

**STATE OF MAINE**  
**DEPARTMENT OF MARINE RESOURCES**  
Standard Aquaculture Lease Application  
Suspended culture of shellfish  
Home Harbor, Pleasant Island  
Muscle Ridge Shoals Township, Penobscot Bay

**The Maine Mariculture**  
**Company, LLC**  
Docket #2015-15  
July 14, 2017

**HEARING OFFICER'S REPORT**  
**FINDINGS OF FACT, CONCLUSIONS OF LAW, AND DECISION**

The Maine Mariculture Company, LLC ("MMC"), a Maine corporation, applied to the Department of Marine Resources ("DMR") for a standard aquaculture lease on 3.66 acres<sup>1</sup> located in the coastal waters of the State of Maine, north of Pleasant Island in Muscle Ridge Channel, in Muscle Ridge Shoals Township (Unorganized Territory) in Knox County, for the purpose of cultivating American or eastern oysters (*Crassostrea virginica*) and sea scallops (*Placopecten magellanicus*) using suspended culture techniques. DMR accepted the application as complete on December 3, 2015. Four parties subsequently intervened in this case. A public hearing on this application was held on November 14, 2016, in Thomaston, Maine.

**1. THE PROCEEDINGS**

Notices of the hearing and copies of the application and DMR site report were made available to numerous state and federal agencies for their review, as well as to various educational institutions, aquaculture and environmental organizations, members of the Legislature, representatives of the press, riparian landowners, and other private individuals who have requested to receive such notices. Because the proposed lease site is not located in a municipality, the Department also notified the nearby towns of South Thomaston, Owls Head, and Vinalhaven. Sergeant Matt Talbot of Maine Marine Patrol, Division 1, Section 3, in Rockland was notified in lieu of a local harbormaster and completed the Harbormaster Questionnaire. Notice of the hearing was published in the (Rockland) *Courier Gazette*, *Camden Herald*, and (Belfast) *Republican Journal* on October 13 and 27 and in the *Commercial Fisheries News* November 2016 edition.

Sworn testimony was given at the hearing by twelve people. Darrald Atwood and Brendan Atwood testified for the applicant, describing the proposed project. Jon Lewis, Director of the DMR Aquaculture Division, described the site visit and presented a videotape of the bottom. Maine Marine Patrol Officer Wesley Dean reviewed the Harbormaster Questionnaire and described his observations from his years patrolling the area around the proposed lease site.

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<sup>1</sup> The DMR site report calculates the proposed acreage as 3.657 acres; the application stated it as 3.62 acres.

Intervenor Gordon Connell testified in favor of the proposed lease. Intervenors Paul Johnson, John Oakes, and Katherine Oakes testified in opposition to the proposed lease. Mr. and Mrs. Oakes, who were represented by attorney Sally Mills, presented the expert testimony of Captain Edward Glaser regarding the use of Home Harbor as an anchorage for cruising boats. Ron Huber, Geoff Parker, and Merritt Carey testified as members of the public. A number of individuals and groups submitted written comments to the Department, as well.

Each witness was sworn and was subject to questioning by the Department, the applicant, the intervenors, and members of the public. The hearing was recorded by DMR. The hearing officer was Diantha Robinson.

The evidentiary record before the Department regarding this lease application includes exhibits introduced at the hearing (see exhibit list below), and the record of testimony at the hearing itself.<sup>2</sup> The evidence from all of these sources is summarized below.<sup>3</sup> Exhibit titles and explanatory notes accompanying the names of the parties' exhibits in the list below were provided by the party presenting the exhibit.<sup>4</sup>

In its Response to the Hearing Officer's Report and Proposed Findings of Fact, Conclusions of Law, and Decision, the applicant proposed that the Department approve a lease reduced in size from the original 3.66 acres to 1.2 acres within the same boundaries, subject to several conditions. This proposal is untimely, because the hearing is over and the record is closed. Neither the intervenors nor other interested members of the public have had an opportunity to question the applicant about the proposal to reduce the lease size or to provide evidence as to whether or not such a reduction resolves any of their concerns or objections to the proposed lease. The time for this is long past; the Department will make its decision based on the lease as originally proposed and upon the record created regarding that specific proposal. If the applicant wishes to pursue a lease for a site reduced in size, as it has proposed, it should begin the application process anew, so that the intervenors and the public are given a reasonable opportunity to be heard and the Department has record evidence specific to that proposal to consider in light of the applicable lease decision criteria.

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<sup>2</sup> All parties were given access to the recording of the public hearing and the opportunity to request printed transcripts, which no one requested. A portion of beginning of the hearing was inadvertently not recorded, consisting of the hearing officer's opening statement and a portion of Darrald Atwood's direct testimony that accompanied the PowerPoint slides in Exhibits 4-11. The hearing officer took extensive notes of this testimony, and the opening statement was read from a written version; both of these documents are included in the case file. All of the slides were admitted to the record without objection at the close of the hearing.

<sup>3</sup> In references to testimony, "Smith/Jones" means testimony of Smith, questioned by Jones.

<sup>4</sup> At the close of the hearing, Maine Mariculture offered all its exhibits (4-11), which it had previously pre-filed, for the record. All were admitted without objection except Exhibit 6, consisting of a list of scientific articles, which was held pending submission of abstracts of the articles by Brendan Atwood and review and agreement by Attorney Mills, all of which subsequently occurred. All of the exhibits offered by the Oakes (12-26) were also admitted without objection, subject to Attorney Mills' providing dates for all of the photographs contained in Exhibit 13, which she did. Mr. Oakes's written testimony, which he read into the record at the hearing, was provided after the hearing and accepted as Exhibit 19.

**LIST OF EXHIBITS**

1. DMR File, Docket #2015-15 (cited as "CF")
2. Application of The Maine Mariculture Company, LLC; completed December 3, 2015, amended October 14, 2016 (cited as "App")
3. DMR Site Report dated July 19, 2016 (cited as "SR")

**Applicant's Exhibits – The Maine Mariculture Company, LLC**

4. (MMC Exhibit 1): MMCo Lease Hearing Introduction (pdf document)
5. (MMC Exhibit 2): MMCo Lease Hearing Aquaculture Ecoservices Overview Report & CV for Dr. Rheault (pdf document)
6. (MMC Exhibit 3): MMCo Lease Hearing Supplemental Research Citations and References: Aquaculture Ecoservices & Lobster Mobility (pdf document; Due to copyrights and the large body of evidence, citations have been provided rather than full publications.) Abstracts of the articles have been included in this exhibit.
7. (MMC Exhibit 4): MMCo Lease Hearing Maximum Displacement of Commercial Fishing (pdf diagram)
8. (MMC Exhibit 5): Home Harbor Historical Photographs (pdf document)
9. (MMC Exhibit 6): MMCo Lease Hearing ACOE LPA Permits (pdf document)
10. (MMC Exhibit 7): Mooring Description (pdf document)
11. (MMC Exhibit 8): Letters of Support (pdf document)

**Intervenors' Exhibits – John & Katherine Oakes****Deeds and Permits**

12. (Oakes Exhibit 1): Deed to Katherine Oakes (tenant-in-common)
13. (Oakes Exhibit 2): Mooring permits - Oakes
  - (a) Application and Permit for Mooring by John Oakes dated May 9, 2014;
  - (b) Application and Permit for Mooring by Katherine Oakes dated April 15, 2016

[The Katherine Oakes Mooring was applied for September 15, 2015. It was received by USACOE October 2, 2015. On April 15, 2016 the Oakes called Peter Tischbein, USACOE, and asked him where the permit was. Mr. Tischbein stated the permit was never received by the Oakes because he sent it to the wrong address. But when sent to the correct address, the permit was dated 4-15-16.]

14. (Oakes Exhibit 3): Aerial photo of area depicting lease and mooring;
15. (Oakes Exhibit 4): Oakes Application for temporary seasonal dock (LURC requires an application; Karen Bolstridge, LURC acknowledged).
16. (Oakes Exhibit 5): Google Earth shot depicting lease area and sailboat.

### Experts and Consultants

17. (Oakes Exhibit 6): Report of Joseph DeAlteris PhD dated October 25, 2016;
18. (Oakes Exhibit 7): Resume of Captain Edward Glaser
19. (Oakes Exhibit 8): Written testimony of John Oakes
20. (Oakes Exhibit 9): Reserved (No exhibit offered)
21. (Oakes Exhibit 10): Reserved (No exhibit offered)

### Moorings

22. (Oakes Exhibit 11): Photos
  - (a) Photo from Site Report – Atwood float and 15 cages + mooring
  - (b) Photo float beside dock
23. (Oakes Exhibit 12): Photos
  - (a) Eelgrass observed
  - (b) More eelgrass observed
24. (Oakes Exhibit 13): Photos – Boats in Home Harbor:
  - 24 (a) September 2, 2012 - Three sailboats anchored in Home Harbor
  - 24 (b) September 2, 2012 – Four sailboats anchored in Home Harbor
  - 24 (c) July 12, 2015 - Two sailboats moored by work float in Home Harbor
  - 24 (d) August 1, 2015 – Home Harbor with work float in foreground, Oakes white boat in center and two lobster-style boats anchored in front of and behind it
  - 24 (e) August 29, 2014 - Sailboat moored in Home Harbor with large lobster boat approaching from east
25. (Oakes Exhibit 14): Section from 1868 US Coast Pilot “West Penobscot Bay” – Harbor of Refuge
26. (Oakes Exhibit 15): Excerpt from: Taft, Hank and Jan, and Rindlaub, Curtis, *A Cruising Guide to the Maine Coast*. Peaks Island, Maine; Diamond Pass Publishing, Inc., 2002; pages 195-196.

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

### **A. Site History**

Darrald Atwood, a member of The Maine Mariculture Company, LLC, currently operates two Limited-Purpose Aquaculture (LPA) license sites for the culture of blue mussels, American oysters, and sea scallops in the vicinity of the proposed lease site (ATW315 and ATW415). Two previous LPA licenses for sites in or near the same locations were issued to Mr. Atwood in 2013 and replaced by the present licenses in 2015. Brendan Atwood installed a 12 ft. x 24 ft. work float in the vicinity in 2015 to support the LPA operations. Brendan Atwood testified that the LPA licenses will not be renewed if the proposed lease is granted.

## **B. Site Characteristics**

On June 24, 2016, DMR biologists visited the proposed lease site and assessed it and the surrounding area in light of the criteria for granting an aquaculture lease, as described in the site report. The proposed lease site is located in Home Harbor at Pleasant Island, a small, sparsely-developed island located in the southern portion of the Muscle Ridge Islands in western Penobscot Bay.<sup>5</sup> The shoreline adjacent to the proposed lease site consists of rocky outcroppings, with a sand beach on the west side of the cove and a pebble beach south of the proposed lease site. Above the shoreline, the upland consists of evergreen woodland.<sup>6</sup>

The sea bottom within the proposed lease site is sandy with large rocks and dense deposits of mussel shells at the eastern corner.<sup>7</sup> Water depths within the proposed lease site range from 7 ft. to 23 ft. at mean low water and from 17 ft. to 33 ft. at mean high water.<sup>8</sup> The area around the site is currently classified by the Department's Water Quality Classification program as "open/approved for the harvest of shellfish."<sup>9</sup>

Geoff Parker testified that Hewett Island, which lies directly northeast of Pleasant Island, is incorrectly identified in a correction to the DMR site report as being owned by the Maine Department of Inland Fisheries and Wildlife. Mr. Parker said that the tiny island owned by MDIFW is listed in the State of Maine's registry of conserved lands as Hewett Island but is known locally as Hewett Island Rock. The much larger Hewett Island is privately owned by a corporation with ten shareholders, of which Mr. Parker said he is one.<sup>10</sup>

## **C. Proposed Operations**

MMC is a family enterprise operated by Darrald, Brendan, Genevieve, and Ryan Atwood, all of whom reside in either Connecticut or Vermont.<sup>11</sup> Darrald Atwood testified that in addition to a cottage on Pleasant Island, he has a house on the mainland in Spruce Head where he plans eventually to establish a permanent residence.<sup>12</sup>

MMC proposes to grow American or eastern oysters (*Crassostrea virginica*) and sea scallops (*Placopecten magellanicus*) on the proposed lease site. The site measures approximately 450 feet by 350 feet. As described in the application,<sup>13</sup> three parallel "headlines" would run lengthwise (northeast/southwest) across the site, moored to 1,000-pound granite mooring blocks and additionally secured with helix anchors as needed. Two of the headlines would lie just inside and parallel to the west and east boundaries of the site; the third headline would divide the site into two sections covering

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<sup>5</sup> App 4; SR Fig 1, p. 1; Fig. 2, p. 6

<sup>6</sup> SR 8

<sup>7</sup> SR 8

<sup>8</sup> SR 2

<sup>9</sup> SR 11

<sup>10</sup> Parker, testimony

<sup>11</sup> App 24

<sup>12</sup> D. Atwood/Mills

<sup>13</sup> App 5A-11A

approximately two-thirds (the western section) and one-third (the eastern section) of the site, respectively. Shorter “transverse” lines would run across each section, perpendicular to the headlines; the gear would be attached to the transverse lines.

At maximum development of the site, one set of 19 transverse lines 240 feet long would occupy the western section of the site and hold up to 40 floating OysterGro cages per line. A second set of 9 lines 110 ft. long would occupy the northern half of the eastern section and hold up to 15 OysterGro cages per line. A maximum of 900 OysterGro cages is thus proposed for the site. These cages, when in use for oyster culture, would float at the surface during the growing season and be dropped to the bottom for overwintering.<sup>14</sup>

The application was revised shortly before the hearing to provide that any of the lines used for oyster cages could be used instead to hold up to 185 vertical dropper ropes each, with each rope holding up to 70 ear-hung scallops. Any transverse line would hold either oyster cages or scallop dropper ropes, but not both on the same line. In the western section of the site, this would amount to a maximum of approximately 3,515 dropper ropes on the 19 transverse lines. The dropper ropes would be submerged below the water’s surface; the transverse line holding them would be marked by buoys.<sup>15</sup>

Up to 300 stacks of 3-ft. by 3-ft. plastic mesh “aquatrays” holding scallops would be submerged on the ocean bottom in the southern half of the eastern section of the site, tethered to 25 110-ft. transverse lines. Each line would hold up to twelve stacks of up to 24 trays in 10-ft.-high aluminum frames anchored to concrete blocks on the bottom. A maximum of 7,200 aquatrays could be deployed on the bottom in this manner year-round. At mean low water, the aquatrays stacks would be approximately five feet below the sea surface.<sup>16</sup>

On-site support structures would include a 12’ x 24’ work float with a davit, which would be used to lift and lower cages and trays for cleaning, sorting, and re-stocking. Darrald Atwood testified that the float would be moored within the lease boundaries and would not occupy a separate mooring outside the proposed lease site.<sup>17</sup> According to the application, the float would be stored offsite over the winter.<sup>18</sup> Mr. Atwood testified that the work float on the lease site would be the same size as the one now used with the LPAs. No fuel, oil, or gasoline will be stored on the site, and in the event that a small generator or motor is used, it will not be stored on site.<sup>19</sup>

According to the application, the site will be accessed via private vessel, departing from Spruce Head Island in South Thomaston. On-site operations are planned to occur roughly 10 days per month between May and October for about 8 hours per day. At maximum production, MMC would be engaged

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<sup>14</sup> App 16

<sup>15</sup> App 5-A, 7-A

<sup>16</sup> Ibid

<sup>17</sup> D. Atwood/Lewis

<sup>18</sup> App 12

<sup>19</sup> App 13

in production 5 days per week for a maximum of 10 hours during daylight (May through November). Cages will be flipped every 7-21 days on average for 24 hours to dry and slough off any fouling.<sup>20</sup>

At the start of operations, the applicant plans to grow 150,000 oysters and 15,000 scallops, the amount of shellfish currently being cultured on the two LPA sites. At maximum production, the applicant expects to grow 1.4 million oysters and 610,000 scallops annually. Oyster stocking density at maximum capacity will be 1200-1500 oysters per cage and 50 scallops per tray.<sup>21</sup>

#### **D. Oversight and Management**

During the DMR site visit, DMR biologists made the following observations regarding the Atwood LPA gear located near the proposed lease site:

On June 24, 2016, 15 OysterGro™ cages and one line of ear-hung scallops were observed adjacent to a work float near the proposed lease site (Images 1 and 2). Additionally, MDMR scientists observed one aquatray stack on the ocean floor that was tipped over at the time of visitation (Image 4). Spat collector bags were observed adjacent to the aquatray stack. These spat collector bags were bundled together and anchored to the ocean floor. Substantial deterioration of the outer mesh bags was observed.<sup>22</sup>

At the hearing, Jon Lewis reviewed the findings regarding the aquatrays and the spat collector bags. He testified that the chain on the mooring for the work float was seriously undersized and that some of the links were two-thirds worn through. On a thousand-pound mooring block, Mr. Lewis said, this was a concern.<sup>23</sup> Darrald Atwood testified that the mooring chain had since been replaced with 3/8-inch chain and that the rack holding the aquatrays was reconfigured to make it more stable.<sup>24</sup> Mr. Atwood asked Mr. Lewis if the chain had failed; Mr. Lewis stated that it had not failed at the time he saw it.<sup>25</sup>

Marsden Brewer, a lobster fisherman working with the Atwoods, testified that the scallop spat bags had previously been deployed elsewhere and were moved to the LPA site after the spat had been collected. He said that the bags were already torn from being snarled in lobster gear before they were moved. Mr. Lewis said that once the plastic is degraded it breaks up and floats away, adding to the plastic pollution in the ocean.<sup>26</sup>

Asked by Ms Mills if the LPA sites are adequately maintained, Brendan Atwood said that the Atwoods have been learning how to manage the gear, and Darrald Atwood noted that no gear had been lost. Darrald Atwood described their project as “cutting edge” and said they are developing best practices for their work. Brendan Atwood testified that they became aware of the gear problems on the LPAs and the work float mooring when Mr. Lewis notified them after the June 24 site visit.<sup>27</sup>

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<sup>20</sup> App 15

<sup>21</sup> App 16

<sup>22</sup> SR 2

<sup>23</sup> Lewis, testimony

<sup>24</sup> D. Atwood/Mills

<sup>25</sup> Lewis/D. Atwood

<sup>26</sup> Lewis/Brewer

<sup>27</sup> B. & D. Atwood/Mills

At the hearing, Mr. Lewis showed digital video of the site and gear taken during the site visit. He testified that when he viewed the overturned rack and fouled scallop trays, the inadequate and worn mooring chain, and the deteriorated spat bags on June 24, he questioned the Atwoods' oversight of the LPA project and particularly how they would manage the proposed lease site with a maximum of 300 stacks of 24 aquatrays, plus 900 oyster cages, up to 3,500 dropper ropes of scallops, and other associated gear.<sup>28</sup>

Asked by Mr. Lewis how the proposed lease site would be monitored in winter, given the out-of-state residence of MMC's owners, Brendan Atwood said it would be monitored weekly in winter and that local fishermen, including members of a co-op, could respond to the site if problems arose.<sup>29</sup> He said he had no concerns about the company's ability to monitor the site.<sup>30</sup>

Asked by Ms Mills who will tend the gear on the site if the lease is approved, Darrald Atwood said probably Gordon Connell and members of the Tenants Harbor Co-op. Mr. Atwood said they are currently developing "contingency plans."<sup>31</sup>

Gordon Connell said he expected to continue working for the Atwoods if the lease is granted. He said he had no responsibility for the LPA sites and that he participates as required, citing spat collection and setting and hauling the float and moorings as instances of work he had been hired to do.<sup>32</sup>

Merritt Carey testified that she is working with the Tenants Harbor Fishermen's Co-op in relation to the Atwoods' project and that the Co-op members would help maintain the site year-round. Although she lives in Yarmouth, she said she also could come to the site if necessary.<sup>33</sup>

Brendan Atwood testified that maximum build-out of gear as proposed for the site would take place within the 10-year lease term, depending on a number of factors, including whether the project is economically and otherwise feasible.<sup>34</sup> Darrald Atwood testified that the company had planned to move more slowly in developing the site but became concerned that the LPA licenses might not be renewed and so applied for the lease:

"We had planned to move this along much more slowly and in fact would have been content with the LPAs for some period of time. Unfortunately, it became clear to us that that might not occur based on information that we had received, so in order to protect the animals that were in the water – you know, it would be really hard to have an operation going and have the LPA not be renewed. But we felt we really needed to secure a longer period of time so that we could grow this out and have some – a business plan."<sup>35</sup>

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<sup>28</sup> Lewis, testimony

<sup>29</sup> B. Atwood/Lewis

<sup>30</sup> B. Atwood/Mills

<sup>31</sup> D. Atwood/Mills

<sup>32</sup> Connell/Mills

<sup>33</sup> Carey, testimony

<sup>34</sup> B. Atwood/Robinson

<sup>35</sup> D. Atwood/Robinson



MMC argues that “we are capable of properly maintaining our site and concerns about MMCO.’s ability to oversee and tend to the proposed site are unfounded.” MMC states that it is able “to respond to any urgent needs regarding our gear and site, should they arise,” noting that the Atwoods live within a few hours’ drive of the site and near the site for much of the year, and that some of them will live at Spruce Head in the future. MMC emphasizes the commitment of their “local partners” “to provide oversight for the site in our absence, and assist with maintenance needs as necessary.”

The Atwoods argue that the spat bags came to them in degraded condition and do not reflect a maintenance issue. They dismiss criticism of the state of the gear on the LPA sites as “unfounded,” since no gear actually failed and there were no citations or sanctions against them for gear failures. The Atwoods assert that they have “demonstrated responsible management and maintenance of our sites.”<sup>36</sup>

DMR Rule Chapter 2.75 (2) requires that “Each lessee shall maintain his aquaculture lease in such a manner as to avoid the creation of a public or private nuisance and to avoid substantial injury to marine organisms.” It is true that the Atwoods have not been warned or cited for the gear problems on the LPA sites and that the mooring chain had not actually broken before they replaced it. It is also true that a number of scallops died when the rack tipped over and that degraded plastic spat bags were placed in the marine environment. Had the mooring chain failed and the barge gone adrift, a “nuisance” could well have been the result.

The conditions observed by DMR during the site visit and the manner in which the Atwoods have responded to these observations demonstrate that MMC is unlikely to properly maintain the gear and to manage the operations on a lease site of the size, complexity, and remoteness of the one proposed here. DMR expects and relies on the good stewardship of aquaculture lessees as temporary custodians of public trust property. When legitimate observations of a lack of such stewardship are dismissed as “unfounded” and deflected with the remark that no citation was issued, the Department has reason to question whether its expectations are likely to be met if a proposed lease is granted.

Knowing that a DMR site visit was planned, the Atwoods did not ensure that the gear in the vicinity was in proper condition as late in the growing season as June 24. Placing worn spat bags back in the water simply because they were received in that condition is careless and irresponsible. Since they have operated LPAs at the same location for the previous three years, it is reasonable for DMR to expect that they would have moved farther along the learning curve than appears to be the case.

The decision by the Commissioner to grant an aquaculture lease is discretionary, according to 12 MRS § 6072 (1) and (7-A), even if the criteria for granting a lease are met. Evidence regarding the fitness of a lease applicant to responsibly manage a proposed lease during its term may be considered in reaching that decision.

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<sup>36</sup> MMC Arguments, pp. 5-6

### **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**

**Riparian ownership of Pleasant Island.** Pleasant Island is divided into two privately-owned parcels.<sup>37</sup> The northern portion of the island, including all land bordering Home Harbor, is owned by eleven tenants in common holding undivided interests, all of whom are apparently descendants of a common grantor. Mr. Oakes testified that “because the land is owned undividedly, no tenant can say which of them owns any particular parcel of the land.” His wife, Katherine Oakes, is one of those tenants; her ownership is reflected in the deed marked as Exhibit 12. Mr. Oakes stated that Mrs. Oakes “has the same exact complete ownership rights to every part of the island as every one of her co-tenants-in-common.”<sup>38</sup> Therefore, all owners of the northern part of Pleasant Island are technically riparians with respect to the proposed lease, since they all own the shorefront land within 1,000 feet of the proposed lease site, although only a few of them have cottages on the shore of Home Harbor.

The evidence indicates that all of the parties to this proceeding are among these tenants in common. This includes the four members of the Atwood family,<sup>39</sup> Katherine and John Oakes, Gordon Connell, and Paul Johnson, all of whom testified at the hearing. Three other owners submitted comment letters but did not testify, including Sally and Donald Merchant, Katherine and Laura Nelson, and Rachel and Edward Benjamin.<sup>40</sup>

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<sup>37</sup> SR 6

<sup>38</sup> Exhibit 19 (J. Oakes, testimony); list of riparian owners at App 28-33

<sup>39</sup> App 21-23

<sup>40</sup> The Merchant and Nelson letters supporting the application are included in Exhibit 14; the Benjamin and Nelson letters are included in the DMR file, Exhibit 1.

Many of these owners have built cottages on Pleasant Island. The Oakes's house is on the east shore of Home Harbor, while the Atwoods' house is on the opposite side of the island.<sup>41</sup> Mrs. Benjamin's letter says she owns two cottages facing Home Harbor. Mrs. Merchant's letter says she has a cottage on Home Harbor.

According to the testimony, intervenor applications, comment letters, and exhibits, the riparian owners of northern Pleasant Island are divided in their opinions about the potential effects of the proposed lease on their and their neighbors' access to and from the shore.<sup>42</sup>

**Site report observations.** The DMR site report provides a list of approximate distances between the proposed lease site and the surrounding shore.<sup>43</sup> As described in the site report and illustrated in Figure 2 (reproduced below), the west and south corners of the proposed lease site are closest to the Pleasant Island shore. At mean low water, the west corner is approximately 65 feet and the south corner approximately 109 feet from the nearest points on the island.<sup>44</sup> These distances represent the maximum constriction of access between the open water beyond the proposed lease site and the inner part of Home Harbor along the shore of Pleasant Island.

The east corner of the proposed lease site lies about 390 feet from the island shore to the east. The western lease boundary lies about 220 feet from the western shore of Home Harbor; there are five moorings in this area. More than 1,000 feet of water lie between the north boundary of the proposed lease site and the shore of Hewett Island across the channel to the north.

The site report notes the following observations in Home Harbor:<sup>45</sup>

- 3 buildings on the shore of Home Harbor<sup>46</sup>
- No docks
- An outhaul and boat southwest of the proposed lease site.
- A beach and shoreline walkway west of the proposed lease site.

The outhaul apparently belongs to the Atwoods and is used for access to the LPA sites nearby but would not be used in connection with the proposed lease site.<sup>47</sup> The report concludes that access to and from the outhaul "would be altered but not prevented by the proposed lease site," stating that passage to the outhaul would be around the east side of the proposed lease site through the 109-foot space between the site and the shore at mean low water, or around the west side of the site in the 220 feet of water between the site and the western shore.

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<sup>41</sup> D. Atwood/Mills

<sup>42</sup> Mr. Connell, the Nelsons, and the Merchants support the proposed lease, while Mr. Johnson, the Oakes, and the Benjamins oppose it.

<sup>43</sup> **Approximate Distances to Shore** (SR 5-6)

S Corner to Nearest Point, Pleasant Island (MLW) ~109 feet to the southeast

W Corner to Nearest Point, Pleasant Island (MLW) ~65 feet to the southwest

Western Boundary to Home Harbor's Western Shoreline (MLW) ~220 feet to the west

N Corner to Nearest Point, Hewett Island (MLW) ~1,063 feet to the north

E Corner to Nearest Point, Pleasant Island (MLW) ~390 feet to the southeast

<sup>44</sup> SR 6; Fig 2

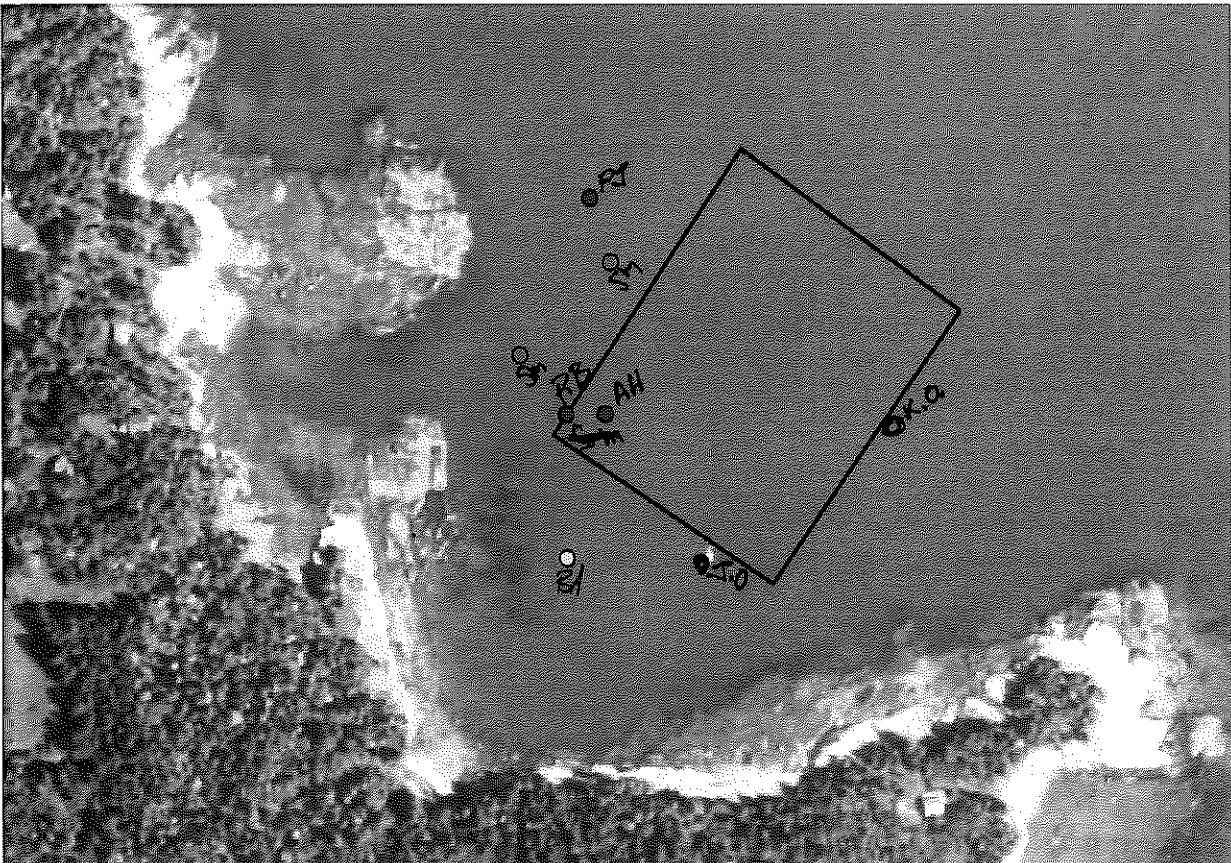
<sup>45</sup> SR 6

<sup>46</sup> Based on testimony and the letters referred to in footnotes 5 and 7, these are presumably the Oakes, Benjamin, and Merchant cottages.

<sup>47</sup> D. Atwood/Robinson

Although the Atwoods testified that they would not use the outhaul for access to the proposed lease site, the constriction of access to the shore would affect any vessel navigating between the waters seaward of Home Harbor and the shore of Pleasant Island to the east, south, or west of the proposed lease site. The site report states that access to and from the walkway and beach from the ocean would be possible with the proposed lease site in place via the 220 feet of water between the west side of the site and the west shore of Home Harbor.<sup>48</sup>

**Moorings.** At the time of the site visit, three mooring balls, two buoys marked "M," and a yellow buoy were observed in or near the proposed lease site.<sup>49</sup> Jon Lewis testified that neither he nor the U.S. Army Corps of Engineers could identify the owners of these moorings and buoys.<sup>50</sup> At the close of the hearing, those present were requested to mark a poster showing an enlarged view of Figure 2 of the site report to indicate ownership of the moorings shown or to depict moorings that were not visible at the time of the site visit. The marked poster is shown below. The Oakes cottage is visible on the peninsula at the lower right. The black rectangle depicts the proposed lease site.



<sup>48</sup> SR 6

<sup>49</sup> SR 6 & Figure 2

<sup>50</sup> Lewis/Mills. The Army Corps issues permits for moorings in places like Home Harbor, where there is no local harbormaster or mooring ordinance.

Based on the marking on the poster at the hearing and on additional information provided by the U.S. Army Corps of Engineers,<sup>51</sup> the mooring balls and buoys observed at the site visit, as well as others issued for this area, are identified as follows:

U. S. Army Corps permitted moorings, Pleasant Island  
As labeled at hearing 11-14-16 on poster of site report Figure 2

1. Benjamin, Rachel, Permit no. NAE-2015-01949 (two moorings, marked "RB" and "AH," green dots on or near proposed west lease boundary)
2. Johnson, Paul, Permit no. NAE-2015-01950 (marked "PJ," green dot 133 feet northwest of proposed lease site)
3. Merchant, Sally, Permit no. NAE-2015-01957 (marked "SM," two red dots 63 and 95 feet west of proposed lease site) The Army Corps lists only one mooring permit issued to Sally Merchant in Home Harbor, but two buoys marked "M" were observed at the site and shown as red dots on Figure 2.
4. Oakes, John, Permit no. NAE-2014-00982, amended 2015 (marked "JO" by black circle by proposed south lease boundary; his white boat shows beside the south lease boundary in Fig. 2<sup>52</sup>)
5. Oakes, Katherine, Permit no. NAE-2015-01954 (marked "KO" by black circle by proposed east lease boundary)
6. Atwood, Brendan, Permit no. NAE-2015-01021 (marked "BA" by yellow circle south of proposed lease; mooring for work float for LPAs)
7. Atwood, Darrald, LPA mooring, Permit no. NAE-2013-00886, replaced by 2015-01584 (not marked on poster, and no buoy shown in Figure 2)
8. Atwood, Darrald, LPA mooring, Permit no. NAE-2014-02251, replaced by 2015-01587 (not marked on poster, and no buoy shown in Figure 2)
9. The Maine Mariculture Company, Inc., Permit no. NAE-2015-01656 (permit for proposed aquaculture gear on lease site as outlined in Figure 2)

Much of the opposition to the proposed lease appears to arise from the fact that the Atwoods' aquaculture project evolved quickly from growing oysters for personal consumption in four floating cages on a 400-square-foot LPA license site in 2013 to an application two years later for a commercial-scale lease site on 3.66 acres occupying the center of Home Harbor. Following the mandatory DMR public scoping session on August 13, 2015, the Atwoods, organized as The Maine Mariculture Company, LLC, applied for the proposed lease and for an Army Corps permit for the lease gear on August 21, 2015.

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<sup>51</sup> DMR File, Exhibit 1, e-mail from Peter Tischbein, USACE to Diantha Robinson, DMR, 11-14-16

<sup>52</sup> Exhibit 19, p. 2

The Army Corps permit for the gear proposed for the lease site was issued to MMC on October 19, 2015. The Corps also issued mooring permits in 2015 to Rachel Benjamin, Sally Merchant, Paul Johnson, and Katherine Oakes, as noted in the list above. The Katherine Oakes and Rachel Benjamin permits are the closest to the proposed lease site; they were issued subject to a condition that they not be placed so as to interfere with aquaculture gear on the proposed lease site.<sup>53</sup> It is not clear if the other permits had similar conditions.

Mrs. Benjamin's comment letter to DMR indicates that she had moorings on the other side of Home Harbor which were increasingly impeded by eelgrass and which she intended to move to Home Harbor. The letter says that concerns about the proposed lease site prompted her to apply for the permits, including one for her brother, Paul Johnson. Mrs. Benjamin writes that her cottages will be "deprived of the means of ingress and egress" if the lease is granted.<sup>54</sup> Mrs. Benjamin did not testify at the hearing.

Mrs. Merchant has had moorings in Home Harbor for 40 years, according to Gordon Connell;<sup>55</sup> she received an Army Corps permit for one mooring in 2015, although Mr. Connell marked the two red dots on the Figure 2 poster, representing the buoys marked "M" observed during the DMR site visit, as two moorings held by the Merchants. Mrs. Merchant's undated letter addressed to the Corps of Engineers is included in Exhibit 11, submitted by the applicant; it states that she sees "no grounds for resisting the establishment" of the proposed lease, she believes that "any problems with access for other uses around this lease are greatly exaggerated, and that there is 'adequate space between the rafts/lines, etc. and the shore for access to a landing on the shore and mooring room for the only residents on the southerly side of the cove" (i.e., the Oakes).<sup>56</sup> Mrs. Merchant did not testify at the hearing.

Katherine Oakes applied for a mooring permit on September 15, 2015, which was re-issued on April 15, 2015, after a previous permit was apparently mailed to the wrong address.<sup>57</sup>

John Oakes testified that his mooring had originally been placed for him in 1998 by Mr. and Mrs. Merchant.<sup>58</sup> Mr. Connell stated that Mr. Oakes's mooring was of long standing in the cove, being one of three "historical" moorings, in his view, along with the two used by the Merchants.<sup>59</sup> Mr. Oakes said he applied for and received his Corps permit in 2014 and applied again on Sept. 15, 2015, for an amendment to lengthen the chain and pennants on this mooring so it could hold a larger boat. The amendment was approved on December 3, 2015.<sup>60</sup>

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<sup>53</sup> Exhibit 1, Benjamin letter; Exhibit 13 (b)

<sup>54</sup> Exhibit 1, R. Benjamin letter

<sup>55</sup> G. Connell/D. Atwood

<sup>56</sup> Exhibit 11

<sup>57</sup> Exhibit List, above, listing for Exhibit 13 (b)

<sup>58</sup> Exhibit 19; Exhibit 13 (a); J. Oakes/B. Atwood; Mr. Connell stated that Mr. Oakes's mooring was of long standing in the cove, being one of three "historical" moorings, along with the two used by the Merchants (Connell/D. Atwood).

<sup>59</sup> Connell/D. Atwood

<sup>60</sup> Exhibit 13 (a)

Mr. Oakes testified that “The reason for the changes [in the mooring gear] was to secure greater freedom for a moored boat to have sufficient swinging room, especially if the boat size was increased from our present 21’.” Noting that the boat shows up on Figure 2 of the site report and in Exhibit 16 as a white dot by the south boundary of the lease, Mr. Oakes said that with the longer mooring gear, the moored boat would swing over the boundary line into the proposed lease site.<sup>61</sup> Mr. Oakes contended that as the lease site is developed with increasing amounts of gear, mooring his boat at its present location will become increasingly unsafe and even impossible.<sup>62</sup>

Mr. Connell, who intervened in support of the lease application, characterized the scope of the amended mooring as “ridiculous” at a ratio of 7 or 8 to 1.<sup>63</sup> Mr. Oakes agreed that the scope he uses is in that range. Captain Ed Glaser, an expert witness presented by the Oakes, testified that a reasonable scope for an anchor or mooring is 7:1.<sup>64</sup>

Mr. Oakes described other ways in which the proposed lease would affect his use of his mooring. Approaching the mooring from the west would mean navigating through the 65-foot (at MLW) corridor between the west corner of the lease and the adjacent shore. Although Mr. Oakes assumed that the LPAs and the work float might remain in place outside the lease boundaries and that a 25-foot buffer around the lease might also be involved, the Atwoods testified that this would not be the case. With other moorings in place and boats on them, however, as well as submerged rocks to navigate around, Mr. Oakes said he would find the westerly approach unreasonable.<sup>65</sup>

The alternative, Mr. Oakes said, would be to approach his mooring from the southeast, navigating around any anchored vessels that might be located between the proposed lease site and the east shore of the island. With any “significant” northwest wind, he said,

We will have to hug the South corner of the lease and make a tight right-hand turn to avoid the submerged rocks to the left. We will be required to navigate parallel to the Southwesterly bound of the lease which will be on our right, keeping as close as possible to the lease perimeter or risk overshooting our mooring. The Atwood lease will place both our boat and mooring WITHIN the Atwood lease perimeter....We will be required to navigate difficult, tight turns when exposed to more wind and the lease will “consume” our mooring and its needed area. (Exhibit 19, p. 3)

Mr. Oakes further testified that his access to and from the shore would be hampered by the proposed lease site. He noted that the passage between the south lease corner and the shore in front of his house would be reduced to 109 feet with the lease in place and that submerged rocks lie off the lease corner, further narrowing the passage. He explained that he and Mrs. Oakes anchor their boat in front of the house, about 60-70 feet off shore and off-load their belongings into a dinghy. This requires space for the boat to be anchored, with the dinghy attached. He stated:

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<sup>61</sup> Exhibit 19, p. 2; Exhibit 16

<sup>62</sup> Ibid

<sup>63</sup> J. Oakes/G. Connell

<sup>64</sup> Glaser, testimony

<sup>65</sup> Exhibit 19, p. 3

When the wind is blowing from the Northwest we would ordinarily make a further allowance by setting our anchor further away from the shore to allow for the anchor to drag. But, in so doing we would be intruding into the area taken by the lease. We need flexibility when we load and unload from our boat to our dinghy because the weather conditions vary so enormously. And by flexibility we mean SPACE. Any wind can make things difficult and awkward where things are dropped and accidents can happen. We are exposed and more vulnerable along this particular Southern shore of Home Harbor. We often have to change landing and leaving spots according to wind and tide. The FLEXIBILITY we need disappears when the Atwood lease perimeter invades the SPACE we need (emphasis in original). (Exhibit 19, p. 3)

Mr. Oakes also noted that “We may need a barge to our front shore to unload building materials, brought to the shore with a suitably large boat. We don’t believe it will fit if the lease is granted.” He also stated that the Oakes obtained a permit from the Land Use Planning Commission in 2013 for a seasonal ramp and float which they apparently have not yet built; Mr. Oakes testified that with the lease in place, the contractor would be unable to maneuver his boat to install the dock in the area available.<sup>66</sup>

Marine Patrol Officer Dean testified that he had spent eight years patrolling the area around Home Harbor. With the proposed lease site in place, he said, the Oakes would still have access to their mooring, but he quoted the Harbormaster Questionnaire, which states, “It appears that the proposed lease site may cause at least one of the two mooring owners to have to significantly alter their normal ingress/egress from the channel to the mooring.”<sup>67</sup>

Darrald Atwood testified that the proposed lease site would not affect moorings that were permitted before the lease application was submitted on August 21, 2015; this would appear to apply only to John Oakes’s mooring. Maine Mariculture later stated in its written closing arguments that “Ingress and egress to all riparian owners will be preserved....Access to the moorings that were placed and/or permitted prior to MMCo.’s submission of the application would also be maintained.”<sup>68</sup> The phrase “placed and/or permitted” appears to include the Merchant moorings, which were placed but not permitted before 2015. It appears to be intended to exclude the amendment to Mr. Oakes’s mooring from consideration by the Department, as well as the moorings of Katherine Oakes, Rachel Benjamin, and Paul Johnson.<sup>69</sup>

MMC contends that the amendment to Mr. Oakes’s permit should be ignored by the Department in considering the lease’s potential effects, since it was applied for after MMC applied for its permit and was granted after the company’s permit was issued. The company contends that its permit therefore “takes precedence for use of the proposed site.”<sup>70</sup> MMC further argues that Mr. Oakes did not present any evidence to substantiate his claim that with the extended mooring gear authorized by the permit, his boat would swing into the proposed lease site, and that he did not show why the extensions were

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<sup>66</sup> Exhibit 19, p. 3

<sup>67</sup> W. Dean/D. Atwood

<sup>68</sup> MMC Arguments (Closing Arguments of The Maine Mariculture Company, LLC, December 5, 2016), page 1

<sup>69</sup> The Benjamin moorings, which are within or on boundary of the southwest corner of the lease, would be affected by the lease development, as would the Katherine Oakes mooring on the east boundary; however, both these mooring permits are subject to conditions requiring the moorings to be set so as not to interfere with the aquaculture gear if the lease is granted.

<sup>70</sup> MMC Arguments, p. 1



necessary or whether he plans to get a larger boat.<sup>71</sup> The company asserts that “considering that the extensions have not been used to date and there is no clear future use or actual need for the extensions, this proposed lease site will not impact any existing uses of this mooring.”<sup>72</sup>

Finally, MMC argues that the proposed lease will not “prevent the ingress and egress for riparian owners,” stating that, “While it is acknowledged that the Oakes may need to take a different route to access their mooring, the increase in distance (a few hundred feet) and time (a few seconds) required to access this mooring is minimal.”<sup>73</sup>

**Discussion.** The aquaculture lease criterion at issue here is described in statute and DMR rules as follows:

Statute: The lease will not unreasonably interfere with the ingress and egress of riparian owners. (12 MRS §6072 (7-A)(A) )

Rule: The Commissioner shall examine whether the riparian owners can safely navigate to their shore. The Commissioner shall consider the type of shore involved and the type of vessel that can reasonably land on that shore. He/she shall consider the type of structures proposed for the lease and their potential impact on the vessels which would need to maneuver around those structures. (C. 2.37 (1) (A) (1))

The applicant for a lease has the burden to prove that the proposed aquaculture activities will not unreasonably interfere with riparian ingress and egress. Of the riparians in Home Harbor, the Oakes are the most directly affected by the location of the proposed lease site, since they will be forced to navigate around it to reach their shore, from whatever direction they enter the harbor. John Oakes’s mooring has been located in the cove since 1998. His testimony described the difficulties he believes he faces in gaining access to the shore near his house with the proposed lease in place.

As Officer Dean testified, it is clear that the Oakes’s historical route will be significantly altered because access to the inner portion of Home Harbor, where John Oakes’s mooring and his shorefront landing points are located, will be constricted by the west and south corners of the proposed lease site to passages of 65 and 109 feet, respectively, at mean low water. Changing wind and weather conditions will affect Mr. Oakes’s ability to navigate through these constrictions to gain access to the shore or to his mooring from the west or the east around the lease site.

Anchoring the Oakes boat between Mr. Oakes’s mooring and the shore, transferring gear and people to a dinghy, rowing to shore and back to the boat, mooring the boat, and returning to shore by dinghy are operations that are directly affected by wind and sea conditions. With the gear on the proposed lease site arrayed along a boundary of 350 feet across most of the inner part of the harbor next to Mr. Oakes’s mooring, the lease will clearly reduce the room he has to maneuver during these operations. In challenging weather and sea conditions, this reduced maneuverability jeopardizes his safety and that of his passengers. Not only will he need to contend with wind and waves, he will need to keep from colliding or becoming entangled with the lease gear.

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<sup>71</sup> Ibid

<sup>72</sup> Ibid

<sup>73</sup> MMC Arguments, p. 2

Access by other riparian dwellers on the shore of Home Harbor would be affected by the lease to a somewhat lesser degree, depending on the direction from which they approach their moorings. Access to the Merchant, Benjamin, and Johnson moorings is not obstructed from the west, but access from the north and east would require them to navigate around the proposed lease site. The proposed lease site would also restrict access for larger vessels, like barges, that would be necessary for constructing, hauling, and storing docks or transporting large items or construction materials to the riparians' shore beyond the proposed lease site.

Filling the central part of Home Harbor with aquaculture gear, as the applicant proposes, would restrict access by riparians to a significant degree, as shown by this evidence.

**Therefore, I find** that the aquaculture activities proposed for this site will unreasonably interfere with the ingress and egress of riparian owners.

## B. Navigation

DMR biologists evaluated the effect of the proposed lease on navigation and described their conclusions as follows:

The proposed lease activities are not expected to interfere with navigation in the general vicinity. Although the channel north of Pleasant Island and south of Hewett Island is navigated for both commercial and recreational purposes, boats transiting this area will not be negatively impacted by the presence of the proposed lease at any tide. The site is located greater than 1,065 feet from Hewett Island at Mean Low Water (MLW) while another location in the same channel provides only ~495 feet (MLW) between Pleasant Island and ledges south of Hewett Island.

The proposed lease would likely alter but not prevent navigation within Home Harbor. The southern corner of the proposed lease site sits ~109 feet from Pleasant Island at Mean High [sic] Water (MLW) and the western corner sits ~65 feet from Pleasant Island (MLW). Boats transiting into the eastern portion of home harbor [sic] would be impacted but not prevented from reaching their destination. Using Home Harbor as an anchorage would be made substantially more difficult if the proposed lease were granted.<sup>74</sup>

As these observations indicate, there are two aspects to assessing navigation in the vicinity of the proposed lease site. To the north of the site, more than 1,000 feet of open water lies between the site and Hewett Island. The channel through which lobster boats travel from the mainland crosses these waters from Muscle Ridge Channel in the west to Penobscot Bay in the east. Brendan Atwood testified that he is aware of the "high volume of boat traffic" through this channel, which is outside the proposed lease site.<sup>75</sup> Officer Dean testified that the proposed lease site would not interfere with this boat traffic, and the site report agrees.

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<sup>74</sup> SR 7

<sup>75</sup> B. Atwood/P. Johnson

The proposed lease site, however, occupies a large area of Home Harbor to the south of the channel, reducing the area available for navigation and anchoring between the site and the shore to the east, south, and west of the site, as discussed in the previous section on riparian access. The site report indicates that while the lease site would not prevent boats from navigating into the inner part of Home Harbor between the proposed lease site and the shore to the south, such vessels would still be “impacted,” and using the harbor as an anchorage “would be made substantially more difficult” should the lease be granted.<sup>76</sup>

Mr. Atwood testified that “something happens everywhere,” so in seeking a location for the lease site, he said he tried to find the “least disruptive spot,” where there would be minimal conflict with other uses. He stated that moorings are limited in Home Harbor, and recreational and commercial uses are limited, as well. He presented a map depicting Home Harbor as covering 50 acres of water between the northeast side of Pleasant Island and the south side of Hewett Island to support his argument that the 3.66-acre lease site comprises less than 8% of this space.<sup>77</sup>

MMC argues that “navigation around the proposed lease site will be maintained for all existing commercial and recreational uses,” that navigation “in and around Home Harbor would not be prevented by the proposed site,” and that Home Harbor sees “limited seasonal use for anchorage of recreational vessels” and “is not an ideal anchorage for vessels.” The company argues that “While anchorage within the proposed site may be impacted to some degree, the requested lease area is less than 8% of Home Harbor, and many acres remain to the West, East and North of the proposed site for safe anchorage.”<sup>78</sup>

Darrald Atwood testified that even with the lease in place, there would be space for three 80-foot boats to moor outside the proposed lease site. He presented an illustration titled “Anchorage Sites Around Proposed Lease Site,” depicting three 220-foot diameter circles, one each to the east, north, and west of the site and purporting to show that an 80-foot boat, which he said is larger than the boats that use the cove, could anchor within each of the circled locations.<sup>79</sup>

In response to questions by Mr. Lewis, Mr. Atwood stated that the scope of the anchor line for an 80-foot boat in 25 feet of water would be between a ratio of 5:1 and 10:1. Mr. Lewis noted that at this depth, with 100 feet of anchor line (a 4:1 ratio), an 80-foot boat could not fit inside the 110-foot radius circles shown on Mr. Atwood’s illustration. Brendan Atwood responded that the diagram was “hasty,” but asserted that the area could nevertheless fit three 80-foot boats; he further stated that he had never seen an 80-foot boat in Home Harbor.<sup>80</sup> Geoff Parker, a member of the public and one of the owners of Hewett Island, testified that he had seen two boats approximately 80 feet in length anchored in Home Harbor in the summer of 2016.<sup>81</sup> Mr. Lewis testified that even for a boat 50 or 60 feet long anchoring in Home

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<sup>76</sup> SR 7

<sup>77</sup> D. Atwood, testimony; Exhibit 4

<sup>78</sup> Maine Mariculture Arguments, p. 2-3

<sup>79</sup> D. Atwood, testimony; Exhibit 4

<sup>80</sup> D. Atwood/Lewis; B. Atwood/Lewis

<sup>81</sup> Parker, testimony

Harbor, the scope of the mooring line would likely be 100-150 feet, so that size vessel would not fit in the areas shown on the Atwood diagram, either.<sup>82</sup>

Merritt Carey, an experienced sailor and co-owner with her family of Graffam Island, northwest of Pleasant Island, described the Home Harbor anchorage as “terrible,” hard to get to, and with shoals in the vicinity; she said she would rather anchor in Tenants Harbor to the south or at a site farther up Muscle Ridge Channel. She said that sailing has dropped off since the 1970s and 1980s and fewer sailboats use the harbor as an anchorage now than did at that time.

Mr. Connell said he has fished for lobster in Home Harbor for 40 years; he described it as “the poorest anchorage in Muscle Ridge.” He said it “rolls,” and that it is located on the lobstermen’s travel lane, known as “I-95,” so that boats at anchor there would be subject to motion from the wakes of the passing vessels. Mr. Connell said that in his opinion the lease would not interfere with historical uses in the cove.

Ed Glaser, an expert witness presented by John and Katherine Oakes, has spent 30 years working on or captaining windjammers, fishing boats, and oil tankers along the Maine coast and 12 years serving as Harbormaster in the City of Rockland.<sup>83</sup> Mr. Glaser testified that standard practice when anchoring a vessel is to use a scope of 7:1 for rope or 2:1 to 3:1 for chain. In 25 feet of water, Mr. Glaser said, this means 175 feet of rope, and with a 25-foot boat, the radius of the swing of the boat at anchor would be 200 feet. With the proposed lease in place, he said, boats anchoring in Home Harbor would end up in the channel traveled by the lobstermen. The lease would eliminate the “harbor aspect” of Home Harbor, he said, and he would no longer recommend it as an anchorage, something he said he did in the past as Harbormaster in Rockland.<sup>84</sup>

Douglas Preston submitted a written comment during the comment period prior to the hearing, stating that “Home Harbor is a small harbor with frequent daily use by lobster fishermen and cruising yachts. I have often anchored in this cove overnight. The lease is so large (3.66 acres) that it would block use of Home Harbor by anyone except the lease-holder.”<sup>85</sup>

John Oakes presented five photographs of boats at anchor in Home Harbor in 2012, 2014, and 2015.<sup>86</sup> He testified that in the years he and Katherine Oakes have lived on Pleasant Island, they “have seen many sailboats come into Home Harbor, almost every evening in the summer. Some are our friends who come to visit by boat. ... We have watched the Outward Bound rowing boats come into the cove and stay the night with their crews.”<sup>87</sup>

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<sup>82</sup> Lewis, testimony

<sup>83</sup> Exhibit 18

<sup>84</sup> Glaser, testimony

<sup>85</sup> Ex 1, e-mail from Douglas Preston to Diantha Robinson, et al., 11-4-16

<sup>86</sup> Exhibits 24 (a)-(e)

<sup>87</sup> Exhibit 19, p. 6

Mr. Oakes described his observations of sailboats anchoring in Home Harbor:

typically the boats circle the cove, sounding out the depths and expected wind direction and eventually drop anchor. Then they pull back to set their anchor in the firm mud bottom, this procedure demands a lot of room. These sailboats won't be able to find an anchorage in the Southwestern, and more sheltered, end of Home Harbor, as they are advised in the present Cruising Guide.<sup>88</sup>

The Cruising Guide is *A Cruising Guide to the Maine Coast*, an excerpt from which is contained in Exhibit 26. The excerpt describes Home Harbor as an anchorage as follows:

Under normal conditions it is a lovely harbor, seldom used, nestled in the encircling arms of several islands and ledges, with a distant view of Heron Neck and Hurricane Island to the east.

Directions for Approach: Aim for the little cobble beach at the head of the cove on Pleasant Island.

Work your way in to depths of 16 or 20 feet at low, noting the ledges that make out from the west side of the harbor. Holding ground is good in mud. You will be well protected from prevailing southerlies but exposed to the east and somewhat to the north-northwest. At high tide, a roll can work its way over Hewitt Island Rocks and into the harbor.<sup>89</sup>

Mr. Oakes testified that the *Cruising Guide* provides a chart "that shows the best and safest approach and to 'aim for the little cobbled beach at the head of the cove.' This most sheltered part, close to the cobble cove, will be beyond the reach of the sailboats if the lease is granted."<sup>90</sup> If the lease is granted, Mr. Oakes said, the "historical use of Home Harbor as a sailboat shelter and safe anchorage" would end.<sup>91</sup> He noted that Home Harbor has long been considered a good anchorage, quoting language from the *U.S. Coast Pilot* in 1868:

On the northern side of Pleasant Island is found a harbor of refuge known as Home Harbor, affording anchorage in from three and a half to six fathoms, and fully protected from all winds except those between SE and E.<sup>92</sup>

**Discussion.** The applicant bears the burden of proof to demonstrate that the proposed lease will not unreasonably interfere with navigation. The lease proposed by Maine Mariculture would clearly affect navigation in Home Harbor, given its size and location; the question is whether the aquaculture activities would interfere with navigation to an unreasonable degree.

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<sup>88</sup> Exhibit 19, p. 7

<sup>89</sup> Exhibit 26, p. 1

<sup>90</sup> Exhibit 26, p. 2

<sup>91</sup> Exhibit 19, pp. 6-7

<sup>92</sup> Exhibit 25

The evidence focuses on the area of Home Harbor also referred to by the riparian owners as “the cove,” where the lease site is proposed to be located. The evidence shows that people moor boats in this area, navigate to and from the shore and to and from moorings, and navigate and anchor transient boats for varying periods of time, including overnight stays. MMC attempts to define a much larger area as “Home Harbor,” depicting the proposed lease site as taking up a small part of a large area, rather than the reverse. The question, though, is what navigational uses are made of the waters in the vicinity of the lease site, regardless of what they are called. The aerial photograph shown on page 9, as well as numerous maps and photographs presented in the application, site report, and exhibits, show that the proposed lease site would significantly reduce the space available for boats to navigate and anchor in the cove.

The space between the east side of the proposed lease site and the shore narrows from 390 feet at the east corner near the channel to 109 feet at the south corner, farther inside the cove. On the west side of the site, the space between the site and the shore narrows from 220 feet of water to 65 feet at the west corner.<sup>93</sup> These distances would preclude most sailboats from navigating in the cove except under power, and larger vessels, such as the 80-foot sailboats Mr. Parker saw anchored in Home Harbor in the summer of 2016, would be excluded altogether.

At mean high water, depths within the proposed lease site range from 17-33 feet; depths are deepest in the northern and eastern portions of the site.<sup>94</sup> Similar depths can be expected in the adjacent waters. As Mr. Glaser explained, in 25 feet of water, an anchored 25-foot boat would swing in a circle with a diameter of approximately 400 feet.

With a maximum of 390 feet of open water between the east side of the proposed lease site and the nearest shore at MLW, the proposed lease site would foreclose the use of the cove for anchoring anything other than very small boats. Anchoring there would not only be made “substantially more difficult” by the lease, as the site report states, it would become virtually impossible. Boats of any size would lack the space not only to swing at anchor, but to navigate around the cove to set and fix an anchor in the first place, as described by Mr. Oakes. Boats seeking to anchor north of the proposed lease site would find themselves in the midst of the channel referred to as “I-95,” clearly not a reasonable or even safe place to anchor, as noted by Mr. Connell and Mr. Glaser.

As is clear from the map contained in the Taft *Cruising Guide*, the area recommended as an anchorage is off the cobble beach inside the cove, just where the lease is proposed to be located.<sup>95</sup> As Mr. Glaser testified, the proposed lease site would take the “harbor” out of Home Harbor, and as Mr. Oakes testified, the historical use of the cove as a shelter and safe anchorage would end.

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<sup>93</sup> SR 5-6

<sup>94</sup> SR 2

<sup>95</sup> Exhibit 26

Mr. Connell and Ms Carey pointed out the aspects of Home Harbor that make it a less desirable anchorage: the channel traveled by numerous lobster boats, the shoals nearby, and the potential for a “roll,” as noted in the *Cruising Guide*, at high tide. MMC describes it as having “limited seasonal use” and argues that although anchoring may be “impacted to some degree” by the lease site, “many acres remain” beyond the proposed lease site for anchoring. Even the *Cruising Guide* notes that Home Harbor is “seldom used.”<sup>96</sup>

Along the Maine coast, most, if not all anchorages are used seasonally, and few anchorages are perfect, but Home Harbor has, according to the evidence, been recommended and used as an anchorage for nearly 150 years. The photographs in Exhibit 24 show that sail and power boats of varying sizes continue to anchor there, sometimes as many as five at one time. Mr. Preston’s letter and the testimony of Mr. Parker and Mr. Oakes confirm this. This present-day use of Home Harbor as an anchorage is a reality that would be eliminated by the proposed lease site.<sup>97</sup>

Occupying the center of the cove to the extent that the proposed lease site would do forces all other uses to the perimeter. Constricting the passages by which boats can navigate to and from the interior of the cove and the shore beyond the proposed lease site would make navigation more complicated, longer, impossible in some cases, and more hazardous in adverse weather and sea conditions.

The evidence shows that the proposed lease would restrict, hinder, and in some cases prevent navigation in Home Harbor to an unacceptable degree.

**Therefore, I find** that the aquaculture activities proposed for this site will unreasonably interfere with navigation.

### C. Flora & Fauna

**Epibenthic ecology.** DMR biologists visited the proposed lease site on June 24, 2016 to document the epibenthic ecology of the surrounding area using a digital video camera; the video was shown by Mr. Lewis at the public hearing. The site report notes that numerous species were observed, of which the most notable were American lobsters, hermit crabs, and sugar kelp. The site report states:

American lobsters (*Homarus americanus*) were seen commonly within the proposed lease site, and were present in higher density on the sand and hard mud bottom within the central portion of the site. Hermit crabs (*Pagurus sp*) were also abundant throughout the proposed lease area.<sup>98</sup>

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<sup>96</sup> Ibid

<sup>97</sup> The applicant argues in its Response that its photographs in Exhibit 8 support its argument that Home Harbor is not used as an anchorage for cruising boats. The photographs depict Home Harbor with no boats visible on eight dates: July 8, 2009; May 31, 2010; Oct. 9, 2011; June 14, 2014; May 23, 2015; June 13, 2015; August 2, 2015; and June 11, 2016. Except for the July 8, 2009 and August 2, 2015 dates, the others are early or late in the season for cruising boats to be in evidence. The evidence presented by the Oakes, plus testimony from a member of the public and a comment letter from a cruising sailor, as discussed above, support the conclusion that Home Harbor is used as an anchorage by cruising sailboats. That the harbor may be unoccupied at various times, as shown in the Atwood photographs, does not negate this conclusion. The reliability and persuasiveness of the evidence and the credibility of the witnesses are matters for the Department to evaluate.

<sup>98</sup> SR 9

The sea bottom near the eastern corner is dominated by rocks and sugar kelp (*Saccharina latissima*) which gives way to a flat sandy/firm mud bottom with scattered rocks and kelp throughout the center of the site. The presence of macro-flora decreased in the southern portion of the proposed lease site but returned again south of said site.<sup>99</sup>

**Eelgrass.** In 2003, DMR assessed the status of eelgrass in Home Harbor, finding two patches with 10%-40% cover and one with 40%-70% cover, as shown in the Figure 4 of the site report.<sup>100</sup> During the site visit, DMR biologists observed eelgrass approximately 125 feet south of the proposed lease site, near the yellow buoy shown in Figure 2. According to the site report, the cover was estimated at 10% - 20%. Eelgrass within the proposed lease site was observed as “rare.”<sup>101</sup>

**Wildlife.** Harbor seals and ospreys were observed during the site visit; an osprey nest is located on Pleasant Island, south of the proposed lease site. The site report notes that there are no Essential or Significant Wildlife Habitats within Home Harbor.<sup>102</sup>

At the hearing, Mr. Lewis testified that he saw “a fair amount” of kelp in the northwest part of the proposed lease site, ledge in the northeast portion, patches of gravel, and “more lobsters than expected” in the kelp and in burrows. He said that in his experience, kelp creates shelter for marine animals, and the lobsters were “in abundance” on the site.<sup>103</sup> Mr. Lewis said that “In 19 years of diving on aquaculture sites in Maine, this is an unusually high number of lobsters,” observing that the density of lobsters on the site is “similar to that of good lobster habitat.”<sup>104</sup>

Gordon Connell testified that kelp is a “cycle thing,” alternating in abundance with sea urchins. Historically, he said, there were fewer lobsters.<sup>105</sup> He said two years ago there was no lobster gear in the cove, but there were 15 traps on the proposed lease site at the time of the 2016 site visit.<sup>106</sup>

Officer Dean testified that compared to the area that fishermen from Pleasant Island have historically fished, the proposed lease site has been low in fishing (i.e., lobstering) activity, but he noted that “more gear showed up in recent years,” estimating that there were 45 traps in the lease area, fished by four commercial and one recreational lobster fishermen.<sup>107</sup> Asked if there was more lobster fishing in Home Harbor after the MMC scoping session, Officer Dean said that gear had increased there but that he could not state when this occurred.<sup>108</sup>

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<sup>99</sup> SR 8

<sup>100</sup> SR 9; note correction 2 to site report re: date of eelgrass assessment.

<sup>101</sup> SR 9

<sup>102</sup> SR 10 DMR sent a copy of this lease application to MDIF&W for their review and comment. No comments were received. Normally MDIF&W comments on aquaculture applications when it has concerns about potential effects on wildlife. DMR interprets the absence of any comment as indicating that MDIF&W has no such concerns in this instance. Furthermore, according to data available and managed by MDIF&W, there are no Essential or Significant Wildlife Habitats within Home Harbor, and the northeastern shore of Pleasant Island is categorized as moderate to high value Tidal Wading Bird and Waterfowl Habitat.

<sup>103</sup> Lewis, testimony

<sup>104</sup> Lewis/Huber

<sup>105</sup> Connell, testimony

<sup>106</sup> Connell/Johnson

<sup>107</sup> Dean, testimony

<sup>108</sup> Dean/D. Atwood



Darrald Atwood testified that with the proposed lease site in place, any lobster traps displaced from the site would be moved no more than 300 feet away. Lobsters move as much as 250 miles in migration, he said, and the traps would still be “within lobster forage ranges.” The proposed aquaculture project would benefit lobsters, Mr. Atwood said, and the best indication of that is the current abundance of lobsters at the proposed lease site, which he attributed to the LPA activities.<sup>109</sup>

**Discussion.** Whatever the timing of or reasons for the apparent increase in lobster gear in Home Harbor, it appears that the area on and around the proposed lease site is currently very good habitat for lobsters, which were present in unusually high numbers at the time of the site visit on June 24, 2016, according to Mr. Lewis. Given the nature of the proposed aquaculture project, this is cause for concern.

MMC proposes to create an intensely-developed commercial aquaculture operation over the 10-year term of the proposed lease. Gear would consist of up to 900 floating oyster cages, which would be overwintered on the bottom of the proposed lease site. Alternatively, as many as 3,500 dropper ropes of ear-hung scallops could be substituted for some or all of the oyster cages, using growing methods relatively new to mid-coast Maine. In addition, up to 300 stacks of up to 24 aquatrays holding scallops would be placed on the bottom of the site, year-round.

In the course of operations on the proposed lease site, the aquatray stacks would be placed on concrete blocks on the bottom, periodically lifted for cleaning and grading, and replaced. Ropes of scallops would occasionally be lifted, run through a cleaning machine, and re-hung. Oyster cages would be periodically hauled, sorted, restocked, and re-floated during the growing season; they would be dropped to the bottom in the fall for overwintering and hauled up again in the spring.

Placing 900 oyster cages and 300 stacks of aquatrays on top of the kelp beds on the site would shade them at best and would very likely damage them and the habitat that has nurtured the present abundance of lobsters. Floating the cages during the growing season would also shade the kelp beds. The repeated movement of the gear on and off the bottom would damage the beds and disturb lobsters and other creatures sheltering in them. The large amount of gear would amplify these effects.

Normally aquaculture sites are not located in areas where other species of biological or commercial concern are abundant, particularly if the aquaculture operations are likely to reduce that abundance. The intensity and scale of development planned for this site make such a reduction highly likely. Here in Home Harbor, the unusually flourishing habitat for kelp and lobster on the proposed lease site would inevitably be damaged by the intensive aquaculture operations planned for the site.

It appears from this evidence that the ecology of the proposed lease site and surrounding area will be adversely affected by the lease activities.

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

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<sup>109</sup> D. Atwood, testimony

**4. CONCLUSIONS OF LAW**

The language of 12 MRS §6072 (7-A) provides that a proposed lease must meet all of the criteria listed in the statute in order for the commissioner to exercise the discretion conferred by the law and decide whether to grant the lease.<sup>110</sup> Failure to satisfy one or more of the criteria means that the application must be denied.

Based on the above findings, I conclude that:

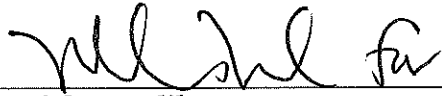
- A. The aquaculture activities proposed for this site will unreasonably interfere with the ingress and egress of riparian owners.
- B. The aquaculture activities proposed for this site will unreasonably interfere with navigation.
- C. The aquaculture activities proposed for this site will unreasonably interfere with the ability of the lease site and surrounding areas to support existing ecologically significant flora and fauna.

Accordingly, the evidence in the record supports the conclusion that the proposed aquaculture activities fail to 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 denies the lease proposed by The Maine Mariculture Company, LLC in Home Harbor, Muscle Ridge Shoals Township, Knox County.

Dated: 7.14.17

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

<sup>110</sup> **7-A. Decision.** In evaluating the proposed lease, the commissioner shall take into consideration the number and density of aquaculture leases in an area and may grant the lease if the proposed lease meets the following conditions as defined by rule.