

STATE OF MAINE
DEPARTMENT OF MARINE RESOURCES
Standard Aquaculture Lease Renewal
Suspended Culture of Shellfish
Maquoit Bay, Freeport, Cumberland County

Maine Oyster Inc., and
Edward Bradley
MAQ BRE

Findings of Fact, Conclusions of Law, and Decision

Maine Oyster Inc., and Edward Bradley applied to the Department of Marine Resources (DMR) to renew the aquaculture lease MAQ BRE for a period of 20 years. The 9.89¹-acre lease is located in Maquoit Bay, Town of Freeport, Cumberland County and is for the suspended culture of American oysters (*Crassostrea virginica*) and European oysters (*Ostrea edulis*).

This lease was originally granted on June 24, 2014, to Maine Oyster Inc., and Edward Bradley for a period of 10 years.

1. Proceedings

DMR deemed the renewal application complete on August 14, 2024. Notice of the 30-day public comment period and opportunity to request a public hearing was published in the *Forecaster* on October 17, 2024. Notice was also provided to the Town of Freeport, riparian landowners within 1,000 feet of the site, and other state agencies, and sent to subscribers of DMR's aquaculture email list-serve. The record closed on November 16, 2024. During the comment period, one comment was received from the Maine Department of Inland Fisheries & Wildlife (IFW).

In accordance with 12 M.R.S.A. § 6072(12), a public hearing on a lease renewal is at DMR's discretion unless ten or more requests for a public hearing are received during the comment period.² DMR did not receive any requests for a public hearing. DMR elected not to hold a public hearing on the renewal request.

¹ After the original lease was granted, an update in ArcPro GIS software resulted in a new calculation of acreage for the site providing a measurement of 9.89 acres instead of the 9.91 acres indicated in the original decision.

² On June 20, 2025, LD 1722 was enacted. LD 1722, which applies to all pending renewal applications, amends 12 M.R.S.A. § 6072(12), so that, among other changes, lease renewals are no longer adjudicatory proceedings, meaning

2. Statutory Criteria

Aquaculture lease renewals are governed by 12 M.R.S.A. § 6072(12) and by DMR's Chapter 2.45 rules, which provide that an aquaculture lease shall be renewed if: the commissioner receives, prior to or within 30 days after the expiration of a lease,³ an application for renewal that includes information on the type and amount of aquaculture to be conducted during the new lease term; the lessee has complied with the lease agreement during its term; the Commissioner determines that renewal of the lease is in the best interest of the state; the renewal will not cause the lessee to be a tenant of any kind in leases covering an aggregate of more than 1,000 acres; and the lease is not being held for speculative purposes.

A. Date Application was Received

When issuing a decision on a lease renewal the Commissioner must consider whether the application for renewal was received prior to the expiration of the lease or within 30 days after the expiration of the lease with an assessed late fee of \$500, and that the application includes information on the type and amount of aquaculture to be conducted during the new lease term. 12 M.R.S.A. § 6072(12)(A).

MAQ BRE was set to expire on June 23, 2024. DMR received the application for renewal of MAQ BRE on May 2, 2024. The renewal application was incomplete and DMR requested more information from the applicant on May 22, 2024. The applicant submitted a revised application to DMR on July 25, 2024, and the application was deemed complete on August 14, 2024.

The renewal application was received 52 days before the expiration of the lease, which is within the submission timeframes specified in statute

Therefore, DMR finds that the commissioner received the application for renewal prior to the expiration of the lease, and that the application includes information on the type and amount of aquaculture to be conducted during the new lease term.

public hearings are not required for lease renewals. The notice provided for this application complies with the notice procedures provided for in LD 1722.

³ LD 1722 also changed the timing of renewal application submissions from 30 days before the lease expired to requiring the renewal application be received on or before the date of lease expiration or within 30 days of the lease expiring with a \$500 late fee. The sections of 12 M.R.S. § 6072 related to lease renewal processes amended by LD 1722 apply to all renewal applications pending with the Department on the effective date of June 20, 2025, and all renewal applications submitted following the effective date. This application was pending at the time the statutory change was made.

B. Compliance with Lease Agreement

When issuing a decision on a lease renewal the Commissioner must consider whether the lessee has complied with the lease agreement during the term of the lease. The Department shall consider the compliance record of the leaseholder. 12 M.R.S.A. § 6072(12)(B).

There are no documented violations of the lease agreement over the prior term.

The original decision for MAQ BRE includes approval for both American oysters (*Crassostrea virginica*) and European oysters (*Ostrea edulis*). The source of stock is listed as Muscongus Bay Aquaculture⁴ which is currently an approved source for American oysters (*Crassostrea virginica*) but not European oysters (*Ostrea edulis*). Chapter 24.10(4)(F) identifies all coastal Maine waters as a restricted area for European oysters (*Ostrea edulis*). Shellfish from restricted areas are presumed to carry infectious disease, pests or parasites unless an applicant produces sufficient evidence to rebut this assumption including demonstration that the shellfish to be imported, introduced, or possessed have been raised in a closed-system hatchery free of the infectious or contagious diseases found in the coastal waters of the restricted area. There are currently no approved hatcheries for European oysters (*Ostrea edulis*) and based on the record, the lease holders have not submitted sufficient evidence to support the possession of European oysters (*Ostrea edulis*). Therefore, European oysters (*Ostrea edulis*) are removed as an authorized species for MAQ BRE. If the lease holders wish to cultivate European oysters (*Ostrea edulis*) in the future, they would need to apply for a species amendment demonstrating that they have an available source of stock.

MAQ BRE was conditioned as follows:

“The leaseholders will observe the lease site and such areas outside the lease site as they select annually in June and September and report any observable eelgrass or lack of growth of eelgrass. If a resurgence of eelgrass within or outside the lease site is observed, the leaseholders must notify the DMR Aquaculture Environmental Coordinator, who will conduct a dive on the site and make a report. All reports are to be sent to: the U.S. Army Corps of Engineers [USACOE] at LeeAnn.Neal@usace.army.mil, NOAA Fisheries Habitat Conservation Division at

⁴ Signed lease decision for MAQ BRE, page 11.

mike.r.johnson@noaa.gov, and the Maine Department of Marine Resources at jon.lewis@maine.gov.”⁵

The site visit conducted by DMR scientists in 2013 observed one blade of “unviable” eelgrass:

“Eelgrass (*Zostera marina*) has historically been a very important and conspicuous component of the ecosystem in Maquoit Bay. In 2013, Maine DMR was slated to conduct an eelgrass study in the bay however, like many embayments along the Maine Coast in 2013 eelgrass essentially disappeared from the bay after the winter on [of] 2012-2013. Divers observed only one eelgrass plant which was heavily covered in a bryozoan. The plant condition was very poor to unviable. No known cause of this widespread eelgrass disappearance has been identified.”⁶

Eelgrass throughout Maine has failed to recover since 2013 and the most likely culprit is the invasive European green crab⁷. The Maine Department of Environmental Protection’s (DEP) most recent eelgrass assessment of the area, conducted in 2022, confirmed that no eelgrass is present within the lease site or its immediate boundary.⁸

None the less the lease holders take measures to encourage the regrowth of eelgrass including wide spacing of lines, moving system lines each season, allowing movement of lines in wind and tide, alternating bags on the system lines, deploying bags at low densities, delaying deployment, removing bags as early as possible and removing all gear in the off-season.

The record is not clear if reports of eelgrass or notification of eelgrass resurgence were submitted by the leaseholder, but due to uncertainty regarding the nature of the required reports as well as attrition in staff since the lease was issued and potential gaps in the record and steps taken by the applicant to promote eelgrass, DMR finds they have substantially complied with the condition.

Therefore, DMR finds that the applicant has complied with the lease agreement during its term.

⁵ Signed lease decision for MAQ BRE, page 14

⁶ Signed lease decision for MAQ BRE, page 9

⁷ Hilary A. Neckles "Loss of Eelgrass in Casco Bay, Maine, Linked to Green Crab Disturbance," *Northeastern Naturalist* 22(3), 478-500, (1 September 2015). <https://doi.org/10.1656/045.022.0305>

⁸ MEGIS Layer: Seagrass 2022 Cape Elizabeth to Phippsburg, Name: 88, ID: 125.

C. Best Interest of the State of Maine

When issuing a decision on a lease renewal the Commissioner must determine whether renewal of the lease is in the best interest of the State. 12 M.R.S.A. § 6072(12)(C). In determining whether it is in the best interest of the State to renew the lease, DMR takes into consideration, among other things, the potential for conflict with new or existing uses of the area which the Commissioner determines to be a higher use of the area from the perspective of public interest. Chapter 2 § 2.45(2)(B).

On November 12, 2024, DMR received a comment from IFW stating that minimal impacts to wildlife are anticipated.⁹ DMR did not receive any other comments specific to this renewal criterion. Based on the record, renewal of the lease would not result in conflicts with new or existing uses of the area.

Therefore, DMR finds that it is in the best interests of the State of Maine to renew this lease.

D. Aggregate Lease Holdings

The Commissioner may not issue a lease renewal if the renewal will cause the lessee to become a tenant of any kind in leases covering an aggregate of more than 1,000 acres. 12 M.R.S.A. §6072(12)(D), (13-A)(B); Chapter 2.45(3).

According to DMR records, Maine Oyster Inc., holds the following leases:

Lease Acronym	Acreage
ROY LAM	6.59
SHE LE5	12.21
MAQ BR1	5.18
MAQ BRE	9.89

The total acreage leased by Maine Oyster Inc., if this renewal is approved would be 33.87 acres. According to DMR records, Edward Bradley holds the following leases:

⁹ Email from C. Wentworth (IFW) to DMR Aquaculture dated November 12, 2024.

Lease Acronym	Acreage
MAQ BRW	11.75
MAQ BRE	9.89

The total acreage leased by Edward Bradley, if this renewal is approved would be 21.64 acres.

Therefore, DMR finds that the renewal of this lease will not cause either lessee, whether considered in conjunction or separately, to lease more than 1,000 acres.

E. Speculative Purposes

The Commissioner may not issue a lease renewal if the lease is being held for speculative purposes. 12 M.R.S.A. §6072(12)(E). In determining whether the lease is being held for speculative purposes, the Commissioner must consider whether the lessee has conducted substantially no research or aquaculture in the lease areas during the previous lease term. Chapter 2.45(2)(A).

The renewal application states that the site is a nursery only site and juvenile oysters were cultivated annually on the lease site from June to September and that the site was used throughout the course of the prior term.¹⁰ Based on the record, the lessee has conducted aquaculture activities in the lease areas during the previous term.

Therefore, DMR finds that the lease is not being held for speculative purposes.

3. Conclusions of Law

Based on the above findings, DMR concludes that:

- A. The commissioner received the application for renewal prior to the expiration of the lease, and that the application includes information on the type and amount of aquaculture to be conducted during the new lease term.
- B. The lessee has complied with the lease agreement during the term of the lease.
- C. The renewal of the lease is in the best interest of the State.

¹⁰ Pages 1 and 2 of the final lease renewal application.

- D. The renewal of the lease will not cause the lessee to become a tenant of any kind in leases covering an aggregate of more than 1,000 acres.
- E. The lease is not being held for speculative purposes.

Accordingly, the record supports the conclusion that the proposed aquaculture activities meet the requirements for the granting of a renewal of an aquaculture lease set forth in 12 M.R.S.A. § 6072(12).

4. Lease Conditions

The Commissioner may establish conditions that govern the use of the lease area and impose limitations on aquaculture activities, pursuant to 12 M.R.S.A. § 6072(7-B). 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 were part of the previous lease:

1. The lease site must be marked in accordance with both U.S. Coast Guard requirements and DMR Rule 2.80.
2. Lobster and crab fishing, recreational fishing, and navigation are allowed in open areas of the lease site, but navigation must be around the oyster gear, not through it.
3. Dragging and shellfish harvesting are prohibited except with the authorization of the leaseholders.
4. The leaseholders will observe the lease site and such areas outside the lease site as they select annually in June and September and report any observable eelgrass or lack of growth of eelgrass. If a resurgence of eelgrass within or outside the lease site is observed, the leaseholders must notify the DMR Aquaculture Environmental Coordinator, who will conduct a dive on the site and make a report. All reports are to be sent to: the U.S. Army Corps of Engineers at LeeAnn.Neal@usace.army.mil, NOAA Fisheries Habitat Conservation Division at mike.r.johnson@noaa.gov, and the Maine Department of Marine Resources at jon.lewis@maine.gov.

Condition 1 is a regulatory requirement and included in the lease agreement, so it is removed. Condition 2 will remain on the lease but is revised to eliminate unnecessary language. Condition 3 prohibits dragging and shellfish harvesting within the boundaries of the lease area,

which governs the use of the site by individuals who are not a party to this lease. Title 12 M.R.S.A. § 6073(2) states that it shall be unlawful to interfere with the rights provided in a lease. Therefore, the statute already addresses this issue and condition 3 is removed. Condition 4 requires the lease holder to observe the lease site and areas outside the lease site annually in June and September for the presence or absence of eelgrass and to report or notify state and federal agencies if a resurgence is observed. Since the lease was initially granted, DMR has learned more about eelgrass and the associated decline throughout the state. For example, the coastwide decline in eelgrass, attributed to the invasive European green crab, is now well documented. Recent eelgrass evaluations conducted by DEP demonstrate that eelgrass is not present within the site or the immediate boundaries. Additionally, the condition is worded very ambiguously and most of the people who the lease holder would be required to contact are retired. Therefore, this condition is eliminated as unnecessary and onerous on the lease holder.

The conditions applied to the renewed lease shall be as follows:

1. Navigation, lobster and crab fishing, and recreational boating and fishing shall be allowed on the lease.

5. Decision

The Commissioner grants the application of Maine Oyster Inc., and Edward Bradley to renew their aquaculture lease MAQ BRE for a period of 20 years. The renewed lease is subject to the same terms, conditions, and obligations as set forth in the original lease, except as modified by this decision.

6. Revocation of Lease

The Commissioner may commence revocation procedures upon determining, pursuant to 12 M.R.S.A. § 6072(11) that no substantial aquaculture has been conducted within the preceding year, that the lease activities are substantially injurious to marine organisms or public health, or that any of the conditions of the lease or any applicable laws or regulations have been violated.

Dated: 11.18.25


Carl J. Wilson, Commissioner,
Department of Marine Resources

STATE OF MAINE
DEPARTMENT OF MARINE RESOURCES
Standard Aquaculture Lease Application
Suspended culture of American and European oysters,
Maquoit Bay, Freeport

Maine Oyster, Inc.
and Edward Bradley
Lease MAQ BRE
Docket #2013-01
Date of Decision

FINDINGS OF FACT, CONCLUSIONS OF LAW, AND DECISION

Maine Oyster, Inc., a Maine corporation, and Edward Bradley applied to the Department of Marine Resources (“DMR”) for a standard aquaculture lease on 9.91 acres located in the coastal waters of the State of Maine, west of Bunganuc Rock in Maquoit Bay in the Town of Freeport 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 June 11, 2013. A public hearing on this application was held on March 17, 2014, in Freeport. There were no intervenors.

1. THE PROCEEDINGS

Notices of the hearing, the application, and the DMR site report 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 Freeport and the Freeport Harbormaster, members of the Legislature, representatives of the press, riparian landowners, and other private individuals. Notice of the hearing was published in the *Forecaster* on February 13 and March 6 and in the *Commercial Fisheries News* March edition.

Sworn testimony was given at the hearing by: Eric Horne, Christian Horne, and Edward Bradley on behalf of the applicants and by DMR’s Aquaculture Environmental Coordinator, Jon Lewis. The applicants described the proposed project. Mr. Lewis described the site visit and presented a videotape of the bottom. Each witness was subject to questioning by the Department; no members of the public attended the hearing. The hearing was recorded by DMR. The Hearing Officer was Diantha Robinson.

The evidentiary record before the Department regarding this lease application includes three exhibits introduced at the hearing (see exhibit list below), and the record of testimony at the hearing itself. The evidence from all of these sources is summarized below.¹

¹ In references to testimony, “Smith/Jones” means testimony of Smith, questioned by Jones.

LIST OF EXHIBITS²

1. Case file, # 2013-01
2. Application signed and dated 12/12/11, revised 2/28/13
3. DMR site report dated 12/30/13

2. DESCRIPTION OF THE PROJECT

A. Site History

This decision addresses one of two related standard lease applications which further the development of oyster aquaculture in western Maquoit Bay. The two applications, which are virtually identical except for the identity of the applicants and the location of the proposed sites, were considered together in a single public hearing.

Maine Oyster, Inc. is owned by Eric Horne and Valy Steverlynck and is the co-applicant with Edward Bradley in Docket #2013-01, which this decision addresses. Christian Horne is the co-applicant with Mr. Bradley in Docket #2013-02. To simplify references to these two applications, they will be referred to as the “Maine Oyster application” and the “Christian Horne application,” respectively.

Currently, two lease sites exist in the vicinity, leases MAQ BR1 and MAQ BR2.

MAQ BR1, currently held by Peter Horne, is located approximately 2,800 feet southwest of the two proposed sites; that lease is in the process of being transferred to Maine Oyster, Inc. and Christian Horne.

MAQ BR2, currently held by Edward Bradley, is a 5-acre lease for suspended and bottom culture of several species of shellfish, including American oysters. The Christian Horne application proposes to expand this existing lease site by an additional 6.82 acres, with Edward Bradley and Christian Horne as co-lessees of the resulting 11.82-acre lease.

The Maine Oyster application is for a new 9.91-acre standard lease site. This site is approximately 500 feet east of MAQ BR2 in its present configuration and 100 feet east of the expanded footprint of that lease as proposed in the Christian Horne application. The existing and proposed lease sites are pictured below in Figure 1 from the DMR site reports for both lease applications.

² Exhibits 1, 2, and 3 are cited, with page references, as CF1, A2, SR3, etc. Other exhibits are cited by exhibit number.

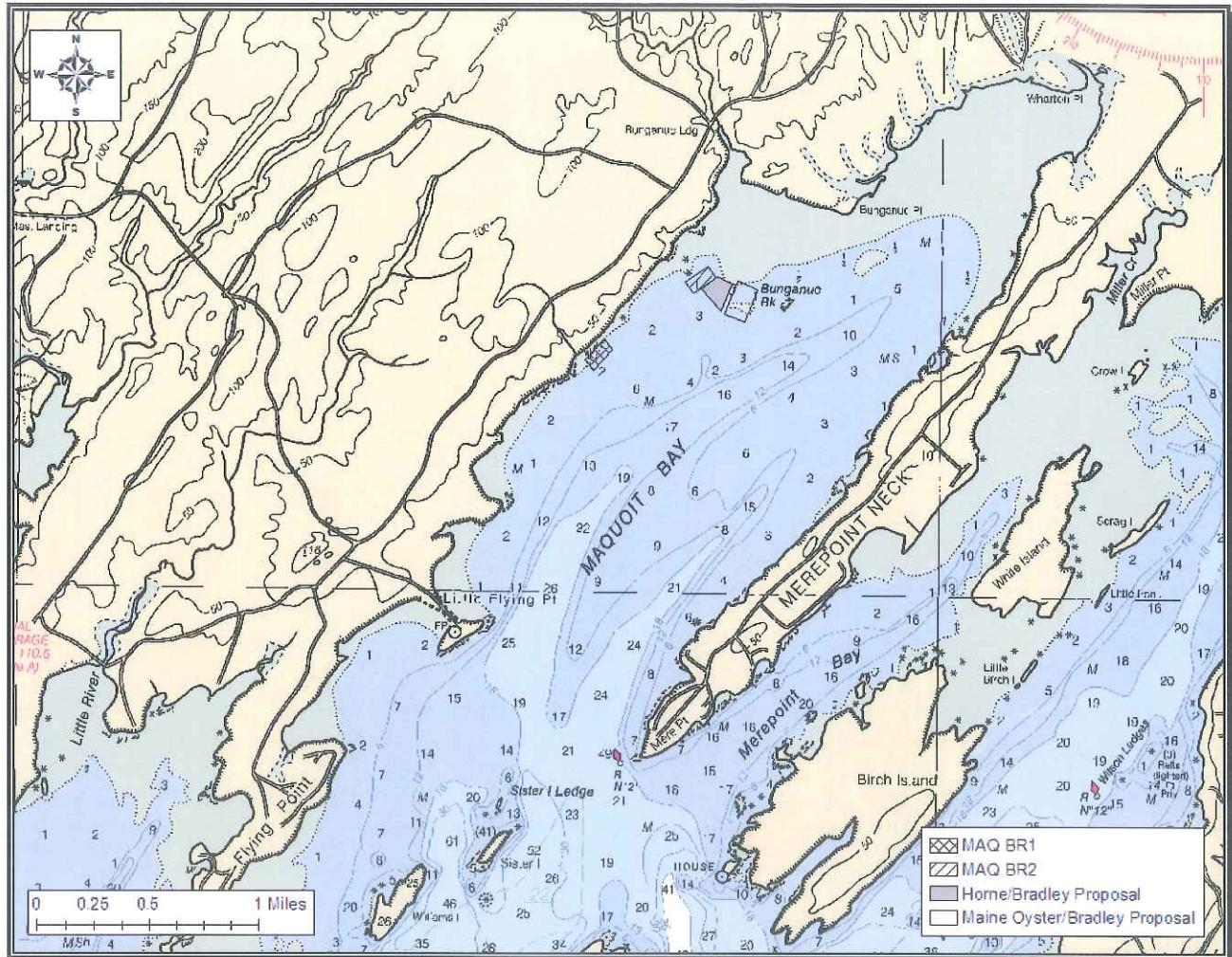


Figure 1*

B. Proposed Operations

Both the Maine Oyster, Inc. application and the Christian Horne application describe identical operations that are similar to those now practiced on Mr. Bradley's lease MAQ BR2. The leases are operated as floating nursery sites for juvenile oysters in plastic mesh ADPI bags installed in parallel rows running roughly north-south, to minimize stress on the gear from wind and currents (Eric and Christian Horne, testimony). When the oysters are large enough, they will be grown out to market size at other aquaculture sites held by the applicants.

Oyster seed will initially be raised in upwellers on Eric and Christian Horne's limited-purpose aquaculture sites HOR-2-07 and CHOR-1-13 in the Harraseeket River in Freeport. In late June or early July, the oysters will be placed in floating bags on the lease sites to grow until October, when the bags of oysters will be removed from the site. Over the winter, the system lines, to which the bags are attached, will be removed, and only the marker buoys and the 3/4" head lines attached to the helix moorings will remain on the sites, sunk to the bottom to protect them from ice (Christian Horne, testimony).

Eric Horne testified that ample space will be left between the lines of bags to allow room for navigation and tending the gear. Edward Bradley testified that he navigates “carefully” between the lines of bags on MAQ BR2 in a 25-foot boat.

Christian Horne testified that the only maintenance done on the site once the bags are installed will be to flip the bags periodically. No sorting, grading, or power washing will be conducted. Access to the sites will be from the family’s private dock or from public launching facilities around Maquoit Bay. Both applications state that a 24-ft. skiff with a 4-stroke outboard and an electric lobster pot hauler will be used one to two times weekly on the lease sites (App 6).

C. Site Characteristics

The proposed 9.91-acre lease site is located in warm, shallow subtidal waters in the northwest corner of Maquoit Bay, at the edge of the intertidal zone (Eric and Christian Horne, testimony)³. Department biologists conducted a site visit on August 7, 2013, during which they inspected the proposed lease site according to the criteria for granting aquaculture leases. They assessed the benthic ecology of the area using SCUBA and an underwater video camera (SR2). The proposed lease site is located approximately 100 ft. east of the lease site proposed in the Christian Horne application.

Jon Lewis testified that the bottom of both of the proposed new lease sites is flat and uniform, like the bottom on the existing site, MAQ BR2, which he also observed (Lewis, testimony). Both sites are located in an area currently classified by the Department of Marine Resources Water Quality Classification program as “open/approved for the harvest of shellfish” (SR 8).

Mean low water depth within the area of the proposed lease, as calculated from measurements taken during the site visit, is approximately 2.1 feet (SR 3). The site report describes the proposed lease site and its surroundings as follows:

It is more than 1,700 feet from the nearest uplands, which consist of residential development interspersed with mixed forest. The outlet of Bunganuc Creek is approximately 2,000 feet to the north. The nearest navigational hazard, Bunganuc Rock, is located approximately 670 feet to the east (SR 3).

Currents are primarily tidally driven in a northeast to southwest direction. The benthos consists of firm mud with very little topographical variation. Historically eelgrass (*Zostera marina*) has been prevalent throughout Maquoit Bay. At the time of the Department’s site assessment, however, a lack of eelgrass was noted. In 2013, The Department received several reports concerning the scarcity of eelgrass around the state, including within Maquoit Bay (SR 3).

The northern reaches of Maquoit Bay are expected to experience some ice over during winter months. Pan or sheet ice from the adjacent shallows and Bunganuc Creek is also expected to flow through the area. The applicants have indicated

³ The Maine Oyster application lists the acreage as “Approximately 10 acres (subject to DMR review).” DMR biologists calculated the acreage as 9.91 acres (SR 3).

they plan to remove floating gear by late October of each year thus mitigating potential gear damage and dislodgement due to ice (SR3).

The Department sent a Harbormaster Questionnaire to the Town of Freeport, but no response was received.

3. STATUTORY CRITERIA & FINDINGS OF FACT

Approval of standard aquaculture leases is governed by 12 M.R.S.A. §6072. 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, docking facilities, or conserved lands 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; that the lease will not result in an unreasonable impact from noise or lights at the boundaries of the lease site; and that the lease will be in compliance with visual impact criteria adopted by the Commissioner relating to color, height, shape and mass.

A. Riparian Access

The site report states:

The proposed lease area is more than 1,000 feet from the nearest shorefront property. There is adequate room for landowner ingress and egress, particularly at higher tidal stages. At MLW access will be hindered more by shallow water and tidally exposed mudflats than by the proposed activities (SR 4).

Based on this evidence, it appears that the proposed lease will not hamper access to and from the shore.

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 proposed lease location as follows:

The proposed lease is located at the head of Maquoit Bay, to the west of the channel, in shallow water. At high water there is sufficient water depth to navigate between the proposed lease (and current activities) and the western shoreline. At low water there is insufficient water for all but the smallest of vessels in the area. Approximately 1,000 feet of water ranging from 2 feet at low

water to 10 feet at high water exists between the proposed lease and the main navigational channel leading to the head of the bay.

Primary users of the waters and intertidal shoreline surrounding the proposed lease would be clam diggers in shallow draft vessels and others in recreational kayaks (SR 4-5).

Christian Horne testified that there have been no problems with navigation in the past on either of the existing lease sites, MAQ BR1 and MAQ BR2 (Christian Horne, testimony). Eric Horne testified that navigation in the area is limited by shallow water and extensive mud flats to the north of the proposed sites. Clammers come to the area from the north or east in air boats, he said; they do not cross the area of the proposed lease sites. There is little north-south vessel transit in the vicinity, although there is ample space between the east side of the proposed Maine Oyster lease site and Bunganuc Rock (Eric Horne, testimony).

Jon Lewis testified that there is "plenty of room" for navigation around the proposed lease sites, including 100 feet between the two sites and 660 feet between Bunganuc Rock and the east side of the Maine Oyster site. He stated that the space is adequate for the vessels that would navigate in the shallow water that exists in this vicinity (Lewis, testimony).

This evidence indicates that navigation in the area is unlikely to be affected to any significant degree by the presence of the aquaculture gear.

Therefore, I find that the aquaculture activities proposed for this site will not unreasonably interfere with navigation. The lease site must be marked in accordance with U. S. Coast Guard requirements.

C. Fishing & Other Uses

The site report states:

During the site visit on August 7, 2013 no commercial or recreational fishing activity was observed. The mudflats to the north of the proposed site are heavily used for clamming during low tides. Both soft-shell (*Mya arenaria*) and hard-clams (*Merenaria mercenaria*) are harvested from these nearby flats.

Recreational angling for striped bass (*Morone saxatilis*) is common in Maquoit Bay during the summer months. Floating bags would likely attract some fish seeking shade and food resources associated with the gear in the water. Some potential for line tangling and breakoff exists if a fish is hooked near the proposed floating bags and moorings.

Other water-borne recreational activities likely include pleasure boating in small skiffs, sailing and kayaking. These activities would likely occur at higher tidal stages and at shallow water stages would be substantially restricted due to water depths and surrounding mudflats. (SR 5)

Christian Horne testified that recreational striped bass fishermen in Maquoit Bay prefer to fish near the floating bags and that there have been no problems with fishing gear snarling in

the oyster gear on the two existing lease sites (Christian Horne, testimony). The proposed lease sites are subtidal, so soft-shell clams would not be harvested there. Jon Lewis testified that while some quahogs were observed on the proposed lease sites during the site visit dive, they did not exist there in commercially harvestable quantities (Lewis/Bradley).

The evidence indicates that it is unlikely that the presence of the aquaculture lease site will interfere significantly with fishing of any kind. The lease site must be marked in accordance with DMR Rule 2.80.⁴

Other aquaculture leases. As described above (Site History), there are two existing lease sites in Maquoit Bay. MAQ BR1, approximately 2,800 feet southwest of the proposed two lease sites, is far enough away from the proposed sites that it will not be affected by operations there.

MAQ BR2 is 500 feet west of the proposed Maine Oyster lease site. The Christian Horne lease application proposes an expansion of MAQ BR2 that would result in a larger site 100 feet west of the proposed Maine Oyster site. The proposed lease sites will be operated jointly by the applicants, who have chosen to locate them in proximity to one another. The site report notes with respect to each of the proposed sites:

There are no other known aquaculture activities within Maquoit Bay. The proposed lease, should it be granted, is not expected to negatively impact the existing aquaculture operations in the area. (SR 5)

It appears that the proposed lease site will not interfere with operations at either of the existing lease sites in the area.

Exclusivity. Eric and Christian Horne testified that lobster and crab fishing and navigation can be allowed in the open areas of the proposed lease sites, although they requested that navigation be around the floating oyster gear, not through it. No dragging or shellfish

⁴2.80 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.

harvesting should occur without the lessees' authorization (E. Horne and C. Horne/Robinson). There appears to be no reason to restrict recreational fishing, given Christian's Horne's testimony.

These restrictions are reasonable in order to enable the aquaculture project to be carried out while encouraging the greatest number of compatible uses of the area, as provided in 12 MRS §6072-A (15). Conditions reflecting these restrictions will be included in the lease.

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. Lobster and crab fishing, recreational fishing, and navigation will be allowed in open areas of the lease site, but navigation must be around the oyster gear, not through it. Dragging and shellfish harvesting will be prohibited except with the authorization of the leaseholders. The lease must be marked in accordance with DMR Rule 2.80.⁵

D. Flora & Fauna

During the site visit, DMR biologists observed several species of flora and fauna. Brown benthic diatoms were abundant; the site report describes these as "a common algae found on soft bottom sediments" (SR 6). Quahogs and boring sponges were occasionally noted.⁶ Species rarely observed included horseshoe crabs, green crabs, hermit crabs, sea stars, and eelgrass (SR 6). No Essential Habitats for endangered or threatened species or species of concern were found within one-quarter mile of the proposed lease site; the nearest such habitat was more than 3,500 feet from the site (SR 7). The site report makes the following observations:

The tidal mudflats immediately north of the proposed lease area (Figure 1) are considered Significant Wildlife Habitat under the Natural Resources Protection Act. They represent important feeding habitat for shorebirds (Maine Office of

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.
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 The site report states: "Boring sponges (*Cliona celata*) were observed on the bottom through the dives. These sponges are known to prey on shellfish by boring a hole into the shell of bivalve mollusks using an acidic secretion. These sponges are known to occur along the Maine coast however the two DMR divers had not previously encountered these sponges in 14 and 16 years of diving the coast respectively" (SR 6).

GIS, GISVIEW.MEIFW.Shorebird). According to the lease application, the proposed activities would not encroach upon the intertidal (SR 7).

Due to the historical presence of eelgrass the majority of Maquoit Bay, above the 10 foot depth contour (Figure 1), is listed as Tidal Wading Bird and Waterfowl Habitat (SR 8)

MDMR received comments regarding the proposed activities from Bethany Atkins, Wildlife Biologist at MDIF&W, on July 15, 2013. Ms. Atkins confirmed the presence of eelgrass beds mapped as Tidal Wading Bird and Waterfowl Habitat but further stated that “MDIFW does not expect the suspended aquaculture activities, as proposed, to have significant impact on wading birds and waterfowl.” (SR 8)

Eelgrass. Eelgrass has been common on the site in the past, but it had virtually disappeared from the proposed lease site by the time of the site visit, as described under Site Characteristics, above. The site report comments additionally on the loss of eelgrass as follows:

Eelgrass (*Zostera marina*) has historically been a very important and conspicuous component of the ecosystem in Maquoit Bay (Figure 3). In 2013, Maine DMR was slated to conduct an eelgrass study in the bay however, like many embayments along the Maine Coast in 2013 eelgrass essentially disappeared from the bay after the winter on 2012-2013. Divers observed only one eelgrass plant which was heavily covered in a bryozoan. The plant condition was very poor to unviable. No known cause of this widespread eelgrass disappearance has been identified (SR 6).

According to the application, the applicants have been managing the existing oyster aquaculture operations with “a variety of practices to ensure minimal ‘bottom shading’ of the area’s eelgrass resources” (App 7). These practices are intended to allow “consistent sunlight penetration to the sea floor” to enable the eelgrass to grow, regardless of the gear floating above it at the surface for part of the year.⁷ These measures include:

- Wide spacing of system lines;
- Installing system lines at differing points along the headlines from one season to the next;
- Putting extra slack in system lines which allows them to move and sway with wind and tide to differing locations throughout the day;
- Alternating bags on opposite sides of the system line;
- Deploying bags at a very low density per acre overall;
- Incorporating the use of shellfish upwellers – delaying deployment of bags until early July. This allows eelgrass beds ample time to become established each season;

⁷ The application includes a copy of a 2008 report to the Maine Department of Inland Fisheries and Wildlife on eelgrass resources in Maquoit Bay by MER Assessment Corporation of Brunswick, Maine, a marine environmental and resources consultant. The application quotes MER’s president, Christopher S. Heinig, as saying “The impact [on eelgrass] of oyster aquaculture, at least this form (surface system), whether absolute or comparative, is negligible.” (SR 7)

- Removing all bags as early in the fall as possible to reduce the amount of time gear is deployed on the site at the end of the growing season; and
- Ensuring that no gear is present on the site during the off-season (Late October thru late June). (App 7)

Eric and Christian Horne testified that the eelgrass protection measures practiced to date on existing lease site MAQ BR2 will be continued on the proposed lease sites, even though no eelgrass was found on the sites during the 2013 site visit.

Jon Lewis testified that discussions had been held with the applicants, DMR, the U.S. Army Corps of Engineers, and the National Marine Fisheries Service, a division of the National Oceanic and Atmospheric Administration (NOAA), regarding a potential study to assess possible effects on eelgrass of shading and fertilization by the oyster farms, assuming the proposed lease sites were granted. With the loss of the eelgrass beds in 2013, he noted that even if the eelgrass returns, "It would not be in a static state suitable for monitoring" (Lewis, testimony).

Following the public hearing, the discussions were resumed among the same parties and produced the following agreement regarding future monitoring for eelgrass.

The leaseholders will make general observations twice during each growing season of each of the lease sites and such areas outside the sites as they select, once in June and once in September, near the beginning and end of the season. These observations will include reporting of any observable eelgrass occurring within the sites or in the areas observed outside the sites, or the lack of growth observed within or outside the sites. In the event observations indicate a resurgence of eelgrass within or outside the sites, Jon Lewis, the Aquaculture Environmental Coordinator of the Maine Department of Marine Resources, will be contacted by the leaseholders and will conduct a dive at the sites. Mr. Lewis will report his findings to the Army Corps and NOAA. The lessees' reports for June and September and any additional reports are to be e-mailed to Michael Johnson of the Habitat Conservation Division at NOAA Fisheries at mike.r.johnson@noaa.gov, to LeeAnn Neal, Senior Project Manager at the U.S. Army Corps of Engineers, at LeeAnn.Neal@usace.army.mil, and to Jon Lewis of the Maine Department of Marine Resources at jon.lewis@maine.gov.

This reporting requirement will be made a condition of the new lease.

Based on this evidence, it appears that the proposed lease will not affect other species on or near the proposed lease site. The culture practices described in the application are intended to protect the existing eelgrass and may help it to regenerate.

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, provided that the eelgrass observation and reporting requirement described above is made a condition of the lease.

E. Public Use & Enjoyment

According to the site report, there are no public docking facilities, parks, beaches, or conserved lands within 1000 feet of the proposed lease site (SR 8).

Therefore, I find that the aquaculture activities proposed for this site will not unreasonably interfere with the public use or enjoyment within 1,000 feet of beaches, parks, or docking facilities or certain conserved lands owned by municipal, state, or federal governments.

F. Source of Organisms

The application indicates that the source of stock for this proposed lease site is Muscongus Bay Aquaculture in Bremen, Maine (App, cover page).

Therefore, I find that the applicants have demonstrated that there is an available source of stock to be cultured for the lease site.

G. Light

The application indicates that no lights will be used at the proposed lease site and that the applicants do not intend to work on the site other than during daylight hours (App 6).

Therefore, I find that the aquaculture activities proposed for these sites will not result in an unreasonable impact from light at the boundaries of the lease site.

H. Noise

The site report notes:

The applicant has proposed using a 24' outboard powered skiff powered with a four-stroke outboard and an electric "pot-hauler" for retrieving gear which they describe as inaudible outside of the boat. In combination, these pieces of equipment are as quiet as can be reasonably achieved and likely quieter than many other boats (SR 8).

Based on this evidence, it appears that any noise generated by operations on the site is unlikely to have a significant effect at the boundaries of the lease.

Therefore, I find that the aquaculture activities proposed for this site will not result in an unreasonable impact from noise at the boundaries of the lease.

I. Visual Impact

The site report notes that:

The gear proposed is the standard throughout Maine's shellfish aquaculture industry. At maximum production the applicant proposes 2700 floating ADPI bags arranged in parallel rows (see page 3 of the application). This would be in addition to any gear deployed on the existing lease site MAQ BR2 and proposed site #2013-02 (if a lease is awarded). No buildings or other on-site support structures are planned as part of this proposal (SR, p. 7).

The Department's visual impact rule requires structures and gear on lease sites to blend with the surroundings as much as possible. The evidence shows that this will be the case on the proposed lease site.

Therefore, I find that the equipment, buildings, and watercraft to be used at the proposed lease site will comply with the visual impact criteria contained in DMR Regulation 2.37 (1) (A) (10).

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. The lease boundaries must be marked in accordance with the requirements of DMR Rule 2.80. Lobster and crab fishing, recreational fishing, and navigation will be allowed in open areas of the lease site, but navigation must be around the oyster gear, not through it. Dragging and shellfish harvesting will be prohibited except with the authorization of the leaseholders.
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. The leaseholders will observe the lease site and such areas outside the lease site as they select annually in June and September and report any observable eelgrass or lack of growth of eelgrass. If a resurgence of eelgrass within or outside the lease site is observed, the leaseholders must notify the DMR Aquaculture Environmental Coordinator, who will conduct a dive on the site and make a report. All reports are to be sent to: the U.S. Army Corps of Engineers at LeeAnn.Neal@usace.army.mil, NOAA Fisheries Habitat Conservation Division at mike.r.johnson@noaa.gov, and the Maine Department of Marine Resources at jon.lewis@maine.gov.

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.
7. The aquaculture activities proposed for this site will not result in an unreasonable impact from light at the boundaries of the lease site.
8. The aquaculture activities proposed for this site will not result in an unreasonable impact from noise at the boundaries of the lease site.
9. The aquaculture activities proposed for this site will comply with the visual impact criteria contained in DMR Regulation 2.37(1)(A)(10).

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.

5. DECISION

Based on the foregoing, the Commissioner grants the requested lease of 9.91 acres to Maine Oyster, Inc. and Edward Bradley for ten years for the purpose of cultivating American oysters (*Crassostrea virginica*) and European oysters (*Ostrea edulis*) using suspended culture techniques.

Execution by the leaseholder and the Department of the new lease authorized by this decision constitutes their consent to terminate lease MAQ BR2.

The lessees shall pay the State of Maine rent in the amount of \$100.00 per acre per year. The lessees 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 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 (7-B)⁸ Conditions are

⁸ 12 MRSA §6072 (7-B) states: "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."

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. Lobster and crab fishing, recreational fishing, and navigation are allowed in open areas of the lease site, but navigation must be around the oyster gear, not through it.
3. Dragging and shellfish harvesting are prohibited except with the authorization of the leaseholders.
4. The leaseholders will observe the lease site and such areas outside the lease site as they select annually in June and September and report any observable eelgrass or lack of growth of eelgrass. If a resurgence of eelgrass within or outside the lease site is observed, the leaseholders must notify the DMR Aquaculture Environmental Coordinator, who will conduct a dive on the site and make a report. All reports are to be sent to: the U.S. Army Corps of Engineers at LeeAnn.Neal@usace.army.mil, NOAA Fisheries Habitat Conservation Division at mike.r.johnson@noaa.gov, and the Maine Department of Marine Resources at jon.lewis@maine.gov.

7. REVOCATION OF LEASE

The Commissioner may commence revocation procedures upon determining pursuant to 12 MRSA §6072 (11) and DMR Rule Chapter 2.42 that no substantial aquaculture has been conducted within the preceding year, that the lease activities are substantially injurious to marine organisms, or that any of the conditions of the lease or any applicable laws or regulations have been violated.

Dated:

6/24/14



Patrick C. Kelihher
Commissioner,
Department of Marine Resources