

**STATE OF MAINE
DEPARTMENT OF MARINE RESOURCES**

University of New England

SACO RIx

Application for Change in Gear Authorization
Northeast of Ram Island, Saco

June 8, 2021

FINDINGS OF FACT, CONCLUSIONS OF LAW, AND DECISION

The University of New England applied to the Department of Marine Resources (DMR) to change the gear authorization on experimental lease SACO RIx, located northeast of Ram Island in Saco Bay, Saco, York County, Maine. The leaseholder is seeking authorization to alter the mooring system and general configuration of the horizontal longline system for the cultivation of marine algae.

1. THE PROCEEDINGS

The amendment application was submitted to DMR on January 25, 2021 and was deemed complete by DMR on February 5, 2021. Notice of the application and the 14-day public comment period were provided to other state and federal agencies, riparian landowners, the Town of Saco and its Harbormaster, and others on DMR's mailing list. The evidentiary record before DMR regarding this lease amendment application includes five exhibits (see exhibit list below).

A. List of Exhibits^{1,2}

1. Application for a change of gear authorization deemed complete February 5, 2021
2. Case file
3. Executed lease document for SACO RIx signed October 11, 2019
4. Original lease decision signed May 14, 2019
5. Original lease application, deemed complete February 14, 2019

2. STATUTORY CRITERIA & FINDINGS OF FACT

Approval of experimental aquaculture lease amendments is governed by 12 M.R.S.A. § 6072-A (8) and Chapter 2.44 of DMR regulations. The statute and regulations provide that the Commissioner may grant amendments for the use of specific gear, species, and/or operational modifications on an existing lease site provided the proposed changes are consistent with the findings on the underlying lease application, do not materially alter the findings of the original decision, and would not result in a change to the original lease conditions.

¹ Exhibits 1-5 are cited below as: Amendment Application – “App”, Case File – “CF”, Executed lease for SACO RIx – “Exhibit 3”, DMR Decision on Lease SACO RIx - “Exhibit 4”, and Original Experimental Lease Application for SACO RIx – “Exhibit 5”.

² Page numbers are cited using the PDF page number, which may not always match the page number written on documents.

A. Original Lease Decision

On May 14, 2019 DMR granted lease SACO R1x to The University of New England (Exhibit 4, page 7). DMR's Findings of Fact, Conclusions of Law, and Decision, henceforth referred to as "the decision", found that the evidence in the record supported the conclusion that the aquaculture activities proposed by The University of New England met the requirements for granting an experimental aquaculture lease as set forth in 12 M.R.S.A. § 6072-A (Exhibit 4, page 6).

The decision provided authorization to cultivate sugar kelp (*Saccharina latissima*), winged kelp (*Alaria esculenta*), horsetail kelp (*Laminaria digitata*), and dulse (*Palmaria palmata*) using suspended culture techniques (Exhibit 4, page 6). Four horizontal longlines, each 200 feet in length, connected to header bars at either end, and deployed approximately 6 feet below the surface of the water comprise the gear authorized for the suspended culture of marine algae on SACO R1x (Exhibit 4, page 1 & Exhibit 5, pages 10 & 11). In the original application, The University of New England proposed to secure each longline with either two (one at each end) or eight (four at each end) 110-pound claw anchors (Exhibit 5, pages 10 & 11).

Conditions imposed on lease SACO R1x, pursuant to 12 M.R.S.A § 6072-A (15) and located on pages 6 & 7 of the decision, are as follows:

1. The lease site must be marked in accordance with both U.S. Coast Guard requirements and DMR Rule 2.80.
2. All gear, including moorings, shall be removed from the lease site annually, from May 16th through October 14th.
3. Commercial fishing, except by authorization of the leaseholder, is prohibited within the lease boundaries during the time when culture gear is installed.

B. Proposed Gear Changes and Findings

The University of New England proposes to alter the mooring system and general configuration of the horizontal longline system for the cultivation of marine algae on SACO R1x. Specifically, the leaseholder is proposing to deploy an array system, consisting of up to 32 helical anchors, 8 header lines, (30) 50-100 foot cultivation lines made of fiberglass rod, and associated node floats, tensioning floats, and dropper floats (App, pages 2-4). Cultivation lines would be deployed approximately 6 feet below the surface of the water (CF). According to the application, 9 node floats, measuring 4-5 feet in length and 2-3 feet in diameter, 36 tensioning floats, measuring 16"-30" in diameter, and 30 dropper floats, measuring 15"-20" in diameter, would be deployed (App, page 2). The applicant is proposing to remove all gear, other than the screw anchors, from June 1st to October 14th (App, page 6). Screw anchors would remain in place and would be marked with flagging tape or subsurface buoys (App, page 6).

As SACO R1x is already permitted to deploy horizontal longlines for the culture of marine algae, the moored array proposed to culture marine algae in this amendment application is akin in purpose to the gear already authorized on the lease site. Additionally, as cultivation lines would be deployed approximately 6 feet below the surface of the water, the proposal is similar to what is already installed on the proposal. The main difference between the two proposals is that more gear would be deployed on the site when kelp is being cultivated. However, as the proposed gear change would remain within the bounds of the existing

lease site, and because the gear type is similar in style to the gear already permitted, the proposed gear is unlikely to significantly change the impact of the lease on other users of the area. Furthermore, DMR did not receive any public comments regarding this application.

In the decision, the finding of fact and discussion of the original application's impact on riparian access, navigation, fishing, and other uses of the area considered the lease area as a whole. For example, when discussing how the proposal might impact navigation, page 3 of the decision states:

According to the site report, over 800 feet of navigable area are located between the proposed lease boundaries and the 30-foot contour lines to the north and northwest, and over 500 feet of navigable area are located between the proposed lease and the 30-foot contour line to the south.

When discussing the gear that would be deployed on the lease site, page 3 of the decision goes on to state:

...because the applicant is proposing to submerge longlines approximately 6 feet below the surface of the water, shallow draft vessels will maintain the ability to navigate over the proposed lease area throughout the year.

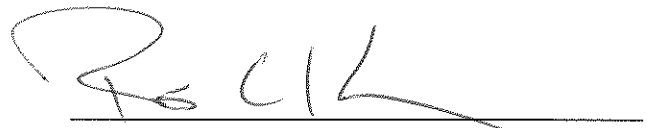
These excerpts are representative of the rest of the decision, in that they show that when considering the original application's impact on riparian access, navigation, fishing, and other uses of the area, the decision did not discuss the amount of space occupied by gear within the lease area but instead considered the lease area as a whole and the depth that longlines would be deployed below the surface of the water. Given this, and because the array system for the cultivation of marine algae proposed in this amendment application is similar in type to the gear already authorized on the lease site, the proposed change in gear layout is consistent with the findings on the underlying lease application and would not materially alter the findings of the original decision.

However, certain elements of the amendment application cannot be granted as they would result in a change to the original lease conditions. Specifically, the applicant is proposing to remove all gear, other than the screw anchors, from June 1st to October 14th (App, page 6). Screw anchors are proposed to remain in place throughout the year and are proposed to be marked with flagging tape or subsurface buoys (App, page 6). A condition imposed on lease SACO RIx requires that all gear, including moorings, be removed from the lease site annually from May 16th through October 14th, and therefore the proposed timing for gear deployment and the proposed year-round deployment of screw anchors would result in a change to the original lease conditions and therefore cannot be granted per DMR Rule 2.44(1).

3. DECISION

Based on the foregoing, the Commissioner grants the request from The University of New England for the authorization to alter the mooring system and general configuration of the horizontal longline system for the cultivation of marine algae on experimental lease SACO RIx. Specifically, the leaseholder may deploy an array system for the cultivation on marine algae on SACO RIx annually from October 15th through May 15th; all gear, including screw anchors deployed in this amendment, must be removed from the lease site from May 16th through October 14th, annually.

Dated: 6/8/2021

A handwritten signature in black ink, appearing to read 'P. C. Keliher', written over a horizontal line.

Patrick C. Keliher, Commissioner
Department of Marine Resources

**STATE OF MAINE
DEPARTMENT OF MARINE RESOURCES**

Experimental Aquaculture Lease Application

Suspended culture of marine algae

Saco Bay, Saco

**University of New England
SACO RIx**

May 14, 2019

FINDINGS OF FACT, CONCLUSIONS OF LAW, AND DECISION

The University of New England applied to the Department of Marine Resources (“DMR”) for a three-year experimental aquaculture lease for scientific purposes located northeast of Ram Island in Saco Bay, Saco, York County. The proposed lease is 3.91 acres in size, and is proposed for the suspended cultivation of sugar kelp (*Saccharina latissima*), winged kelp (*Alaria esculenta*), horsetail kelp (*Laminaria digitata*), and dulse (*Palmaria palmata*). DMR accepted the application as complete on February 14, 2019. No requests for a public hearing were received during the comment period, and no hearing was held.

1. THE PROCEEDINGS

Notice of the application and the 30-day public comment period were provided to state and federal agencies, riparian landowners, the Town of Saco and its Harbormaster, and others on the Department’s mailing list. Notice of the application and comment period was published in the *Journal Tribute* on March 7, 2019.

The evidentiary record before the Department regarding this lease application includes the application, the Department’s site report dated April 19, 2019, and the case file. The evidence from each of these sources is summarized below.¹

2. DESCRIPTION OF THE PROJECT

A. Proposed Operations

The purpose of the proposed experimental lease is to assess seaweed farming structures in open ocean conditions (App 4²). Marine algae species would be cultivated using 4 longlines, each 200 feet in length, positioned approximately 6 feet below the surface of the water (App 4 & 8-10). Culture gear, including mooring gear, would be removed from the site annually, from May 16th through October 14th, during the lease term (SR 2). At the end of each growing season, marine algae would be harvested from the longlines and removed from the site. The proposed lease is for scientific purposes; marine algae harvested from the site would not be sold (App 4).

¹ These sources are cited, with page references, as CF (case file), App (application), SR (site report).

² For ease of referencing, DMR staff corrected the page numbers on the application after it was deemed complete and sent out for public comment. All citations in this application refer to the updated page numbers on the application.

B. Site Characteristics

On April 5, 2019, DMR scientists visited the proposed lease site and assessed it and the surrounding area in consideration of the criteria for granting an experimental aquaculture lease. The proposed site occupies subtidal waters in Saco Bay, northeast of Ram Island (SR 2). A single house is located on Ram Island; the island's shoreline is rocky (SR 2). At mean low water, the distance from the northwest corner of the proposed lease site to the nearest point on Ram Island is approximately 1,126 feet (SR 5). The proposed lease is located over 1,000 feet to the north and northwest of the marked channel leading into the Saco River (SR 2 & SR 5). At mean low water, water depths within the proposed lease site range between approximately 41.3 and 44 feet. (SR 4).

3. STATUTORY CRITERIA & FINDINGS OF FACT

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

A. Riparian Access

The closest shorefront land to the proposed lease is Ram Island, located over 1,000 feet to the southwest (SR 6). No docks were observed on Ram Island during DMR's site visit on April 5, 2019 (SR 6). Additionally, no moorings were observed in the vicinity of the proposed lease site (SR 6). According to the site report, the proposed lease would not inhibit access to the Ram Island shoreline (SR 6). Furthermore, the distance between the proposed lease and other shorelines makes it unlikely that the proposal would negatively impact riparian access elsewhere in Saco Bay.

The Saco Harbormaster stated in written comments that the proposed lease application does not interfere with the ability of riparian landowners located within 1,000 feet of the proposed lease to get to and from their property.³ During the review period, the Department did not receive any comments from members of the public concerning access to riparian owned land. Based on the absence of public comments it is reasonable to conclude that there are no concerns about the effects the proposed site may have on riparian ingress and egress. It appears from this evidence that riparian ingress and egress will not be unduly affected by the proposed lease application.

³ CF: Harbormaster Questionnaire dated March 23, 2019.

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

B. Navigation

The Saco River channel is the closest marked channel to the proposed lease. A red nun, located over 1,500 feet to the southeast, is the closest navigational aid to the proposal and therefore, vessels navigating within this marked channel will not be hindered by the proposed lease operations (SR 6).

The proposed lease is located in a section of Saco Bay that is surrounded by Ram Island and three submerged ledges (SR 7). According to the site report, over 800 feet of navigable area are located between the proposed lease boundaries and the 30-foot contour lines to the north and northwest, and over 500 feet of navigable area are located between the proposed lease and the 30-foot contour line to the south (SR 7). Due to the distance between the proposed lease, Ram Island, and the shallow ledges, it appears that navigation in the immediate vicinity of the proposed lease, were it to be granted, would not be prevented.

Additionally, because the applicant is proposing to submerge longlines approximately 6 feet below the surface of the water, shallow draft vessels will maintain the ability to navigate over the proposed lease throughout the year (SR 7). Lastly, the proposed aquaculture gear would be removed from the site annually from May 16th through October 14th, so the proposed lease would not pose an unreasonable impact to navigation in the area when boating activities are most prevalent (SR 7).

The Saco Harbormaster indicated that the proposed lease does not interfere with navigation in designated channels.⁴ During the review period, the Department did not receive any public comments regarding navigation. Based on the absence of public comments, it is reasonable to conclude that there are no concerns regarding the effects the proposed lease may have on navigation within the area. It appears from this evidence that navigation in the area will not be unduly affected by the proposed lease application.

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

C. Fishing & Other Uses

Fishing. According to the Saco Harbormaster, “commercial lobstering occurs in this area beginning at the end of May until October” and recreational fishing occurs in the area during June, July, and August.⁵ During the site visit on April 5, 2019, lobster buoys were observed scattered outside of the proposed lease site, but no commercial or recreational activities were observed within the lease boundaries (SR 7). In the site report, DMR acknowledged that commercial and recreational uses of this area are “more prevalent in the summer months” (SR 7).

⁴ CF: Harbormaster Questionnaire dated March 23, 2019.

⁵ CF: Harbormaster Questionnaire dated March 23, 2019.

The applicants intend to remove all gear, including moorings, from the proposed site from May 16th through October 14th each year (App 4 & SR 2). Therefore, the proposed lease would not impede commercial or recreational fishing during summer months, when these activities are most frequent. Additionally, due to the remaining space available in Saco Bay, beyond the proposed lease boundaries, it appears that there would be adequate room for commercial and recreational fishing in the general area during the time when longlines are proposed to be deployed.

Given the seasonal nature of the proposed lease, the seasonal nature of commercial and recreational fishing activities in the area, the remaining space available in Saco Bay, and the absence of public comments expressing concerns regarding interference with fishing, it is reasonable to conclude that the proposed lease is unlikely to unreasonably affect commercial and recreational fishing activities in the area.

Exclusivity. The applicant requests that commercial fishing be prohibited within the boundaries of the proposed site from October 15th through May 15th to avoid gear entanglement (App 4). Restricting commercial fishing during the time when culture gear is deployed on the lease site is reasonable to enable the aquaculture project to be carried out while encouraging the greatest number of compatible uses of the area, as provided for in 12 MRS §6072-A (15). Conditions reflecting these restrictions will be included in the lease.

Other aquaculture uses. Two existing aquaculture operations are located within one mile of the proposed lease (SR 7). The closest of these is a Limited Purpose Aquaculture (LPA) license permitted for the culture of marine algae and located within the boundaries of the proposed lease (SR 7). This LPA license is held by an individual associated with the lease proposal and would be encompassed by the lease, if granted (SR 7 & App 2).

An experimental lease, permitted for the suspended culture of marine algae, is located over 3,500 feet to the west of the proposal. Due to this distance, it is unlikely that the activities proposed by University of New England will negatively impact the existing lease. Based on this evidence, it appears that the proposed lease will not unreasonably interfere with other aquaculture uses in the area.

Other water-related uses. During the site visit on April 5, 2019, DMR staff did not observe any other water-related uses of the proposed lease area. During the review period, the Department did not receive any public comments detailing other uses of the area. Based on the absence of public comments, it is reasonable to conclude that there are no concerns regarding the effects the proposed lease may have on other water-related uses of the area.

Therefore, considering other aquaculture uses of the area, the activities proposed for this site will not unreasonably interfere with fishing or other water related uses of the area.

D. Flora & Fauna

Data collected by DMR, in 2002, show the closest documented eelgrass (*Zostera marina*) beds were located over 4,000 feet from the proposed lease (SR 19). Additionally, data maintained by the Maine Department of Inland Fisheries and Wildlife (MDIF&W), show that the proposed lease is located within

one mile of four seabird nesting islands (SR 8). MDIF&W data also show Tidal Wading Bird and Waterfowl Habitat, along with designated habitat for the harlequin duck, the piping plover, and the salt marsh sparrow over 3,000 feet to the south of the proposal (SR 8). DMR sent a copy of the lease application to MDIF&W for their review and comment, but did not receive a response.⁶

Based on the evidence that the proposed lease does not intersect with historical eelgrass beds or mapped wildlife habitat, and because DMR's site report does not contain concerns regarding the impact of the proposed lease on the surrounding ecosystem, it appears that the culture of marine algae, as proposed for this lease site, will not interfere with the ecological functioning of the area.

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

Per the site report, "There are no beaches, parks, or docking facilities owned by federal, state, or municipal government within 1,000 feet of the proposed lease site" (SR 10).

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

F. Source of Organisms

Marine algae seed would be obtained from The University of New England's Arthur P. Girard Marine Science Center in Biddeford, Maine (App 1). This facility, if sourcing reproductive material from Maine waters, is an approved source of stock.

Therefore, the applicant has demonstrated that there is an available source of stock to be cultured for the lease site.

4. CONCLUSIONS OF LAW

Based on the above findings, I conclude that:

1. The aquaculture activities proposed for this site will not unreasonably interfere with the ingress and egress of any riparian owner.
2. The aquaculture activities proposed for this site will not unreasonably interfere with navigation.
3. The aquaculture activities proposed for this site will not unreasonably interfere with fishing or other uses of the area, taking into consideration the number and density of aquaculture leases in the area.
4. The aquaculture activities proposed for this site will not unreasonably interfere with the ability of the lease site and surrounding areas to support existing ecologically significant flora and fauna.

⁶ CF: Email from C. Burke to J. Perry, MDIF&W Environmental Review Coordinator, dated March 6, 2019.

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

6. The applicant has demonstrated that there is an available source of stock to be cultured for the lease site.

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

5. DECISION

Based on the foregoing, the Commissioner grants the requested experimental lease of 3.91 acres to The University of New England for three years, the term of the lease to begin within twelve months of the date of this decision, on a date chosen by the lessee⁷; however, no aquaculture rights shall accrue in the lease area until the lease is fully executed.

This lease is granted to the lessee for the cultivation of sugar kelp (*Saccharina latissima*), winged kelp (*Alaria esculenta*), horsetail kelp (*Laminaria digitata*), and dulse (*Palmaria palmata*) using suspended culture techniques. The lessee shall pay the State of Maine rent in the amount of \$100.00 per acre per year. Since this is an experimental lease with more than 400 sq. ft. of structures and no discharge, a bond or escrow account is required. The lessee shall post a bond or establish an escrow account pursuant to DMR Rule 2.64 (12) (B) in the amount of \$5,000.00, conditioned upon performance of the obligations contained in the aquaculture lease documents and all applicable statutes and regulations.

6. CONDITIONS TO BE IMPOSED ON LEASE

The Commissioner may establish conditions that govern the use of the lease area and impose limitations on aquaculture activities, pursuant to 12 MRSA §6072-A (15)⁸. Conditions are designed to encourage the greatest multiple compatible uses of the lease area, while preserving the exclusive rights of the lessee to the extent necessary to carry out the purposes of the lease.

The following conditions shall be incorporated into the lease:

1. The lease site must be marked in accordance with both U.S. Coast Guard requirements and DMR Rule 2.80.

⁷ DMR Rule 2.64 (14) provides:

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

⁸ 12 MRSA §6072-A (15) provides that:

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

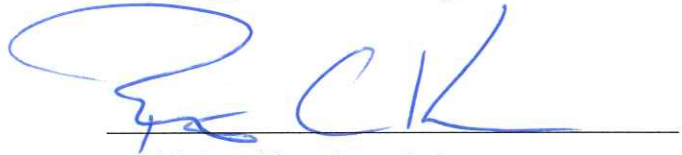
2. All gear, including moorings, shall be removed from the lease site annually, from May 16th through October 14th.
3. Commercial fishing, except by authorization of the leaseholder, is prohibited within the lease boundaries during the time when culture gear is installed.

7. REVOCATION OF EXPERIMENTAL LEASE

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

Dated: _____

3/14/19



Patrick C. Keliher, Commissioner
Department of Marine Resources