

**STATE OF MAINE  
DEPARTMENT OF MARINE RESOURCES**

**Christian Horne and  
Edward Bradley**

Application for Change in Gear Authorization  
Maquoit Bay, Freeport

**MAQ BRW**

February 24, 2020

**FINDINGS OF FACT, CONCLUSIONS OF LAW, AND DECISION**

Christian Horne and Edward Bradley applied to the Department of Marine Resources (DMR) for a change in gear authorization on their existing standard lease MAQ BRW, located west of Bunganuc Rock in Maquoit Bay in the Town of Freeport in Cumberland County Maine. The leaseholder is seeking authorization to add 300 Flow N Grow cages to their site. The leaseholder will continue to operate with the ADPI bags currently authorized but will slowly phase in the Flow N Grow cages.

**1. THE PROCEEDINGS**

Notice of the application and the 14-day public comment period were provided to federal agencies, riparian landowners, the Town of Freeport and its Harbormaster, and others on DMR's mailing list. The evidentiary record before the Department regarding this lease amendment application includes two exhibits (see exhibit list below).

**LIST OF EXHIBITS<sup>1</sup>**

1. Application for a change of gear authorization
2. Original lease decision signed June 25, 2014

**2. STATUTORY CRITERIA & FINDINGS OF FACT**

Approval of standard aquaculture lease amendments is governed by 12 M.R.S.A. § 6072 (13)(G) and Chapter 2.44 of DMR regulations. The statute and regulations provide that the Commissioner may grant amendments for the use of specific gear on an existing lease site provided the proposed changes are consistent with the findings of the original decision and lease conditions.

**A. Original Lease Decision**

On June 25, 2014 DMR granted lease MAQ BRW to Christian Horne and Edward Bradley (Exhibit 2, page 14). DMR's Findings of Fact, Conclusions of Law, and Decision, henceforth referred to as "the decision", found that the evidence in the record supported the conclusion that the aquaculture activities proposed by the applicants met the requirements for granting a standard aquaculture lease as set forth in 12 M.R.S.A. § 6072 (Exhibit 2, page 14).

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<sup>1</sup> Exhibits 1 and 2 are cited below as: Application – "App", DMR Decision on Lease DAM BN - "Exhibit 2".

The decision combined an existing lease held by the applicants with a new lease to create MAQ BRW. Lease MAQ BRW provided authorization for two tracts. Tract 1 is authorized for cultivation of American oysters, European oysters, quahogs, scallops, mussels, surf/hen clams, and soft-shell clams using suspended and bottom culture techniques, while tract 2 is authorized for the cultivation of American oysters and European oysters using suspended culture techniques (Exhibit 1, page 12). The lease is operated as a floating nursery site for juvenile oysters in plastic mesh ADPI bags installed in parallel rows running north-south. When the oysters are large enough, they are grown out to market size at other aquaculture sites held by the applicants. Oysters are not overwintered on site (Exhibit 1, page 3).

Conditions imposed on lease MAQ BRW, pursuant to 12 M.R.S.A § 6072 (7-B) and located on page 14 of the decision, are as follows:

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](mailto:LeeAnn.Neal@usace.army.mil), NOAA Fisheries Habitat Conservation Division at [mike.r.johnson@noaa.gov](mailto:mike.r.johnson@noaa.gov), and the Maine Department of Marine Resources at [jon.lewis@maine.gov](mailto:jon.lewis@maine.gov).

## **B. Proposed Gear Changes and Findings**

Christian Horne and Edward Bradley are requesting authorization to add Flow N Grow cages to their site. The leaseholders will continue to operate with the ADPI bags currently authorized for their lease site but will slowly phase in the cages with the goal of replacing all ADPI bags with cages (App 3). The applicant is currently authorized to have up to 2700 ADPI bags and is requesting authorization to add 300 cages. No overwintering will occur, and the proposed gear change would not change the layout of their lease or alter other production activities. Therefore, the proposed gear changes will not materially alter the findings of the original decision for standard lease MAQ BRW.

All conditions currently imposed on the lease will remain in place. However, condition 4 will be updated to reflect changes in staff and contact information, and an updated lease will be issued. Condition 4 will be changed to:

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 Program. A DMR scientist will conduct a dive on the site and make a report. All reports are to be kept on file with the DMR Aquaculture program and sent to: the U.S. Army Corps of Engineers at [LeeAnn.Neal@usace.army.mil](mailto:LeeAnn.Neal@usace.army.mil), NOAA Fisheries Habitat Conservation Division at [mike.r.johnson@noaa.gov](mailto:mike.r.johnson@noaa.gov).

**3. DECISION**

Based on the foregoing, the Commissioner grants the request from Christian Horne and Edward Bradley to add 300 Flow N Grow cages to their lease.

Dated: \_\_\_\_\_

2/24/2020



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

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

**Christian Horne**  
**and Edward Bradley**  
**Lease MAQ BRW**  
Docket #2013-02  
  
June 25, 2014

## **FINDINGS OF FACT, CONCLUSIONS OF LAW, AND DECISION**

Christian Horne and Edward Bradley applied to the Department of Marine Resources (“DMR”) for a standard aquaculture lease on 11.82 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 17, 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.<sup>1</sup>

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

## **LIST OF EXHIBITS<sup>2</sup>**

1. Case file, # 2013-01
2. Application signed and dated 7/21/12, revised 6/10/13
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.

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

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

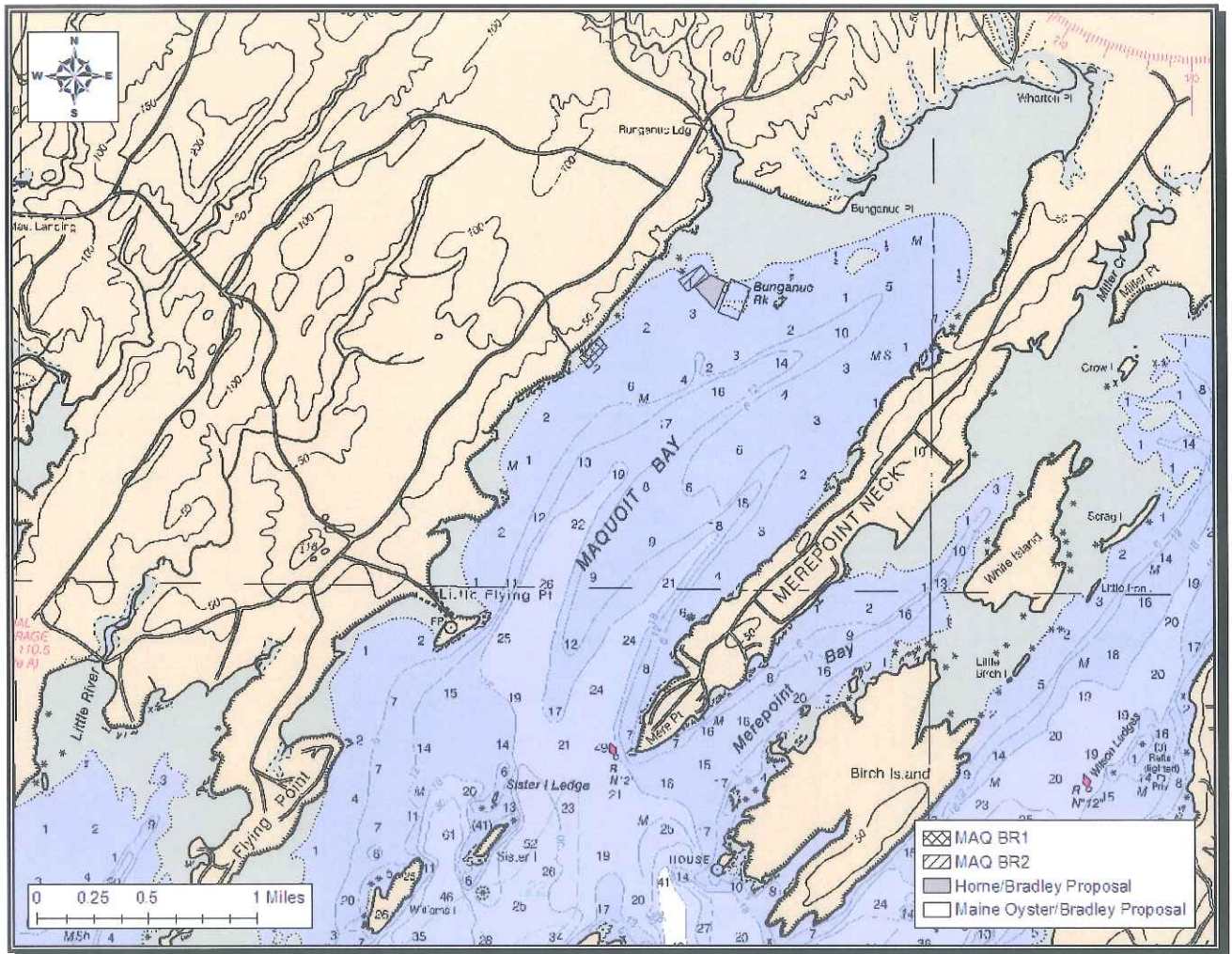


Figure 1\*

### 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 11.82-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)<sup>3</sup>. 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 (SR 2 ). The proposed lease site is located approximately west of the lease site proposed in the Maine Oyster 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 1,200 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 1,300 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

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<sup>3</sup> The Christian Horne application is for 6.82 new acres, to be combined with the existing lease of 5 acres.

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 (*Merrenaria 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.<sup>4</sup>

**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

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<sup>4</sup>**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.

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.<sup>5</sup>

#### **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.<sup>6</sup> 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

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#### <sup>5</sup>**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.

<sup>6</sup> 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.<sup>7</sup> 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;

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<sup>7</sup> 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](mailto: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](mailto:LeeAnn.Neal@usace.army.mil), and to Jon Lewis of the Maine Department of Marine Resources at [jon.lewis@maine.gov](mailto: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 #2013-01 (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).

#### **K. Combining Lease MAQ BR2 with new acreage**

The existing 5-acre lease, MAQ BR2, was issued initially in 1985; it is authorized for bottom and suspended culture of American oysters, quahogs, scallops, mussels, surf/hen clams, and soft-shell clams. Christian Horne testified at the hearing that he and Edward Bradley seek authorization to culture European oysters on the entire lease site, including both the proposed new acreage and the existing MAQ BR2 lease footprint. He indicated that they wish to retain the existing authorization for suspended and bottom culture of the species listed for the area of MAQ BR2 but are not seeking to add these species or authorization for bottom culture to the new 6.82-acre portion of the combined lease at this time (Christian Horne/Robinson).

Therefore, the lease will consist of two contiguous tracts: the footprint of lease MAQ BR2 will become Tract 1, with its existing species and culture authorization, plus the addition of European oysters as a species for culture; and the new 6.82-acre site will become Tract 2, authorized for suspended culture of American and European oysters. The lease on MAQ BR2 will be terminated upon the execution of the new lease for the combined site.

The sole condition on the existing lease for MAQ BR2 is the usual provision that the site must be marked in accordance with the requirements of the U.S. Coast Guard and the Maine Department of Marine Resources. That lease condition will apply to the new combined lease, as well.

#### **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](mailto:LeeAnn.Neal@usace.army.mil), NOAA Fisheries Habitat Conservation Division at [mike.r.johnson@noaa.gov](mailto:mike.r.johnson@noaa.gov), and the Maine Department of Marine Resources at [jon.lewis@maine.gov](mailto: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).

10. The new lease will authorize the suspended culture of American and European oysters on the entire lease site, but the portion of the site previously leased under lease MAQ BR2 and to continue as Tract 1 of the new lease will continue to be authorized for suspended and bottom culture of American oysters (*Crassostrea virginica*), quahogs (*Mercenaria mercenaria*),



scallops (*Placopecten magellanicus*), mussels (*Mytilus edulis*), surf/hen clams (*Spisula solidissima*), and soft-shell clams (*Mya arenaria*).

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 11.82 acres to Christian Horne and Edward Bradley for ten years for the purpose of cultivating American oysters (*Crassostrea virginica*) and European oysters (*Ostrea edulis*) using suspended culture techniques. The portion of the lease site previously leased under lease MAQ BR2 will continue to be authorized for suspended and bottom culture of American oysters (*Crassostrea virginica*), quahogs (*Mercenaria mercenaria*), scallops (*Placopecten magellanicus*), mussels (*Mytilus edulis*), surf/hen clams (*Spisula solidissima*), and soft-shell clams (*Mya arenaria*).

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)<sup>8</sup> 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. 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.

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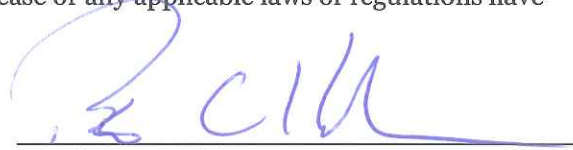
<sup>8</sup> 12 MRSA §6072 (7-B) states: "The commissioner may establish conditions that govern the use of the leased area and limitations on the aquaculture activities. These conditions must encourage the greatest multiple, compatible uses of the leased area, but must also address the ability of the 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."

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](mailto:LeeAnn.Neal@usace.army.mil), NOAA Fisheries Habitat Conservation Division at [mike.r.johnson@noaa.gov](mailto:mike.r.johnson@noaa.gov) , and the Maine Department of Marine Resources at [jon.lewis@maine.gov](mailto:jon.lewis@maine.gov).

**7. REVOCAION 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: 6/25/14

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