mouth of the Spurwink River

¹² CF: MDIFW agency comments regarding the proposal, email dated August 22, 2018.

¹³ See: <https://www.maine.gov/ifw/fish-wildlife/wildlife/endangered-threatened-species/essential-wildlife-habitat/pplt-nests.html>

¹⁴ Although the applicants may not have intended for portions of the proposed lease site to be intertidal, measurements and observations during the site visit indicate otherwise. Pursuant to Chapter 2.64(C)(6) the Department requires the written permission of all intertidal landowners. In addition, 12 MRSA §6072(3) specifies that the Commissioner may not lease areas in the intertidal zone without the permission of the municipal officers, provided the municipality has an authorized shellfish conservation program. Based on Department records, the Town of Scarborough has an authorized shellfish conservation program. Because the Department is denying the lease, these permissions do not need to be satisfied prior to any rights accruing.

(SR 13). Average daytime fishing activity in the area from May through October ranges from one to four anglers near the beginning and end of the fishing season to five to eight anglers during peak season (SR 13).

A comment received from the RCNWR noted the following:

The Refuge also manages hunting and fishing programs in select areas in the Spurwink Division. Waterfowl, turkey and deer are all hunted according to State and federal guidelines. The river is well known as a fantastic place to fish. Given the possible intensity of this operation during the hunt season, we are concerned over possible disturbance to our hunting and fishing public. The area is heavily used by sportsman, fisherman and recreational boaters...".¹⁵

During the site visit, staff observed spent cartridges along the western shoreline, which indicates that hunting occurs within this area of the Spurwink River (SR 13). If the lease was granted, fishing would be limited to the applicant's proposed navigational corridor, or outside the boundaries of the proposed site at the appropriate tidal stages (SR 14). In addition to the concerns expressed by RCNWR, the Department received several comments from members of the public indicating that the area is utilized heavily by recreational vessels.

Discussion:

The evidence indicates that recreational fishing and boating occurs frequently in the area. In addition, the RCNWF actively manages a fishing program in the area. If the lease was granted, fishing would be limited to the proposed navigational corridor within the boundaries of the lease or areas outside the lease boundaries. However, the navigational corridor is only 10-foot wide, which is not large enough to accommodate the size of most vessels. It would also be difficult, if not impossible for fishermen to determine the location of the corridor, because it would be unmarked and the location would change throughout the year. Based on multiple water-based uses of the area, including recreational boating and fishing it also seems unlikely that the proposed corridor could accommodate multiple uses at any one time.

It appears that the proposal would displace and significantly alter existing water based uses of the area, including recreational fishing and boating. It may also hinder existing hunting and fishing programs that are actively managed by the RCNWF.

Therefore, the aquaculture activities proposed for this site will unreasonably interfere with fishing and other water related uses of the area.

4. CONCLUSIONS OF LAW

¹⁵ CF: Letter from RCNWR to DMR dated January 19, 2018.


The evidence in the record supports the conclusion that the proposed aquaculture activities do not meet all the requirements for granting an experimental lease set forth in 12 M.R.S.A §6072-A. Since the application fails to satisfy all criteria, it must be denied.

5. DECISION

Based on the foregoing, the Commissioner denies the application of Matthew Hassler and Robert Willette for a lease to cultivate American/Eastern oysters (*Crassostrea virginica*) using suspended culture techniques on 2.89 acres located in the Spurwink River, Scarborough.

Dated: _____

10/1/18



**Patrick C. Keliher, Commissioner,
Department of Marine Resources**