

**STATE OF MAINE**  
**DEPARTMENT OF MARINE RESOURCES**  
Experimental Aquaculture Lease Application  
Suspended and bottom culture of multiple species,  
Lowe's Cove, Damariscotta River, South Bristol

**Darling Marine Center,**  
**University of Maine**  
**DAM LW2**  
Docket # 2013-05-E  
August 14, 2013

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

The Darling Marine Center ("DMC" or "Darling Center") of the University of Maine applied to the Department of Marine Resources ("DMR") for a three-year experimental aquaculture lease on three tracts totaling 1.79<sup>1</sup> acres located in the coastal waters of the State of Maine, in Lowe's Cove, Damariscotta River, in Walpole in the Town of South Bristol, Lincoln County, for the purpose of cultivating the following species, using suspended and bottom culture techniques:

- American oysters (*Crassostrea virginica*)
- European oysters (*Ostrea edulis*)
- Sea scallops (*Placopecten magellanicus*)
- Blue mussels (*Mytilus edulis*)
- Soft-shelled clams (*Mya arenaria*)
- Hard clams (*Mercenaria mercenaria*)
- Razor clams (*Ensis directus*)
- Surf clams (*Spisula solidissima*)
- Arctic surf clams (*Mactromeris polynyma*)
- Sugar kelp (*Saccharina latissima*)
- Horsetail kelp (*Laminaria digitata*)
- Dulse (*Palmaria palmata*)
- Winged kelp (*Alaria esculenta*)

DMR accepted the application as complete on January 25, 2013. No public hearing was held on this application.

### **1. THE PROCEEDINGS**

Notice of the application, the DMR site report, and the 30-day public comment period were sent to state and federal agencies which were requested to review the project, as well as to riparian landowners, the Town of South Bristol and its Harbormaster, members of the Legislature, representatives of the press, aquaculture and environmental organizations, and

---

<sup>1</sup> The application states the acreage as 1.75, but the site report gives the surveyed acreage as 1.79 (SR 2).

others on the Department's mailing list. Notice of the application and comment period was published in the *Lincoln County News* on February 28, 2013. No comments were received by the Department.

The evidentiary record before the Department regarding this lease application includes the application and the Department's site report dated May 3, 2013. The evidence from all of these sources is summarized below.<sup>2</sup>

## **2. DESCRIPTION OF THE PROJECT**

This proposed lease is for the purpose of scientific research and education (App 5). According to the applicant, it will

...support the research and education missions of the DMC, the University of Maine, and the scientists and students associated with them....we envision the lease to be used for investigations on the aquaculture of various organisms (such as oysters, scallops, razor clams, macroalgae). These may take different forms, such as density experiments, field-testing of selected families of shellfish, or trials of different growout equipment. (App 4)

The Darling Center hosts students at all levels, from kindergarten to graduate school; activities include field research using the lease sites, field trips to the lease sites, and other educational opportunities. The Darling Center and the University of Maine have a staff of scientists who conduct ongoing research on marine subjects, including aquaculture. The application notes that "The University of Maine and the Darling Center have more than 30 years of experience in aquaculture research and education, and the proposed lease will advance those efforts" (App 4).

Consequently, the identities of the researchers, the names and numbers of species, the culture techniques, and the types of gear used on the lease at any one time will vary over the term of the lease. The application states that "projects may change from year to year, but all will have their basis in research and education, not commercial production" (App 4). The projects will be conducted under the overall direction and control of the Darling Marine Center, as part of the University of Maine.

Experimental leases issues for scientific research can be renewed for subsequent 3-year terms.<sup>3</sup>

### **Proposed Operations**

As stated above, the proposed lease site will be used for scientific and educational research using various species, gear, and techniques over time. The application notes that current projects that will use the lease site include "broodstock development of Eastern oyster, sea scallop

---

<sup>2</sup> The application and site report are cited as "App" and "SR" with page numbers.

<sup>3</sup> 12 MRS §6072-A (18)

cage culture (demonstration), overwintering of oysters as part of the Oyster Garden program, and research on scallop fertilization” (App 4).

Pages 4 and 5 of the application contain descriptions of the species, amounts, sources, and culture and harvesting techniques to be used. Pages 7, 8, and 9 describe the gear to be used, with reference to illustrations in various appendices. This information is summarized below, but reference is made to the application for a more complete description of these items. The application notes that the gear items listed are examples of equipment currently used and that gear may change as innovations occur.

**American oysters (*Crassostrea virginica*) and European oysters (*Ostrea edulis*):** Seed will be bred at the Darling Center hatchery or obtained from commercial hatcheries in Maine or out-of-state (with all necessary permits and quarantine procedures); up to 50,000 oysters, usually fewer, will be kept on the lease at any one time. Oysters will be cultured in various types of containers, floating or fixed on the bottom, and possibly in other gear suspended from long lines or a raft. Gear includes floating bags, lantern/pearl nets, and bottom cages. See the application at pages 4, 5, 19, 21-24, 26, 28, and 33. Shellfish will be harvested by removing them from the culture gear.

**Sea scallops (*Placopecten magellanicus*):** Seed will be obtained as wild spat and adults collected under DMR special licenses and possibly from hatchery production at the Darling Center. Several thousand adults and/or juveniles may be on the lease at any one time. The gear used will be mainly the same gear as used for oysters, as well as scallop ear hangers. Harvesting will be done by removing the shellfish from the culture gear. See the application at pages 4, 5, 19, 21-24, 26, 28, and 33.

**Blue mussels (*Mytilus edulis*):** Stock will be collected locally or produced in the Darling Center hatchery; 500-1,000 lbs. of mussels may be on the lease. Spat will be seeded on dropper lines to be suspended under a raft or on a longline system on Tract 1. Harvest will be conducted by hand. See the application at pp. 4, 5, 25, and 33.

**Soft-shelled clams (*Mya arenaria*), Hard clams (*Mercenaria mercenaria*), Razor clams (*Ensis directus*), Surf clams (*Spisula solidissima*), and Arctic/Stimpson’s surf clams (*Mactromeris polynyma*):** Some clams will be produced in the Darling Center hatchery, and some will be collected in the wild under DMR licenses. Culture involves keeping clams in sediment, including on the bottom under nets (12-ft.-square netted plots), in bottomless boxes or cages set on the bottom, or in boxes or cages filled with sediment and set on the bottom. Harvest will be done by digging the shellfish out from the sediment on the bottom or removing them from containers; razor clams are harvested by sprinkling salt on their burrows, causing them to emerge. See the application at pp. 4, 5, 13, and 29.

**Sugar kelp (*Saccharina latissima*), Horsetail kelp (*Laminaria digitata*), Dulse (*Palmaria palmata*) and Winged kelp (*Alaria esculenta*):** Seed will be produced at the Darling Center hatchery or obtained from hatcheries at the University of Maine’s Center for

Cooperative Aquaculture Research in Franklin, Maine or at the hatchery of Ocean Approved, LLC, in Portland. These marine algae will be grown on up to three 100-ft. longlines suspended 7 ft. below the surface on Tract 1 of the lease. Seaweed is harvested by cutting the seaweed from the longlines. See the application at pp. 5, 7, and 20.

**Location of projects and species:** The site report describes the gear to be used on the three tracts as follows:

Structures would consist of a 225 ft<sup>2</sup> wooden raft and up to four 160 foot longlines supporting submerged shellfish containment and/or for the culture of algal species on Tract 1. Tracts 2 and 3 are proposed for the use of oyster tables, clam cages and netted plots deployed on or within the sediments (see Application). At lower tidal stages gear would be exposed throughout both Tracts 2 and 3. (SR 2)

The projects to be carried out will utilize the three lease tracts as follows (App 5):

- Tract 1 – all species, at one time or another
- Tract 2 – primarily razor clams, surf clams, hard clams, and Eastern oysters
- Tract 3 – primarily soft-shell clams, hard clams, surf clams, and Stimpson's/Arctic surf clams

According to the application, “These lists may change at one time or another, but this is the general approach we envision. Each tract has different attributes, and these attributes are variously appropriate to the different species” (App 5).

### **Site Characteristics**

The site report describes the proposed lease site as follows:

The proposed lease occupies shallow subtidal and intertidal waters in Lowes Cove in the Damariscotta River. The University of Maine (The University) has applied for three discrete tracts. Tract 1 sits in subtidal water along the eastern shore of Lowes Cove, adjacent to McGuire Point, and is comprised of The University's prior experimental lease (DAM LW) plus an area of expansion extending 250 feet to the northeast (Figure 2). Upland characteristics consist of mixed hardwood/softwood forest. Tracts 2 and 3 occupy intertidal waters and are bounded to the north and west, respectively, by The University's Darling Marine Center property (Figures 2 and 3). (SR 2)

Tract 1 is further described in the application as having water depth of approximately 25 ft. at mean high water with a soft mud bottom and currents of 0.5 – 1 knot. Tide range in Lowe's Cove is approximately 9 feet (App 5). Tract 1 lies 210 ft. northeast of the main channel of the river at mean low water; the nearest shore is approximately 127 ft. southeast of the east corner of the tract at mean low water (SR 4). The Darling Center held a standard aquaculture lease (DAM LW) on the site of most of Tract 1 for ten years, until 2012.

Tract 2 consists of subtidal and intertidal areas along the shore south of the Darling Center wharf. The bottom is rocky closer to shore, grading to mud over gravel and then to sand farther seaward. The current is approximately 0.5 knot, parallel to shore (App 5). Tract 2 lies approximately 212 ft. east of the channel at mean low water and 133 ft. southeast of the Darling Center wharf (SR 4).

Tract 3 lies farther inside Lowe's Cove off the northwest shore. Its bottom is rocky near shore and mud farther from shore. Approximately 80% of the bottom is exposed at mean low water; the current is less than 0.5 knot (App 5). Tract lies approximately 185 ft. northwest of the eastern shore of Lowe's Cove (SR 4).

The proposed lease is in an area currently classified by the Department of Marine Resources Water Quality Classification program as "open/approved for the harvest of shellfish" (SR 7).

### **3. STATUTORY CRITERIA & FINDINGS OF FACT**

Approval of experimental aquaculture leases is governed by 12 M.R.S.A. §6072-A. This statute provides that a lease may be granted by the Commissioner of DMR upon determining that the project will not unreasonably interfere with the ingress and egress of riparian owners; with navigation; with fishing or other uses of the area, taking into consideration the number and density of aquaculture leases in an area; with the ability of the lease site and surrounding areas to support existing ecologically significant flora and fauna; or with the public use or enjoyment within 1,000 feet of beaches, parks, or docking facilities owned by municipal, state, or federal governments. The Commissioner must also determine that the applicant has demonstrated that there is an available source of organisms to be cultured for the lease site.

#### **A. Riparian Access**

All three lease tracts lie off shoreline owned by the University of Maine. There is one other riparian landowner within 1,000 feet of the proposed lease site (App 3, SR 4). According to the site report:

Tract 1 of the proposed lease site is located at the outer, eastern extent of Lowes Cove, adjacent to properties held by The University of Maine and The Rounds Revocable Trust. It sits approximately 80-150 feet from shore at mean low water. At the time of the Department's site assessment no docks associated with riparian property and with which the proposed tract might interfere were observed.

The surrounding uplands of Tracts 2 and 3 are also owned by the applicant. The Darling Marine Center has a pier located approximately 130 feet to the west of Tract 2 (Figure 3). The University also has a mooring field centrally located between Tracts 1 and 2. Tract 2 is tucked inside a small cove formed by the applicant's pier to the west and ledge outcroppings to the east. No interference with vessel transit between the mooring field and pier system is anticipated.

Tract 3 is located in primarily intertidal waters along the northwestern shore of Lowes Cove. It is beyond navigable waters at lower tidal stages. A small cabin was noted along the southeastern shore and more than 200 feet from the proposed aquaculture site. (SR 4)

No riparian land will be used for access to the proposed lease site (App 3). There are no docks in Lowe's Cove. There is ample space between the lease tracts and the shore to allow for access to and from the shore. The lease activities will be conducted solely in the water and will not hamper access to and from the uplands.

**Therefore, I find** that the aquaculture activities proposed for this site will not unreasonably interfere with the ingress and egress of any riparian owner.

### **B. Navigation**

The site report describes navigation in the vicinity of the proposed lease site as follows:

Tract 1 is located adjacent to the eastern shore of Lowes Cove. Vessels moving through the main channel of the Damariscotta River would in no way be impeded by the location of Tract 1 and vessels entering Lowes Cove would have approximately 600 feet of navigable water to the north and west.

Tracts 2 is located adjacent to the shoreline and tucked into a small cove/ intertidal area with the pier to the west and a rocky point to the east.

Tract 3 is located inside Lowes Cove adjacent to the western shoreline. The area is intertidal and approximately 160 feet of navigable water would be available to the east at higher water stages. (SR 4).

The application notes that recreational boating in the area is sporadic. The previous lease on the site of Tract 1 (DAM LW) was in effect for ten years without conflicts or problems with other uses of the area, according to the applicant. All tracts are well outside the main navigational channel of the river and will not interfere with navigation there or with the use of Lowe's Cove by the Darling Center vessels and others (App 5).

It appears from this evidence that navigation in the area will not be unduly affected by the presence of the proposed lease tracts and associated activities.

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

### **C. Fishing & Other Uses**

The application notes that very limited commercial and recreational fishing occurs in Lowe's Cove. Clamming takes place in the inner part of the cove, with access gained mainly over an upland path leading from the highway. Some periwinkle harvesting occurs along the rocky

shore east of the Darling Center wharf. Sporadic recreational fishing occurs but is limited by the Darling Center mooring field adjacent to the proposed lease tracts (App 5).

The site report notes that

On March 22, 2013 no fishing within the area of the proposed lease site was observed. The Department recognizes that commercial and recreational fishing is seasonally dependent. With the exception of the area surrounding Tract 1, fishing for lobster and crab and drag harvesting of shellfish is unlikely to occur in such shallow waters where navigation is severely limited. Recreational hook and line fishing for striped bass (*Morone saxatilis*) and, to a lesser extent, mackerel (*Scomber scombrus*) is also expected to occur in the area.

A SCUBA dive was made through Tract 2 and bottom characteristics were ledge closer to the shoreline and a sand/gravel mixture at the base of those ledges. No commercially important species in Tract 2 during that dive.

Tract 3 of the proposed lease is partially situated over intertidal mud flats along the northwestern shore of Lowes Cove. Clam and worm harvesting in the area is likely; access to the flats, however, would be expected to occur via land or by running a boat onto the flats. Some displacement of harvest activities would occur should this lease be granted. The Board of Selectmen for the Town of South Bristol, in a letter dated December 6, 2012 and included with the application, consented to the issuance of the proposed lease within the municipally managed intertidal area (SR 5).

It appears from this evidence that the proposed lease site is unlikely to affect fishing in the area.

**Exclusivity.** The applicant requests that no mobile fishing gear be permitted on the lease tracts and that fixed-gear fishing be allowed, provided it does not interfere with aquaculture gear on the lease tracts. Navigation by foot or by vessel will be allowed on the lease tracts (App 6). 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.

**Other aquaculture leases.** The nearest aquaculture sites to the proposed lease are a 12-acre lease for shellfish and marine algae located 1,475 ft. to the southeast (DAM CC2) and an LPA license site for oysters located 3,045 ft. to the southwest (DAL-1-10) (SR 5). According to the site report,

Activities within intertidal Tracts 2 and 3 will result in some sediment resuspension. This is expected to be no more significant than what occurs during wild harvest of clams and worms in the area. The cleaning and scrubbing of gear on site will result in the deposition of some organic debris. Owing to distance and the small scale and academic nature of the project, the proposed activities are expected to have negligible ecological effect, if any at all, on nearby aquaculture sites. (SR 5)

Based on this evidence, it appears that the proposed lease will not unreasonably interfere with fishing or other uses of the area.

**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. The lease must be marked in accordance with DMR Rule 2.80. <sup>4</sup> Mobile fishing gear will not be permitted on the lease. Fixed-gear fishing will be permitted on the lease, provided it does not interfere with aquaculture gear. Navigation by foot or vessel will be allowed on the lease.

#### **D. Flora & Fauna**

The Darling Center has conducted similar research at its previous lease site in the same area for more than ten years, with no apparent effect on the environment in Lowe's Cove. The application notes that the activities proposed for the new, larger lease are not significantly different from the previous lease activity or the other activities that occur in the cove. Any sedimentation arising from activity on the lease tracts will be less than the natural turbidity experienced in the area. Gear will be cleaned by hand with hose and brush; the modest amount of fouling material released will be absorbed by the environment and will not build up. The structures on the lease tracts will provide habitat for juvenile species and refuge for larger organisms. No wildlife or waterfowl will be disturbed; osprey, eagles, and waterfowl are regularly seen in the area (App 6).

According to the site report:

Tract 1 was not investigated by SCUBA during this site visit. In 2001 the proposed lease area and surrounding area was documented with SCUBA and underwater video. Flora and fauna observed during that dive was as follows:

---

#### <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.

Abundant: Brown Benthic Diatoms, Green Algae, Blue Mussels (*Mytilus edulis*) – east of lease site approaching intertidal, Rockweed (*Laminaria* sp.) – east of lease site approaching and in the intertidal, Sand Shrimp (*Crangon septemspinosa*).

Common: Kelp (*Laminaria* sp.), Rock Crab (*Cancer irroratus*), 1-2" burrows - possibly Wry Mouth Eels (*Cryptacanthodes maculatus*).

Occasional: Atlantic Horseshoe Crab (*Limulus polyphemus*), Bryozoans on kelp to the east of the proposed lease site, Burrowing Anemone (*Cerianthus* sp.), European Oyster (*Ostrea edulis*) towards center of lease site and likely planted by the applicant, Frilled Anemone (*Metridium senile*), Green Crab (*Carcinus maenus*), unidentified species of Hermit Crab, Lobster Burrow. (SR 6)

The application notes additional species that occur on Tract 1, including Jonah crabs, rock crabs, green crabs, periwinkles, lobsters, cunner, sea stars, and occasional lumpfish. No eelgrass is present on the site (App 5).

The site report describes Tract 2 as having a "shallow sandy bottom with ledges nearshore" (SR 6). The primary species observed during the DMR biologists' SCUBA dive on March 22, 2013, were periwinkles or mud snails; "rockweed and green crabs were seen rarely" (SR 6). The application observes that hermit crabs, sea lettuce, razor crabs, and softshell clams are also present on this tract (App 5).

Tract 3 is described in the site report as having "rocky boulder substrate to the west transitioning to soft mud bottom to the east" (SR 6). The application notes rockweed and sea lettuce on this tract, but no eel grass (App 5).

DMR sent a copy of this lease application to the Maine Department of Inland Fisheries and Wildlife (MDIF&W) for their review and comment. The site report notes that according to MDIF&W, there are no Essential Habitats or Significant Wildlife Habitats associated with the proposed lease site locations (SR 7).

Because of the presence of the disease MSX, American oysters within the Damariscotta and Johns Rivers north of a line between Ocean Point, Boothbay, and Pemaquid Point, Bristol, including American oysters cultured on this lease, cannot be moved to any other coastal waters in the State of Maine unless a transfer permit is obtained from the Department under Chapter 24 of its rules. Because of the number of people likely to use the lease, many of whom may be unfamiliar with the Department's rules, a condition will be placed on the lease requiring the Darling Center to ensure that anyone who works with American oysters on the lease site is informed of this restriction.

Based on this evidence, it appears that the activities proposed for this lease site will not interfere with the ecological functioning of the area.

**Therefore, I find** that the aquaculture activities proposed for this site will not unreasonably interfere with the ability of the lease site and surrounding areas to support existing ecologically significant flora and fauna.

### **E. Public Use & Enjoyment**

According to the site report,

With the exception of the Darling Marine Center wharf, there are no public docking facilities or beaches within 1,000 feet of the proposed lease. (SR 7)

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

### **F. Source of Organisms**

According to the application, seed stock for this proposed lease site will be obtained from

- Darling Marine Center hatchery in Walpole (Town of South Bristol), Maine
- Mook Sea Farm in Walpole (Town of South Bristol), Maine
- Muscongus Bay Aquaculture in Bremen, Maine
- Downeast Institute in Beals, Maine
- Center for Cooperative Aquaculture Research in Franklin, Maine
- Ocean Approved, LLC, in Portland

In addition to hatchery sources, the application states that “Some seed stock will come from wild collections, such as scallop seed. These will be arranged under all applicable state laws and DMR regulation, sometimes under special license” (App 1, 4). Special licenses are issued by DMR pursuant to 12 MRS §6074.

The application also states that “The Oyster Broodstock Program regularly brings in oysters from outside of the state, but when this occurs, it is under all appropriate permits from the state, and all shellstock is kept under strict quarantine at the DMC” (App 4).

**Therefore, I find** that the applicant has demonstrated that there are available sources of the various species to be cultured on the lease site.

## **4. CONCLUSIONS OF LAW**

Based on the above findings, I conclude that:

1. The aquaculture activities proposed for this site will not unreasonably interfere with the ingress and egress of any riparian owner.
2. The aquaculture activities proposed for this site will not unreasonably interfere with navigation. The lease site must be marked in accordance with U. S. Coast Guard requirements.
3. The aquaculture activities proposed for this site will not unreasonably interfere with fishing or other uses of the area, taking into consideration the number and density of aquaculture

leases in the area. The lease must be marked in accordance with DMR Rule 2.80.<sup>5</sup> Dragging and mobile fishing gear will not be permitted on the lease. Lobstering and other fixed-gear fishing will be permitted on the lease, provided they do not interfere with aquaculture gear. Navigation by foot or vessel will be allowed on the lease.

4. The aquaculture activities proposed for this site will not unreasonably interfere with the ability of the lease site and surrounding areas to support existing ecologically significant flora and fauna.

5. The aquaculture activities proposed for this site will not unreasonably interfere with the public use or enjoyment within 1,000 feet of beaches, parks, or docking facilities owned by municipal, state, or federal governments.

6. The applicant has demonstrated that there are available sources of the various species to be cultured for the lease site.

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

## **5. DECISION**

Based on the foregoing, the Commissioner grants the requested experimental lease of 1.79 acres to the Darling Marine Center, University of Maine, for three years, the term of the lease to begin within twelve months of the date of this decision, on a date chosen by the applicant<sup>6</sup>; however, no aquaculture rights shall accrue in the lease area until the lease is fully executed. This

---

### <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> DMR Rule 2.64 (14) provides:

"The term of the lease shall begin within 12 months of the Commissioner's decision, on a date chosen by the applicant. No aquaculture rights shall accrue in the lease area until the lease term begins and the lease is signed."

lease is granted for scientific experimental purposes and is renewable at no charge every three years, pursuant to 12 MRS § 6072-A (18).

This lease is granted to the applicant for the purpose of cultivating: American oysters (*Crassostrea virginica*), European oysters (*Ostrea edulis*), Sea scallops (*Placopecten magellanicus*), Blue mussels (*Mytilus edulis*), Soft-shelled clams (*Mya arenaria*), Hard clams (*Mercenaria mercenaria*), Razor clams (*Ensis directus*), Surf clams (*Spisula solidissima*), Arctic surf clams (*Mactromeris polynyma*), Sugar kelp (*Saccharina latissima*), Horsetail kelp (*Laminaria digitata*), Dulse (*Palmaria palmata*), and Winged kelp (*Alaria esculenta*), using bottom and suspended culture techniques.

The applicant shall pay the State of Maine rent in the amount of \$100.00 per acre per year. Since this is an experimental lease with more than 400 sq. ft. of structures and no discharge, a bond or escrow account is required. The applicant shall post a bond or establish an escrow account pursuant to DMR Rule 2.64 (10) (D) in the amount of \$5,000.00, conditioned upon its performance of the obligations contained in the aquaculture lease documents and all applicable statutes and regulations.

## **6. CONDITIONS TO BE IMPOSED ON LEASE**

The Commissioner may establish conditions that govern the use of the lease area and impose limitations on aquaculture activities, pursuant to 12 MRSA §6072-A (15)<sup>7</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.<sup>8</sup>
2. Dragging and use of mobile fishing gear are not permitted on the lease. Lobstering and other fixed-gear fishing are permitted on the lease, provided they do not interfere with aquaculture gear. Navigation by vessel and travel by foot are allowed on the lease.

---

<sup>7</sup> 12 MRSA §6072-A (15) provides that:

“The commissioner may establish conditions that govern the use of the leased area and limitations on the aquaculture activities. These conditions must encourage the greatest multiple, compatible uses of the leased area, but must also address the ability of the lease site and surrounding area to support ecologically significant flora and fauna and preserve the exclusive rights of the lessee to the extent necessary to carry out the lease purpose. The commissioner may grant the lease on a conditional basis until the lessee has acquired all the necessary federal, state and local permits.”

### <sup>8</sup> **2.80 Marking Procedures for Aquaculture Leases**

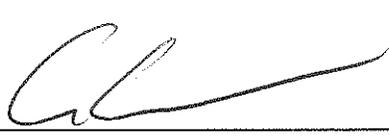
1. When required by the Commissioner in the lease, aquaculture leases shall be marked with a floating device, such as a buoy, which displays the lease identifier assigned by the Department and the words SEA FARM in letters of at least 2 inches in height in colors contrasting to the background color of the device. The marked floating device shall be readily distinguishable from interior buoys and aquaculture gear.

3. The lessee must inform anyone using the lease site of the restriction on the movement of American oysters from the Damariscotta River pursuant to DMR Rules Chapter 24.

**7. REVOCATION OF LEASE**

The Commissioner may commence revocation procedures upon determining pursuant to 12 MRSA §6072-A (22) and DMR Rule Chapter 2.64 (13) that no substantial research has been conducted on the site within the preceding year, that research has been conducted in a manner injurious to the environment or to marine organisms, or that any conditions of the lease or any applicable laws or regulations have been violated.

**Dated:** 8/14/2013

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