

**STATE OF MAINE
DEPARTMENT OF MARINE RESOURCES**

Abigail Barrows

SEH PC

Standard Aquaculture Lease Application
Suspended Culture of Oysters and Marine Algae
Pickering Cove, Deer Isle, Maine

FINDINGS OF FACT, CONCLUSIONS OF LAW, AND DECISION

Abigail Barrows applied to the Department of Marine Resources (DMR) for a twenty-year standard aquaculture lease on 4.61-acres¹ located in Pickering Cove, Southeast Harbor, Deer Isle, Maine. The proposal is for the suspended culture of American oyster (*Crassostrea virginica*), European oyster (*Ostrea edulis*), sugar kelp (*Saccharina latissima*/ *Saccharina latissima forma angustissima*), horsetail kelp (*Laminaria digitata*), winged kelp (*Alaria esculenta*), dulse (*Palmaria palmata*), and nori/laver (*Porphyra umbilicalis*).

1. PROCEDURAL HISTORY

The pre-application meeting on this proposal was held on November 18, 2021, and a scoping session was held on March 10, 2022. DMR accepted the final application as complete on May 23, 2022. Notice of the completed application and public hearing was provided to state agencies, the Town of Deer Isle and its harbormaster, riparian landowners within 1,000 feet of the proposed site, and subscribers to DMR's aquaculture email listserv. A Harbormaster Questionnaire was sent to the harbormaster on July 26, 2022, requesting information about designated or traditional storm anchorages, navigation, riparian ingress and egress, and fishing or other uses of the area, among other considerations. No response was received by DMR. Notice of the public hearing was published in the *Penobscot Bay Press* on April 18 and May 9, 2024. The public notice for the hearing stated that the proceeding would be conducted in-person and directed interested persons to register to provide testimony or ask questions during the proceeding. It also directed interested persons to contact DMR for an intervenor application. On May 13, 2024, DMR received an application for intervenor status from the Deer Isle-Stonington Shellfish Conservation Committee (Committee). In accordance with 12 M.R.S.A. § 6671, any municipality, by vote of its legislative body, may implement a shellfish conservation program and associated ordinances. This delegated authority is limited to any area of the intertidal zone within the respective community and allows the municipality to regulate the take, possession, and size of shellfish within established parameters. A shellfish conservation ordinance also provides for municipal licensing of harvesters in accordance with statutory provisions.

¹ Applicant originally requested 4.24 acres. DMR calculations indicate the area is 4.61 acres.

The Towns of Deer Isle and Stonington established municipal shellfish conservation programs in accordance with this statutory authority. As permitted by 12 M.R.S.A. § 6671(7), the programs are administered jointly by the Committee which is composed of members from each Town.

Chapter 2.20(1) of DMR's regulations requires that an intervenor application include a description of the manner in which the intervenor applicant may be directly and substantially affected by the granting of the proposed lease, including a description of the intervenor applicant's existing use of the area. The rule also provides that the intervenor application must include a description of any objections to the proposal.

The intervenor application stated that the lease proposal was discussed at a May 8, 2024, shellfish conservation meeting. According to the application, at that meeting it was determined that "the site itself does not overlap with the ongoing shellfishing activity in the area." However, harvesters and members of the Committee raised concerns that the suspended culture of oysters would negatively impact surrounding clam flats "since larval stage clams originating from this cove [Pickering Cove] will be unnaturally susceptible to predation by the suspended shellfish aquaculture at this site." The possible predation of larval clams by cultured oysters was identified as the Committee's primary concern and reason for objecting to the proposed lease.

The intervenor application stated that oyster populations have increased around intertidal flats and speculated that the populations are coming from aquaculture and have expanded due to warmer water temperatures. Simultaneously, the application acknowledged that the "development of oyster populations has many factors and can take time," but the Committee decided to intervene on the grounds that predation of larval clams by the oysters grown on the proposed site could have "a substantial and direct negative effect on the existing softshell clam population and the ongoing shellfish harvesting in Pickering Cove."

The intervenor application also stated that shellfish harvesting activities were characterized incorrectly by the lease applicant in their proposal. The lease application stated that the closest clam harvesting that occurs in the area is ~0.4 miles from the proposed lease site. The Committee stated that according to harvesters and the shellfish warden the closest harvest sites are ~500 feet from the proposal. The Committee submitted a rendering with the intervenor application, which identified 12 active softshell clamming sites in Pickering Cove including intertidal areas along Freese Island.

The Committee requested intervenor status based on the claim that oysters are increasing in population within intertidal areas, which may be due to aquaculture and warmer waters. Therefore, oysters grown on sites, like the one proposed, may consume enough larval clams to impact clam harvesters substantially and directly. However, Committee did not point to evidence to support this claim, and the application acknowledges that factors other than aquaculture may contribute to increasing oyster populations. According to DMR records, the only active lease site authorized for the suspended culture of oysters in Deer Isle is PEN LD4, which is in Long Cove and is 3.07 acres in size. There are no active lease sites for oysters in Stonington.

Intervenor applicants must demonstrate that they will be substantially and directly affected for the status to be conferred. In this case, the Committee did not demonstrate that it would be substantially and directly affected if the proposal were granted, so DMR denied its application for full-intervenor status. Chapter 2.20(3)(A) provides, in accordance with 5 M.R.S.A § 9054(2), that the Commissioner may grant limited intervenor status to an intervenor applicant where DMR determines that the applicant has a lesser interest than that necessary for full intervenor status but whose participation as a limited intervenor is warranted or would be helpful to decision making.

The Commissioner determined that the participation of the Committee as a limited intervenor would be helpful in assessing this proposal because members would be able to clarify the locations and extent of shellfish harvesting activities in the area, including access to those sites. The clarification is important because the Committee alleged that shellfish harvesting was not characterized correctly in the lease application. DMR also found that the Committee may be able to address other factors that are relevant to the decision criteria, including evidence to support its concerns about the impact the proposed lease would have on clam harvesting. Therefore, on May 20, 2024, the Department granted limited intervenor status to the Committee (hereafter limited intervenor).

On May 20, 2024, DMR also issued a procedural order providing testimony and cross-examination time limits, guidelines for exhibits, and a requirement for the limited intervenor to designate individuals to testify and cross-examine.

A public hearing on this application was held on May 28, 2024, and 28 individuals registered to participate in the hearing.

Sworn testimony was given at the hearing by the following witnesses:

Name	Affiliation
Abigail Barrows	Applicant
Crystal Gove	Limited Intervenor, Deer Isle-Stonington Shellfish Committee
Bill Gove, Sr.	
Raelene Pert	
Dr. Emaly Piecuch	Members of the public
Dennis Carter	
George Reardon	
Dick Eaton	
Megan Wood	
William Turner	
Allison Melvin	

Jesse Klein	Members of the public
Representative Holly Eaton	
Esmé Deprez	
Marilyn Reed Crowell	
Benjamin Jon Jackson	
Alex Loer	
Steven Joseph Dorr	
Danny L. Weed	
Joel Billings	

At the start of the hearing, eight documents were submitted to DMR for consideration as evidence by the applicant, limited intervenor, and members of the public. The applicant presented a printed copy of the PowerPoint presentation that accompanied testimony, and two scientific studies. The hearing officer admitted the PowerPoint into the record as exhibit E, but the two studies were excluded. The studies were excluded because they did not comply with the filing requirements specified in the Procedural Order. The limited intervenor presented two documents, one describing warming trends in the Gulf of Maine and the other summarizing softshell clam landings. The hearing officer admitted the two documents as exhibits A and B respectively. The limited intervenor also presented two photographs depicting American and European oysters. In response to a request by the hearing officer to clarify the purpose of the images, the limited intervenor stated that they were used to generally demonstrate the difference in appearance between American and European oysters. The hearing officer excluded the images as irrelevant because the difference in appearance between these marine organisms is commonly known and was not a matter of dispute at the hearing (5 M.R.S.A. § 9057(2)).

Emaly Piccuch submitted a document regarding DMR's aquaculture leasing process and Dennis Carter submitted two images of oysters that had settled on a beach in the Town of Surry. The hearing officer entered these as exhibits F, G, and H respectively. No objections were raised to the exhibits entered into the record or materials excluded.

The hearing was recorded by DMR. The Hearing Officer was Maria Eggett.

The evidentiary record before DMR regarding this lease application includes the recording of testimony at the hearing and exhibits admitted at the hearing. The evidence from all sources is summarized below.²

LIST OF EXHIBITS

² Exhibits 1, 2, and 3 are cited below as: Case file – "CF", Application – "App", site report – "SR".

1. Case file
2. Application
3. DMR site report, issued on April 5, 2024
4. Exhibit A – Annual Warming Trends in the Gulf of Maine (Limited Intervenor)
5. Exhibit B – Softshell clam landings (Limited Intervenor)
6. Exhibit E – Powerpoint slides (Applicant)
7. Exhibit F – Two suggested additions to aquaculture lease process (Emaly Piecuch)
8. Exhibit G – Photograph of oysters (Dennis Carter)
9. Exhibit H - Photograph of oysters (Dennis Carter)

2. DESCRIPTION OF THE PROJECT

A. Proposed Operations

The applicant proposes to culture American oyster (*Crassostrea virginica*), European oyster (*Ostrea edulis*), sugar kelp (*Saccharina latissima*/*Saccharina latissima* forma *angustissima*), horsetail kelp (*Laminaria digitata*), winged kelp (*Alaria esculenta*), dulse (*Palmaria palmata*), and nori/laver (*Porphyra umbilicalis*) using suspended culture techniques (App 1-2). The applicant proposes to use 50 oyster ranches (60-inches by 40-inches by 23-inches), 1,050 floating oyster bags (36-inches by 20-inches by 4-inches), and twelve marine algae spools (~400 linear feet, and wrapped around a 3 10-foot line) as well as buoys, moorings, depth control weights, and chains. Yellow lease marking buoys will be deployed along the perimeter (App 6). Gear will remain on-site year-round in varying configurations with algae lines deployed and shellfish bags submerged in the winter (App 8).

The applicant anticipates seeding oysters in April to June. Marine algae will be seeded from November to January. The applicant anticipates tending the oysters at least once per week and the marine algae a few times per month (App 7). The application states harvesting will occur 1-6 days per week for oysters and for a 2-3-week period in the spring for marine algae (App 8).



Figure 1: Vicinity map. Image from DMR site report.

B. Site Characteristics

On August 2, 2023, DMR scientists assessed the proposed lease site. DMR arrived on site at approximately 12:34 PM. The proposal is located on the southeastern side of Pickering Cove between Deer Isle, Big Hay Island and Freese Island (Figure 1). The surrounding shoreline is composed of rock ledges and marshland with mixed forest uplands. There are no houses within the general proximity of the proposed lease area.

On August 2, 2023, DMR began collecting depths at the proposed site at approximately 12:53 PM. The tide was ebbing with the next low tide predicted at 5:57 PM. Depths were determined to be between 16.3-23.4 feet. Correcting for tidal variations derives depths at mean low water (MLW, 0.0 feet) to be between 6.5-13.6 feet (SR 2).

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 upon determining that the project will not unreasonably interfere with: the ingress and egress of riparian owners; navigation; fishing or other uses of the area, taking into consideration other aquaculture uses of the area; the ability of the lease site and surrounding areas to support existing ecologically significant flora and fauna; or 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 comply with visual impact criteria adopted by the Commissioner.

A. Riparian Access

In examining riparian owner ingress and egress (12 M.R.S.A. § 6072(7-A)(A)), the Commissioner “shall consider the type of structures proposed for the lease site and their potential impact on the vessels which would need to maneuver around those structures.” Chapter 2.37(1)(A)(1) ³.

During DMR’s site assessment, no houses or piers were observed within 1,000 feet of the proposal. A small mooring field was observed to the northwest with the nearest mooring located approximately 908 feet northwest of the proposal. At the time of DMR’s site visit, one mooring was unoccupied, one mooring contained a small recreational powerboat, and the third mooring contained an unriggered sailboat (Figure 2). From the general proposal area, four houses were visible to the north further inside Pickering Cove and two additional houses were visible to the northeast. The houses to the northeast were observed to have stairs leading to the water, but no piers or docks were observed. Three small rowboats were observed tied up along the shore. There is approximately 655.3 feet of navigable water between the western boundary and the Deer Isle shoreline at MLW (Figure 2) (SR 4-5).



Figure 2: Proposed lease area with site visit observations. Image from DMR site report.

³ 13-188 C.M.R. ch. 2,

During the public hearing, George Reardon testified that his family owns property within 1,000 feet of the proposed site. Mr. Reardon stated that the proposed lease would not interfere with riparian ingress and egress. No other testimony concerning riparian ingress and egress was received. Based on the evidence, the proposal would not unreasonably interfere with riparian access to and from shore.

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

B. Navigation

When examining navigation, the Commissioner considers whether the lease activities would interfere with commercial or recreational navigation around the lease area and considers the current uses of the navigational channels in the area (12 M.R.S.A. § 6072(7-A)(B); Chapter 2.37(1)(A)(2)).

The proposal is in subtidal waters on the southeastern side of Pickering Cove in Southeast Harbor. Navigational charts indicate that much of the northern portion of Pickering Cove is shallow and intertidal. The proposal is located approximately 574 feet to the north of the entrance to Pickering Cove and the deeper, more open waters of Southeast Harbor (Figure 3). The nearest navigational aid is located approximately 5,964 feet to the southeast of the proposal. When DMR arrived at the proposal site, a small recreational powerboat with a cabin was anchored to the north of the proposal. The boat was occupied and appeared to be anchored for recreational purposes. During the site assessment, the boat raised its anchor and transited to the west of the proposal out of Pickering Cove.

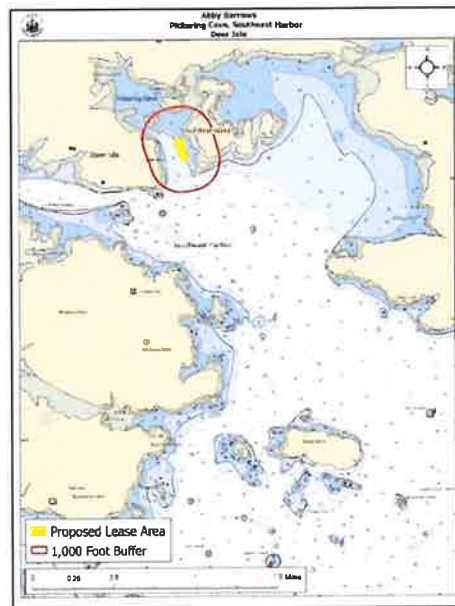


Figure 3: Navigational channels in the vicinity of the proposed lease area.

During the public hearing, no one offered testimony or evidence regarding potential impacts to navigation. Given the distance to navigational channels and the lack of public comments, it is unlikely the proposal will unreasonably interfere with navigation in the area.

Therefore, the aquaculture activities proposed for this site will not unreasonably interfere with navigation.

C. Fishing & Other Uses

When examining fishing and other uses, the Commissioner considers whether the lease activities would unreasonably interfere with commercial or recreational fishing or other water-related uses of the area (12 M.R.S.A. § 6072(7-A)(C); Chapter 2.37(1)(A)(3)). Additionally, the Commissioner considers any evidence concerning other aquaculture uses of the area (Chapter 2.37(1)(A)(4)).

Fishing. During DMR's site assessment, no fishing activities were observed. No lobster buoys were observed within 1,000 feet of the proposal (SR 6). The application states that some lobster fishing occurs in the area, as well as menhaden (commercial and recreational) and softshell clamming, both approximately 0.25-0.5 miles from the proposed lease site (App 13). The application states that the lease, if approved, would displace the traps of 1-2 lobstermen (App 13).

At the public hearing, the intervenor testified that softshell clam landings in the area have decreased in the last five years and that the number of individuals licensed to harvest softshell clams has also declined significantly. The intervenor partially attributed the decline in clams to invasive European green crabs and predatory worms and stated that harvesting softshell clams is no longer profitable, leading to a decrease in harvest activity. The intervenor also stated that Pickering Cove is closed to the wild harvest of shellfish during certain times of year, which further limits harvest activity in the area.⁴ With regard to this lease proposal, the intervenor felt that increasing water temperatures may cause the oysters to spawn and settle in high abundance on surrounding flats to the detriment of softshell clams.

The intervenor also stated that oysters are an additional predator as they consume softshell clam spat, which would lead to further declines in the softshell clam population. The intervenor stated that there appeared to be more oysters settling on flats within the area. However, the intervenor stated that they had not conducted any local studies or surveys to further evaluate this issue. The claims regarding increases in the oyster population were based on anecdotal evidence as the Committee had heard from local harvesters that there appears to be more oysters in Long Cove, Deer Isle, which is near an existing aquaculture lease. The intervenor also testified that climate change may be a factor influencing oyster populations in the area.

⁴ Pickering Cove was reclassified on September 5, 2023 to Approved, so that the seasonal closure is no longer in place. As part of the DMR notification process, the Town was notified of the reclassification.

Exhibit B, submitted by the intervenor, provides softshell clam landings, in pounds of shellstock, from dealer reports from 2018-2022. These figures were collected and published by DMR's Landings Program and list the data by county and then town. Deer Isle and Stonington are communities within Hancock County. The data demonstrate that from 2020-2022 softshell clam landings in Deer Isle have declined. From 2018-2021, softshell clam landings in Stonington have declined as well. Landings data were not reported for Stonington in 2022 as they did not meet confidentiality requirements.

Landings data for Hancock County indicate that many other towns within the area, for which data could be published, experienced declines in softshell clam landings between 2018-2022. Some towns, including Deer Isle, may also have experienced increases over the years. For example, in 2018, landings in Deer Isle were 448,664 pounds and in 2019, they were 606,496 pounds. The data do not provide a basis for the decline, but generally demonstrates a decline in softshell clam landings in pounds of shellstock from dealer reports. The data also demonstrate that the decline is not unique to Deer Isle or surrounding areas.

The intervenor also stated that they had concerns about the lease in the proposed location because there are clam diggers who operate in that area. On cross-examination, the intervenor stated that one area of the lease may overlap with an area that is actively dug for clams, but they could not be certain. However, the intervenor application states: "it was [in reference to a shellfish committee meeting held on May 8, 2024] confirmed that the site itself does not overlap with ongoing shellfishing activity in the area" (CF, Intervenor Application, pg. 1). The intervenor also clarified that no active research is occurring in Pickering Cove as of the date of the hearing, but the Committee might pursue research involving the collection of softshell clams spat in the future. The intervenor felt that the prevalence of oyster spat may interfere with the Committee's ability to collect softshell clam spat.

Emaly Piecuch, who is also a member of the Committee, testified that because the lease is at the mouth of Pickering Cove, water entering and exiting the cove will pass through the lease. Since oysters are filter feeders, more clam spat may be consumed. Emaly Piecuch also testified that the Committee should have been consulted about and consented to this proposal. Dennis Carter testified that some flats in the Town of Surry contain thousands of oysters.⁵ He felt that if the lease were approved, oysters would settle on the flats near and around the proposed lease site to the detriment of softshell clam populations. On cross-examination, Mr. Carter clarified that he was not a commercial harvester but generally concerned about this issue. Dick Eaton testified that he believes the decline in clams can be attributed to oysters.

⁵ The Department is aware that the area depicted is closed to the harvest of shellfish due to water quality. If the area was open to the harvest of shellfish it is most likely that the number of observed oysters would be much lower. In addition, the images were of areas in the Town of Surry, which is ~30 miles away from the Town of Deer Isle.

Mr. Eaton also testified that if the lease is approved, individuals who fish for menhaden would avoid the area as a courtesy to eliminate the possibility of gear conflicts. No testimony concerning lobster fishing was offered at the hearing.

Discussion:

While the intervenor and three members of the public testified that the oysters proposed to be cultivated on the lease may potentially impact the softshell clam population through predation and/or competition, no compelling evidence was presented to demonstrate that the proposed lease would create such adverse impacts. The intervenor acknowledged that there are other factors influencing softshell clam populations including predation from invasive European green crabs and worms, and factors related to climate change such as warming waters.

The intervenor testified that a portion of the proposed site may overlap with an area actively harvested for softshell clams. However, when the intervenor submitted their application, they depicted general harvest areas within Pickering Cove (see Figure 4 below), including around Freese and Big Hay Islands. Based on the site report, the closest distance to the Freese Island shoreline is approximately 104.2 feet as measured from the NE corner of the proposed site at MLW. The shoreline of Big Hay Island, at MLW, is approximately 851.7 feet to the north of the proposed lease. In addition, the harvest locations are depicted within the intertidal and the proposed lease is entirely subtidal.

During the hearing, the Committee expressed an interest in conducting research related to softshell clam settlement within Pickering Cove, which would require the collection of clam spat. The intervenor expressed concerns that the oysters cultivated on the proposed lease site would interfere with the collection of clam spat, because the oysters may consume large amounts of clam spat or otherwise settle on the flats to the detriment of softshell clams. However, there is no active collection of clam spat by the intervenor in Pickering Cove or plans to do so within the near future nor is the intervenor engaged in any other research within this area. The claim that oysters would interfere with the study was also speculative as no evidence was presented to demonstrate that the culture of oysters on the lease site would adversely impact softshell clam populations. Given the evidence, the proposed lease would not unreasonably interfere with the harvest of softshell clams or other shellfish species within the area nor would it preclude the Committee from conducting work associated with the management of shellfish.

Shellfish conservation programs have management authority over certain shellfish resources above the extreme low water mark. In accordance with 12 M.R.S.A. §6072(3), if the lease proposal is above the mean low water mark, and the municipality has a shellfish conservation management program in accordance with 12 M.R.S.A. §6671 then the applicant is required to obtain consent for the proposed site from the municipal officers. The proposed site is entirely subtidal, so the applicant is not required to obtain consent from Deer Isle municipal officers.

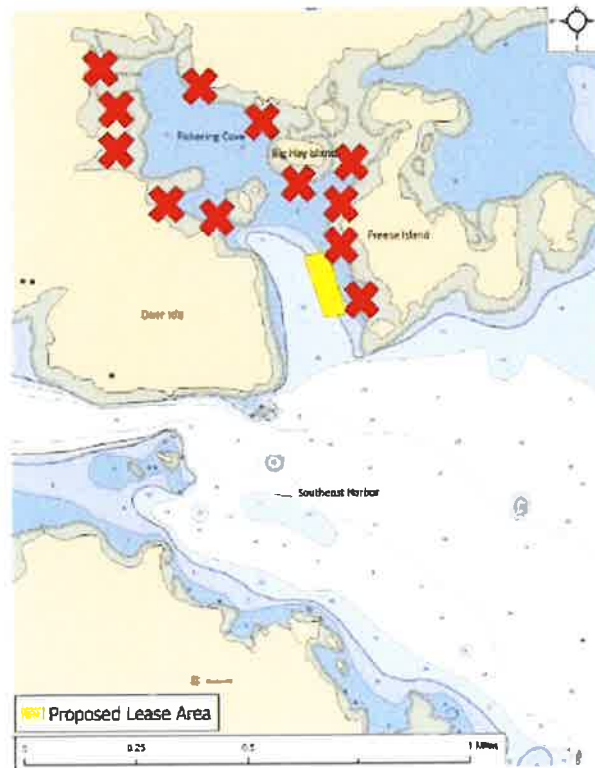


Figure 4: General clam harvest areas in relationship to the proposed lease area. Taken from limited intervenor application.

While testimony was offered that menhaden fishing may be impacted by the proposed lease, in its application for intervenor status, the limited intervenor stated “the concern on the impact of the lease area would have on the pogie [menhaden] fishing seemed minor to the group”. Only one fisherman offered testimony concerning menhaden. Specifically, Dick Eaton stated that menhaden fisherman avoid the area near an existing aquaculture lease, in Long Cove, out of courtesy (versus the area being closed to the fishery or the site preventing fishing from occurring) to avoid the potential for gear conflict.

Mr. Eaton’s testimony indicated that if this lease were granted, he would choose to avoid fishing for menhaden in Pickering Cove out of courtesy. However, Mr. Eaton did not testify that he could not fish for menhaden in other areas around the lease if it were granted. Based on DMR’s licensing data, Mr. Eaton fishes for menhaden from a 30-foot vessel. At mean low water, the proposed lease is ~655.3 feet from the shoreline of Deer Isle, and ~851.7 feet from Big Hay Island (SR 3). These distances provide an adequate area for Mr. Eaton’s menhaden fishing to occur within Pickering Cove. Whether Mr. Eaton chooses to fish for menhaden in this area is a matter of preference, but that activity could continue to occur. Therefore, the proposal will not unreasonably interfere with menhaden fishing.

No testimony was provided concerning impacts to lobster fishing. The application suggests that if the proposal is granted, one to two fishermen may need to deploy traps in other locations within Pickering Cove. For example, rather than deploying traps within the lease boundaries they would be deployed outside the boundaries. Given the absence of testimony and minimal impacts to anyone deploying lobster traps within the area, the proposed site will not unreasonably interfere with lobster fishing.

Therefore, the aquaculture activities proposed for this site will not unreasonably interfere with fishing.

Other aquaculture uses: There are no active aquaculture leases or Limited Purpose Aquaculture licenses (LPAs) within 1,000 feet of the proposal (SR 6).

No testimony was received by other aquaculture lease or license holders in the area to indicate they have concerns regarding the proposed activities. Based on this evidence, the proposed lease will not unreasonably interfere with other aquaculture activities in the area.

Other water-related uses. The application states kayaking does occur in the cove, but kayakers will be able to navigate around the proposed lease (App 13). No evidence or testimony was provided at the hearing concerning kayaking, swimming, or other similar uses of the area.

Therefore, given the information in the record, the aquaculture activities proposed for this site will not unreasonably interfere with fishing, existing aquaculture operations, or other water-related uses of the area.

D. Flora & Fauna

When examining existing system support, the Commissioner considers the degree to which the use of the lease site will interfere with significant wildlife habitat and marine habitat or with the ability of the lease site and marine and upland areas to support ecologically significant flora and fauna (12 M.R.S.A. § 6072(7-A)(D); Chapter 2.37(1)(A)(5)).

Site observations. DMR scientists utilized a remotely operated vehicle to assess the epibenthic ecology of the proposed lease. Sand shrimp (*Crangon septemspinosa*) was found in common abundance in the proposed lease footprint (SR 7).

Eelgrass (*Zostera marina*)

Historical records of eelgrass collected in 2010⁶ indicate that there is mapped eelgrass within 1,000 feet of the proposal. The nearest mapped eelgrass is a patch approximately 61.2 feet to the east of the proposal. During DMR’s site assessment, scientists did not observe any eelgrass within the boundaries of the proposed site (SR 8).



Figure 4: Mapped eelgrass (*Z. marina*) in the vicinity of the proposed lease area.

Wildlife

According to Geographic Information System (GIS) data maintained by the Maine Department of Inland Fisheries and Wildlife (MDIFW) and available through the Maine Office of GIS (MEGIS), there is a mapped Tidal Waterfowl and Wading Bird Habitat 670.9 feet to the northeast of the proposal. The nearest mapped bald eagle (*Haliaeetus leucocephalus*) nest is located approximately 1.64 miles to the west of the proposal.

On July 28, 2022, a Wildlife Biologist with MDIFW responded by email to a “Request for Agency Review and Comment”, stating that minimal impacts to wildlife are anticipated.

During DMR’s site assessment, scientists observed double-crested cormorants (*Nannopterum auritum*), common terns (*Sterna hirundo*), herring gulls (*Larus argentatus*), lesser black backed gulls

⁶ Data obtained from The Maine Office of GIS “GISVIEW.MEDMR.Eelgrass”. This is the most current record of mapped eelgrass within the vicinity of the proposal.

(*Larus fuscus*), a bald eagle (*Haliaeetus leucocephalus*), as well as a harbor seal (*Phoca vitulina*) in the vicinity of the proposal (SR 9).

The limited intervenor raised concerns related to the interactions between cultured oysters and wild populations of softshell clams. Specifically, that oysters cultured on the proposed site may consume large amounts of clam spat or otherwise settle on the flats to the detriment of softshell clams. Those considerations were addressed in Section C of this decision as the limited intervenor suggested it would adversely impact the commercial harvest of softshell clams. DMR found that those concerns were not supported by any evidence in the record. That finding is reiterated in this section in so far as it relates to the impact the proposed site may have on this criterion.

No other testimony concerning flora and fauna was offered at the hearing. Given the expert analysis of MDIFW and the site report, it is unlikely that the proposed lease will adversely affect the existing flora and fauna.

Therefore, 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

When examining interference with public facilities, the Commissioner considers the degree to which the lease interferes with public use or enjoyment within 1,000 feet of beach, park, docking facility, or certain conserved lands owned by the Federal Government, the State Government, or a municipal government (12 M.R.S.A. § 6072(7-A)(F); Chapter 2.37(1)(A)(7)).

The proposal is not within 1,000 feet of any beach, park, or docking facilities owned by federal or state governments. The proposed lease is within 1,000 feet of conserved lands owned by federal and state governments. The “Edgar M. Tennis Preserve” is located on Deer Isle, which is approximately 655.3 feet to the west of the proposal at MLW. The preserve is owned by the State of Maine and managed by the Island Heritage Trust. The preserve is publicly accessible and contains hiking trails (SR 10).

Big Hay Island is located approximately 851.7 feet to the north of the proposal at MLW. The island is federally owned by the U.S. National Park Service and is considered part of Acadia National Park. The island is an undeveloped conservation area (SR 10).

During the public hearing, no one offered testimony or evidence regarding potential impacts to these public lands. Given the distance to the conserved lands, the nature of the activities proposed, and the lack of testimony concerning potential impacts, it is unlikely that the proposed lease will adversely affect public lands.



Figure 5: Conserved lands within 1,000 feet of the proposed site.

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

F. Source of Organisms

In accordance with 12 M.R.S.A. §6072(7-A)(E), standard lease applicants are required to demonstrate that there is an available source of organisms to be cultured for the lease site. When examining the source of organisms, the Commissioner shall include but not be limited to, consideration of the source's biosecurity, sanitation, and applicable fish health practices (Chapter 2.37(1)(A)(6)).

According to the application, the source for all marine algae species would be Springtide Seaweed in Gouldsboro, Maine. European oyster (*O. edulis*) would be sourced from Downeast Institute in Beals, Maine and American oyster (*C. virginica*) would be sourced from Muscongus Bay Aquaculture in Bremen, Maine (App 2). These are currently approved sources for these species. If the applicant is unable to obtain stock from these sources, then it must come from another DMR approved source.

Therefore, the applicant has demonstrated that there are available sources of stock to be cultured for the lease site.

G. Light

The Commissioner considers whether there will be an unreasonable impact from lighting in accordance with 12 M.R.S.A §6072(7-A)(G) and the regulatory standards specified in Chapter 2.37(1)(A)(8). The statute specifies that a lease must not result in an unreasonable impact from light at the boundaries of the proposed site. The applicable regulation imposes specific requirements related to lighting, including a requirement that the applicant demonstrate that all reasonable measures will be taken to mitigate light impacts associated with the lease activities.

According to the application, lights would only be used on the proposed lease site in emergency situations (App 10). Chapter 2.37(1)(A)(8) exempts the use of lights in such situations.

Therefore, the proposed aquaculture activities will not result in an unreasonable impact from light at the boundaries of the lease site.

H. Noise

The Commissioner considers whether there will be an unreasonable impact from noise in accordance with 12 M.R.S.A §6072(7-A)(G) and the regulatory standards specified in Chapter 2.37(1)(A)(9). The statute specifies that a lease must not result in an unreasonable impact from noise at the boundaries of the proposed site. The applicable regulation imposes specific requirements related to noise, including a requirement that the applicant take all reasonable measures to mitigate noise impacts associated with the lease activities.

According to the application, the only source of noise on-site would be a vessel powered by a four-stroke outboard. On cross-examination, the applicant confirmed that no other noise generating equipment is proposed (Barrows testimony).

Based on this information, any noise generated by the proposed operations is unlikely to have a significant effect at the boundaries of the lease site.

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

I. Visual Impact

Before granting a lease, the Commissioner must determine that the proposed project will be in compliance with visual impact criteria adopted by the commissioner relating to color, height, shape and mass (12 M.R.S.A §6072(7-A)(H)). The Commissioner has adopted such regulatory standards specified in Chapter 2.37(1)(A)(10).

The application stated that surface line mooring balls/buoys within the farm will be yellow, orange, white, or black. However, in response to a question from DMR at the hearing, the applicant confirmed that if the project is approved, only buoys in the colors approved by Chapter 2.37(1)(A)(10) will be used (Barrows testimony). With this change, the proposal would be in compliance with all regulatory standards related to visual impacts.

Therefore, the equipment utilized on the proposed lease site will comply with the DMR's visual impact criteria.

6. CONCLUSIONS OF LAW

Based on the above findings, I conclude that:

- a. The aquaculture activities proposed for this site will not unreasonably interfere with the ingress and egress of any riparian owner.
- b. The aquaculture activities proposed for this site will not unreasonably interfere with navigation.
- c. The aquaculture activities proposed for this site will not unreasonably interfere with fishing or other water-related uses of the area, taking into consideration other aquaculture uses in the area.
- d. The aquaculture activities proposed will not unreasonably interfere with the ability of the lease site and surrounding areas to support existing ecologically significant flora and fauna.
- e. The aquaculture activities proposed for this site will not unreasonably interfere with the public use or enjoyment within 1,000 feet of beaches, parks, docking facilities, or certain conserved lands owned by municipal, state, or federal governments.
- f. The applicant has demonstrated that there is an available source for organisms to be cultured for the lease site.
- g. The aquaculture activities proposed for this site will not result in an unreasonable impact from light at the boundaries of the lease site.
- h. The aquaculture activities proposed for this site will not result in an unreasonable impact from noise at the boundaries of the lease site.
- i. The aquaculture activities proposed for this site will comply with the visual impact criteria contained in DMR Regulation 2.37(1)(A)(10).

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

7. DECISION

Based on the foregoing, the Commissioner grants a lease to Abigail Barrows for 4.61 acres for twenty years for the cultivation of American/Eastern oyster (*Crassostrea virginica*), European/Belon oyster

(*Ostrea edulis*), sugar kelp (*Saccharina latissima*/*Saccharina latissima* forma *angustissima*), horsetail kelp (*Laminaria digitata*), winged kelp (*Alaria esculenta*), dulse (*Palmaria palmata*), nori/laver (*Porphyra umbilicalis*) using suspended culture techniques. The lessee shall pay the State of Maine rent in the amount of \$100.00 per acre per year. The lessee shall post a bond or establish an escrow account pursuant to DMR Rule 2.40 (2)(A) in the amount of \$5,000.00, conditioned upon performance of the obligations contained in the aquaculture lease documents and all applicable statutes and regulations.

8. 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 M.R.S.A §6072 (7-B).⁷ 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. No conditions shall be imposed on this lease.

9. REVOCATION OF LEASE

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

Dated: _____

9/19/20



Patrick C. Keliher, Commissioner
Department of Marine Resources

⁷ 12 MRSA §6072 (7-B) states: "The commissioner may establish conditions that govern the use of the leased area and limitations on the aquaculture activities. These conditions must encourage the greatest multiple, compatible uses of the leased area, but must also address the ability of the lease site and surrounding area to support ecologically significant flora and fauna and preserve the exclusive rights of the lessee to the extent necessary to carry out the lease purpose."