

CRMC DECISION WORKSHEET

2022-04-046

Roger Williams University

Hearing Date:	MAY 23, 2023		
Approved as Recommended			
Approved w/additional Stipulations			
Approved but Modified			
Denied		Vote	

APPLICATION INFORMATION						
File Number	Town	Project Location		Category	Special Exception	Variance
2022-04-046	Bristol	Mount Hope Bay adjacent to RWU Bristol Campus		B	<input type="checkbox"/>	<input type="checkbox"/>
		Plat	Lot			
		Owner Name and Address				
Date Accepted	April 13, 2022	Roger Williams University Dept of Biology; Attn: T. Scott One Old Ferry Road Bristol, RI 02809		Work at or Below MHW	X	
Date Completed	May 15, 2023			Lease Required	X	

PROJECT DESCRIPTION

1.78 Acre Educational Research project

KEY PROGRAMMATIC ISSUES

Coastal Feature: Submerged Land
Water Type: Type , 2
Red Book: 1.2.1(C); 1.3.1(A);1.3.1(K)
SAMP: NA

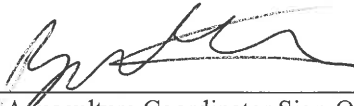
Variances and/or Special Exception Details: NA

Additional Comments and/or Council Requirements: No objections recieved, research/educational aquaculture projects larger than 1000sq.ft. requires council approval, 1.3.1(K)(5)(a)(15). Three year research/education lease may be extended for additional terms of not more than three years.

Specific Staff Stipulations (beyond Standard stipulations): No product may be sold; all procedures established by DEM and CRMC for work in Conditional Waters must be followed; no work south of Learning Platform; all gear must be removed when not in use; all hazard marker bouys shall be registered with USCG as PATONs.

STAFF RECOMMENDATION(S)

Engineer _____ Recommendation: _____
 Biologist _____ Recommendation: _____
 Other Staff **BJG** Recommendation: **Approval with stips**

 _____ date May 15, 2023
 Supervising Biologist Sign-off _____ date _____
 Executive Director Sign-Off _____ date _____
 Staff Sign off on Hearing Packet (Eng/Bio) _____ date _____



STATE OF RHODE ISLAND
COASTAL RESOURCES MANAGEMENT COUNCIL
INTER-OFFICE MEMORANDUM

DATE: May 15, 2023
TO: Jeffrey M. Willis, Executive Director
FROM: Benjamin J. Goetsch, Aquaculture Coordinator
SUBJECT: CRMC File No. 2022-04-046

Applicant's Name: Roger Williams University
Project: 1.78 Acre Education/Research Aquaculture Project
Location: Mount Hope Bay adjacent to RWU Bristol Campus, Bristol
Water Type/Name: Type 2, Low Intensity Use
Coastal Feature: Submerged Land

STAFF REPORT

This application is for a 1.78-acre aquaculture operation in conditionally approved waters expressly for the purpose of using aquaculture for education and research at Roger Williams University (RWU), see attachment A for copy of application. This application also serves as an update to past research permits issued to RWU in the same area over the years (CRMC Files: 2001-12-043; 2002-06-044; 2016-03-011; 2016-09-044) and seeks to bring all the other projects under one authorization for more efficient management by RWU and CRMC. Education/research aquaculture permits are generally eligible for administrative approval by the Executive Director under the conditions set forth in 650-RICR-20-00-1.3.1(K)(5)(a)(15). However, given this proposal exceeds the one thousand square foot threshold for administrative approval as described in the regulation cited above, this application may only be approved by the full council. In addition, this application requests a lease, which according to the regulation above, is allowable and renewable for terms not exceeding three years.

According to the application materials, the size of the proposal is needed to accommodate the demonstration of multiple aquaculture technologies and species as teaching tools for various programs and courses, and to develop new and improved technologies for advancing the aquaculture industry in the region. This equipment consists of rack and bag system, bottom cages, floating cages, and Australian longlines for the cultivation of Eastern Oyster (*Crassostrea virginica*). Bottom cages and bottom netting for Atlantic razor clam (*Ensis directus*). Spat bags and bottom cages for Bay scallop (*Argopecten irradians*). Suspended longlines for Sugar kelp (*Saccharina latissimi*) and Blue mussel (*Mytilus edulis*). Additional requested species to be cultivated are: Hard clam (*Mercenaria mercenaria*), Atlantic surf clam (*Spisula solidissima*), Sout razor clam (*Tagelus plebeius*), Soft shell clam (*Mya arenaria*), Blood Ark (*Anadara granosa*), Atlantic awning clam (*Solemya velum*), Graceful redweed (*Gracilaria tikvahiae*), and Dulse (*Palmaria palmate*). As

such, the applicant requires continued access to an educational/research area that will allow their faculty and students to test new equipment and demonstrate existing technology as they provide outreach and research services to the aquaculture sector. Therefore, the applicant has requested an extended research/educational lease for a 1.78 -acre site adjacent to the RWU Learning Platform and the RWU campus shoreline on Mt. Hope Bay.

Given the size of this proposal exceeds the 1000 square feet threshold for administrative approval, Staff recommended that the applicants follow standard Category B aquaculture permit review process, including the prerequisite Preliminary Determination (PD) application and local PD meeting with the Town of Bristol and other stakeholders, a thirty-day public notice period, and a review by the RI Marine Fisheries Council. Staff will summarize the results of the standard review process below.

The PD meeting for this proposal was held on September 13, 2021, as part of the regularly scheduled Bristol Harbor Commission meeting, please see Staff's PD report in Attachment C. The meeting was productive and well attended by fishermen and other members of the public. There was discussion regarding the need for clear marking in the area with hazard buoys and a marked fairway to shore for both the public and RWU sailing school. The Bristol Harbor commission recommended that the application be approved if the site went no further offshore than the terminus of the Learning Platform to reduce any conflict with commercial fishing, see Attachment D.

In the subsequent full application, the applicant followed the Staff recommendations in the PD report by adjusting the eastern edge of the site landward to be even with the end of the RWU Learning Platform and adding five hazard buoys along the offshore and northern boundary of the site, two of which would mark a fairway to and from the shore for use by the public and RWU sailing school.

The full application was sent out to a Thirty Day Public Notice on May 16, 2022, and extended to June 30th at the request of the Bristol Harbormaster, see Attachments A and B. No objections or public comments were received. However, the applicants did engage in discussions with the Bristol Harbormaster and Harbor Commission during the thirty-day comment period regarding some clarifications to the application. The Commission was concerned that the maps contained in the application seemed to show that the southern boundary of the site was extending south past the RWU Learning Platform. The applicants had no intention of using the area south of the Learning Platform and agreed this was a minor oversight that could be easily corrected with more accurate coordinates and site plan. Working with DEM, the applicants corrected the coordinates to exclude the area south of the platform. These corrected coordinates are outlined in a letter from RWU to Bristol Harbor Commission, see Attachment E. The letter also clarifies the position of the hazard marker buoys and fairway to the shore.

As part of the standard review process, this application has also received the following letters and authorizations:

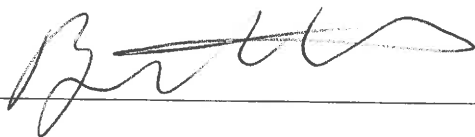
- RI Department of Environmental Management (DEM) Office of the Deputy Director for Natural Resources: minimal impact to fisheries and habitat, 5/15/2023 (Attachment F)
- RI Marine Fisheries Council: consistent with the competing uses of the marine fisheries 3/20/2023 (Attachment G)
- RI DEM Office of Water Resources (OWR): neither a RIPDES permit, nor a Water Quality Certificate is required for the proposed facility. Applicants may only work on site while the Conditional Waters are in the approved status unless permission have been granted by the DEM. 09/12/2021 (Attachment H)
- U.S. Army Corps of Engineers 10/3/2022 (Attachment I)

As mentioned in the DEM OWR letter above (received during the PD review), the site is in Mt. Hope Bay in waters classified by DEM OWR as Conditionally Approved. This means that the area is closed to the harvest of shellfish for seven days following a precipitation event greater than 0.5" of rain or snow melt. During a closure event, work may only be performed on an aquaculture site with permission of the DEM, see 250-RICR-40-00-1.9(F). Based on past practices developed between CRMC and DEM, Aquaculturists seeking such permission during a closure event may contact the CRMC Aquaculture Coordinator who will coordinate authorization with the DEM for some activities under certain circumstances, such as the tending of gear and seed only. Staff does not generally encourage new commercial aquaculture sites in conditional waters for this reason. However, given this application does not seek authorization for sale of product, the harvest restriction during closure events will not have much effect on the viability of the research/education activity. The applicants are aware of the limitations due to the status of the surrounding waters and have agreed to follow the standard procedures outlined above in the application materials.

Based on the standard review of the application and associated authorizations, Staff finds that the application meets the requirements of the Rhode Island Coastal Resource Management Program and recommends for approval with the following stipulations and conditions:

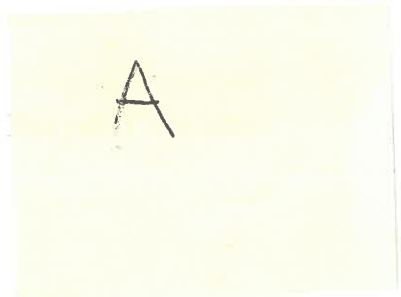
1. The initial lease shall be for three years and shall be renewable upon application by the permittee for successive periods of three years for each renewable period; provided, that the terms and conditions of the permit, and the rules and regulations promulgated by the CRMC and DEM have been met.
2. The approved plans shall be those received April 11, 2022, prepared by Skylar Bayer and Tim Scott, and as modified by the letter dated June 24, 2022.
3. No work shall be performed south of the Learning Platform.
4. Kelp lines shall be installed no earlier than November 1st and removed from the site no later than May 1st.
5. Seasonal seed lines, buoys, cages, floats, and other associated gear shall be removed during the off-season or when not in use and the gear shall be stored in upland areas on campus.
6. The site shall not be visited while waters remain in the closed status without the authorization of CRMC and DEM.
7. No product may be sold.
8. All hazard marker buoys must be registered with USCG as Private Aids to Navigation (PATON).

Signature: _____

A handwritten signature in black ink, appearing to be "Brett", written over a horizontal line.



State of Rhode Island
Coastal Resources Management Council
 Oliver H. Stedman Government Center
 4808 Tower Hill Road, Suite 3
 Wakefield, RI 02879-1900



PUBLIC NOTICE

File Number: 2022-04-046 Date: May 16, 2022

This office has under consideration the application of:

**Roger Williams University
 Dept of Biology; Attn: T. Scott
 One Old Ferry Road
 Bristol, RI 02809**

for a State of Rhode Island Assent to construct and maintain: **a two-acre education/research aquaculture site adjacent to the university’s Learning Platform in Mount Hope Bay. The application seeks Council approval for the listed activities pursuant to 650-RICR-20-00-1.3.1(K)(5)(a)(15).**

Project Location:	Mount Hope Bay adjacent to RWU Bristol Campus
City/Town:	Bristol
Waterway:	Mount Hope Bay
Related Files	2021-07-043

Plans of the proposed work can be seen attached or requested at Cstaffl@crmc.ri.gov.

In accordance with the Administrative Procedures Act (Chapter 42-35 of the Rhode Island General Laws) you may request a hearing on this matter.

You are advised that if you have good reason to enter protests against the proposed work it is your privilege to do so. It is expected that objectors will review the application and plans thoroughly, visit site of proposed work if necessary, to familiarize themselves with the conditions and cite what law or laws, if any, would in their opinion be violated by the work proposed.

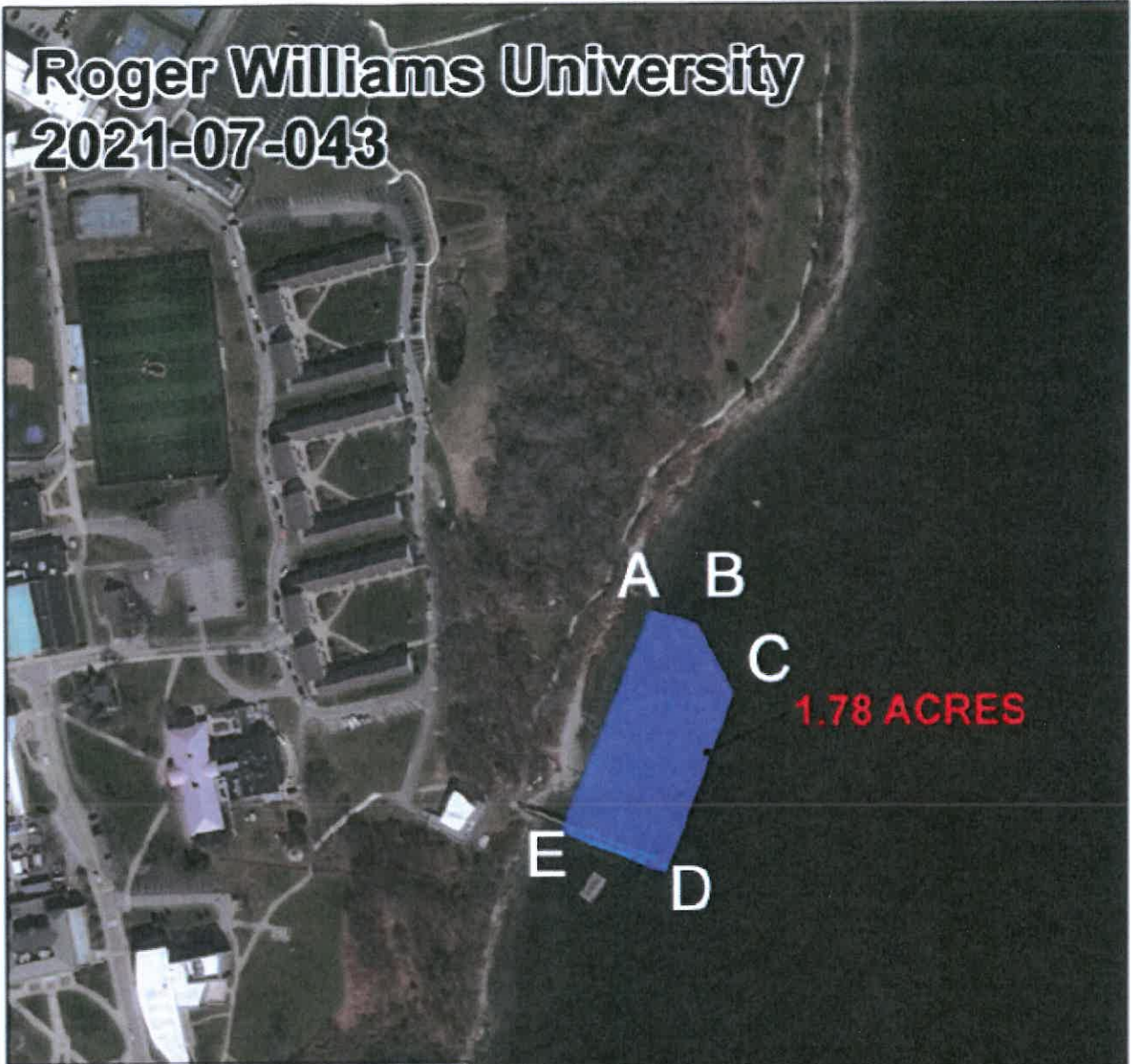
If you desire to protest, you must attend the scheduled hearing and give sworn testimony. A notice of the time and place of such hearing will be furnished you as soon as possible after receipt of your request for hearing. If you desire to request a hearing, to receive consideration, it should be in writing (**with your correct mailing address, e-mail address and valid contact number**) and be received at this office on or before June 16, 2022.

Please email your comments/hearing requests to: cstaffl@crmc.ri.gov; or mail via USPS to: Coastal Resources Management Council; O. S. Government Center, 4808 Tower Hill Road, Rm 116; Wakefield, RI 02879.

/lat

Roger Williams University

2021-07-043



Legend

Aquaculture

-  Approved
-  PD App
-  PN App
-  Withdrawn/Expired



0 160 320 Feet





State of Rhode Island
 Coastal Resources Management Council
 Oliver H. Stedman Government Center
 4808 Tower Hill Road, Suite 3
 Wakefield, RI 02879-1900

(401) 783-3370
 Fax (401) 783-2069

File Number (CRMC use only): 2022-04-046

CRMC RESEARCH/EDUCATIONAL AQUACULTURE APPLICATION

Applicant's Name: Roger Williams University, Contacts: Skylar Bayer & Tim Scott, Biology Department

School and/or affiliation: Roger Williams University

Mailing Address: One Old Ferry Way, Bristol

State: RI Zip: 02809 Telephone Number: 401-254-3091 (Bayer)

E-Mail: sbayer@rwu.edu TScott@rwu.edu

PROJECT LOCATION

Waterway: Mt. Hope Bay adjacent to the RWU Bristol Campus

City/Town: Bristol

Latitude-longitude coordinates of site: 41 39.055 North, 71 15.366 West

On a separate piece of paper, please describe the proposed project. If this is a research project, please provide an experimental design including null hypothesis and proposed statistical analysis. If this is an educational project, please describe your pedagogy and how this project will fit in with your classroom instructional plan. For either type of project, provide a detailed operational plan, i.e. what you propose to do, how you propose to do it, where you propose to do it, and why you are proposing this plan.

Proposed species (common name; genus and species): See attached

Proposed start and end dates for experiment: N/A -- education and research permit

NOTE: The applicant acknowledges by evidence of their signature that they have reviewed the Rhode Island Coastal Resources Management Program, and have, where possible adhered to the policies and standards of the program. The applicant also acknowledges by evidence of their signature that to the best of their knowledge the information contained in the application is true and valid. The filing of false information can result in the Coastal Resources Management Council revoking the state assent.

Skylar R. Bayer
 Applicant's Signature



Ben Goetsch, Aquaculture Coordinator
Rhode Island Coastal Resources Management Council
Stedman Government Center
4808 Tower Hill Road
Wakefield, RI 02879-1900

4 April 2022

Mr. Ben Goetsch:

Please find enclosed a request from Roger Williams University (RWU) for a CRMC Aquaculture Permit for an experimental aquaculture farm on the western side of Mt. Hope Bay, adjacent to RWU Bristol campus. Through its Center for Economic and Environmental Development (CEED), the University has been involved in aquaculture research and education for much of the past two decades. Currently, we operate the Luther H. Blount Shellfish Hatchery, an Aquatic Animal Diagnostic Laboratory and an extensive Marine Ornamental Fish Rearing Program. Most of this activity is conducted within the Marine and Natural Sciences (MNS) Building. We have entered into formal partnerships with the Rhode Island Department of Environmental Management, the Rhode Island Shellfishermen's Association, the New England Aquarium and the Audubon Society of Rhode Island, among others, to contribute the institution's knowledge and skills to the development of regional aquaculture.

A significant component of RWU's aquaculture program is our capacity to conduct experimental deployments to demonstrate aquaculture technologies as teaching tools for our various programs and courses, and to develop new and improved technologies for advancing the aquaculture industry in the region. As such, we require access to an experimental area that will allow us to test new equipment and to demonstrate existing technology as we provide outreach and research services to the aquaculture sector. Therefore, with this application, RWU is requesting an extended educational aquaculture lease for a 1.78 plot adjacent to our campus shoreline on Mt. Hope Bay, and encompassing the RWU Learning Platform.

After a preliminary determination (PD) public meeting with the Bristol Harbor Commission on September 13th, 2021, per the recommendations of the attendees, we adjusted our proposal to make the eastern edge of the lease site parallel with the end of the learning platform. Additionally, we will add five hazard buoys added along the offshore and northern boundary of the site. Two of these buoys will mark the bottom plant area that will also serve as a fairway to the beach for the RWU Sailing Team. They will be beneficial aids to navigation per the recommendation of CRMC.

Thank you for your consideration of this request.



Skylar R. Bayer, PhD
Aquaculture Extension Specialist
sbayer@rwsu.edu; 401-254-3091



Timothy M. Scott, PhD
CEED Director
tscott@rwu.edu; 401-254-3563

I. Introduction

Through its Center for Economic and Environmental Development (CEED), Roger Williams University (RWU) engages in a broad range of aquaculture activities involving faculty, staff and the ~250 undergraduate students studying marine biology, aquaculture and aquarium science. In addition, CEED collaborates extensively on a variety of research and restoration projects with the private industry, commercial fishing, environmental, regulatory and scientific communities. We conduct training sessions for the public (*e.g.*, shellfish aquaculture) and professional groups. As a consequence, the CEED facilities are used to hold and produce specimens for research, demonstration, restoration, class exercises and breeding experiments. Our shellfish aquaculture permit request reflects this in that it is species-rich but the actual number of individuals held at any given time is small relative to a commercial lease. Not all species listed are on site at present, but we try to anticipate our needs as the programs continue to expand.

One of our Faculty – Dr. Roxanna Smolowitz – is a member of the CRMC Biosecurity Board, which regularly reviews aquatic health concerns and offers recommendations regarding best management strategies to minimize environmental risk. Under the direction of Dr. Smolowitz, CEED operates an Aquatic Animal Diagnostic Laboratory, which provides diagnostic services for research and commercial operations when fish and shellfish disease outbreaks occur. At the same time, this lab works collaboratively to further understand disease processes and to develop new and improved diagnostic tools and techniques.

We are requesting a 1.78-acre research/education aquaculture field site to be located in Mt. Hope Bay adjacent to the RWU campus. The lease will be used for both demonstration projects that are important for educational and outreach purposes and for research projects that will be conducted to address new technologies or management strategies for the aquaculture industry. It is important to note, no shellfish or aquaculture products grown on the lease will be sold on the commercial market. Excess oysters produced through our research and demonstration activities will be donated to local non-profit groups (*e.g.*, Rhode Island Shellfisherman's Association, Town of Warren Restoration Program).

All shellfish and kelp operations will be conducted in accordance with the Rhode Island Biosecurity board protocols. All handling of shellfish to be consumed will follow the recommendations/regulations set forth by RIDEM (Rhode Island Marine Fisheries Regulations, Part IV Shellfish) and in accordance with the RIDEM Vibrio Management Plan, as instituted 1 July 2014.

II. Operational Plan

1. *Name and address:*
 Roger Williams University
 Center for Economic and Environmental
 Development.
 One Old Ferry Rd,
 Bristol, RI 02809

2. *CRMC file number:* 2021-07-043

3. *DEM aquaculture license number:* N/A

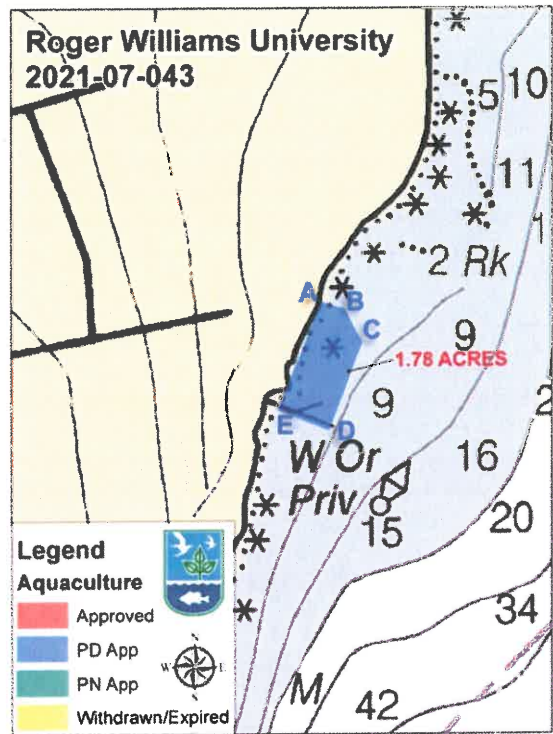
4. *Type of facility:* Education/Research

5. *Location of facility:*

 Bristol, Rhode Island
 Mount Hope Bay
 Shellfish Growing Area 17

6. *Species grown:*

- Crassostrea virginica* Eastern oyster
- Mercenaria mercenaria* Hard clam
- Argopecten irradians* Bay scallop
- Spisula solidissima* Atlantic surf clam
- Ensis directus* Atlantic razor clam
- Tagelus plebeius* Stout razor clam
- Mya arenaria* Soft shell clam
- Mytilus edulis* Blue Mussel
- Anadara granosa* Blood Ark
- Solemya velum* Atlantic awning clam
- Saccharina latissimi* Sugar kelp
- Gracilaria tikvahiae* Graceful redweed
- Palmaria palmate* Dulse



Corner Point	Latitude	Longitude	Side	Length (ft)
A	41.65092	-71.25615	A-B	85.66
B	41.65085	-71.25585	B-C	135.73
C	41.65052	-71.25562	C-D	339.24
D	41.64965	-71.25606	D-E	196.69
E	41.64985	-71.25673	E-A	463.91
		Perimeter	Area	
A-B-C-D-E	1,221.23 ft		77,536.80 ft ²	1.78 acres

Figure 1. RI DEM map of lease site with associated Latitude and Longitude coordinates, perimeter and area measurements.

Note: Oysters are the only species grown in perpetuity on the proposed lease. Other species may be grown on the lease dependent upon project and research needs.

7. Gear Description

General culturing of shellfish and macroalgae will include deployment of data loggers. RI Department of Environmental Management's Office of Water Resources in the effort to address increasing water temperatures and the potential threat of a *Vibrio* illness outbreak are asking all lease holders to monitor water temperature at lease their site and keep records of actual temperatures of bottom, surface and at depth waters where the shellfish are being grown during the Summer months (June-September).

The NSSP Model Ordinance includes a requirement that if aquaculture gear is found to attract birds or mammals to the extent that their waste presents a human health risk then a written operation plan to mitigate that risk is required. In consultation with RIDEM Division of Marine Fisheries methods to deter waterfowl attraction will be completed if any gear described below or experimental gear is found to attract birds.

a.) Oyster Culture

Rack and Bag system: Oysters will be grown from nursery phase to market size or subsequent seeding for restoration in a rack and bag system. Racks are made of uncoated rebar iron with dimension of 12' (L) x 2.6' (W) x 1.4' (H) (Figure 2). Each rack will hold six ADPI mesh oyster bags with dimensions of 3.3' (L) x 1.7' (W), fastened to the rack with ¼" bungee cord. The farm is currently set up with 12 racks oriented in an east-east grid with a minimum of 2' between racks. Gear will be placed at subtidal depth to a maximum depth of 5' below mean low water. We anticipate removing all but three racks and replacing them with bottom cages, as they are better suited for the physical conditions of the site.

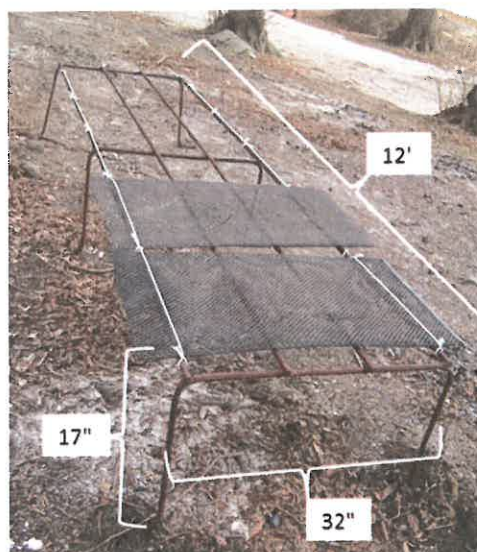


Figure 2. Rack and bag culture system.

Bottom cages: Oyster will also be grown from nursery to market phase in wire cages placed on the bottom and configured in a trawl system of up to 10 cages tied to surface buoys. Each cage consists of two rows with three tiers each, capable of holding a total of six 3' (L) x 1.7' (W) ADPI oyster bags. Cage dimensions are racks are 45.0" (L) x 40.5" (W) x 20.5" (H) (Figure 3). The farm will currently hold 18 bottom cages with potential for expansion up to a maximum of 50 cages. All cages will be located in subtidal waters within the lease footprint.

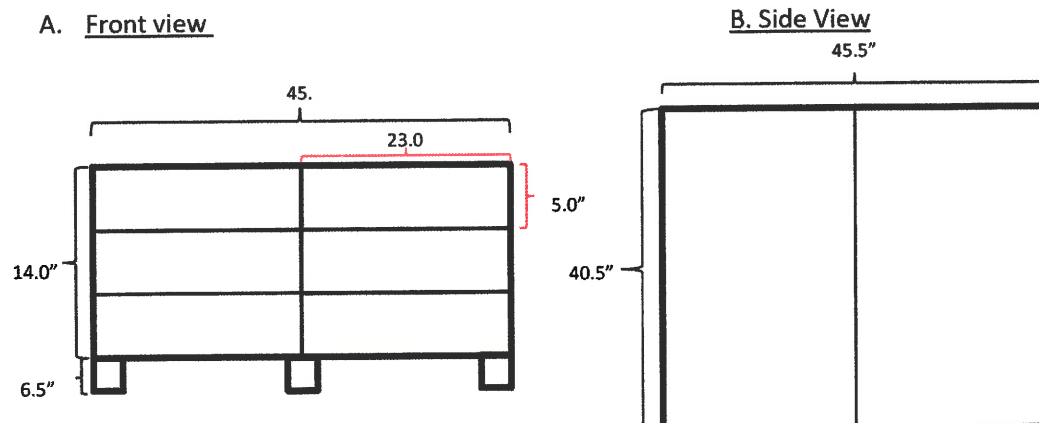


Figure 3. Bottom oyster cage.

Floating cages: Floating cages (e.g. Oyster Gro®, Flow N Grow™, Oyster Ranch™) may be used dependent upon research needs. The cages are wire mesh with three rows of two tiers, capable of holding six 3.3' (L) x 1.7' (W) ADPI oyster bags. Two polyethylene floats are fixed to the top side of cages to provide floatation during the growing season. During winter months the floats are filled with water and cages sunk to the bottom. Dimensions of the cages are 5.2' (L) x 3.5' (W) x 1.6' (H) (Figure 4). Cages will be tied together in a long line outhaul system running north of the RWU learning platform.

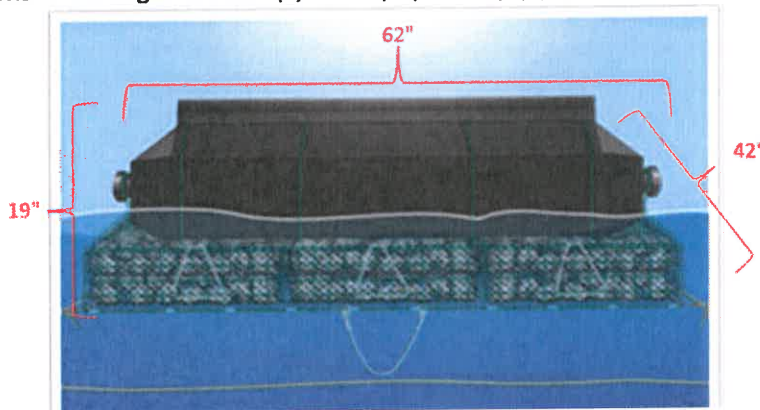


Figure 4. OysterGro® cage

Australian longlines: Australian longlines are used to raise oysters from 1-inch valve height to market size. The system consists of long lines suspended between dock pilings or poles inserted into the sediment. The backbone is held at mid tide and oyster baskets (e.g., Seapa, Hexyl, Zappco) are suspended from the line with 12-inches

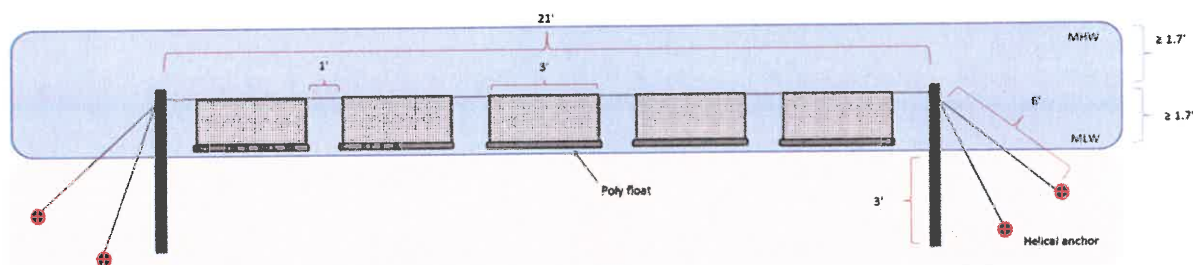


Figure 5. Australian longline.

between baskets (Figure 5). The lines will be located within the lease in subtidal waters during the growing season (May – November) and removed during the low growth season (December – April). We have a maximum of a total of 50 bags suspended on this system.

Experimental gear: Shellfish culture technology not described herein may be used on an experimental basis. This technology will fall within the same parameters as the proposed gear which is on site in perpetuity (i.e. bottom culture, mid-water culture, floating culture). Prior to deployment of experimental gear, CEED staff will contact the CRMC aquaculture coordinator with detailed descriptions of the technology and site plans.

b.) Infaunal Clam Culture

Hard clams, razor clams, softshell clams, Atlantic surf clams, blood arks and Atlantic awning clams may be grown on the lease, dependent upon project and outreach needs.

Bottom cages: Clams will be raised in nursery culture within bottom cages described in part 7a. Oyster Culture. Clams will be held in 3.3' (L) x 1.7' (W) ADPI mesh bags with varying substrates within the bags (e.g., Hydroton, pumice, pea stone). All cages will be placed in subtidal waters within the lease.

Bottom netting: Clam growout will take place within conventional bottom net systems using raceways of approximately 10' by 10' or smaller dimensions. Nets will be pinned into the substrate with 2' rebar staples. Florida soft bags are also a possible grow out system we will use for clams.

Experimental gear: Shellfish culture technology not described herein may be used on an experimental basis. This technology will fall within the same parameters as the proposed gear which is on site in perpetuity (i.e., bottom culture, mid-water culture, floating culture). Prior to deployment of experimental gear, CEED staff will contact the CRMC aquaculture coordinator with detailed descriptions of the technology and site plans.

c.) Scallop Culture

Bay Scallops may be grown on the lease, dependent upon project and outreach needs. Scallops will either originate from the RWU shellfish hatchery or be sourced from an approved commercial hatchery.

Spat bags: When produced, juvenile scallops (5-10 mm shell height) will be transferred from the hatchery to our field nursery in June and July. Scallops will be held in hanging spat bags with dimensions of 2.4(L) x 1.4' (W) until growth to 15-20 mm and subsequent transfer to bottom cages or rack and bags. Spat bags will be suspended from surface longlines. Total number of spat bags deployed on the lease will be dependent upon project needs.

Bottom cages: Bottom cages will be used to rear scallops after transfer from spat bags. Bottom cages to be used are four tiered 2' (L) x 2' (W) x 2' (H) wire mesh cages (Figure 6). Scallops are held in 2.3' (L) x 2.3' (W) plastic mesh bags, with a total of four bags per cage. Cages will be tied together in groups of five and marked with a surface float. All cages will be placed in subtidal waters within the leased footprint. Total number of scallop cages deployed on the lease will be dependent upon project needs.

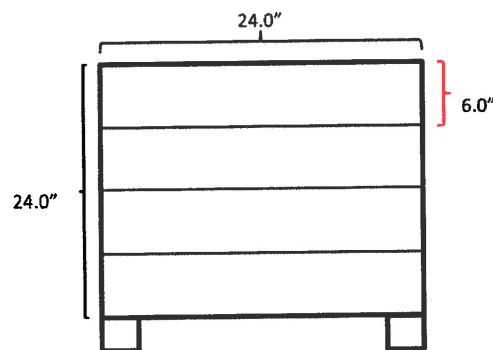


Figure 6. Scallop bottom cage.

Experimental gear: Shellfish culture technology not described herein may be used on an experimental basis. This technology will fall within the same parameters as the proposed gear which is on site in perpetuity (*i.e.*, bottom culture, mid-water culture, floating culture). Prior to deployment of experimental gear, CEED staff will contact the CRMC aquaculture coordinator with detailed descriptions of the technology and site plans.

d.) Macroalgae Culture

During winter months (November-May) sugar kelp and or dulse may be grown on suspended longlines, above the sediment surface and held in place with helical anchors (Figure 7). Long lines will be suspended in the water column using 2-3 ft., ½ in. PVC spacers with a six-pound concrete block tied into the longline and an 11-inch lobster buoy providing floatation. Spacers will be deployed every 50 ft. along the kelp line. After harvest in April, the kelp long line and buoys will be removed and the Oyster Gro cages will be floated to the surface. Longline length is anticipated at 100 feet with a maximum of 5 lines in place. Total production will be dependent upon project needs.

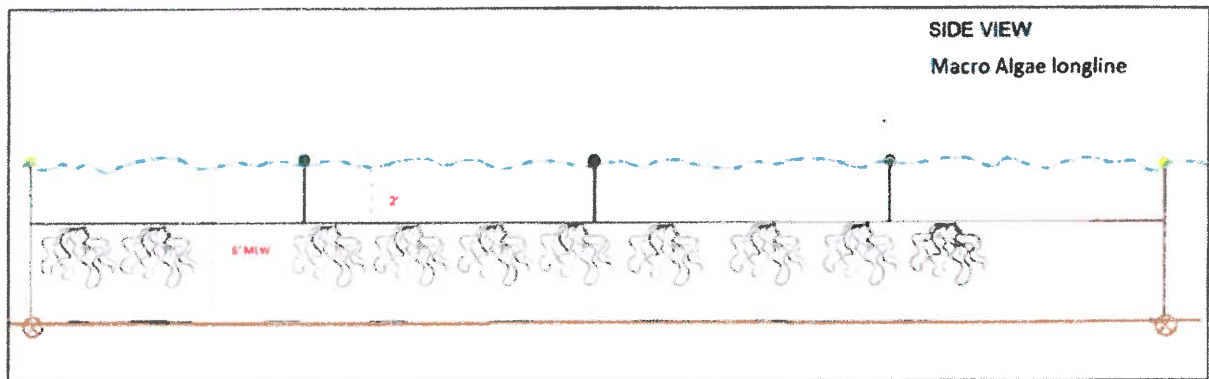


Figure 7. Macro algae longline.

Legend

- 11" Lobster buoy
- 11" Lobster Buoy
- 🌿 Kelp
- ⊗ Helical Anchor
- Longline
- 1/2" PVC spacer

e.) Mussel Culture

Mussels will be grown in suspended 100 foot longlines, secured with helical anchors and floated to the surface with 11-inch lobster buoys (Figure 8). Seed will be placed in mussel socks and attached to the backbone of the longline.

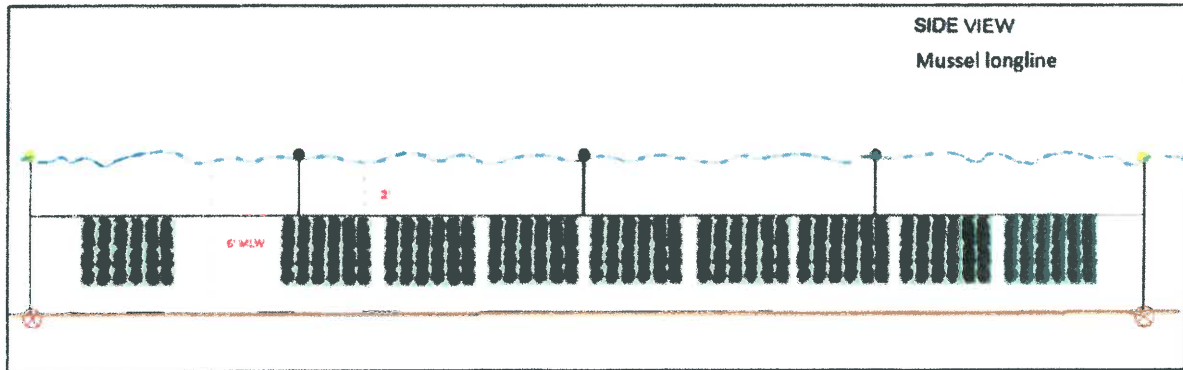


Figure 8. Mussel longline.

Legend

- 11" Lobster buoy
- 11" Lobster Buoy
- ⊗ Metal Anchor
- Mussel sock
- Longline
- 1/2" PVC spacer

f.) Nursery Culture

CEED currently operates a conventional shore-based upweller system, installed on the RWU Learning Platform, that consists of three 12-foot troughs (12' by 3' by 3'), each with nine 16" silos. At present this is driven by two 2 HP submersible pumps with the capacity to install a third submersible pump, as needed. All shellfish seed used are either generated on-site at the RWU Shellfish Hatchery or are purchased from a commercial source (with appropriate pathology testing and reports) as allowed by the CRMC Aquaculture Coordinator, with proper notification (described in 10a.)



Figure 10. The RWU Shellfish Nursery located on the Learning Platform.

8. Identifying markers:

Each corner of the site will be marked with a Coast-Guard approved 12-inch hazard buoy with the CRMC assent number printed on each marker (Figure 11). Additionally, two buoys will be added along the offshore part of the lease to mark a fairway to the beach for the RWU Sailing Team. Markers will be held in place with 3' helical anchors and 3/8" sinking polysteel line.



Figure 11. Image of a hazard buoy in the water. From Getty Images.

9. DEM Shellfish Harvesting Classification:

Mount Hope Bay – Area 17 – Conditional waters

10. Description of practices and procedures:

10a. Seed Source and Husbandry

Oysters: Oyster seed will be sourced from the RWU shellfish hatchery, a commercial shellfish hatchery or oyster farm with an approved pathology report. Determination of exact seed source will be dependent upon hatchery supply and project needs. The CRMC Aquaculture Coordinator will be notified of seed source and provided a corresponding pathology report (if source is outside the biosecurity zone) at least five days in advance of moving any seed onto the farm. Throughout the growing season oysters will be sorted according to size and density of oysters in bags will be thinned to mitigate overcrowding and food competition. Floating gear with juvenile oysters will be submerged during the winter months (November-April). Number of seed planted annually will be dependent upon project needs.

Infaunal clams: Clams will be sourced from the RWU shellfish hatchery, a commercial shellfish hatchery or aquaculture farm with an approved health certificate. Determination of exact seed source will be dependent upon hatchery supply and project needs. The CRMC Aquaculture Coordinator will be notified of seed source and provided a corresponding pathology report at least five days in advance of moving any seed onto the farm. Clams will be reared in nursery cage culture or raceways as described in 7b. Annual production will be dependent upon project and research needs.

Bay Scallops: Scallop seed will be sourced from the RWU shellfish hatchery, a commercial shellfish hatchery or aquaculture farm, with an approved health certificate. Determination of exact seed source will be dependent upon hatchery supply. The CRMC Aquaculture Coordinator will be notified of seed source and provided a corresponding pathology report at least five days in advance of moving any seed onto the farm. Scallops will be grown in, spat bags, bottom cages or floating gear as described in section 7c. Throughout the growing season scallops will be sorted according to size and density of scallops in bags will be thinned to mitigate overcrowding and food competition. Number of scallops produced annually will be dependent upon project and research needs.

Macroalgae: Macroalgae will be produced in the RWU shellfish hatchery or purchased from a commercial producer. Reproductively active algal tissue will be harvested from Rhode Island water and provided to the hatchery for spore production. The CRMC Aquaculture Coordinator will be notified at least five days prior to planting kelp and provided required documentation if needed. Kelp will be

planted on the longlines in November, timing dependent upon water temperature (<50°F), and grown until March or April. Growing kelp does not require maintenance of shoot density or anti-fouling practices, therefore, husbandry will be limited to making sure lines are secure and correctly positioned in the water column. Annual production will be dependent upon project and research needs.

10b. Gear Maintenance

All gear used in our lease will be cleaned as needed, with a minimum of once per growing season, via a land-based power washer. All fouling material removed from bags will be air-dried and disposed of.

10c. Harvest, Storage and Transportation

All handling of shellfish to be consumed will follow the recommendations/regulations set forth by RIDEM (Rhode Island Marine Fisheries Regulations, Part IV Shellfish) and in accordance with the RIDEM Vibrio Management Plan, as instituted 1 July 2014. All handling of macroalgae to be consumed will follow recommendations/regulations set forth by regulating agencies as protocols are developed. All shellfish/kelp movement and donations will be recorded with appropriate tagging as mandated by the RI shellfish regulations and those records will be maintained by CEED and will be available for review upon request.

Our proposed site is located in conditional approved waters. The Rhode Island shellfish closure hotline will be checked prior to commencement of any work. Harvest will not take place during any closure. The CRMC coordinator will be contacted prior to commencement of work during a shellfish harvest closure.

Aquaculturists in areas where emergency shellfish closures have been enacted will be allowed access to their leases for the purposes of preparing for and planting seed and when extreme weather could result in loss or damage of gear to conduct necessary maintenance/retrieval of their equipment. All other activities on the aquaculture lease, including but not limited to the harvest of shellfish, will remain prohibited until the water quality is acceptable to allow for harvest. Aquaculturists seeking permission to access their lease during an emergency closure must seek authorization by contacting Benjamin Goetsch, CRMC's aquaculture coordinator at 783-3370.

10d. Time table of work performed.

Farm work described herein will take place 3-5 days per week, between sunrise and sunset.

11. Procedures for maintaining records for operations using seed acquired from out-of-state. Description of notification, disease certification, and labeling/tagging of product.

Records of seed purchases will be maintained by CEED for review by CRMC upon request. CRMC will be notified prior to seed purchases and supplied with the appropriate documentation including: the origin of the seed (hatchery name and location), spawn date, number purchased, date of delivery and pathology report(s).

12. Procedures for maintaining records for upwellers in prohibited waters.

Our upweller is located adjacent to this proposed lease in conditional waters. Seed will be removed from the upweller at a maximum size of 25 mm. Seed movement will not take place during a shellfish harvest closure.

13. Procedures for maintaining records for operations using seed from prohibited waters.

Seed purchased from a third party that originated from prohibited waters will be kept separate from other cohorts by marking bags with red tags. Tags will contain the date the seed was purchased to insure movement or donations do not occur prior to 6 months of growth in approved waters of the lease. Seed which originated in prohibited waters will not be mixed with seed originating from approved waters.

III. Written responses to CRMP section 300.1

1. Demonstrate the need for the proposed activity or alteration:

Roger Williams University is a private liberal-arts school with a well-established (50-year) history of education in the marine sciences. RWU has been a leader in aquaculture education in the region for the past 15 years and is internationally recognized for its contributions to aquaculture research and outreach. It is essential that RWU have a location where they have the capability to educate, demonstrate and conduct research on aquaculture activities that are relevant to the northeast region. The facility will be used to train students in the full cycle of shellfish production as a component to our newly developed major/minor in Aquaculture and Aquarium Sciences. In addition, the facility will be used in support of our Applied Shellfish Farming course, a training program for shellfish aquaculture business start-ups. This site will also be used for research projects that will be conducted to address new technologies or management strategies for the aquaculture industry.

2. Demonstrate that all applicable local zoning ordinance, building codes, flood hazard standards, and all safety codes, fire codes, and environmental requirements have or will be met.

Permits required for the proposed lease will be obtained through RI CRMC pending approval of subsequent applications.

3. Describe the boundaries of the coastal waters and land areas that are anticipated to be affected.

The proposed RWU aquaculture research site runs from the subtidal boundary on-shore to approximately 10 feet of water depth (@MLW) on the off-shore boundary. The substrate is rock cobble in the shallow subtidal transitioning to sand at 2-3 feet of water. Along the northern half of the shoreline, the intertidal is bounded on the upland side by a short extent of fringing marsh dominated with cordgrass (*Spartina alterniflora*) and with *Phragmites* spp. further inland. No aquaculture or shoreside activities will occur in the intertidal and upland area that is bounded by the fringing marsh. There is no evidence of any submerged aquatic vegetation within the bounds of the site. The land adjacent to the proposed lease is owned by Roger Williams University

4. *Demonstrate that the alteration or activity will not result in significant impacts on erosion and/or deposition process along the shore and tidal waters.*

The shoreline adjacent to the proposed lease is rock cobble transitioning to a hard sand substrate. It is a protected shoreline that has not experienced any significant shoreline erosion, with the exception of the occasional storm blowing directly out of the northeast. The equipment that we will be placing on the bottom will have no impact on shoreline erosion or deposition as the structures are primarily off-shore and highly unlikely to impact hydrodynamics in the area.

5. *Demonstrate that the alteration or activity will not result in significant impacts on the abundance and diversity of plant and animal life.*

The proposed lease will not result in significant impacts on the abundance and diversity of plant and animal life. Eastern oysters play a critical ecological role within our coastal environment by providing complex biogenic structures, which increase species density, biomass and richness over nearby mud habitats (Tolley and Volety 2005, Manley *et al.* 2010, Abeels *et al.* 2012, Quan *et al.* 2012). Shellfish and associated culture gear serve as essential fish habitat (Coen *et al.* 1999, Peterson *et al.* 2003, Forrester 2007); ultimately increasing productivity within our coastal waters (Grabowski *et al.* 2004, Grabowski *et al.* 2008). Sugar kelp provides habitat for sessile and mobile species. There is no submerged aquatic vegetation on the proposed lease.

6. *Demonstrate that the alteration will not unreasonably interfere with, impair, or significantly impact existing public access to, or use of, tidal waters and/or the shore.*

There will be no interference with public access or use of tidal waters and or the shore. The proposed lease is sited in shallow subtidal water out to 10 feet at mean low tide. Aquaculture gear within the proposed lease will be spaced with adequate distance between gear items (e.g. bottom cages, floating cages, spat bags) to safely allow for small boat navigation. Allowances have been made to allow shoreline access for the RWU Sailing Team, as they train in the surrounding waters (see Figure 14)

7. *Demonstrate that the alteration will not result in significant impacts to water circulation, flushing, turbidity, and sedimentation.*

Impacts of water circulation, flushing, turbidity, and sedimentation are not applicable to this project as the gear used will have little effect on the hydrodynamics in the area.

8. *Demonstrate that there will be no significant deterioration in the quality of water in the immediate vicinity as defined by DEM.*

The proposed lease will have no negative effect on water quality. Oysters are capable of benthic-pelagic coupling by filtering phytoplankton and seston and transporting this organic matter to the benthos, thus supplementing benthic food webs and accelerating nutrient cycling within the system (Dame 1993, Smaal and Prins 1993, Pietros and Rice 2003). Through filter feeding activities, oysters increase water clarity, reduce turbidity (Cloern 1982, Newell 1988) as well as reduce carbon, nitrogen, (Hargis and Haven 1999) and pollutants from the water column (Tolley *et al.* 2005).

9. *Demonstrate that the alteration or activity will not result in significant impacts to areas of historic archeological significance.*

There is no known historic archeological significance in the propose lease. We will not be excavating or disrupting the shoreline or upland areas with our activities.

10. *Demonstrate that the alteration or activity will not result in significant conflicts with water-dependent uses and activity such as recreational boating, fishing, swimming, navigation and commerce.*

The area we propose to occupy is a foul-area with considerable rocks exposed at low tide and outside of commercial boat traffic routes. The primary boating activity in the area is from the RWU Sailing Team and we have an open line of communication to avoid any conflicting activities.

The area is lightly fished by recreational shore diggers; they will not be affected by this proposal as they target the intertidal habitat, outside of the proposed lease footprint. We have not observed any appreciable harvest from the intertidal area adjacent to the lease and none within the lease boundary. Commercial whelk harvest takes place east of the proposed the lease, primarily along the 15-foot contour line and deeper. We have not witnessed commercial fishing within the proposed lease boundary. Impacts to recreational fin fishermen will be limited as the proposed lease is located entirely within shallow water in a area not suitable for appreciable fin fish activity.

11. *Demonstrate that measures have been taken to minimize any adverse scenic impacts.*

The proposed lease is bordered entirely by Roger Williams University property. View of the proposed lease from on-campus buildings is obscured from view by mature hardwood trees. The proposed lease is not visible from private domiciles or businesses. The nature of the demonstration/research farm limits the number of individual gear items on the lease, as the intention is not maximizing production for commercial sale. Consequently, we will have the ability to maintain an organized and orderly aquaculture facility.

I. References

- Abeels, H.A., Loh A.N. and Volety A.K. 2012. Trophic transfer and habitat use of oyster *Crassostrea virginica* reefs in southwest Florida, identified by stable isotope analysis. *Marine Ecology Progress Series*. 426:125-142.
- Cloern, J.E. 1982. Does the benthos control phytoplankton biomass in San Francisco Bay? *Marine Ecology Progress Series*. 9:191-202.
- Coen, L.D., Luckenbach, M.W., and Breitbart, D.L. 1999. The role of oyster reefs as essential fish habitat: a review of current knowledge and some new perspectives. *American Fisheries Society Symposium*. 22:438-454.
- Dame, R.F. 1993. The role of bivalve filter feeder material fluxes in estuarine ecosystems. In: R.F. Dame, editor. *Bivalve Filter Feeders in Estuarine and Coastal Ecosystem Processes*. Berlin: Springer-Verlag. 245-269.
- Grabowski, J.H., Hughes, A.R. and Kimbro, D. 2008. Habitat complexity influences cascading effects of multiple predators. *Ecology*. 89(12):3413-3422
- Grabowski, J.H. and Powers, S.P. 2004. Habitat complexity mitigates trophic transfer on oyster reefs. *Marine Ecology Progress Series*. 277:291-295.
- Hargis, W.J. Jr. and Haven, D.S. 1999. Chesapeake oyster reefs, their importance, destruction and guidelines for restoring them. In: *Oyster Reef Habitat Restoration: A Synopsis and Synthesis of Approaches*, eds. M.W. Luckenbach *et al.* 329-358.
- Manley, P.J., Power, A., Walker, R., Hurley, D., Belcher, C. and Richardson, J. 2010. Ecological succession on restored intertidal oyster habitat in the tidal creeks of coastal Georgia. *Journal of Shellfish Research*. 29(4):917-926.
- Newell, R.I.E. 1988. Ecological changes in Chesapeake Bay: Are they the result of overharvesting the American oyster, *Crassostrea virginica*? In: *Understanding the Estuary: Advances in Chesapeake Bay Research*, eds. Lynch, M.P. and Krome, E.C. Solomons, MD: Chesapeake Research Consortium Publication 129 (CBP/TRS24/88). 356-546.
- Peterson, C.H., Grabowski, J.H. and Powers, S.P. 2003. Estimated enhancement of fish production resulting from restoring oyster reef habitat: quantitative valuation. *Marine Ecology Progress Series*. 246: 249-264.
- Pietros, J.M. and Rice, M.A. 2003. The impacts of aquacultured oysters, *Crassostrea virginica* (Gmelin, 1791) on water quality and [sedimentation](#): results of a [mesocosm](#) study. *Aquaculture*. 220:407-422.
- Quan, W., Humphries, A.T., Shi, L. and Chen, Y. 2012. Determination of trophic transfer at a created intertidal oyster (*Crassostrea arikensis*) reef in the Yangtze River estuary using stable isotope analysis. *Estuaries and Coasts*. 35(1):109-120.
- Smaal, A.C. and Prins, T.C. 1993. The uptake of organic matter and the release of inorganic nutrients by bivalve suspension feeder beds. In: *Bivalve Filter Feeders in Estuarine and Coastal Ecosystem Processes*, ed. R.F. Dame. Berlin. Springer-Verlag. 245-269.
- Tallman J.C. and Forrester, G.E. 2007. Oyster grow-out cages function as artificial reefs for temperate fishes. DOI: 10.1577/T06-119.1
- Tolley, G.S. and Volety, A.K. 2005. The role of oysters in habitat use of oyster reefs by resident fishes and decapod crustaceans. *Journal of Shellfish Research*. 24(4): 1007-1012.

Figure 12. Elevated view of the RWU campus at the tip of Bristol Point and the location of the proposed Aquaculture Research Area. The entrance to the Mount Hope Bridge is at the bottom of the image.



Table 2: Coordinates of proposed aquaculture area.

Corner Point	Latitude	Longitude		Length (ft)
A	41.65092	-71.25615	A-B	85.66
B	41.65085	-71.25585	B-C	135.73
C	41.65052	-71.25562	C-D	339.24
D	41.64965	-71.25606	D-E	196.69
E	41.64985	-71.25673	E-A	463.91

Figure 13. Closer view of the proposed site relative to the Roger Williams University campus: Marine and Natural Sciences Building, housing our Marine Sciences Program and the location of our aquaculture activities on campus.

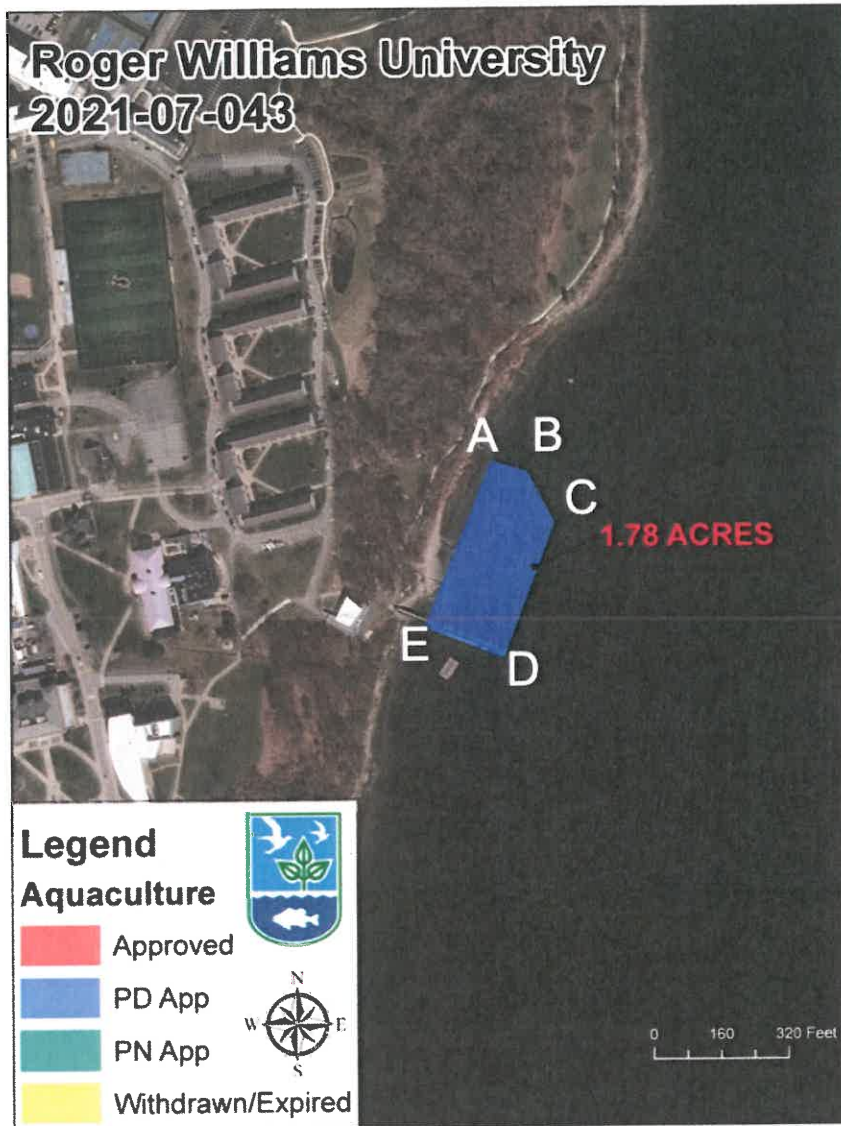
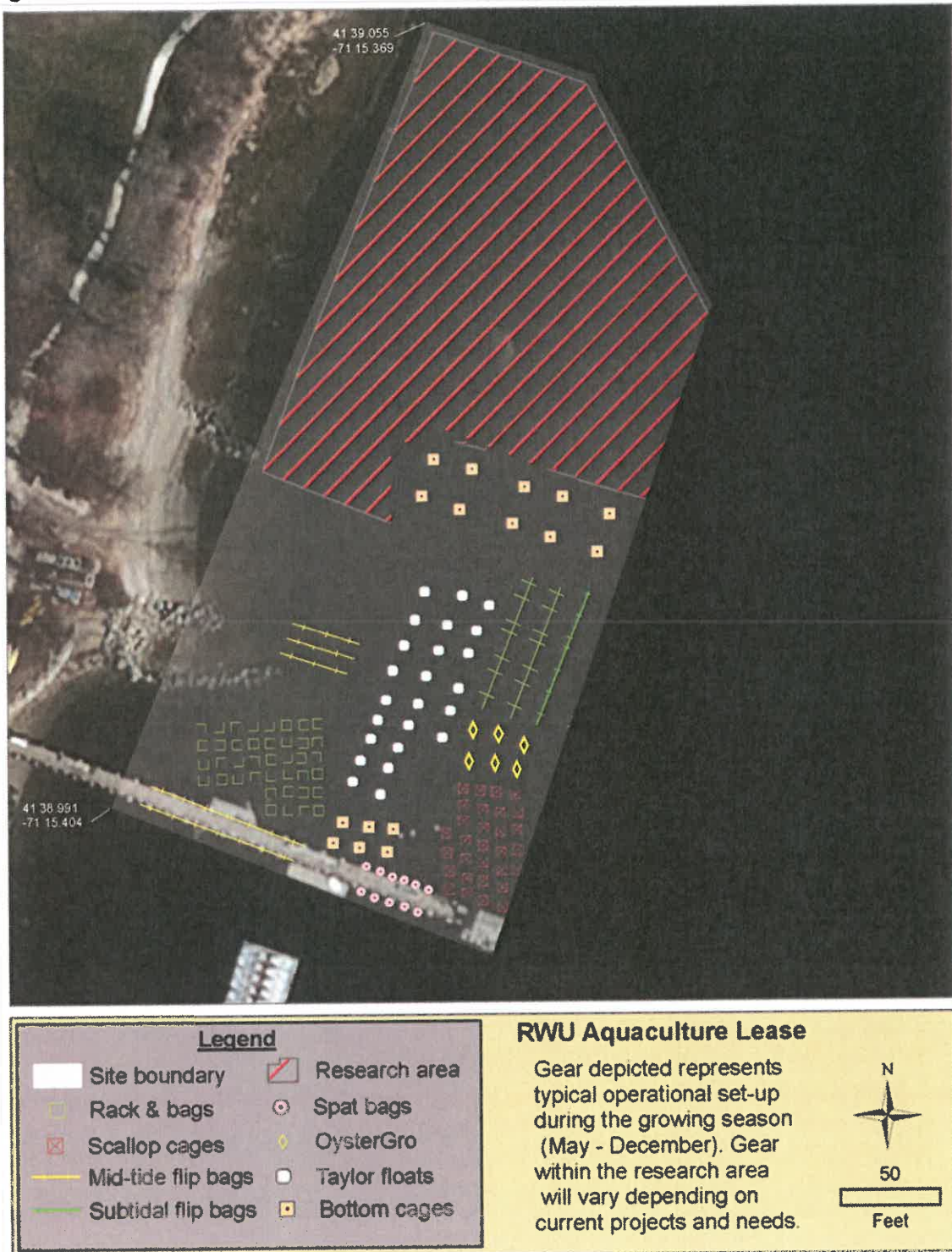


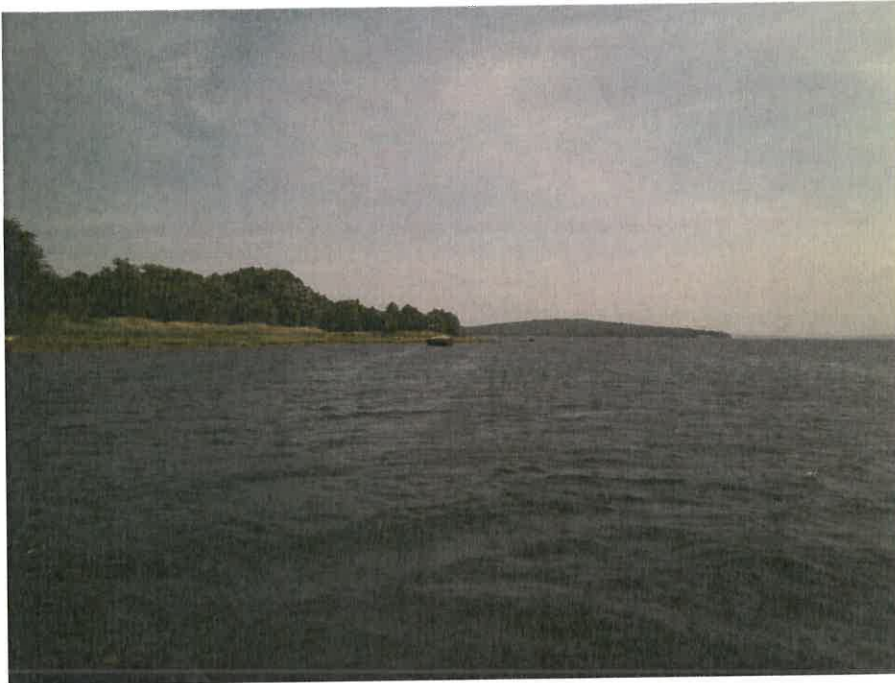
Figure 14. General location of the proposed RWU aquaculture lease.



Figure 15. Plan view of the proposed aquaculture lease.



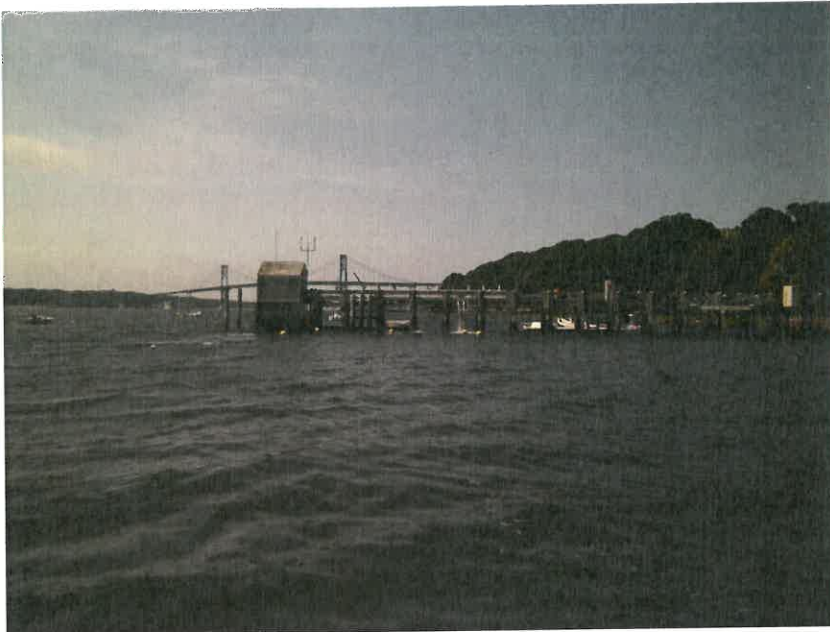
Figures 16a-d. Views of water and surrounding area, taken from the center of the proposed aquaculture site.



a. View looking north



b. View looking east



c. View looking south



d. View looking west

Figure 17. Southerly view of the entire proposed aquaculture area.



CRMC Mailing List for Roger Williams University – All Via Email
CRMC File Number 2022-04-046

Roger Williams University
Dept of Biology; Attn: T. Scott
One Old Ferry Road
Bristol, RI 02809
sbayer@rwu.edu
tscott@rwu.edu

CRMC (2022-04-046)
O. S. Government Center
4808 Tower Hill Road
Wakefield, RI 02879
LTurner@crmc.ri.gov

Lisa Turner

From: Lisa Turner <lturner@crmc.ri.gov>
Sent: Monday, May 16, 2022 11:05 AM
To: 'tscott@rwu.edu'; 'sbayer@rwu.edu'
Cc: 'Ben Goetsch '
Subject: CRMC File Number 2022-04-046 Public Notice -- Roger Williams University - Bristol
Attachments: CRMC File 2022-04-046 PN - Roger William - Bristol.pdf

Good Morning Tim and Skylar: Please see attached CRMC Public Notice. Thank you!

Lisa A. Turner
Office Manager
[Coastal Resources Management Council](#)
Oliver Stedman Government Center
4808 Tower Hill Road; Room 116
Wakefield, RI 02879
401-783-3370

Lisa Turner

From: Lisa Turner <lturner@crmc.ri.gov>
Sent: Monday, May 16, 2022 11:07 AM
To: 'Chris Vitale, Bristol Econ Dev Coor'; 'Diane Williamson, Bristol Comm Dev'; 'Dominic Franco'; 'Edward Tanner, Bristol Zoning for Conservation Comm'; 'Gregg Marsili, Bristol Harbor Master'; 'Kevin McBride, Bristol Public Wks, Director'; 'Kickemuit River Council'; 'Melissa Cordeiro, Bristol Town Clerk'; 'Michael DeMello, Chief, Bristol Fire Dept.'; 'Michelle Dimeo, Bristol, Tax Assessor'; 'Nathan Calouro, Chair, Bristol Town Council'; 'Save Bristol Harbor'; 'Scott Pickering, GM, Eastbay Newspapers'; 'Steven Contente, Town Administrator, Bristol'
Subject: CRMC File 2022-04-046 Public Notice - Roger Williams University - Bristol
Attachments: CRMC File 2022-04-046 PN - Roger William - Bristol.pdf

Please note: Comments must be received by CRMC on or before June 16, 2022. Thank you!

Lisa A. Turner

Office Manager

Coastal Resources Management Council

Oliver Stedman Government Center

4808 Tower Hill Road; Room 116

Wakefield, RI 02879

401-783-3370

Lisa Turner

From: Lisa Turner <lturner@crmc.ri.gov>
Sent: Monday, May 16, 2022 11:08 AM
To: Alicia Wilson, USACE NE Dist; Reg Div; 'Alison Kates, NRPA Program Coordinator'; 'Amy Rose Weinreich, Charlestown TC'; 'Bruce Eastman, RISA'; 'Carol Wordell, Little Compton Town Clerk'; 'Charlotte Taylor'; 'Chris Church, Reporter'; 'Christina Collins, Jamestown Acting Town Admin'; 'Christine Andrews, QDC'; 'Chuck Horbert, RIDEM'; 'Colin Howard, Independent RI -- South Kingstown'; 'David Latham'; 'David Murdock'; 'David Prescott, Save the Bay'; 'Deborah Mongeau, Librarian'; 'Donna Giordano, Westerly TC'; Elizabeth Totten; 'Eric Schneider, RIDEM Fish and Wildlife'; 'Erin Liese, Jamestown Town Clerk'; 'Glenn Modica'; 'James Bessette, Editorial Assistant'; James Boyd; Janet Tarro, Town Clerk, Narragansett; 'Jean Bellm, Exec Asst, Barrington'; 'Jeanne Spencer, Tiverton Town Clerk's Office'; 'Jeannette Alyward, North Kingstown TC'; 'Jeffrey Gardner'; Jeffrey M. Willis, Executive Director, CRMC; 'Jennifer M. West, Portsmouth TC'; 'Jerry Elmer, Esq, CLF'; Joan Chabot, Town Clerk, Tiverton; 'John Brown, THPO, Narragansett Indian Tribe'; 'John Torgan'; 'John Williams, Warwick Cove Marina'; 'Jonathan F. Stone, Exec Dir'; 'Jude Zeh'; 'Kathy & Steve Jacques'; 'Kathy & Steve Jacques'; 'Kendra L. Beaver, Esq, Save the Bay'; Kevin R. Kotelly, USACOE; 'Kim A. Casci-Palangio, East Prov CC'; 'Laura C. Swistak, City Clerk, Newport'; Laura Dwyer; 'Lawrence Taft, Exec Dir'; Leanne Zarrella, City of Cranston, City Clerk; 'Leigh Carney, Town Clerk'; Leslie Martin, USARMY USACE; Lisa Turner; 'Liz Boardman'; Lynn D'Abrosca, City Clerk, Warwick; 'Matt Gineo, Oldport Marine'; 'Matt O'Brien, AP Reporter'; 'Melanie Jewett Army, AICP, RIDOT'; Melissa Cordeiro, Bristol Town Clerk; 'Meredith J. DeSisto, Barrington TC'; 'Michael McGivney'; Michael S. Wierbonics, USARMY CENAE; 'Mike Jarbeau, Save The Bay'; 'Neal Personeus, RIDEM'; 'Nick Donadio'; 'Peter A. Healey'; 'Peter M. Vieira, Marine Construction'; 'Phil Capaldi'; Philip Hervey, Town Manager; Priscilla De La Cruz, Audubon Society of RI; 'Providence City Clerk'; 'Richard Goldstein Pawtucket TC'; 'Richard Kalunian'; 'Robert Lyons, Ocean House Marina'; Robin Barlow, RI Builders; 'Rodman R. Black Jr. HIIA'; Rosalba Zanni; 'Ryan Belssing, Independent RI -- Narragansett'; Sandrea Speroni, Town Clerk's Office; Sarah Frazar, RIDEM; 'Scott Briggs, Librarian'; Susan Flynn, SK Town Clerk; 'Thomas R. Evans, State Librarian'; 'tim rockwell'; 'Wendy J. W. Marshall, Middletown TC'
Subject: CRMC File 2022-04-046 PN - RWI - Bristol
Attachments: CRMC File 2022-04-046 PN - Roger William - Bristol.pdf

Please note: Comments must be received by CRMC on or before June 16, 2022. Thank you!

Lisa A. Turner
Office Manager
Coastal Resources Management Council
Oliver Stedman Government Center
4808 Tower Hill Road; Room 116
Wakefield, RI 02879
401-783-3370

Lisa Turner

From: RI Aquaculture <ri_aquaculture@listserve.ri.gov>
Sent: Monday, May 16, 2022 11:15 AM
To: ri_aquaculture@listserve.ri.gov
Subject: [RI_Aquaculture] Public Notice: CRMC File Number 2022-04-046 -- Aquaculture Research/Education - Roger Williams University - Bristol
Attachments: CRMC File 2022-04-046 PN - Roger William - Bristol.pdf; Untitled attachment 00542.txt

Greetings CRMC Aquaculture Listserve,

Please see attached the 30-day Public Notice for a two-acre research/education aquaculture site adjacent to the Roger Williams University Bristol Campus in Mount Hope Bay. A copy of the application and location map is included within the attached notice.

Please note: Comments must be received by June 16, 2022 at CRMC Offices via email at cstaff1@crmc.ri.gov or via USPS snail mail at the address below.

Thank you!

Coastal Resources Management Council
Oliver Stedman Government Center
4808 Tower Hill Road
Wakefield, RI 02879
Office: 401-783-3370



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[\[avg.com\]](http://avg.com)



State of Rhode Island and Providence Plantations
Coastal Resources Management Council
Oliver H. Stedman Government Center
4808 Tower Hill Road, Suite 3
Wakefield, RI 02879-1900



May 17, 2022

Greg Marsili, Bristol Harbormaster
Bristol Town Hall
10 Court Street
Bristol, RI 02809

Re: CRMC File No. **2022-04-046** -- Roger Williams University Educational/Research
Aquaculture Project -- Request for Public Notice Extension end date.

Mr. Marsili:

Your request to extend the Public Notice Period for the above referenced project from June 16, 2022 to June 30, 2022 has been granted. This extension is granted based on the meeting dates of both the Bristol Harbor Commission, June 6, 2022, and the Bristol Town Council meeting, June 22, 2022. Please provide comment on or before June 30, 2022.

If you require additional information, please do not hesitate to contact me. Thank you.

Sincerely,

James R. Boyd, Deputy Director
Coastal Resources Management Council

/lat

cc: M. Cordeiro, Bristol Town Clerk
T. Scott, RWU
S. Bayer, RWU

Lisa Turner

From: Lisa Turner <lturner@crmc.ri.gov>
Sent: Wednesday, May 18, 2022 11:59 AM
To: 'Gregg Marsili'; Melissa Cordeiro, Bristol Town Clerk
Cc: 'Jeff Willis'; James Boyd; 'Ben Goetsch '
Subject: RE: CRMC File 2022-04-046 Public Notice - Roger Williams University - Bristol
Attachments: Public Notice Extension Bristol - RWU 2022-04-046.pdf

Gregg and Melissa: Please see attached Public Notice Extension as requested in Gregg's email below.

Thank you!

Lisa A. Turner
Office Manager
[Coastal Resources Management Council](#)
Oliver Stedman Government Center
4808 Tower Hill Road; Room 116
Wakefield, RI 02879
401-783-3370

From: Gregg Marsili [mailto:gmarsili@bristolri.gov]
Sent: Monday, May 16, 2022 3:12 PM
To: Lisa Turner <lturner@crmc.ri.gov>
Subject: Re: CRMC File 2022-04-046 Public Notice - Roger Williams University - Bristol

Good Afternoon Lisa,

The closing period for comment is June 16th, is there any way to extend that? The issue is the Bristol Harbor Commission meets June 6th and the next Bristol Town Council meeting is June 22nd. This request from Roger Williams will need to be discussed with both of them.

Thanks,
Gregg Marsili
Bristol Harbormaster

Sent from my iPad

On May 16, 2022, at 11:07 AM, Lisa Turner <lturner@crmc.ri.gov> wrote:

Please note: Comments must be received by CRMC on or before June 16, 2022. Thank you!

Lisa A. Turner
Office Manager
[Coastal Resources Management Council](#)
Oliver Stedman Government Center
4808 Tower Hill Road; Room 116
Wakefield, RI 02879
401-783-3370



State of Rhode Island and Providence Plantations
Coastal Resources Management Council
Oliver H. Stedman Government Center
4808 Tower Hill Road, Suite 3
Wakefield, RI 02879-1900



Dr. Timothy Scott
Roger Williams University
One Old Ferry Road
Bristol, RI 02809

RE: Preliminary Determination Meeting, CRMC File No. 2021-07-043
Site Location: 1 Old Ferry Road, Bristol

Dear Dr. Scott:

Enclosed is the report from the Preliminary Determination Meeting held the other week at the Bristol Harbor Commission. Please review the suggestions, comments and concerns section of this report.

While it is completely up to you if you want to incorporate the suggestions contained in this report in your full application, I strongly recommend that you incorporate the changes suggested. Please do not hesitate to contact me at 401 783-3370 if you have any questions.

Sincerely,

Benjamin J. Goetsch, Aquaculture Coordinator
Coastal Resources Management Council

RHODE ISLAND COASTAL RESOURCES MANAGEMENT COUNCIL
REPORT OF FINDINGS -- PRELIMINARY DETERMINATION

STATEMENT OF LIMITATIONS

The contents of this staff determination report shall be valid only for the period on and preceding the date of this report. This report is neither an approval nor denial of the subject proposal. It is an evaluation of CRMC regulations in effect as of Sept 13, 2021 as they pertain to the below stated proposal, including preliminary staff recommendations.

Modifications to the below stated proposal may, upon the discretion of the CRMC, render this determination null and void.

APPLICANT INFORMATION

NAME: Roger Williams University CRMC FILE NO. D2021-07-043
LOCATION/POLE: 1 Old Ferry Road
CITY/TOWN: Bristol

CONTACT PERSON(S) & ADDRESS:

Roger Williams University
One Old Ferry Road

Bristol, RI 02809

PRELIMINARY REVIEW INFORMATION

PROPOSAL: RWU 2 acre site for research and education

PLAN(S) REVIEWED: Plans received July 12, 2021

INVESTIGATOR Ben Goetsch **DATE** Sept 13, 2021 **TIME** 7:00pm

MEASUREMENTS & OBSERVATIONS:

PREVIOUS CRMC ACTIONS FOR SITE: Various other research permits

Preliminary Buffer and Setback Requirements: NA

SETBACK (ref. Section 1.1.7 CRMP)

BUFFER (ref. Section 1.1.9 CRMP)

Note: Setbacks apply to "construction related activities" including filling, removing, and grading (ref: Section 1.3.1(B) CRMP). The coastal program requires a minimum setback of either 50', or the buffer zone width plus 25' (whichever is greater). Work within this minimum setback will require a variance per Section 1.1.5 of the CRMP. All variances must be requested in writing. No construction or construction related work shall occur within the required setback (exemptions include structural shoreline protection, outfalls and water dependant uses). Work within the required setback may require a Category "B" review (public notice and decision by the full coastal council) and would likely result in adverse CRMC staff recommendations to the Coastal Council during the review process.

NAME: Roger Williams University
CRMC FILE NUMBER: D 2021-07-043

Buffer zones are areas that must be retained in, or allowed to revert to, "an undisturbed natural condition." All structures (excluding accessory structures) should be setback a minimum of 25' from the buffer zone to allow for access, fire protection and maintenance without infringement into the buffer.

If applicable, the plan must show "area of land within 50 feet" in accordance with Rule 5.04 of The Rules and Regulations Governing the Protection and Management of Freshwater Wetlands in the Vicinity of the Coast (the Rules), and label this area as a "buffer zone" in accordance with Rule 5.14. In addition, no activities (such as: drainage, grading, filling, etc.) may affect the freshwater wetland or the buffer zone. Where such alterations occur, or are proposed, an application shall be submitted in accordance with CRMC's Freshwater Wetland Rules.

Coastal Hazard: In accordance with Section 1.1.10, the applicant is encouraged to utilize CRMC's "STORMTOOLS" mapping feature to better understand the impact of current and future Sea Level Rise and Storms on the subject property. Also, in accordance with Section 1.1.6(I), the applicant is required to complete a "Coastal Hazards Worksheet" to further understand the impact of climate change on a proposal (<http://www.crmc.ri.gov/coastalhazardapp.html>). While the RICRMP does not yet require structures to be designed for SLR scenarios, the applicant should consider SLR, Climate Change, and design life expectations in design planning.

Coastal feature verification shall be valid for one-year from the date of this Determination or until an erosion event (e.g., due to storm event, landslide, man-induced alteration, etc.) occurs that alters the coastal feature.

SUMMARY OF FINDINGS

CRMC JURISDICTION: YES
TYPE WATER: 2

For the purpose of this review the coastal feature(s) shall be: Submerged Land

Applicability of CRMP and SAM Plans (as amended):

CRMP Sections: 1.1.4(F); 1.2.1(A); 1.3.1(A); 1.3.1(K); 1.3.1(R)

SAMP: NA

STAFF CONCERNS/COMMENTS/INFORMATION REQUIREMENTS:

The Preliminary Determination (PD) meeting for this application was originally scheduled for August 27th, 2021 at 2:00pm at the Bristol Town Hall. That meeting did occur but was cut short due to concerns from the Bristol Harbor Commission. Given these concerns, the town requested that the meeting be continued to the next Harbor Commission meeting on Sept 13th, 2021 at 7:00pm. Staff from DEM/DMF was present at the first meeting and indicated that the agency had no concerns regarding the proposal. Both meetings were advertised through the new CRMC Aquaculture Listserve.

At the second meeting before the Bristol Harbor Commission meeting, Ben Goetsch gave a brief overview of the PD review process which was followed by a presentation of the proposal by RWU staff and faculty. This application is an update to other research permits over the years and seeks to bring all the other projects under one authorization. Discussion with the Harbor Commission, Harbormaster, fishermen, and general public followed with the following recommendations identified.

NAME: **Roger Williams University**
CRMC FILE NUMBER: **D 2021-07-043**
Concerns raised and recommendations:

Fishermen place trawls of traps along the nine foot contour line just offshore of the University Learning Platform. The orientation of past kelp gear perpendicular to the shore has interfered fishing vessels in the past and markings of the gear have been insufficient for navigational purposes. Fishermen suggested orienting the gear to be parallel to the shore and to keep the lease even with the end of the platform. CRMC agrees and recommends keeping the offshore boundary as close as possible to the terminus of the platform while still allowing room for deep water winter storage. The proposed distance of thirty-five feet off the end of the platform should allow enough room. RWU may want to investigate further to see if it can be sited any closer to the platform and should verify that any new coordinates are accurate for a full application. However, CRMC does not think the orientation of the gear as proposed will hinder navigation as long as the site is well marked.

The Harbormaster recommended placing five hazard buoys along the offshore and northern boundary of the site. Two of those buoys should mark the bottom plant area that will also serve as a fairway to the beach for the sailing team. CRMC agrees hazard buoys would be a beneficial aid to navigation and recommend they be included in a full application. Any private aid to navigation would still have to be registered with the USCG if approved by CRMC.

A concern regarding the conditional water status of the growing area was raised and how that might impact public health and operations. CMRC has received a letter from DEM Office of Water Resources stating the office has no concerns as long as proper protocols were followed during closure periods. CRMC agrees that the conditional nature of the water is not an issue for a research site where production of animals for consumption is not the main driver for the operation. Any product donated for consumption should only be harvested when in the open status. CRMC recommends monitoring the shellfish hotline for closures and alerting CRMC when they plan to harvest for consumption.

Some fishermen raised the concern that permitting this operation would lead to opening the door to other commercial applications in the area. CRMC does not encourage commercial leases in conditional waters and would not support such an application unless there was a compelling need demonstrated by the applicant.

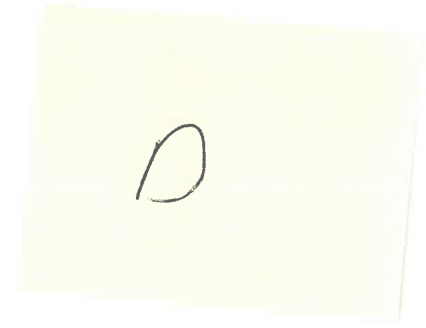
SIGNATURE:  _____ AQUACULTURE COORDINATOR



Town of Bristol, Rhode Island

Harbor Commission

10 Court Street
Bristol, RI 02809
401-253-7000



October 2, 2021

Bristol Town Council
10 Court St.
Bristol, RI 02809

Subject: RWU Proposal for 2 Acre non-commercial Research & Educational Site Near Existing Pier

Dear Honorable Councilmen:

The Harbor Commission respectfully recommends approval of the subject proposal with one suggestion that the site go no further South into the water than the southern end of the existing pier. This recommendation would avoid a conflict with existing commercial fishing.

The subject proposal was made to the Commission at its September meeting by the RWU Staff and Benjamin Goetsch, Aquaculture Coordinator of CRMC who was available to assist and answer any questions.

Respectfully yours,

Domenic Franco
Chairman, Harbor Commission

cc: Gregg Marsili – Harbormaster
Steven Contente – Town Administrator
Diane Williamson – Director - Community Development
Mellissa Cordeiro - Town Clerk
Janes Dollins – Vice Chairman, Harbor Commission

Benjamin Goetsch

From: Scott, Timothy <tscott@rwu.edu>
Sent: Friday, June 24, 2022 9:41 AM
To: Bayer, Skylar
Cc: Benjamin Goetsch; Osinski, Susanna
Subject: Re: Letter in response to concerns brought forth by BHC on the RWU aquaculture lease permit application to CRMC

Thanks Ben - and Skylar, thanks for pulling this together. Tim

From: Bayer, Skylar <syounng-bayer@rwu.edu>
Sent: Friday, June 24, 2022 7:02 AM
To: Gregg Marsili <gmarsili@bristolri.gov>
Cc: Benjamin Goetsch <bgoetsch@crmc.ri.gov>; Scott, Timothy <tscott@rwu.edu>; Osinski, Susanna <sosinski@rwu.edu>
Subject: Letter in response to concerns brought forth by BHC on the RWU aquaculture lease permit application to CRMC

Hi Gregg,

I've attached a letter for the Bristol Harbor Commission that hopefully addresses all the concerns that were brought up. I think one thing that's confusing is the overlay in mapping software from the scale it's shown at makes it look like it is overlapping the learning platform, but it is not. Our shellfish technician, Susanna Osinski, went out with a handheld GPS with slightly revised coordinates to be doubly sure we didn't overlap at all with the south side. We revised our maps with RI DEM to ensure that all of this is reflected in our letter.

I've CCed Ben Goetsch so that he has the most recent adjustments/updates of our application.

Please let us know if you and the Bristol Harbor Commission have any other questions.

Best,
Skylar

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Skylar Bayer, Ph.D.
Pronouns: she/her/hers
Assistant Professor of Biology, Aquaculture and Extension Specialist
Department of Biology, Marine Biology & Environmental Science | Roger Williams University
Office | MNS 240 | Phone | x3091
Zoom Office | <https://rwu.zoom.us/my/bayeroffice>
Twitter: [@drsrbayer](https://twitter.com/drsrbayer)
RWU Shellfish Program Instagram: https://www.instagram.com/rwu_shellfish_program/

24 June 2022

Dear Bristol Harbor Commission,

We are writing to you in regard to your questions and concerns brought forward during your meeting with Dr. Tim Scott on September 13th, 2022, regarding our CRMC Aquaculture permit application for research and education. Firstly, we thank you for your feedback and reaching out directly to us. Secondly, we wish to address your concerns about our permit application explicitly in this letter. The current application in circulation has two maps generated by RI DEM and a diagram of the gear layout proposed in the application. We understand there was a request to ensure that our GPS coordinates of the lease did not go over the south side of the Roger Williams University learning platform and that included any potential aquaculture gear.

To ensure that our application absolutely adheres to this request, our Shellfish Technician Susanna Osinski revisited our GPS coordinates (A – E, **Table 1**) and **slightly adjusted the coordinates to absolutely ensure that points D and E fall in the middle of the Learning platform** to include the upwellers in the physical layout of the lease. The upwellers are on the north side of the learning platform and our understanding is that they need to be included in the proposed lease area. Next, we sent these new coordinates to RI DEM to generate a new official map (**Figure 1**). Staff at RI DEM commented that the diagram did not change very much in its appearance from the previous iteration, however we are confident in our confirmation that these coordinates, and specifically coordinates D and E, do not fall south of the learning platform, but in the middle of the learning platform. Finally, Osinski created an updated gear schematic (**Figure 2**) to illustrate that we will not have gear present on the south side of the Roger Williams University learning platform.

Our permit application as written does not allow for us to conduct any aquaculture activities on the south side of the learning platform. We have absolutely no intention of

conducting aquaculture activities or operations on the south side of the learning platform. Our application requests aquaculture activities on the north side of the learning platform, including the north side of the learning platform where the upwellers are located.

Please see the attached table and two figures on pages 3-5 for details. Please reach out to us if you have any additional concerns or questions. Thank you for your time and consideration in this process. We truly appreciate your willingness to communicate openly and honestly with us here at Roger Williams University.



Skylar R. Bayer, PhD
Aquaculture Extension Specialist
sbayer@rwsu.edu; 401-254-3091

Timothy M. Scott, PhD
CEED Director
tscott@rwu.edu; 401-254-3563

Point	Latitude	Longitude
A	N 41° 39.055'	W 071° 15.369'
B	N 41° 39.051'	W 071° 15.351'
C	N 41° 39.031'	W 071° 15.337'
D	N 41° 38.979'	W 071° 15.364'
E	N 41° 38.991'	W 071° 15.404'

Table 1. Revised latitude and longitude coordinates of the five corners of the Roger Williams University CRMC Aquaculture permit application. Of particular note, points D and E fall within the middle of the Learning Platform and do not fall along the south side of the Learning Platform.

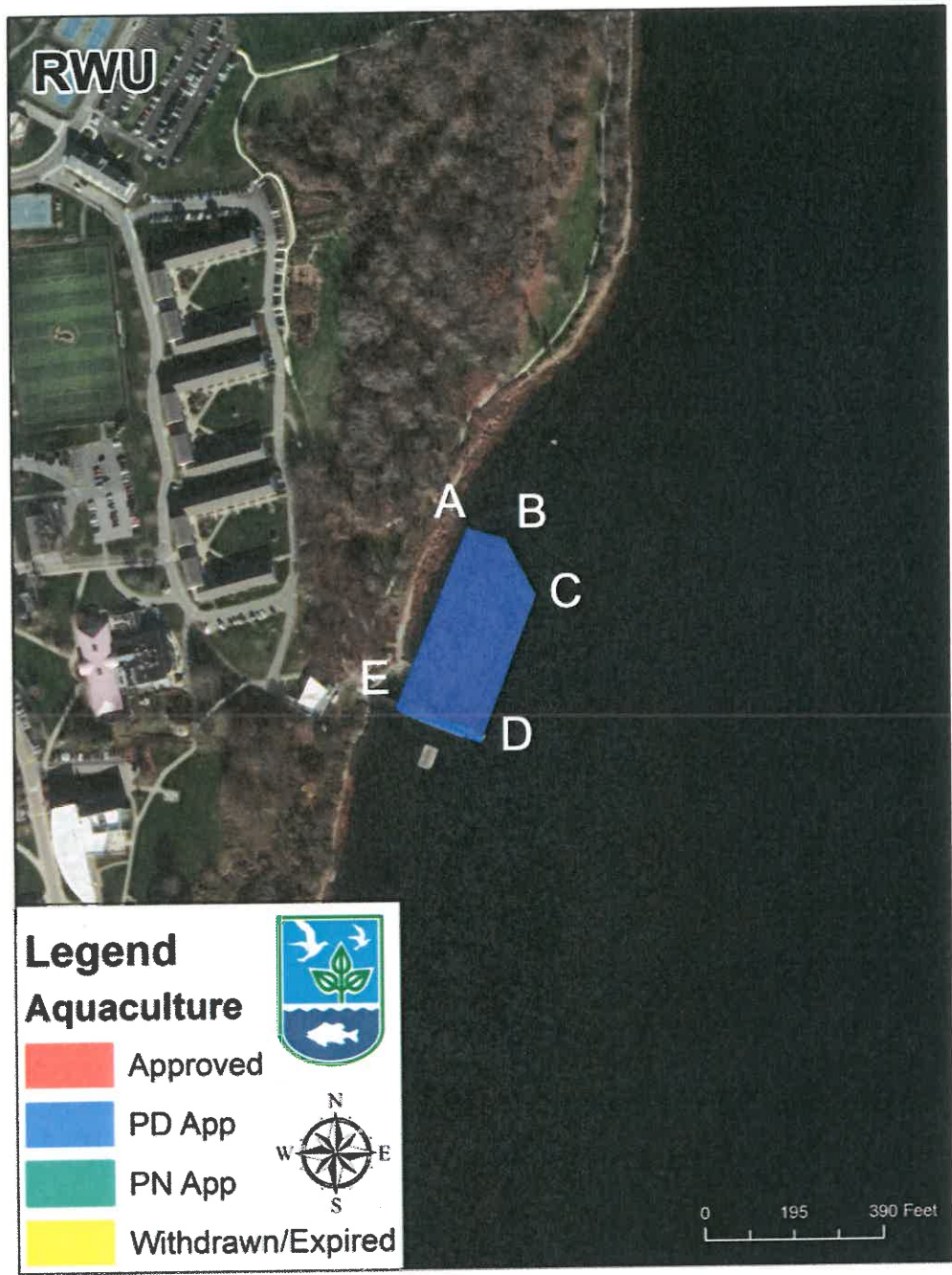


Figure 1. Updated version of the RWU Aquaculture lease map generated by RI DEM in June 2022 with slightly revised coordinates (1.78 acres). While the blue polygon appears the overall the Learning Platform entirely, we believe this is an artifact of the computer program that produced this layout as our GPS coordinates for points D and E fall within the middle of the Learning Platform.

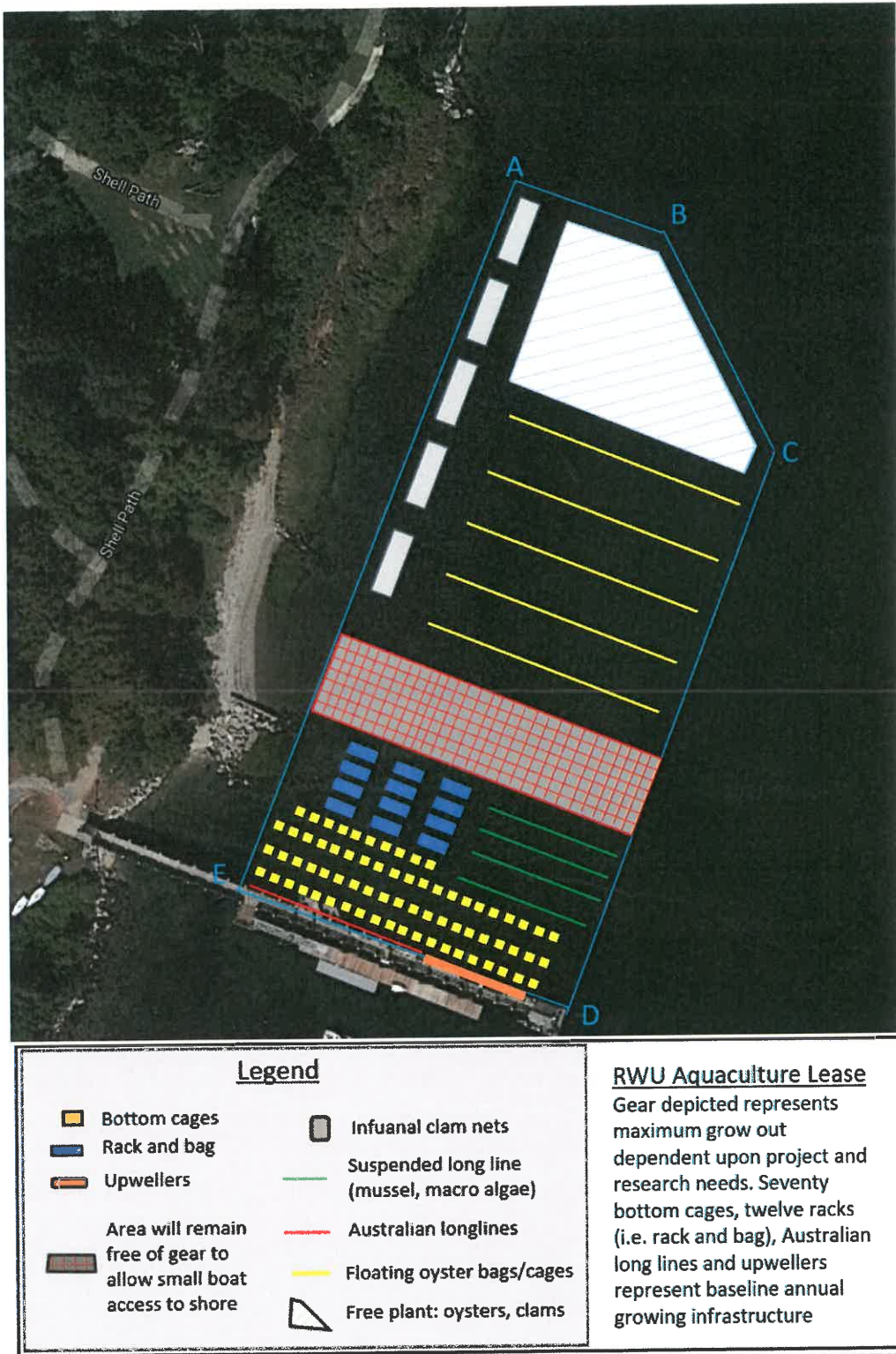


Figure 2. Updated schematic of the proposed gear layout and gear-free passage for small boats. Perhaps most important to identify in this figure is that there is no gear or area of the lease on the south side of the Roger Williams University Learning Platform. This diagram is overall best reflects our intentions in the lease application.



RHODE ISLAND
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
DIVISION OF MARINE FISHERIES/DIVISION OF FISH AND WILDLIFE
3 Fort Wetherill Road
Jamestown, Rhode Island 02835



May 15, 2023

Benjamin Goetsch
Aquaculture Coordinator
Coastal Resources Management Council
4808 Tower Hill Road
Wakefield, RI 02879

Re: Roger Williams University application #2022-04-046

Dear Mr. Goetsch:


The Rhode Island Department of Environmental Management (the Department), through the Division of Fish and Wildlife (DFW) and Division of Marine Fisheries (DMF), has received and reviewed the application submitted by Roger Williams University (RWU) for a 1.78-acre education/research aquaculture site in Mount Hope Bay adjacent to RWU Bristol campus, to be used as an experimental area to test new equipment and to demonstrate existing technology. These equipment consist of rack and bag system, bottom cages, floating cages, and Australian longlines for the cultivation of Eastern Oyster (*Crassostrea virginica*). Bottom cages and bottom netting for Atlantic razor clam (*Ensis directus*). Spat bags and bottom cages for Bay scallop (*Argopecten irradians*). Suspended longlines for Sugar kelp (*Saccharina latissimi*) and Blue mussel (*Mytilus edulis*). Additional requested species to be cultivated are: Hard clam (*Mercenaria mercenaria*), Atlantic surf clam (*Spisula solidissima*), Sout razor clam (*Tagelus plebeius*), Soft shell clam (*Mya arenaria*), Blood Ark (*Anadara granosa*), Atlantic awning clam (*Solemya velum*), Graceful redweed (*Gracilaria tikvahiae*), and Dulse (*Palmaria palmate*).

While the Department does not have objections to this modification, the DFW cautions the applicant that the use of floating bags may attract shorebirds, cormorants, gulls, herons, and egrets that may use the floating gear as roosting habitat; these birds are protected under the Migratory Bird Treaty Act of 1918. The roosting birds may become a nuisance and the resulting high concentration of fecal deposits may contribute to organic matter decomposition with the potential to cause negative impacts to benthic infauna. The DFW encourages the applicants to explore floating gear designs that deter roosting, as the DFW will not support moving deterrents, scarecrows, etc. in the future as they will also displace non-target species from the lease and surrounding area.

The DMF believes that the adverse impacts to marine fisheries and their habitat from this prospective site would be minimal. As such, the DMF does not have objections to this application.

The DMF and DFW's acceptance of the current proposal is specific to the location (provided by the coordinates) and specifications outlined in the application.

Sincerely,

A handwritten signature in black ink that reads "Jason E. McNamee". The signature is written in a cursive style with a large initial "J" and "M".

Jason McNamee,
Deputy Director, Bureau of Natural Resources

Literature Cited:

Borgmann, K. L. 2010. A Review of Human Disturbance Impacts on Waterbirds. Audubon California, 376 Tiburon, California 94920.

Korschgen, C. E., and R. B. Dahlgren. 1992. Human disturbances of waterfowl: causes, effects and management. U.S. Fish and Wildlife Service, Fish and Wildlife Leaflet 13, Washington D.C. USA.

Rhode Island Wildlife Action Plan. 2015. Rhode Island Department of Environmental Management, Providence, RI, USA.

U.S. Fish and Wildlife Service. 2015. Waterfowl population status, 2015. U.S. Department of the Interior, Washington, D.C. USA.



Rhode Island Marine Fisheries Council

3 Fort Wetherill Road Jamestown, Rhode Island 02831
(401) 423-1920 Fax: (401) 423-1921

G

Panel Chair:
Katie Eagan

Scientific Advisor:
Michael Rice

Membership:

Brennan Bica
Comm. Fishing & Dealer

Dennis Erkan
Recreational Shellfish

Cameron Ennis
Aquaculture

Jeff Gardner
Aquaculture

Bob Rheault
Alternate for J. Gardner

David Ghigliotti
Comm. Bullrake

Jeff Grant
Comm. Shellfishing

John McDonald
Comm. Shellfishing

Mike McGiveney
Comm. Bullrake

Kenneth Murgu
Comm. Shellfishing

Richard Pastore
Recreational Rod & Reel

Gerald Schey
Comm. Bullrake

Manuel Sousa
Comm. Bullrake

Chris Sperry
Recreational Shellfish

Roger Tellier
Recreational Rod & Reel

Edward Troiano
Recreational Shellfish

Marine Fisheries staff:
Anna Gerber-Williams

Meeting Notice SHELLFISH ADVISORY PANEL

Wednesday March 8, 2023, 4:30

In person:
URI Bay Campus/GSO
Hazard Room (Coastal Inst. Building)

Zoom webinar:
<https://us02web.zoom.us/j/82513327258?pwd=T001ZTlZU0p6ekJycGFvTUlsQ3ZXUT09>
Meeting ID: 825 1332 7258
Passcode: 323048
Dial in: 1-929-205-6099 (listen only)

Agenda

Agenda item	Recommended action(s)	ePacket Attachment(s)/links
1. Aquaculture Application 2022-04-046 (Roger Williams University; Mt. Hope Bay)	Recommendation to the CRMC pursuant to RI Gen. Laws §20-10-5(d)	• Application 2022-04-046 out to public notice
2. Greenwich Bay Transplant	FYI/discussion	N/A
3. Shellfish Restoration and Enhancement Plan	FYI/discussion	•
4. Providence River Shellfish Management Area • DEM DMF Dredge Survey Results • 2022 Harvest Summary • 2022 Rainfall Closures • 2023 Harvest Schedule	FYI/discussion (anticipated recommendation/vote next meeting on March 22)	• DEM DMF Dredge Survey Results • Harvest summary for 2022 • Rainfall Closures for 2022
5. Any Other Matters	FYI only or recommendation for future action	N/A
6. Adjourn		

All RIMFC Species Advisory Panel meetings are open to the public.
For more information please contact Eric Schneider at eric.schneider@dem.ri.gov or (401) 423-1933

Posted to Sec. of State Open Meetings pursuant to R.I. Gen. Laws § 42-46-6



Rhode Island Marine Fisheries Council

3 Fort Wetherill Road Jamestown, Rhode Island 02835
(401) 423-1920 Fax: (401) 423-1925

Molly Ogren
Chairman

David Monti
Vice Chair

Travis Barao

Andrew
Dangelo

Katie Eagan

Jason Jarvis

Michael Rice,
Ph.D.

Michael
Roderick

March 20, 2023

Ben Goetsch, Aquaculture Coordinator
Coastal Resources Management Council
4808 Tower Hill Road
Wakefield, RI 02879

Re: CRMC Aquaculture Lease Application # 2022-04-046, Roger Williams
University, Mt. Hope Bay

Dear Mr. Goetsch:

Pursuant to RIGL §20-10-5, the above-referenced aquaculture lease application was brought before the RI Marine Fisheries Council's (hereafter " Council" or "RIMFC) via the Council's Shellfish Advisory Panel (SAP) on March 8, 2023. At this meeting the SAP found that the application is consistent with competing uses engaged in the exploitation of marine fisheries in the area. In accordance with RIMFC policy, the recommendation of the SAP constitutes the recommendation of the Council.

Sincerely,



Molly Ogren, Chair
RIMFC

Cc:RIMFC membership



RHODE ISLAND
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

235 Promenade Street, Providence, RI 02908-5767 TDD 401-222-4462

(A)

September 13, 2021

Benjamin Goetsch
Aquaculture Coordinator
Coastal Resources Management Council
Wakefield, RI 02879-1900

Dear Mr. Goetsch,

I am writing in reference to the education and research aquaculture Preliminary Determination request by Roger Williams University (File number 2021-07-043). The proposed location for this site is located in Mt Hope Bay (Growing Area 17, GA17) in the town of Bristol in waters that are classified as **Conditionally Approved** for shellfish harvest. This conditionally approved area closes to shellfish harvest for 7-days after precipitation events that exceed 0.5" of rain or snow melt in a 24-hour period. Conditional closures of this area are announced via our shellfish hotline (401-222-2900), on the DEM shellfish webpage (<http://www.dem.ri.gov/programs/water/shellfish/>) and via the DEM shellfish listserv. It is the responsibility of the applicant to determine if the area is open to shellfish harvesting prior to harvesting any shellfish destined for human consumption. These closures commence at either noon or sunrise, within twelve hours of precipitation reaches the closure criteria and may extend beyond the seven-day minimum for excessive rain events. The applicant is hereby notified that the aquaculturists is prohibited from visiting said lease to tend the shellfish crops when the area is in a closed status unless permission has been received from the Director. This letter does not grant that permission. (Aquaculture of Marine Species in Rhode Island Waters, June 30, 2016 para. 9.6)

The classification of shellfish grounds is an ongoing process based on the principles of the National Shellfish Sanitation Program (NSSP). The Department of Environmental Management assumes no liability by the leaseholder for changes in classifications that may restrict or prohibit access and/or harvesting from said lease area. The previously aquaculture permit was granted in these conditionally approved waters as an educational and research site only and the 2021 application is consistent with that use. As such any harvesting of aquaculture products for human consumption whether on-site or as a commercially sold product can only be conducted while the conditionally approved waters of Mt Hope Bay are in the open status. All harvesting for consumption must cease immediately should a closure be instituted, and any product harvested during a closure of Mt Hope Bay shall not be introduced into the commercial market or consumed on-site. The commercial operation must be in compliance with any National Shellfish Sanitation Program (NSSP) rules and regulations that apply, and any necessary permits or licenses required by any state agency such as RIDEM or RIDOH for a commercial aquaculture harvester/dealer permit must be obtained and maintained and may include state mandated training and reporting by a responsible individual representing the university or aquaculturists. These licenses are in addition to those currently held (or renewing) by the university as indicated in their application.

While this site currently has a conditionally approved classification for the harvesting of shellfish, extraordinary circumstances (i.e., large amounts of rainfall, hurricanes, or oil spills) could temporarily halt such harvesting and prohibit work on said lease. Additionally, waste water treatment facilities

discharge treated effluent into Mt Hope Bay. Should a facility report an upset in treatment outside of the criteria used to establish existing closed safety zones a closure of additional waters within Mt Hope Bay may be required. Again, it is the responsibility of the license holder to determine the status of these harvest waters prior to harvesting for human consumption. If the application is approved, please include the following language that CRMC and DEM previously agreed to as a stipulation:

Aquaculturists in areas where emergency shellfish closures have been enacted will be allowed access to their leases for the purposes of preparing for and planting seed and when extreme weather could result in loss or damage of gear to conduct necessary maintenance/retrieval of their equipment. All other activities on the aquaculture lease, including but not limited to the harvest of shellfish, will remain prohibited until the water quality is acceptable to allow for harvest. Aquaculturists seeking permission to access their lease during an emergency closure must seek authorization by contacting Benjamin Goetsch, CRMC's aquaculture coordinator at 783-3370.

In the effort to address increasing water temperatures and the potential threat of a *Vibrio* illness outbreak we are asking all lease holders to monitor water temperature at lease their site and keep records of actual temperatures of bottom, surface and at depth waters where the shellfish are being grown during the Summer months (June-September). If this project is approved, please include this request in your aquaculture approval document.

The applicant should be aware that the NSSP Model Ordinance includes a requirement that if aquaculture gear is found to attract birds or mammals to the extent that their waste presents a human health risk then a written operation plan to mitigate that risk is required. Please advise the applicant and encourage them to consider methods to deter waterfowl attraction in consultation with RIDEM Division of Marine Fisheries.

Neither a RIPDES permit, nor a Water Quality Certificate is required for the proposed facility. If you or the applicant have questions about the water quality data supporting the shellfish classification in this **Conditionally Approved** lease area please call me at 222-4700, Ext. 277-7412.

Sincerely,

David Borkman Digitally signed by David Borkman
Date: 2021.09.13 10:00:46 -04'00'

David Borkman, Principal Environmental Scientist
RI DEM
Office of Water Resources – Shellfish Program
401-222-4700 extension 277-7412
david.borkman@dem.ri.gov

cc Angelo Liberti
Conor McManus
Dennis Erkan
Chief Dean Hoxie
Keith Amoroso - RIDOH



DEPARTMENT OF THE ARMY
US ARMY CORPS OF ENGINEERS
NEW ENGLAND DISTRICT
696 VIRGINIA ROAD
CONCORD MA 01742-2751



October 3, 2022

Regulatory Division
File No. NAE-2006-02655

Skylar Bayer, Ph.D.
Roger Williams University
1 Old Ferry Way
Bristol, Rhode Island 02809
sbayer@rwu.edu

RI CRMC Application # 2022-04-046

Dear Dr. Bayer:

The U.S. Army Corps of Engineers (USACE) has reviewed your application to the Rhode Island Coastal Resources Management Council (CRMC) to establish a 1.78-acre aquaculture experiment. The project will install lines, buoys, anchors, and regulatory aids to navigation for the cultivation of a winter and summer crops of native sugar kelp/seaweed and shellfish within Mount Hope Bay, located in Bristol, Rhode Island (41.6492°N, 71.2588°W). The project is depicted on the enclosed plans titled "Education and Research Aquaculture Application: Roger Williams University," on 20 sheets dated April 4, 2022.

Based on the information that you have provided, we verify that the Pre-Construction Notification (PCN) activity is authorized under General Permit # 20 of the May 6, 2022 Federal permits known as the Rhode Island General Permits (GPs).

Please review the enclosed GPs carefully, including the general conditions beginning on page 43, to ensure that you and whoever does the work understand its requirements. A copy of the GPs and this verification letter shall be available at the project site throughout the time the work is underway. The GPs are also available at <https://www.nae.usace.army.mil/Missions/Regulatory/State-General-Permits/Rhode-Island-General-Permit/>. Performing work within our jurisdiction that is not specifically authorized by this determination or failing to comply with any special condition provided above and all of the terms and conditions of the GPs may subject you to the enforcement provisions of our regulations. You must perform this work in compliance with the terms and conditions of the GPs and also in compliance with the following special condition(s):

1. The permittee shall ensure that a copy of the project authorization (including its drawings, plans, appendices and other attachments) is present on the vessel that

attends the work site (and the project office), and that all appropriate personnel performing work at the site are fully aware of its terms and conditions.

2. The horizontal seaweed growing lines shall be installed no earlier than November 1 and removed no later than May 30. This condition is to minimize conflict of horizontal seaweed longlines with seasonal abundance of listed marine animals, recreational shell fishing, and seasonal navigation and to mitigate the potential presence of obstruction to navigation.
3. All gear, including buoys and lines shall be marked and maintained with the file number "NAE-2006-02655," as well as the permittee's name and contact information. Markings shall stand up to the elements over time and allow for gear recovery and identification.
4. Seasonal seed lines, buoys, cages, floats, and other associated gear shall be removed during the off-season or when not in use. The gear shall be stored in upland areas to minimize the effects of habitat exclusion, loss or alteration for essential fish habitat and fishery resources.
5. The top five feet, at a minimum, of the vertical anchor/pickup and surface flotation buoy lines shall consist of a sinking (lead) line, chain or other weighted or rigid material to reduce the likelihood for sea turtles to become entangled. The applicant will maintain project equipment to ensure that constant tension is kept on the line at all tides. This requirement for counterweight on the vertical lines is intended to minimize the likelihood that the lines will entangle as they will hang straight down and will be less likely to wrap around appendages of endangered marine sea turtles/mammals.
6. The gear site shall be visited by an attendant surface vessel at least once a week, site conditions permitting. Any noticeable difference in surface buoy or line tension such as any gaps in the horizontal line or movement of vertical lines will prompt an investigation into the tension of that line. If a problem is identified, it will be corrected that day. This condition has been included to ensure that if an entanglement or other issue related to the stability of the system arises, that it will be expeditiously addressed by the permittee.
7. Each sighting of a federally listed threatened or endangered sea turtle or fish shall be recorded and the following information shall be provided:
 - a. Date, time, coordinates of vessel
 - b. Visibility, weather, sea state
 - c. Vector of sighting (distance, bearing)
 - d. Duration of sighting

- e. Species and number of animals
 - f. Observed behaviors (feeding, diving, breaching, etc.)
 - g. Description of interaction with aquaculture facility
8. If any listed species of sea turtle is observed to be entangled or otherwise interacting with the facility structure, the permittee (or onboard staff) shall immediately contact NOAA Stranding Hotline at (866) 755-NOAA (6622) and email nmfs.gar.incidental-take@noaa.gov. The permittee should also contact the NOAA Fisheries Protected Resources Division, Gloucester, MA at (978) 281-9328. This condition is included to ensure that the proper authorities will be consulted in case of gear interaction with protected resources.

This permit does not obviate the need to obtain other Federal, state, or local authorizations required by law, as listed on page 2 of the GP. Performing work not specifically authorized by this determination or failing to comply with any special condition(s) provided above or all the terms and conditions of the GP may subject you to the enforcement provisions of our regulations.

This determination becomes valid only after the Rhode Island CRMC issues their required authorization. The CRMC contact information is provided on page 55 of the GPs.

We continually strive to improve our customer service. For us to better serve you, we would appreciate your completing our Customer Service Survey located at <https://regulatory.ops.usace.army.mil/customer-service-survey/>.

Please contact Daniel Breen of my staff at (978) 318-8831 or Daniel.B.Breen@usace.army.mil if you have any questions.

Sincerely,

Kevin R Kotelly

Kevin R. Kotelly, P.E.
Chief, Permits & Enforcement Branch
Regulatory Division

Enclosures

cc:

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