

**STATE OF MAINE
DEPARTMENT OF MARINE RESOURCES**

Thomas Henninger

CAS LJ2x

Application for Change in Species and Gear Authorization
North of Littlejohn Island, Yarmouth

February 24, 2021

FINDINGS OF FACT, CONCLUSIONS OF LAW, AND DECISION

Thomas Henninger applied to the Department of Marine Resources (DMR) to change the species and gear authorization on his experimental lease CAS LJ2x, located north of Littlejohn Island in the Town of Yarmouth, Cumberland County, Maine. The leaseholder is seeking authorization to cultivate sugar kelp (*Saccharina latissima*) and skinny kelp (*Saccharina angustissima*)¹ on CAS LJ2x, and to deploy longlines for the cultivation of marine algae.

1. THE PROCEEDINGS

The amendment application was submitted to DMR on September 27, 2020 and was deemed complete by DMR on October 29, 2020. Notice of the application and the 14-day public comment period were provided to other state and federal agencies, riparian landowners, the Town of Yarmouth 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).

LIST OF EXHIBITS^{2,3}

1. Application for a change of gear authorization
2. Case file
3. Executed lease document for CAS LJ2x signed February 26, 2020
4. Original lease decision signed July 26, 2019
5. Original lease application, deemed complete October 24, 2018

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

¹ Although referred to in the application as a *Saccharina latissima* morphotype, skinny kelp is now considered a separate species (*Saccharina angustissima*).

² Exhibits 1-5 are cited below as: Amendment Application – “App”, Case File – “CF”, Executed lease for CAS LJ2x – “Exhibit 3”, DMR Decision on Lease CAS LJ2x - “Exhibit 4”, and Original Experimental Lease Application for CAS LJ2x – “Exhibit 5”.

³ Page numbers are cited using the PDF page number, which may not always match the page number written on documents.

application, do not materially alter the findings of the original decision, and would not result in a change to the original lease conditions.

A. Original Lease Decision

On July 26, 2019 DMR granted lease CAS LJ2x to Thomas Henninger (Exhibit 4, page 6). 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 Mr. Henninger met the requirements for granting an experimental aquaculture lease as set forth in 12 M.R.S.A. § 6072-A (Exhibit 4, page 5).

The decision provided authorization to cultivate American oysters (*Crassostrea virginica*), using suspended culture techniques (Exhibit 4, pages 5-6). Floating cages and bottom cages, arranged in up to 16 parallel lines, comprise the gear authorized for the suspended culture of shellfish on CAS LJ2x (Exhibit 4, pages 1 & 6). Parallel lines of gear run north-south on the lease site⁴, with a maximum of 210 floating cages (41" x 68" x 22") deployed along 14 lines, and a maximum of 16 bottom cages (36" x 48" x 48") deployed along two lines (Exhibit 5, page 13). According to the original application for CAS LJ2x, the lines of cages are separated by 15 feet (Exhibit 5, page 13). Floating cages are held in place with a longline connected to (2) 200 lb. mushroom or pyramid anchors and bottom cages are secured in place with their own weight (Exhibit 5, page 16). During the winter months (June through November, according to the original application), floating cages are sunk to the bottom of the proposed lease (Exhibit 5, page 6).

Conditions imposed on lease CAS LJ2x, pursuant to 12 M.R.S.A § 6072-A (15) and located on page 6 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. Other public uses that are not inconsistent with the purposes of the lease are permitted within the lease boundaries.

B. Proposed Gear Changes and Findings

Thomas Henninger is requesting the authorization to add gear for the cultivation of marine algae on experimental lease CAS LJ2x. Specifically, Mr. Henninger is proposing to deploy up to (7) 200-foot longlines made of sinking pot warp on his existing lease (App, page 4). According to the amendment application, these longlines would run north-south, would be deployed 3 feet below the surface of the water, and would be spaced 15 feet apart (App, pages 5&6). In addition to mooring buoys that would be located at either end of the proposed longline, up to three foam buoys would be deployed along the longline to maintain its depth. Marine algae gear is proposed to be deployed on the lease from November 1st through May 30st, annually, and would be deployed over the section of the lease that contains OysterGro cages (referred to in the decision as floating cages) that are sunk to the bottom of the proposed lease from November to June, annually (App 5&6).

⁴ The length of these lines was not stated in the original lease application (Exhibit 5), but page 14 of Exhibit 5 did state that there would be 295 feet between the end anchors holding each line of gear.

As CAS LJ2x is already permitted to deploy longlines on the lease site to hold floating oyster at the surface in the summer months and on the sea floor in the winter, the longlines proposed in this amendment application is similar in type to the gear already authorized on the lease site. Instead of attaching to cages, the longlines would be attached to up to 21 total depth control buoys (App, page 4). As the surface of the lease site is populated with up to 210 floating cages during the summer months, and because up to 16 surface buoys mark the location of bottom cages throughout the year, the proposed depth control buoys are not materially different than the floating gear already authorized on the lease site. Furthermore, the proposed gear change would not increase the amount of gear proposed to contact the bottom of the lease site, as the leaseholder is requesting to secure the marine algae longlines to the existing moorings.

The main difference between the original lease gear authorization and the proposed gear change is the depth at which longlines would be deployed on the lease site during the winter months. Currently, the longlines are deployed along the sea floor in the winter months; the applicant is requesting authorization to deploy longlines 3 feet below the surface of the water from November 1st through May 30th, annually. When considering the impact of proposed gear change on other users of the area, the main difference between the two proposals is that the deployment of mid-water longlines would deter most boating activity over the lease during the winter months, if the proposed amendments were granted. 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 and did not discuss how impacts from the lease would change as result of seasonal differences in gear layout. Therefore, the proposed gear change would not materially alter the findings of the original lease decision.

As the proposed marine algae gear is similar to the longlines already permitted, and because no additional moorings or other gear touching the bottom of the proposed lease site would be deployed, the proposed gear change would not cause a material deviation from the currently permitted operations. Additionally, the original lease proceedings focused on the entirety of the lease area proposed for use, as opposed to when during the year there would be longlines at the surface of the proposed lease. Given this, the proposed change in gear is consistent with the findings on the underlying lease application and would not materially alter the findings of the original decision. Lastly, as the leaseholder is not requesting to change the marking on CAS LJ2x or restrict public uses within the lease site that are not inconsistent with the purposes of the lease, the requested gear change would not result in a change to the lease conditions.

C. Proposed Species Changes and Findings

Thomas Henninger is requesting the authorization to cultivate sugar kelp (*Saccharina latissima*) and skinny kelp (*Saccharina angustissima*) on existing experimental lease site CAS LJ2x (App, page 2). The leaseholder has demonstrated that there is an available source of sugar kelp (*S. latissima*) and skinny kelp (*Saccharina angustissima*) for cultivation, as they propose to obtain seed stock from Ocean's Balance, located in Biddeford, Maine (App, page 2). These kelp species grow in wild beds in Casco Bay, and are cultured on aquaculture sites in Casco Bay as well. Due to this, and because Section 2.B of this decision found that the proposed gear change required for the culture of marine algae on CAS LJ2x is consistent with the findings on the underlying lease application and would not materially alter the findings of the

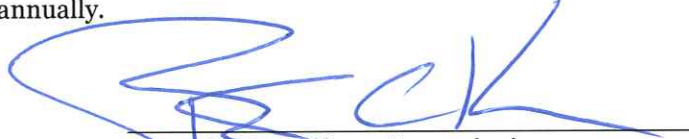
original decision, the presence of these kelp species on CAS LJ2x during the winter months are also consistent with these findings. Furthermore, the proposed species change would not result in a change to the original lease conditions.

3. DECISION

Based on the foregoing, the Commissioner grants the requests from Thomas Henninger for the authorization to cultivate sugar kelp (*Saccharina latissima*) and skinny kelp (*Saccharina angustissima*) on experimental lease CAS LJ2x and for the authorization to deploy marine algae cultivation gear on the lease from November 1st through May 30th, annually.

Dated: _____

2/24/21



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

STATE OF MAINE
DEPARTMENT OF MARINE RESOURCES
Experimental Aquaculture Lease Application
Suspended culture of shellfish
Littlejohn Island, Yarmouth

Thomas Henninger
CAS LJ2x
July 26, 2019

FINDINGS OF FACT, CONCLUSIONS OF LAW, AND DECISION

Thomas Henninger applied to the Department of Marine Resources (“DMR”) for a three-year experimental aquaculture lease located north of Littlejohn Island in Casco Bay, Yarmouth, Cumberland County. The proposed lease is 2.06 acres¹ in size, and is proposed for the suspended cultivation of American/eastern oysters (*Crassostrea virginica*). DMR accepted the application as complete on October 24, 2018. 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 Yarmouth and its Harbormaster, and others on the Department’s mailing list. Notice of the application and comment period was published in the *Northern Forecaster* on December 6, 2018.

The evidentiary record before the Department regarding this lease application includes the application, the Department’s site report dated May 9, 2019, and the case file. The evidence from each of these sources is summarized below.²

2. DESCRIPTION OF THE PROJECT

A. Proposed Operations

The purpose of the proposed experimental lease is to assess the viability of a commercial lease operation in the chosen location (App 4³). American/eastern oysters (*C. virginica*) would be cultivated using floating and bottom cages, arranged in up to 16 parallel lines on the proposed site (App 10A). Up to 210 floating cages are proposed, with dimensions of 41” x 68” x 22” and up to 16 bottom cages, measuring 3’ x 4’ x 4’ are proposed (App 10A-11). During the winter months, cages would be sunk to the bottom for overwintering (App 5).

¹ Applicant originally requested 2.17 acres. DMR calculations in the site report, based on the provided coordinates, indicate the area is 2.06 acres.

² These sources are cited below, with page references, as CF (case file), App (application), SR (site report).

³ The referenced page numbers are those displayed in the bottom of the application page.

B. Site Characteristics

On April 25, 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 between Littlejohn and Cousins Islands in Casco Bay (SR 2). The surrounding uplands host a mixed forest; residential buildings and docks are located to the north and west of the proposed site on Cousins Island, while the section of Littlejohn Island located to the south of the proposed lease, is undeveloped (SR 2). The shoreline is composed primarily of rocks, with mudflats exposed at lower tidal stages to the west of the proposal (SR 2).

At mean low water, the proposed lease is located approximately 1,130 feet from Littlejohn Island to the south and approximately 1,050 feet from Cousins Island to the northwest (SR 4). Water depth within the proposed lease range between 7.5 and 8.5 feet at mean low water (SR 3). The bottom of the proposed lease site is comprised of mud (SR 8).

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 for the lease site.

A. Riparian Access

The proposed lease is located north of Littlejohn Island and south of Cousins Island in Casco Bay (SR 5). Littlejohn Island, located over 1,130 feet to the south of the proposed lease, hosts an undeveloped shoreline (SR 4). Houses, docks, and stairs for shoreline access were observed to the north and west of the proposed lease, on the Cousins Island shoreline (SR 5). At the time of DMR's site visit on April 25, 2019, the closest docks were observed over 800 feet to the north of the proposed lease (SR 5). The proposed lease will not impede depth-appropriate vessels from utilizing this dock due to this distance. During DMR's site visit, an unlabeled white buoy, which was assumed to mark a mooring, was observed approximately 194 feet from the proposed lease (SR 5). According to the site report, "it is likely that, if this buoy marks a mooring, the use of said mooring would be impacted by the proposed lease" (SR 5).

However, during the review period, the Department did not receive any comments from members of the public concerning access to riparian owned land or the use or moorings in the vicinity of the proposed lease. 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, including the use of nearby moorings. Additionally, the Yarmouth 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.⁴ It appears from this evidence that riparian ingress and egress will not be unduly affected by the proposed lease application.

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

B. Navigation

The proposed lease is located in the cove between Littlejohn and Cousins Islands in Casco Bay (SR 2). Per page 6 of the site report:

A marked channel leading into the Royal and Cousins Rivers is located to the north and east of the proposed lease....Vessels navigating to and from the Royal and Cousins Rivers are unlikely to be impacted by the proposed lease, because it is located within a shallow cove more than 1,500 feet to the west of the channel.

According to the site report, navigation within the cove in which the proposed lease is located may be impacted by the proposal (SR 6). If the proposed lease were to be granted, vessels navigating in or out of the cove would have to navigate to the north or south of the proposal, due to its location in the center of the cove's mouth. However, because the Cousins Island shoreline is located approximately 1,050 feet to the north of the proposed lease, and the rocks off the Littlejohn Island shoreline are located approximately 715 feet to the south, adequate room is available for depth-appropriate vessels to navigate on either side of the proposed lease site (SR 4).

The Yarmouth Harbormaster indicated that the proposed lease does not interfere with navigation in designated channels.⁵ 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 Yarmouth Harbormaster, little to no commercial and/or recreational fishing activities occur within the area of the proposed lease.⁶ During the site visit on April 25, 2019, no fishing activities were observed within the lease site (SR 6). In the site report, DMR acknowledged that commercial and recreational uses of this area are "more prevalent in the summer months" (SR 6). If granted, the location and size of the proposed lease would not prevent commercial or recreational fishing activities from occurring between Littlejohn and Cousins Islands.

⁴ CF: Harbormaster Questionnaire dated May 1, 2019.

⁵ CF: Harbormaster Questionnaire dated May 1, 2019.

⁶ CF: Harbormaster Questionnaire dated May 1, 2019.

Given the absence of public comments expressing concerns regarding interference with fishing, it is reasonable to conclude that there are no concerns about the effects the proposed site may have on commercial or recreational fishing. It appears from this evidence that the proposed lease is unlikely to unreasonably affect commercial and recreational fishing activities in the area.

Other aquaculture uses. Three Limited Purpose Aquaculture (LPA) licenses and two experimental aquaculture leases are located within one mile of the proposed lease (SR 6). The closest aquaculture site is an LPA license located within the proposed lease site and held by the applicant (SR 6). The closest aquaculture operation held by another individual is an experimental lease CAS LJIx, which is located approximately 960 feet to the southwest of the proposed lease and permitted for the suspended culture of shellfish (SR 7). Due to this distance, and the absence of public comments concerning the impact of the proposal on existing aquaculture operations, it is unlikely that the activities proposed by the applicant will adversely affect existing aquaculture leases and licenses in the area. 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 25, 2019, DMR staff did not observe other water-related uses of the proposed lease area not described elsewhere in this decision. 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 in 2018 and 2013 show the closest documented eelgrass (*Zostera marina*) beds to be located approximately 110 and 650 feet respectively from the proposed lease site (SR 8). During DMR's site review, no eelgrass was observed when assessing the bottom of the proposed lease via a remotely operated vehicle (SR 8).

Data maintained by the Maine Department of Inland Fisheries and Wildlife (MDIF&W), show that the proposed lease is located approximately 680 feet from Tidal Wading Bird and Waterfowl Habitat (SR 7). DMR sent a copy of the lease application to MDIF&W for their review and comment. MDIF&W indicated: "minimal impacts to wildlife are anticipated".⁷

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 shellfish, 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.

⁷ CF: Email from J. Perry, MDIF&W Environmental Review Coordinator, dated January 9, 2019.

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 the public use or enjoyment within 1,000 feet of beaches, parks, or docking facilities owned by municipal, state, or federal governments.

F. Source of Organisms

American/eastern oyster seed would be obtained from Mark Green, in Peaks Island, Maine (App 2). This source is approved by DMR.

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.
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 2.06 acres to Thomas Henninger 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 lessee⁸; however, no aquaculture rights shall accrue in the lease area until the lease is fully executed.

⁸ DMR Rule 2.64 (14) provides:

This lease is granted to the lessee for the cultivation of American/eastern oysters (*Crassostrea virginica*) 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 (10) (D) 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)⁹. Conditions are designed to encourage the greatest multiple compatible uses of the lease area, while preserving the exclusive rights of the lessee to the extent necessary to carry out the purposes of the lease.

The following conditions shall be incorporated into the lease:


1. The lease site must be marked in accordance with both U.S. Coast Guard requirements and DMR Rule 2.80.
2. Other public uses that are not inconsistent with the purposes of the lease are permitted within the lease boundaries.

7. REVOCAION 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: _____

July 26, 2019



Patrick C. Keliher, Commissioner
Department of Marine Resources

“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.”

⁹ 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.”