

# STANDARD LEASE APPLICATION: NON-DISCHARGE

## 1. APPLICANT CONTACT INFORMATION

Applicant	Downeast Institute		
Contact Person	Dianne Tilton or Sara Randall		
Address	PO Box 83, 39 Wildflower Lane		
City	Beals		
State, Zip	ME 04611		
County	Washington		
Telephone	207-497-5769		
Email	<a href="mailto:dtilton@downeastinstitute.org">dtilton@downeastinstitute.org</a> ; <a href="mailto:srandall@downeastinstitute.org">srandall@downeastinstitute.org</a>		
Type of Application	<input type="checkbox"/> Draft Application <span style="margin-left: 200px;"><input checked="" type="checkbox"/> Final Application</span>		
	<span>[submitted before scoping session session]</span> <span style="margin-left: 100px;">[submitted after scoping session]</span>		
Dates	Pre-Application Meeting:	Draft Application Submitted: 1. Apr. 25, 2023 (initial draft) 2. July 31, 2023 (revised draft) 3. Sept. 7, 2023 (2 <sup>nd</sup> revised draft)	Scoping Session: Dec. 6, 2023
Payment Type	Draft Application: <input type="checkbox"/> Check (included) <input type="checkbox"/> Credit Card		Final Application: <input checked="" type="checkbox"/> Check (included) <input type="checkbox"/> Credit Card

**Note:** The email address you list here will be the primary means by which we will contact you. Please provide an email address that is checked regularly. If you do not use email, please leave this blank.

## 2. PROPOSED LEASE SITE INFORMATION

Location of Proposed Lease Site	
Town	Beals
Waterbody	Mud Hole Cove
General Description (e.g. south of B Island)	Near Mud Hole Point in Eastern Bay
Lease Information	
Total acreage requested (100-acre maximum)	3.95
Lease term requested (20-year maximum)	20
Type of culture (check all that apply)	<input type="checkbox"/> Bottom (no gear)  <input checked="" type="checkbox"/> Suspended (gear in the water and/or on the bottom)

Is any portion of the proposed lease site above mean low water?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
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**Note:** If you selected yes, you need to complete the steps outlined in the section titled: “19. Landowner/Municipal Permission Requirements.

**3. GROWING AREA DESIGNATION**

*Directions:* Information for growing area designations can be found here: <https://www.maine.gov/dmr/shellfish-sanitation-management/closures/index.html>

Growing Area Designation (e.g. WL):	EN
Growing Area Section (e.g. “A1”):	A

**Note:** If you are proposing to grow molluscan shellfish in waters classified as anything other than open/approved, you will need to contact the Bureau of Public Health to discuss your plans at the following email: [DMRPublicHealthDiv@maine.gov](mailto:DMRPublicHealthDiv@maine.gov).

**4. SPECIES INFORMATION**

**A.** Please complete the table below and add additional rows as needed.

Name of species to be cultivated <i>(include both common and scientific names):</i>	Name and address of the source of seed stock or juveniles	Maximum number (or biomass) of organisms you anticipate on the site at any given time
1. Soft-Shell Clams <i>Mya arenaria</i>	Downeast Institute 39 Wildflower Lane, Beals, ME	4.5 million 10-15mm juveniles (1000kg)
2. Arctic Surf Clams <i>Mactromeris polynyma</i>	Downeast Institute 39 Wildflower Lane, Beals, ME	2,600,000 juveniles at 2mm or 36000 @ 10-15mm (8kg)
3. American Oysters <i>Crassostrea virginica</i>	Downeast Institute 39 Wildflower Lane, Beals, ME	400,000 7-8 mm or 20,000 adults (1000kg)
4. European Oysters <i>Ostrea edulis</i>	DEI, pending DMR approval 39 Wildflower Lane, Beals, ME	400,000 7-8 mm or 20,000 adults (1000kg)
5. Razor Clams <i>Ensis leei</i>	DEI, pending DMR approval 39 Wildflower Lane, Beals, ME	4.5 million 10-15 mm (1000kg)
6. Blue Mussels <i>Mytilus Edulis</i>	Downeast Institute, 39 Wildflower Lane, Beals, ME	239,100 @ 10-15 cm

7. Sea Scallop <i>Placopecten magellanicus</i>	Wild seed collected by individual with applicable licenses: Alex de Koning, Frenchman's Bay or Downeast Institute, pending DMR Approval 39 Wildflower Lane, Beals, ME	2000 @ 2mm to 10mm
8. Hard Clam <i>Mercenaria mercenaria</i>	Downeast Institute, 39 Wildflower Lane, Beals, ME	2 million @ 2mm to 10cm

<b>B. Do you intend to possess, transport, or sell whole or roe-on scallops?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
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**If you answered “yes”** please contact the Bureau of Public Health to discuss your plans at the following email: [DMRPublicHealthDiv@maine.gov](mailto:DMRPublicHealthDiv@maine.gov)

**Note:** If you are proposing to grow molluscan shellfish, this application also serves as your written operational plan as required in the National Shellfish Sanitation Program (NSSP) Model Ordinance Chapter 2 and must be maintained in your files. If you wish to submit an operational plan separate from this application, please contact: [DMRPublicHealthDiv@maine.gov](mailto:DMRPublicHealthDiv@maine.gov)

## 5. VICINITY MAP

**Note:** Please label as: 'Vicinity Map'.

**Directions:** Using a NOAA Chart or USGS topographic map, show the area within a minimum of one-half mile of the proposed lease site.

The map needs to display the following:

- The waters, shore lands, and lines of mean high and mean low water within the general area of the lease
- An arrow indicating true north
- A scale bar
- The approximate lease boundaries

**Vicinity Map- see page: 68**

## 6. BOUNDARY DRAWING

**Note:** Please label as: 'Boundary Drawing'.

**Directions:** Depict the boundaries of the proposed lease site. Provide a drawing with all corners, directions, and distances labeled. Provide coordinates for each corner as follows:

- Coordinate Description  
Provide geographic coordinates for each corner of the lease site in latitude and longitude in decimal degrees (e.g., 43.123456 N, -69.123456 W) Identify the datum from the map, chart, or GPS unit used to develop these coordinates. The datum will be shown on the map or chart you are using. The Coordinate Description may be provided separately from the Boundary Drawing.



## Boundary Drawing #1



44.486250°N, -67.586750°W

44.485944°N, -67.585056°W

44.485194°N, -67.587139°W

44.484972°N, -67.585472°W

## Boundary Drawing #2



## 7. SITE DEVELOPMENT

**Directions:** If your operations require the use of cages, nets, ropes, trays, or any object (structure) other than the organism to be grown directly on the bottom or buoys to mark the corners of the lease site, you must submit gear drawings and maximum structure schematics (information below). This section is intended to provide accurate plans depicting the physical structures to be placed in the proposed area. All dimensions need to be labeled with the appropriate units (i.e. 10ft, 10in). If you are proposing a bottom lease (no gear), please skip to question “F. Marking”.

**Note:** You may embed the schematics within the document or attach them to the end of your application. If you attach the schematics, please label them according to the instructions provided below.

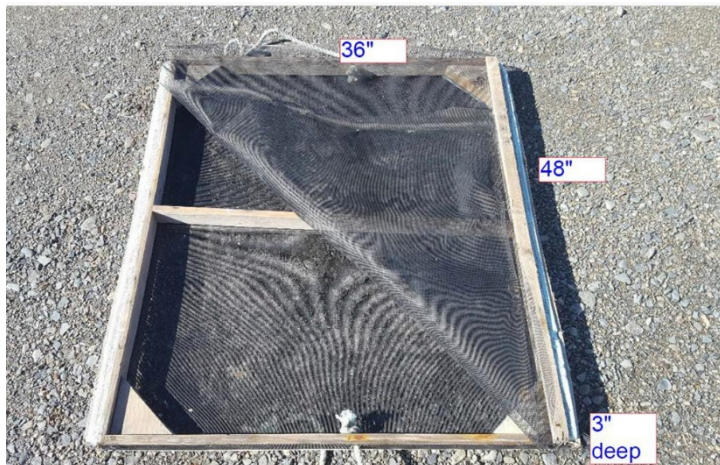
### A. Gear Information

**Directions:** Include a drawing of an individual piece of gear for each of the gear type(s) you plan to use. Include units referenced (i.e. 10in, 10ft, etc.).

1. Gear Drawing: Please include the following for each gear type that will hold organisms to be cultured (e.g. polar circles, marine algae longlines, oyster cages) and label as “Gear Drawing”. This view must show the following:
  - Length, width, and height of each gear type.

#### **Gear Drawing(s)**

##### 1) Floating Tray

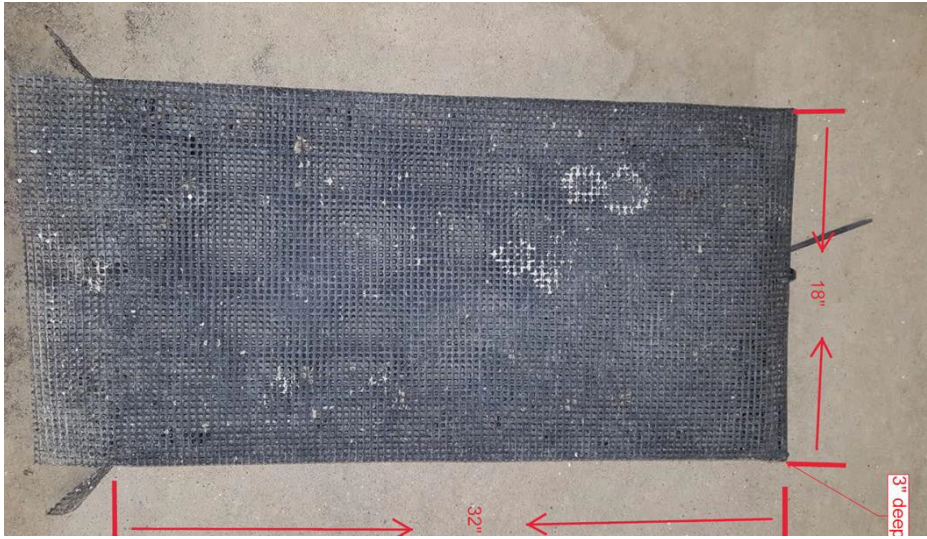


Floating wooden trays

##### 2) ADPI Oyster Bags (floating in the Spring to Fall, submerged in the winter)



ADP Bags – submerged or floating



### 3) Mussel Buoys



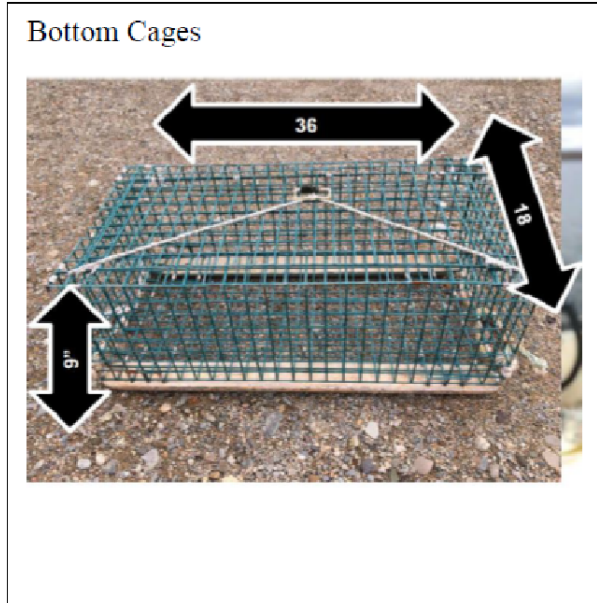
Mussel buoy is 16" dia.

### 4) Lantern Nets

Lantern Nets  
6' long; 20" diameter



5) Weighted Vinyl Coated Bottom Cages



6) Cinder Block Anchors



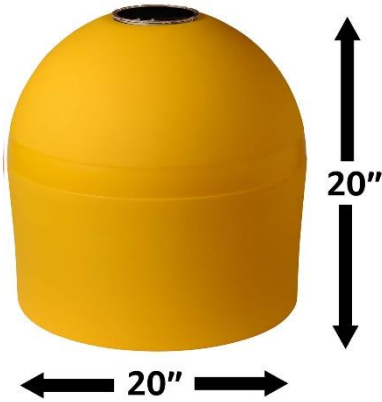
8" x 8" x 16"

7) Lobster Buoys



Lobster buoy is 5" dia. x 11" long.

8. Corner Marker Buoy



9. ½” Galvanized Mooring Chain



10. Concrete Block (anchor)



Pyramid shaped- 22” x 22” x 36”

2. Gear Table: List and describe each individual gear type that you will use in the table below. (e.g. polar circles, marine algae longline, oyster cages, moorings, mooring lines, buoys, etc.).

<b>Specific Gear Type</b> <i>(e.g. soft mesh bag)</i>	<b>Dimensions</b> <i>(e.g. 16”x20”x2”)</i>	<b>Time of year gear will be deployed</b> <i>(e.g. Spring, Winter, etc.)</i>	<b>Maximum amount of this gear type that will be deployed on the site</b> <i>(i.e. 200 cages, 100 lantern nets, etc.)</i>	<b>Species that will be grown using this gear type</b>
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1. Floating Trays	36" x 48" x 3" deep	May 1- June 30	Maximum of 500	Soft-shell clams, hard clams, Arctic Surf Clams, razor clams, American and European oysters, scallops
2. Floating ADPI Oyster Bags	18" x 32"x 3" deep	May 1-June 30	Maximum of 500	American and European oysters
3. Mussel Buoys	16" diameter	Could be year round	Up to 10	All listed
4. Lantern Nets	20" dia. x 6'	June 1- Dec. 31	10	Sea scallops
5. Weighted Vinyl Coated Bottom Cages	36" x 18" x 9"	Dec. 31 - June 1	10	Sea scallops, American and European oysters
6. Cinder Block Anchors	8" x 8"x 16"	8" x 8"x 16"	Up to 82	All listed
7. Lobster Buoys	5" dia. x 11"	Dec. 31- June 1	Up to 82	All listed
8. Corner Marker Buoy	20" x 20" (lighted)	Year-round	4	n/a
9. Mooring chain	½" x 25'	Year-round	4	n/a
10. Concrete Block (anchor)	22" x 22"x 36" -300 lbs.	Year-round	4	n/a

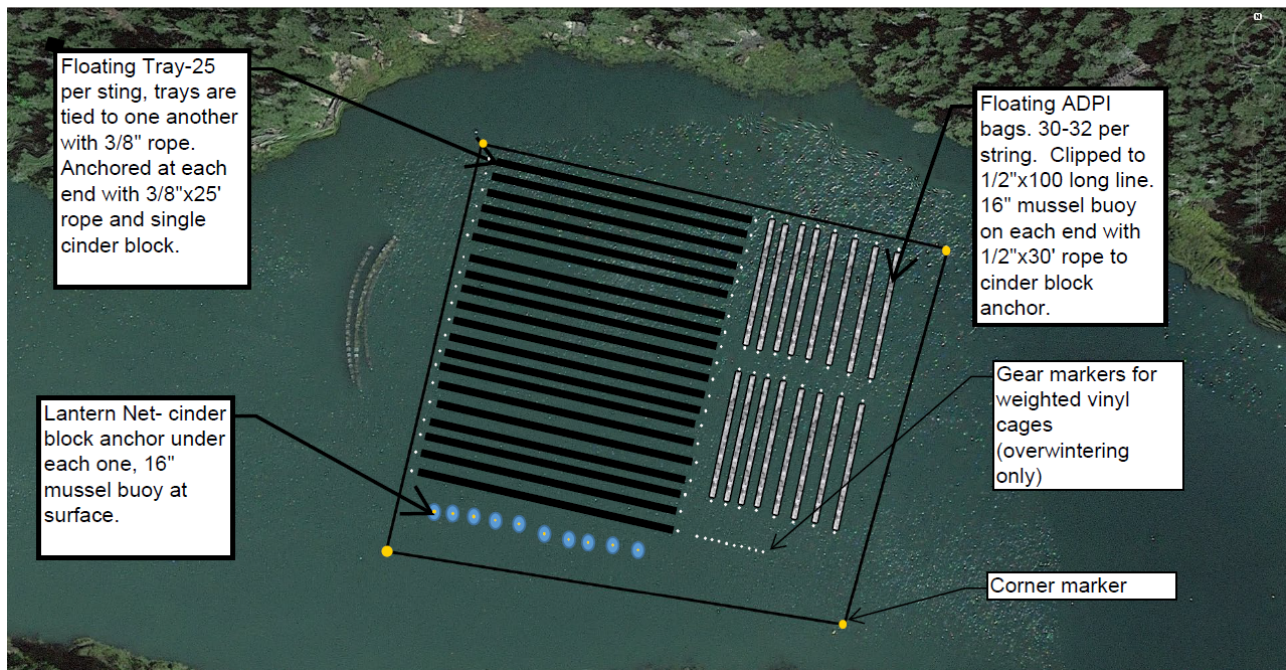


## B. Maximum Structure and Mooring System Schematic

**Directions:** Include drawings of your maximum gear layout. Include units referenced (i.e. 10in, 10ft, etc.).

1. Overhead View. Please include the following and label as “Overhead View”:
  - Maximum layout of gear, including moorings.
  - Length and width of project.
  - Approximate spacing between gear.
  - Lease boundaries and the location of proposed corner markers and any additional gear markers that would be present.

### Overhead View



### Length & Width:

Length of lease: 456.04 ft between NW and NE boundary points. 442.46 ft between SW and SE boundary.

Width of lease: 392.99 ft between NW and SW points. 442.46 ft between SW and SE points.

### Gear Spacing:

Floating trays are tied to one another so there's almost no space between them. They are 25 per row and the rows are approximately 8' apart.

ADPI oyster bags are clipped onto a longline so there's no space between them. Each long line is approximately 8' apart and there's approximately 30' between the two groups of rows to allow the boat a path. Long lines are approximately 100' long, with a cinder block anchor, 3/8" x 30' nylon anchor line and mussel buoy on each end.

Lantern nets are spaced 6-8' apart.

2. Cross-Section View. Please include the following and label as “Cross-Section

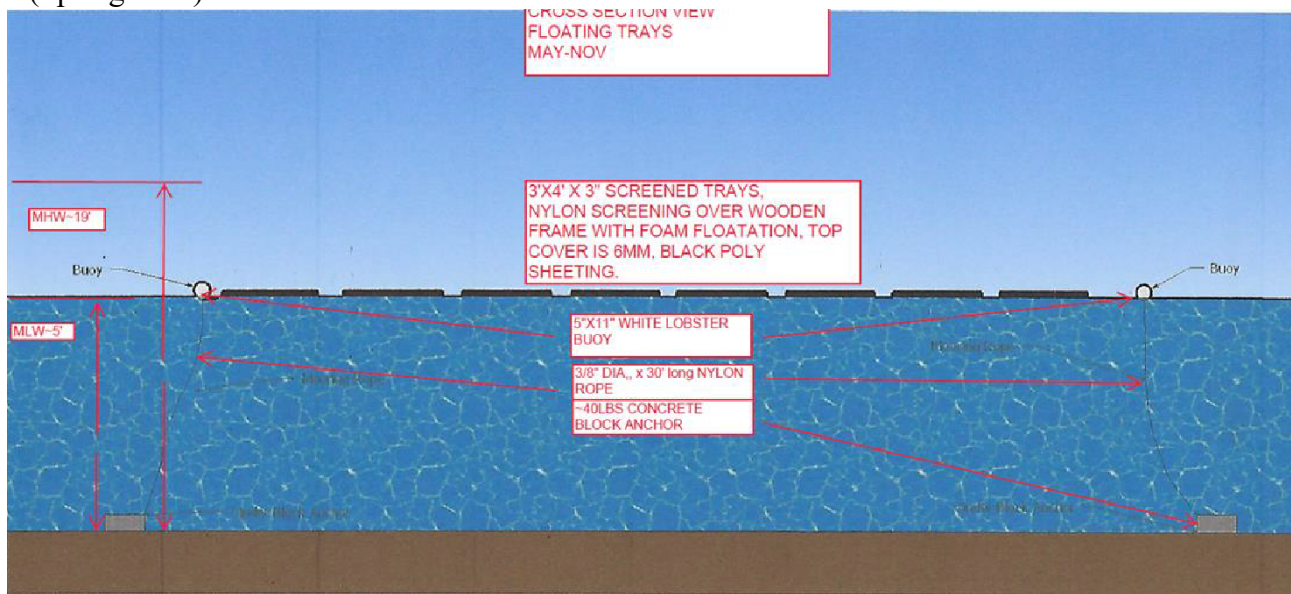
View”:

- The sea bottom.
- Profile of gear in cross-section as it will be deployed.
- Label gear with dimensions and materials.
- Show mooring gear with mooring type, scope, hardware, and line type and size.
- Depth of gear in relation to the water’s surface at mean low water and mean high water (if applicable).

**Note:** Please include an additional Cross Section View, depicting the elements listed above, if there will be seasonal changes to gear layout (i.e. over wintering).

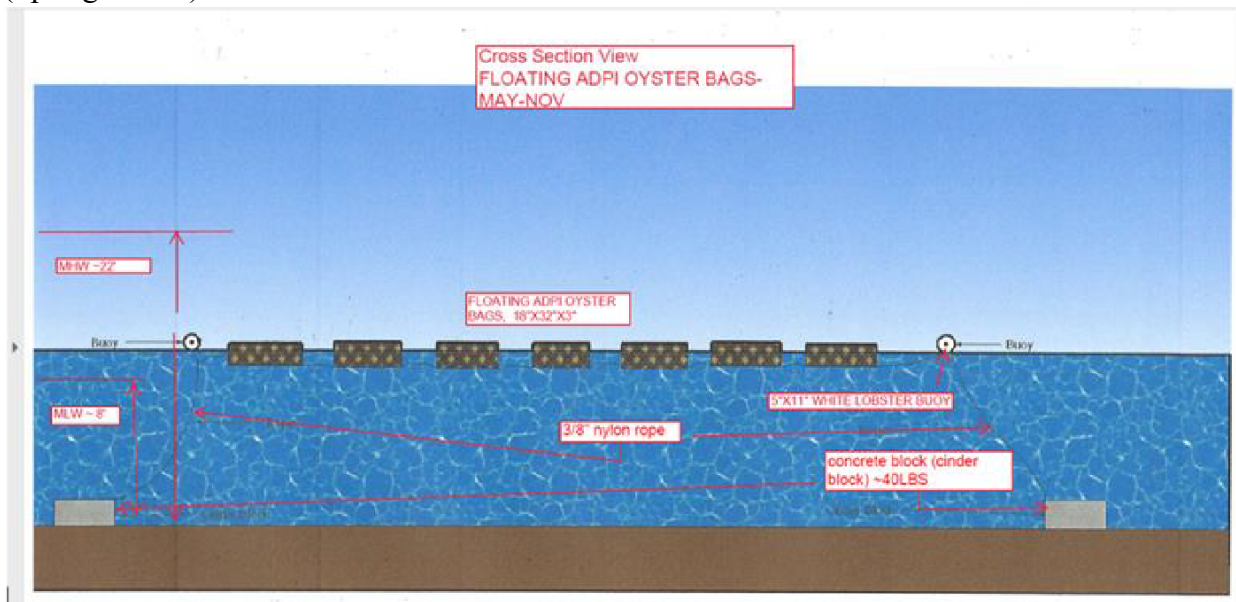
### Cross-Section View(s)

#### Floating Trays (Spring- Fall)





**Cross Section View(s)**  
**Floating ADPI Oyster Bags**  
 (Spring to Fall)

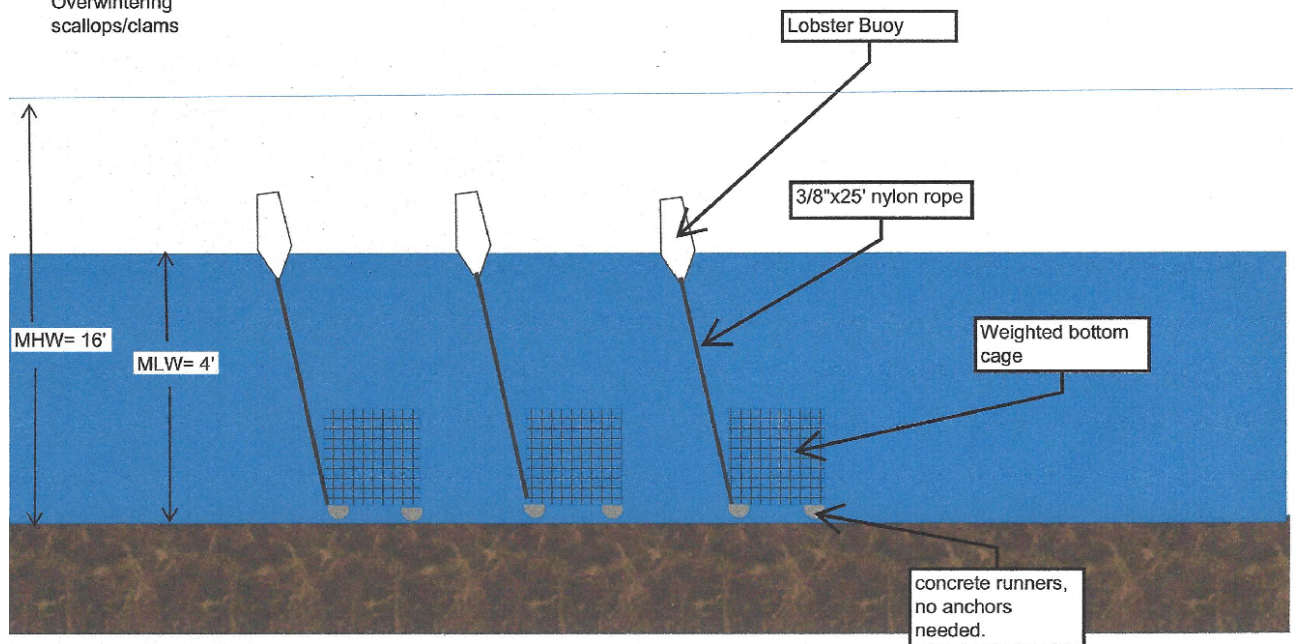


**Floating Oyster Bags**

**Weighted Vinyl Coated Bottom Cages**

**Overwintering**

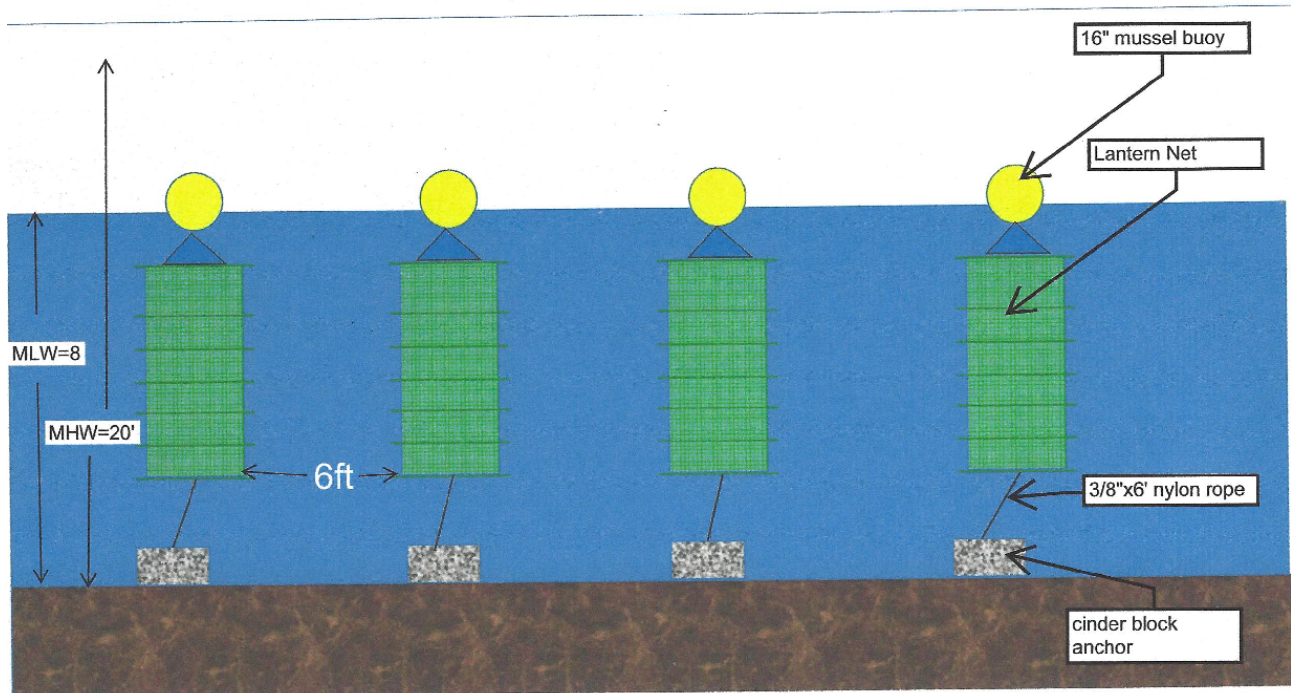
Cross section view for weighted bottom cages. Overwintering scallops/clams



**Lantern Nets**

Floated with a mussel buoy, cinder block anchor. Spaced 8'-10' apart.  
 June 1- December 31

Cross Section View  
Lantern Nets



### C. On-Site Support Structures

1. Describe structures such as barges, sheds, etc., to be located on-site. Provide a schematic and indicate the dimensions, including height above sea level, materials, etc.

There are no support structures on site.

2. Describe the storage and use of oil, gasoline, or other hazardous materials on site. If petroleum products are to be stored on site, provide a spill prevention plan.

There is no gasoline, oil or other hazardous material stored on site.

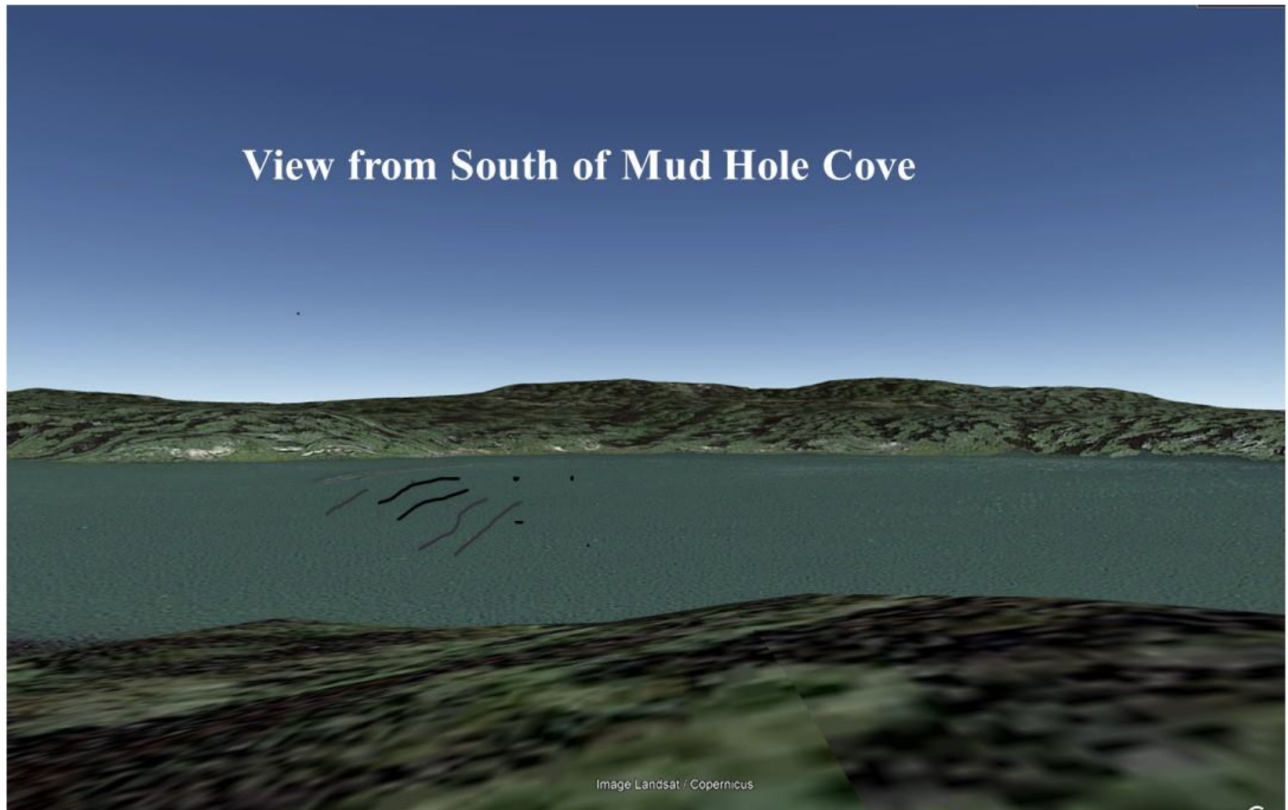
**D. Gear Color**

Provide the color of the gear and structures proposed to be used at the lease site.

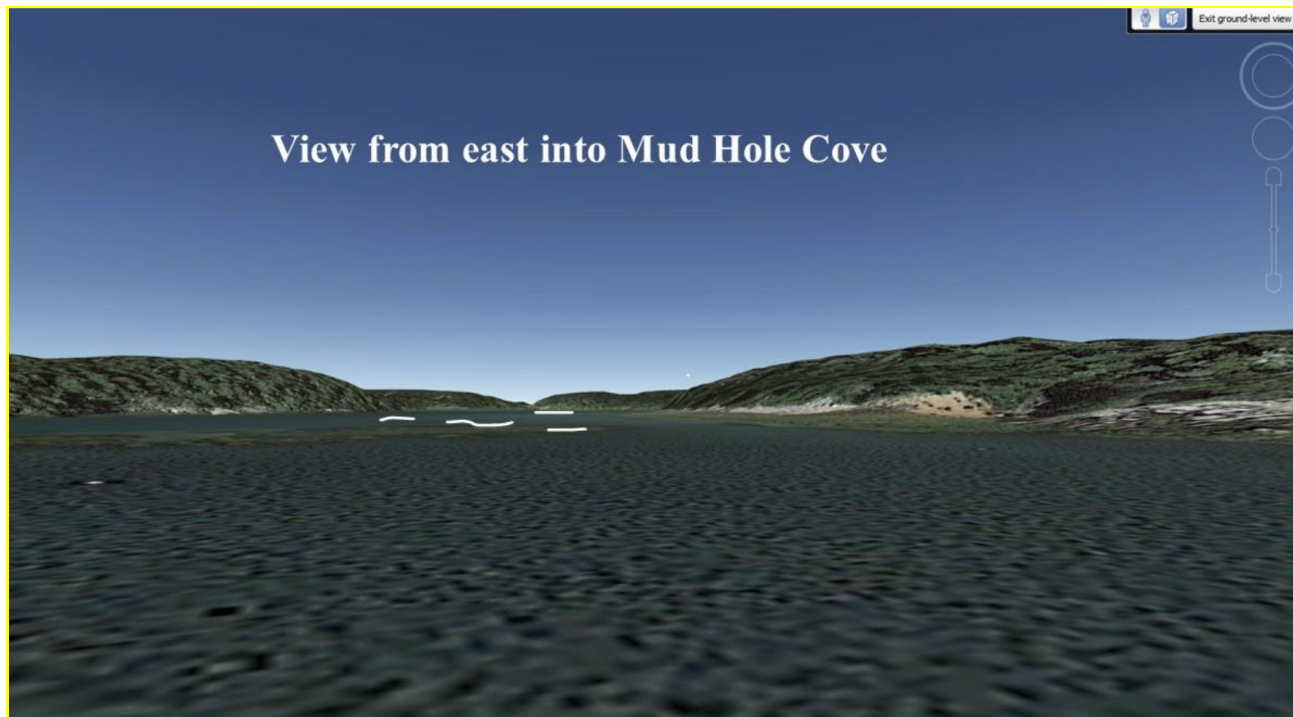
Floating trays, lantern nets and ADPI bags are black, bottom cages are green, mussel buoys can be yellow or black, lobster buoys are white. There will be yellow corner markers on each corner of the lease.

**E. Equipment Layout**

Provide schematic or photographic renderings of the generalized layout of the equipment as depicted from two vantage points on the water. Provide the locations of the two vantage points.







**F. Marking**

Will you be able to mark your site in accordance with DMR regulations, Chapter 2.80? In part, this requires marker buoys which clearly display the lease ID and the words SEA FARM to be located at each corner of the lease. Effective January 1, 2023, marker buoys need to be yellow and host reflective material.

Yes  No

If you answered no, explain why and suggest alternate markings.

**Note:** If a lease is granted, you will also be required to mark the site in accordance with appropriate

US Coast Guard Regulations. If you have questions about US Coast Guard Regulations contact: 1<sup>st</sup> Coast Guard District, Aids to Navigation Office ((617)-223-3293).

## 8. PRODUCTION ACTIVITIES

**Directions:** If you are cultivating more than one species, you will need to provide the following information for each species. Please attach additional pages if needed.

**A.** Please explain your proposed seeding activities. What months will seeding occur and how often will you be onsite to seed during this time.

This lease is used primarily as a nursery site. 2mm or smaller seed is deployed and grown to approximately 8mm. Deployment for all species occurs between May 1 to July 1. Deployment typically takes up to 4 days, taking up to 8 trips per day by boat to the site.

**B.** Please explain your proposed tending/maintenance activities.

Floating trays (Soft-shell clams, hard clams, Arctic surf clams, Razor clams, American and European oysters) and ADPI bags (European and American oysters) are checked regularly. ADPI bags would be flipped every other week, trays are brushed and sprayed off once a month while deployed.

Bottom cages (scallops, oysters), typically only used for overwintering but could be used during summer months, would be periodically pulled up for inspection/cleaning.

**C.** How frequently will you visit the site for routine tending/maintenance (i.e. flipping cages, etc.)?

At least once a week for all species.

**D.** Describe the harvesting techniques you will use. If you plan on using a drag, please provide the dimensions.

No harvesting would occur on this site.

**E.** How often will you be at the site during harvesting periods?

No harvesting.

**F.** Will gear be on the site year-round?  Yes  No

**G.** Describe any overwintering or “off season” plans for the site. For example, will you remove gear from the site and/or deploy gear in different areas within the proposed site? Please include where gear or product will be located if removed from the site.

Floating trays (soft-shell clams, hard clams, Arctic surf clams, Razor clams, American and European oysters), along with their anchors, anchor lines and buoys would be removed each fall. Floating ADPI oyster bags would be emptied and removed, some animals could be overwintered on bottom in bottom cages.

Lantern nets (scallops) could be deployed throughout the year.

**H.** Please provide details on any predator control techniques you plan to employ.

The black poly sheeting on the floating trays (soft-shell clams, hard clams, Arctic surf clams, Razor clams, American and European oysters) is used to help protect against bird predation.

- I. Suspended culture gear can attract birds that roost on the gear and defecate, potentially creating a pollution source impacting shellfish held within the gear. In order to comply with the National Shellfish Sanitation Program (NSSP) Model Ordinance (MO), DMR is requiring that applications for the suspended culture of shellfish include a description of mitigation or deterrent measures to minimize the potential pollution impacts of birds at the proposed site. If appropriate, include sketches or photos that clearly depict those measures put into practice.

Examples may include:

- Submerging suspended gear and associated product at a depth sufficient to deter roosting for two weeks before harvest
- Attaching physical deterrents (i.e. zip ties) to gear
- The site is proposed for the culture of seed only
- The site is proposed for the culture of adductor-only scallops (i.e. no other shellfish species would be grown on the site)
- Proposed gear would always be suspended below the surface of the water at a depth sufficient to deter roosting (i.e. as is common for scallop lantern nets)

The site is proposed for the culture of seed and occasionally overwintered seed that would be submerged during winter.

## 9. NOISE AND LIGHT

**Directions:** If a question does not pertain to your proposed operations, please write “**not applicable**” or “N/A”.

- A. What type of boats will be used on the site? When and how often will these vessels be on the site?

A 22' fiberglass center console outboard propelled boat will be used on the site. The vessel will be on the site frequently from May-Nov./Dec. After December, site visits are when weather permits, but at least every other week.

**B. What type of powered equipment (e.g. generator, power washer, grading equipment, barges, etc.) will be used on the site? When and how often will the equipment be used?**

The outboard is a very quiet 4 stroke, and is either idling or shut down while on site. No power washers are used on site. Gear is sprayed/cleaned using a brush, a 12v electric washdown pump equipped with a garden hose sprayer.

Grading is done before the animals are deployed to the site and again when they return to our land-based facility.

**C. Specify how you intend to reduce noise levels from the boats and other powered equipment.**

The boat engine (outboard) is shut down when not in use. However, when idling the outboard is very quiet.

**D. Provide the number, type (whether fixtures are shielded), wattage and location of lights, other than those used for navigation or marking, that will be used at the proposed lease site.**

No work lights will be used on this site. Daytime work only.

**E. Indicate under what circumstances you might work at your site beyond daylight hours.**



We do not anticipate working on this site beyond daylight hours.

## 10. CURRENT OPERATIONS

**Directions:** If a question does not pertain to your proposed operations, please write “**not applicable**” or “N/A”.

**A.** Describe your existing aquaculture operations, including the acronyms of all active leases and/or licenses.

JROB520; JROB620; JROB720; JROB820; KPEP120; KPEP220; KPEP320; KPEP420; DTIL621; DTIL721; DTIL821; BSAL121; BELL122; BELL222; BELL322; BELL422; MELBA 0009; EAST MHCx; EAST JPx; EAST Epx

**B.** What are your plans for any existing leases and/or Limited Purpose Aquaculture (LPA) licenses if the lease is granted? Will any existing leases and/or LPA licenses be relinquished if the lease is granted? If so, please indicate which ones.

All other LPAs and leases will be retained as they are in different locations.

The future plans for our experimental lease East MHCx is to become a standard lease and to continue to experiment with nursery and grow-out techniques and grow shellfish seed for municipalities and farms.

## 11. ENVIRONMENTAL CHARACTERIZATION

**Directions:** Using your knowledge of the area, describe the environment of the proposed lease site. Be sure to include units of measurement in your answers (i.e. feet, cm/s).

**A.** What are the approximate depths at mean low water?

1 ft – 10 ft.

**B. What are the approximate depths at mean high water?**

13 ft – 22 ft

**C. Provide the approximate current speed and direction during the ebb and flow.**

The flood tide direction is east to west @apprx. 0.5 knots

The ebb tide direction is west to east @ apprx. 0.5 knots.

**D. The following questions (D.1 through D.6) may be answered in writing or by submitting a video. If you plan to submit a video, please contact the Department prior to video collection.**

**1. What are the bottom characteristics (mud, sand, gravel, rock, ledge or some mix, etc.)?**

Soft mud.

**2. Describe the bottom topography (flat, steep rough, etc.).**

Flat over much of the area with a few holes (4') that are dispersed around the northeast corner of the lease.

**3. Describe marine organisms by species or common names. Based on your personal observations or other sources of information, are these species abundant, common, or rare?**

The area within the lease site has very few organisms on the bottom. There are no lobster traps that are fished in this area, and we have not observed lobsters when we have pulled our anchors in the fall and winter. There are several species of non-commercial polychaete worms (*Amphitrite johnstoni* and *terebellids*). We have observed green crabs (*Carcinus maenas*), wrymouth fish (*Cryptacanthodes maculatus*), northern moon snails (*Euspira heros*) and the nemertean *Cerebratulus lacteus*. However, with the exception of green crabs, the other species would be rare. Green crabs are abundant.

**4. Are there shellfish beds or fish migration routes in the surrounding area? If so, please describe.**

There are no shellfish beds or fish migration routes in Mud Hole Cove.

**5. Describe the presence and extent of submerged aquatic vegetation, i.e. eelgrass, within the proposed lease area. Please include the date of this observation along with the method of observation. If submerged aquatic vegetation is observed, please also describe the abundance below and sketch the limits of the beds in the vicinity map.**

We have not observed eelgrass, *Zostera marina*, in the proposed lease site since 1987. This includes annual observations from June through November for this period (31 years).

<b>6. Describe the general shoreline and upland characteristics (rocky shoreline, forested, residential, etc.)</b>
The shoreline on both the north and south side of the proposed lease site is rocky (covered with knotted wrackweed, <i>Ascophyllum nodosum</i> ), leading immediately to forest that is dominated by red and white spruce – <i>Picea rubens</i> and <i>P. glauca</i> , respectively.

<b>E. Is your proposed lease located within a Maine Department of Inland Fisheries and Wildlife designated Essential Habitat?</b>
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

**Note:** The location of Essential Habitats in the State of Maine, along with information on how projects within these areas are reviewed, can be found here: <https://www.maine.gov/ifw/fish-wildlife/wildlife/endangered-threatened-species/essential-wildlife-habitat/index.html>

**If a project is located within an Essential Habitat,** applicants are strongly encouraged to contact the MDIFW Environmental Review Coordinator ([John.Perry@maine.gov](mailto:John.Perry@maine.gov), phone: 207-287-5254) prior to application submission.

**12. EXISTING USES**

<b>A. Describe the existing uses of the proposed area in questions A.1 through A.5 below. Please include the a) type b) time of year c) frequency and d) proximity to the lease site for each existing use.</b>
<b>1. Commercial Fishing</b>
No commercial fishing exists at this time.
<b>2. Recreational Fishing</b>
No recreational fishing is known to occur at this site.

<b>3. Boating Activities (please also include the distance to any navigable channel(s) from your proposed site at low water)</b>
Boating activities are limited to occasional small pleasure vessels. The site is approximately 3,000 feet from a navigable channel at low tide.
<b>4. Ingress and egress (i.e. coming and going) of shorefront property owners within 1,000 feet of the proposal (e.g. docks, moorings, landing boats on shore, etc.)</b>
N/A
<b>5. Other uses (kayaking, swimming, etc.)</b>
No other uses of this site have been observed or are known to occur.

<b>B. Are there private docks, moorings, or other access points within 1,000 feet of the proposed lease? If yes, please include approximate distance from the proposed lease.</b>
There is one mooring for a recreational boat in Mud Hole Cove, marked by a 24" white buoy, approximate coordinates are 44.485596N, 67.585416W. The mooring would be in our lease, and we have no problem with it remaining.

<b>C. Are there public beaches, parks, docking facilities or federally, state, or municipally conserved lands within 1,000 feet of the proposed lease site? If yes, please describe and include approximate distances from proposed lease.</b>
No

**D.** Are there any Limited Purpose Aquaculture (LPA) licenses or aquaculture leases within 1,000 feet of your proposed lease site? If yes, please list their acronyms below.

Current and pending aquaculture leases and active LPA licenses may be found here:  
<https://www.maine.gov/dmr/aquaculture/leases/index.html>

JROB520; JROB620; JROB720; JROB20 These are LPAs for a research project we are conducting. No conflict exists.

### **13. EXCLUSIVE USE**

If your lease is granted, what activities would you request be excluded from occurring within the boundaries of the lease site? In your answer please address applicable commercial and recreational fishing, boating activities, and other activities you listed in the 'Existing Uses' section of this application.

We would like dragging to be prohibited, as well as future moorings. We are not asking for the existing mooring to be moved.

## 14. RIPARIAN LANDOWNERS AND SITE ACCESS

A. If your lease is within 1,000ft of shorefront land (**which extends to mean low water or 1,650 ft. from shore, whichever is less, according to NOAA charts**), the following supporting documents are required:

1. A labeled copy of a tax map(s) depicting the location of the proposed lease site and including the following elements:
  - Label the map “Tax Map: Town of (name of town).”
  - Legible scale
  - Tax lot numbers clearly displayed
  - The boundaries of the proposed lease

**See pages 55 & 56**
2. Please use the Riparian Landowner List (included on the next page) to list the name and address of every shorefront landowner within 1,000ft of the proposed lease site. Have the tax collector or clerk of the municipality certify the list. Refer to the riparian determination guidance document to ensure all riparian landowners are included:  
<https://www.maine.gov/dmr/aquaculture/forms/documents/RiparianDetermination.pdf>

*Note:* When the application and riparian list are both ready to be submitted, you may choose to email a copy of the riparian list and proposed lease coordinates to [DMRAquaculture@maine.gov](mailto:DMRAquaculture@maine.gov) for staff to verify that all required parcels are included on the list *before* having it certified by the municipality. DMR will not verify a riparian list multiple times, so please ensure there will be no additional changes to the application before emailing the riparian list for verification.

3. If any portion of the site is intertidal, you need to complete the steps outlined in the section titled: “19. Landowner/Municipal Permission Requirements”.

**B.** Will your access to the lease area be across riparian land?

Yes    No

**Note:** If you selected yes, you will need to complete the landowner permission requirements included in “19. Landowner/Municipal Permission Requirements” of this application.

**C.** How will you access the proposed site?

By boat from municipal landing.

**D.** How will your proposed activities affect riparian ingress and egress?

There will be no effect.



**RIPARIAN LANDOWNER LIST**

*\*THIS LIST MUST BE **CERTIFIED**\**

On this list, please show the current landowners' names and mailing addresses as listed in the municipal tax records for all riparian shorefront parcels within 1,000 feet of the proposed lease site along with the map and lot number for each parcel. **It is the applicant's responsibility to assemble the information for the Town Clerk to certify.** The Town Clerk *only* certifies that the information is correct according to the Town's records. Once you have completed the form, ask the Town Clerk to complete the certification section below. If the parcels are within more than one municipality, provide a separate, certified riparian list for each municipality.

TOWN OF: Beals

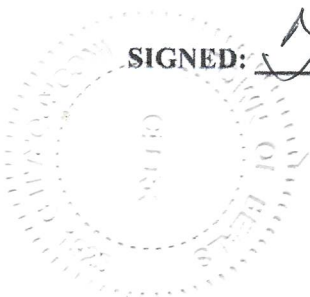
MAP #	LOT #	Landowner name(s) and address(es)
4	12 - 1	Root Estates, Inc. PO Box 456, Oakland ME 04963
4	19	Carver Industries, PO Box 131, Beals, ME 04611
5	2	Nature Conservancy, Fort Andross, 14 Main St., Suite 401, Brunswick, ME 04011

**Please use additional sheets if necessary and attach hereto.**

**CERTIFICATION**

I, TERRY L. Beal, Town Clerk for the Town of Beals certify that the names and addresses of the property owners listed above, as well as the map and lot numbers, are those listed in the records of this municipality and are current as of this date.

SIGNED: Terry L Beal DATE: 4/25/2023



**15. TECHNICAL CAPABILITY**

Provide information regarding professional expertise. Attaching resume or documentation of practical experience necessary to accomplish the proposed project would satisfy this requirement.
Please see attached resumes. Page 57.

**16. FINANCIAL CAPABILITY**

**A. Financial Capability**

Please provide a letter from a financial institution indicating the applicant has an account in good standing.  <b>Note:</b> Any financial information you submit with your application is part of the public record. Please exercise discretion when submitting financial information.
Please see attached letter. Page 67.

**B. Cost Estimates**

Please provide cost estimates of the proposed aquaculture activities.
We estimate these activities cost about \$50,000 per year.

**17. ESCROW ACCOUNT OR PERFORMANCE BOND**

Check the category that describes your operation:

Check Here	Lease Category	Amount of Required Escrow or Performance Bond
<input type="checkbox"/>	No gear/structure, no discharge	\$500.00
<input type="checkbox"/>	No gear/structure, discharge	\$500.00
<input type="checkbox"/>	≤ 400 square feet of gear/structure, no discharge	\$1,500.00
<input checked="" type="checkbox"/>	>400 square feet of gear/structure, no discharge	\$5,000.00*
<input type="checkbox"/>	Gear/Structure, discharge	\$25,000.00

\*DMR may increase the bond/escrow requirements for leases with more than 2,000 square feet of structure.

I, (*printed name of applicant*) Dianne Tilton have read DMR Aquaculture Regulations Chapter 2.64(10) (D) and if this proposed lease is granted by DMR, I will either open an escrow account or obtain a performance bond, in the amount determined by the lease category.

\_\_\_\_\_  
**Applicant Signature**

*Note: Add title if signing on behalf of a corporate applicant.*

Feb. 7, 2024  
**Date**

**ADDITIONAL APPLICANTS:** Each applicant must sign this section indicating that they will open an escrow account or obtain a performance bond. Use the space below for additional persons listed on the application. You may attach additional pages, if necessary.

I, (*printed name of applicant*) \_\_\_\_\_ have read DMR Aquaculture Regulations Chapter 2.64(10) (D) and if this proposed lease is granted by DMR, I will either open an escrow account or obtain a performance bond, in the amount determined by the lease category.

\_\_\_\_\_  
**Applicant Signature**

*Note: Add title if signing on behalf of a corporate applicant.*

\_\_\_\_\_  
**Date**

**18. APPLICANT SIGNATURE PAGE**

I hereby state that the information included in this application is true and correct. I have also read and understand the requirements of the Department’s rules governing aquaculture and the application instructions pertaining to the standard lease process.

Printed name: Dianne Tilton

Title (if corporate applicant): Executive Director

Signature:  Date: Feb. 7, 2024

18 U.S.C. Section 1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of the United States knowingly and willfully falsifies, conceals, or covers up any trick, scheme, or disguises a material fact or makes any false, fictitious or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false, fictitious or fraudulent statements or entry, shall be fined not more than \$10,000 or imprisoned not more than five years or both.

**Note:**

- All applicants must sign and date this page. Please use the space below, if additional signatures are required.
- Corporate applicants, please be sure to include the title(s) (i.e. President, Treasurer, etc.) of the individual(s) signing on the company’s behalf.

**Additional Applicant:**

Printed name: \_\_\_\_\_

Title (if corporate applicant): \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

**19. LANDOWNER/MUNCIPAL PERMISSION REQUIREMENTS (if applicable)**

**Directions:** If any portion of the site is intertidal, you need to complete the steps outlined below.

**Step I: Obtain written permission from all intertidal landowners.**

Pursuant to DMR Regulations Chapter 2.10(3)(G) the Department requires *written permission of every owner of intertidal land in, on, or over which the activity will occur*. It is your responsibility to obtain written permission and include it with your application materials. Please note that the Department does not provide forms for landowner permission.

**Step II: Determine if the municipality where your site is located has a shellfish conservation program.**

Pursuant to 12 MRSA §6072(3) *In any municipality with a shellfish conservation program under section 6671, the Commissioner may not lease areas in the **intertidal zone** within the municipality without the consent of the municipal officers.*

If the municipality where the proposed lease site is located has a shellfish conservation program, it is your responsibility to obtain consent for the proposed lease site from the municipal officers (i.e. the selectmen or councilors of the town, or the mayor and aldermen or councilors of a city.) Consent means a majority vote of the municipal officers as recorded in a public meeting.

It is your responsibility to contact the municipality and determine if they have a shellfish conservation program. Best practices would include discussing your plans with shellfish committee members, but only the consent of municipal officers is required.

Does the municipality, where the proposed site is located, have a shellfish conservation program? <input type="checkbox"/> Yes <input type="checkbox"/> No
--

**If you answered yes**, please attach documentation from a public meeting demonstrating that a majority of municipal officers have consented to your proposal.

## **Note to Applicants:**

As you prepare your standard lease application for submission, please review the information below. It is intended to provide you with a general overview of when DMR communicates with applicants during the leasing process. It also includes answers to some frequently asked questions as they pertain to application processing.

### **When Will I Hear from DMR Regarding My Standard Lease Application?**

Unless otherwise specified, DMR communicates with applicants via email. Please monitor any email address listed on your application on a regular basis. DMR communicates with standard lease applicants at specific times during the application review process, and you can expect to hear from DMR at the following times:

- 1. When your draft application is reviewed for completeness**
  - DMR strives to review draft applications within 30 days of receipt. However, you may be asked to submit additional materials or clarify aspects of your draft application, and this can lengthen the time it may take for a draft application to be reviewed.
  - DMR will notify you when the draft application can move forward to a scoping session.
- 2. When your final application is ‘deemed complete’**
  - DMR strives to review applications within 30 days of receipt. However, you may be asked to submit additional materials or clarify aspects of your application, and this can lengthen the time it may take for an application to be deemed complete.
- 3. After DMR conducts the site visit a copy of the site report will be sent to you**
  - DMR conducts site visits for applications in the order they are deemed complete. However, the time of year, weather, and your proposed operations are all factors that may determine when site visits occur.
  - Site visits are scheduled and conducted at the discretion of DMR staff. Applicants are usually not present during site visits.
- 4. After the site visit has been conducted and the site report is compiled, DMR will contact you about scheduling the public hearing on your application.**
- 5. A copy of the draft decision will be sent to you for review and comment**
- 6. Should a lease be granted, there will be additional communications regarding the execution of your lease.**

Communications between an applicant and DMR tend to be more frequent during the application review period. Once an application has been deemed complete, communications become less frequent because the proposal is moving through the leasing process. Although DMR’s communication with an applicant may become less frequent, applicants should feel free to contact DMR regarding the status of their proposal.

## **FAQs-Application Process**

### **Why do I have to submit a “draft application?”**

DMR regulations provide that before applicants can schedule a scoping session, they must provide DMR

with a draft lease application. Compiling a draft application helps you think through the important elements of your proposed operations. It also provides members of the public and other stakeholders with a tangible document that they can review and provide feedback on during the scoping session.

DMR will review your draft application and let you know when you can move forward with scheduling a scoping session.

### **What if, after the scoping session, I don't want to make any changes to the draft application?**

If you don't want to make any changes to your draft application, you are still responsible for submitting the following prior to DMR's review of your "final application":

- Submit a new cover page (pg. 1 of this document) and applicant signature page (page 19 of this document) with a copy of the tear sheet advertising the scoping session and the final application fee.

DMR will not review a final application until all items listed above are received.

### **How does DMR staff review applications (applies to both draft and final applications)?**

Applications are reviewed by DMR staff, in the order they are received, at regularly scheduled intervals. DMR staff are reviewing applications to make sure that they contain the requisite information and clearly answer the questions that are being asked. If items are missing or need further clarification, DMR will send you an incomplete letter, which specifies the elements of your application in need of modification. The letter will also include resubmission instructions.

DMR will then review any of the new information or materials you provide. Another incomplete letter may be sent if the additional information or materials need further clarification.

### **My final application was deemed complete. What does that mean?**

The designation "deemed complete" means that the application contains the necessary information for further processing. It does not mean that the proposal will be granted.

### **How long does the leasing process take?**

It depends on a variety of factors including the number of applications currently in process, the time of year an application is deemed complete in consideration of proposed operations, and the complexity of issues raised at a public hearing. These types of factors make it difficult to determine when a final decision on your proposal may be rendered.

### **When will my lease be granted?**

Please note that applying for a lease is not a guarantee that your proposal will be granted. DMR will process your application and render a final decision on the proposal based on applicable evidence as it relates to the lease decision criteria. DMR will send you a copy of the draft proposed decision, which will either grant, or deny the proposal. DMR may also grant the proposal with modifications.

The leasing process is designed to serve multiple stakeholder groups, who all utilize Maine's coastal waters for a variety of different purposes and is intended to provide all stakeholder groups with the opportunity to provide feedback on your proposal. If you have questions about applying for a lease, please contact DMR at [DMRaquaculture@maine.gov](mailto:DMRaquaculture@maine.gov) or 624-6567.



**MAINE DEPARTMENT OF MARINE RESOURCES**

*Aquaculture Division, 21 State House Station, Augusta, ME 04333-0021 (207) 624-6567*

**CORPORATE APPLICANT FORM  
For Standard and Experimental Aquaculture Lease Applications**

Corporations or partnerships that apply for aquaculture leases in the State of Maine must complete this form. Corporations must submit information as requested under A. Corporate Applicant. Partnerships must submit information as requested under B. Partnership Applicant.

**A. Corporate Applicant**

**Note:** You must attach a copy of the Articles of Incorporation (Inc.) or Certificate of Formation (LLC) to your application.

1. Name of Corporation: Downeast Institute for Applied Marine Research & Education

2. Date of incorporation: Dec 26, 1995 State of incorporation: Maine

3. List the names, addresses, and titles of all officers:

Name	Address	Title
attached		

**Please use additional sheets if necessary and attach to the application.**

4. List the names and addresses of all directors/members:

Name	Address
attached	



**Please use additional sheets if necessary and attach to the application.**

5. Has the corporation, or any stockholder, director, or officer applied for an aquaculture lease for Maine lands in the past?  Yes  No

If you selected “yes,” please indicate who applied for the lease and the status of the application or lease. Ralph Smith EAST OP; Sam Chapman, SHE SQ2

6. List the names and addresses of all stockholders who own or control at least 5% of the outstanding stock and the percentage of outstanding stock currently owned or controlled by each stockholder.

Name	Address	Percentage of Owned Stock
NA Nonprofit corporation		

**Please use additional sheets if necessary and attach to the application.**

7. List the names and addresses of stockholders, directors, or officers owning an interest, either directly or beneficially, in any other Maine aquaculture leases, as well as the quantity of acreage from existing aquaculture leases attributed to each such person based on the percentage of owned stock listed in question 6. If none, write, “None.”

Name	Address	Lease Acronym	Acreage
Ralph Smith	48 Western Ave, Jonesport, ME	EAST OP	89.70
Sam Chapman	50 Bremen Rd, Waldoboro ME 04572	SHE SQ2	.57

**Please use additional sheets if necessary and attach to the application.**

8. Has the corporation or any officer, director, member, or shareholder listed in item 5 above ever been arrested, indicted, convicted of, or adjudicated to be responsible for any violation of any marine resources or environmental protection law, whether state or federal?

Yes  No

If you selected “yes”, please provide details.

**B. Partnership Applicant**

**Note:** You must attach a copy of either the Certificate of Limited Partnership or documentation of the formation of a General Partnership to your application.

1. Name of Partnership: \_\_\_\_\_

2. Date of formation: \_\_\_\_\_ State of partnership: \_\_\_\_\_

3. List the names, addresses, and ownership shares of all partners:

Name	Address	Ownership Shares

**Please use additional sheets if necessary and attach to the application.**

4. Has the partnership, or any partner applied for an aquaculture lease for Maine lands in the past?  Yes  No

If you selected “yes,” please indicate who applied for the lease and the status of the application or lease.

5. List the names and addresses of any partner owning an interest, either directly or beneficially, in any other Maine aquaculture leases, as well as the quantity of acreage from existing aquaculture leases attributed to each such person, based on their ownership shares from question 3.

Name	Address	Lease Acronym	Acreage


**Please use additional sheets if necessary and attach to the application.**

6. Has the partnership or any partner been arrested, indicted or convicted of or adjudicated to be responsible for any violation of marine resources or environmental protection law, whether State or Federal?

Yes  No

If you selected "yes", please provide details.

## Downeast Institute 2023

### BOARD OF DIRECTORS

#### Board Chair

---

Lynn Alley\*

Retired Science Teacher (JBHS)  
Jonesport

Christopher Bartlett

Maine Sea Grant/University of Maine Cooperative Extension  
Eastport, ME (Personnel Committee)

#### Vice Chair

---

Dr. Sherrie Sprangers

Science Professor at University of Maine at Machias  
Machias, ME (Finance Committee)

Sam Chapman\*

Retired Shellfish Specialist  
Waldoboro, ME

#### Clerk/Treasurer

---

Jane Hinson\*

Retired, Director of Special Programs, UMM  
Machias, ME (Finance Committee)

Dr. Gayle Kraus

Marine Ecology Professor, UMM  
Machias, ME

Jonathan Alley

Machias Savings Bank  
Addison, ME (Finance Committee)

Wendell Bradford

AC Inc., Shellfish Dealer  
Beals, ME

Dean Girdis

Open Energy Advisors  
Washington, DC

Jason Alley

Fisherman  
Jonesport, ME

Dr. Brian Beal\*

Science Professor at University of Maine at Machias  
Machiasport, ME (Personnel Committee)

Ralph Smith

Moosabec Mussels  
Jonesport, ME

Tom Haslett

TILT Investments  
Lincoln, MA

Peter Greene

Machias Savings Bank  
Addison, ME (Personnel Committee)

\*Founder

For Use By The Secretary of State	
File No. ....	
Fee Paid .....	
C. B. ....	
Date .....	

NONPROFIT CORPORATION

STATE OF MAINE

ARTICLES OF INCORPORATION

(CHECK ONLY IF APPLICABLE)

This is a Domestic Condominium Corporation.

<i>Mary Cooper</i> Deputy Secretary of State
A True Copy When Attested By Signature
<i>Mary Cooper</i> Deputy Secretary of State

Pursuant to 13-B MRSA §403, the undersigned, acting as incorporator(s) of a corporation, adopt(s) the following Articles of Incorporation:

FIRST: The name of the corporation is Beads Island Regional Shellfish Hatchery, Inc.

SECOND: The corporation is organized for all purposes permitted under Title 13-B, MRSA, or, if not for all such purposes, then for the following purpose or purposes:

THIRD: The name of its Registered Agent and address of registered office (the registered agent must be a Maine resident, whose business office is identical with the registered office; or a corporation, domestic or foreign, profit or nonprofit, having an office identical with such registered office.)

Everett Johnson, Clerk HCR 71, Box 55  
Machias, ME 04654

~~B.I.R.S.H., PO Box 83 Harrington 04643 Beads Island 04641~~

(street address (not P.O. Box), city, state and zip code)  
PO Box 83, Harrington, ME 04643

(mailing address if different from above)

FOURTH: The number of directors (not less than 3) constituting the initial board of directors of the corporation, if they have been designated or elected, is sixteen.

The minimum number of directors (not less than 3) shall be sixteen and the maximum number of directors shall be twenty.

FIFTH: Members:  There shall be no members.  
("X" one box only)  There shall be one or more classes of members, and the information required by §402 is as follows:

SIXTH:  (Check if this article is to apply)

No substantial part of the activities of the Corporation shall be the carrying on of propaganda, or otherwise attempting to influence legislation, and the Corporation shall not participate in or intervene in (including the publication or distribution of statements) any political campaign on behalf of any candidate for public office.

NEW

SEVENTH:  (Check if this article is to apply. Then fill in reference number of Section 501(c)( ? ) in first paragraph below.)

Upon the dissolution of the Corporation or the termination of its activities, the assets of the Corporation remaining after the payment of all its liabilities shall be distributed exclusively to one or more organizations organized and operated exclusively for such purposes as shall then qualify as an exempt organization or organizations under Section 501(c)( 3 ) of the Internal Revenue Code of 1986, as amended, and as a charitable, religious, eleemosynary, benevolent or educational corporation within the meaning of Title 13B, of the Maine Revised Statutes as amended.

No part of the net earnings of the Corporation shall inure to the benefit of any member, director, or officer of the Corporation, or any private individual (except that reasonable compensation may be paid for services rendered to or for the Corporation in carrying out one or more of its purposes), and no member, director, or officer of the Corporation, or any private individual, shall be entitled to share in the distribution of any of the corporate assets on dissolution of the Corporation.

EIGHTH: Other provisions of these articles, if any, including provisions for the regulation of the internal affairs of the corporation, and distribution of assets on dissolution or final liquidation:

"This corporation is not organized or operated for the benefit of private interest, such as the creator or his family, shareholders of the organization, other designated individuals, or persons controlled, directly or indirectly, by such private interests.

Notwithstanding any other provision of these articles, the corporation shall not carry on any other activities not permitted to be carried on (a) by a corporation exempt from Federal Income tax under section 501(c)(3) of the Internal Revenue Code of 1954, (or the corresponding provision of any future United States Internal Revenue Law) or (b) by a corporation, contributions to which are deductible under section 170(C)(2) of the Internal Revenue Code of 1954 (or corresponding provision of any future United States Internal Revenue Law."

Dated: October 27, 1995

INCORPORATORS

ADDRESSES

- |   |  |
|---|--|
| ① <u>Jane E. Henson</u><br>(signature)<br><u>JANE E. HENSON</u><br>(type or print name)             | Street <u>HERE TO BOX 28</u><br><u>MACHIAS, ME 04654</u><br>(city, state and zip code) |
| ② <u>[Signature]</u><br>(signature)<br><u>Barrett P. Johnson Jr</u><br>(type or print name)         | Street <u>HR 71 Box 55</u><br><u>Machias, ME 04654</u><br>(city, state and zip code)   |
| ③ <u>Will Hopkins</u><br>(signature)<br><u>Will Hopkins</u><br>(type or print name)                 | Street <u>4 FAVOR ST., EASTPORT, ME. 04631</u>   |
| ④ <u>Brian Beal</u><br>(signature)<br><u>Brian Beal</u><br>(type or print name)                     | Street <u>RR # 1; Box 511 Marshfield, Maine 04654</u><br>(city, state and zip code)    |
| ⑤ <u>Susan K. White</u><br>(signature)<br><u>Susan K. White</u><br>(type or print name)             | Street <u>97 Summer St.</u><br><u>Hampden, Me. 04444</u><br>(city, state and zip code) |
| ⑥ <u>Dana E. Wallace</u><br>(signature)<br><u>Dana E. Wallace</u><br>(type or print name)           | Street <u>1026 MERRILL PT RD. BANGOR, ME 04404</u>                                     |
| ⑦ <u>James L. Markos, Jr.</u><br>(signature)<br><u>James L. Markos, Jr.</u><br>(type or print name) | Street <u>Box 747 Ellsworth, Me 04605</u><br>(city, state and zip code)                |

⑧ Wendy W Beal  
Wendy W Beal  
PO Box 310  
Jonesport, ME 04649

⑨ Lynn M. Alley  
LYNN M. ALLEY  
P.O. Box 112  
Beals, ME 04611

⑩ Samuel R. Chapman  
Samuel R. CHAPMAN  
50 Bremen Rd.  
Waldoboro, ME 04572

⑪ Dianne Tilton  
Dianne Tilton  
PO Box 679  
Machias, ME 04654

⑫ Judy B Kemp  
Judy B Kemp  
P.O. Box 152  
Machias, ME 04654

⑬ Hastings  
Michael M. Hastings  
Aquaculture Center  
Suite 203, 141 N. Main St.  
Brewer, ME 04412

⑭ Harold D. Winters  
Harold D. WINTERS  
DMR STA 81  
Augusta, ME 04333



Filing Fee \$5.00

NONPROFIT CORPORATION

STATE OF MAINE

CHANGE OF REGISTERED AGENT ONLY  
or CHANGE OF REGISTERED AGENT  
AND REGISTERED OFFICE

Beals Island Regional Shellfish  
Hatchery (Name of Corporation)

File No. 19960225ND Pages 2  
Fee Paid \$ 5.00  
DCN 1970411600020 AGRO  
FILED  
02/10/1997

*Mary Cooper*

Deputy Secretary of State

A True Copy When Attested By Signature

*Mary Cooper*

Deputy Secretary of State

1997042/000/00/094 000

Pursuant to 13-B MRSA §305.1 or §1212.2, the undersigned corporation executes and delivers for filing the following change(s); authorized by a resolution duly adopted by the board of directors:

FIRST: The name and registered office of the registered agent appearing on the record in the Secretary of State's office:

Everett Johnson, Clerk

(name)

HCR 71, Box 55, Machias, ME 04654

(street, city, state and zip code)

SECOND: The name and registered office of the successor (new) registered agent who must be a Maine resident, whose office is identical with the registered office; or a corporation, domestic or foreign, profit or nonprofit, having an office identical with such registered office:

Jane E. Hinson, Clerk

(name)

HCR 70, Box 28; Outer Elm Street; Machias, ME 04654

(physical location - street (not P.O. Box), city, state and zip code)

(mailing address if different from above)

THIRD: (To be completed by a foreign corporation.)

A. Jurisdiction of incorporation \_\_\_\_\_

B. Date of authorization to carry on activities in this State \_\_\_\_\_

DSS



DATED February 7, 1997

\*By

Jane E. Hinson  
(signature)

Jane E. Hinson, Clerk

(type or print name and capacity)

\*By

(signature)

(type or print name and capacity)

---

\*This document **MUST** be signed by (1) the Clerk or Secretary OR (2) the President or a vice-president *and* the Secretary or an assistant secretary, or such other officer as the bylaws may designate as a 2nd certifying officer OR (3) if there are no such officers, then a majority of the Directors or such directors as may be designated by a majority of directors then in office OR (4) if there are no such directors, then the Members or such of them as may be designated by the members at a lawful meeting.

SUBMIT COMPLETED FORMS TO: CORPORATE EXAMINING SECTION, SECRETARY OF STATE,  
101 STATE HOUSE STATION, AUGUSTA, ME 04333-0101

**NONPROFIT CORPORATION**

**STATE OF MAINE**

**NONCOMMERCIAL REGISTERED AGENT**

**STATEMENT OF APPOINTMENT or CHANGE**

File No. 19960225ND Pages 2  
Fee Paid \$ 15  
DCN 2090692700020 ADDR  
-----FILED-----  
03/05/2009

*Julie R. Dwyer*  
Deputy Secretary of State

A True Copy When Attested By Signature

*Julie R. Dwyer*  
Deputy Secretary of State

DOWNEAST INSTITUTE FOR APPLIED  
(Name of Corporation as it appears on the records of the Secretary of State)  
MAKINE RESEARCH AND EDUCATION

Pursuant to 5 MRSA §§105, 108, & 109 the undersigned corporation executes and delivers the following statement of appointment and/or change of address by a noncommercial registered agent.

**FIRST:** ("X" all boxes that apply)

- A.  change of address
- B.  change of noncommercial registered agent and address
- C.  change of noncommercial registered agent
- D.  change in name of current noncommercial registered agent

**SECOND:** The name and address of the registered agent appearing on the record in the Secretary of State's office:

JANE E. HINSON

(name of current registered agent)

HC 70, BOX 25, MACHIAS, ME 04654

(physical street address, city, state and zip code)

(mailing address if different from above)

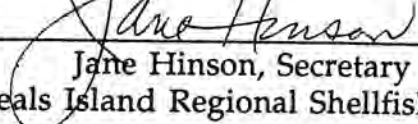
**THIRD:** (For foreign nonprofit corporations only)

Jurisdiction of Organization: \_\_\_\_\_

Date authorized to transact business in the State of Maine: \_\_\_\_\_

CERTIFICATE OF CORRECTION  
State of Maine  
1996 Annual Report  
Beals Island Regional Shellfish Hatchery  
DLN #1960168361713  
Charter #19960225ND

1. Under "Name of Corporation, Name of Registered Agent, Address on File," please: (a) strike "Harrington", and insert in lieu thereof "Beals"; (b) strike "04643", and insert in lieu thereof "04611".
2. Under "Foreign Corporations Only," please: strike "HCR 71, Box 55, Machias, ME 04654".

Signed:   
Jane Hinson, Secretary  
Beals Island Regional Shellfish Hatchery

Date: April 4, 1996

ALL  
ORIGINAL  
AMENDMENTS

STATE OF MAINE  
Office of the Secretary of State  
Bureau of Corporations, Elections and Commissions  
State House Station #101, Augusta, Maine 04333

DIVISION OF CORPORATIONS

02/11/1997

BEALS ISLAND REGIONAL SHELLFISH HATCHERY  
P.O. BOX 83

BEALS ME 04611

PROOF OF FILING  
WR DCN: 1970411600019

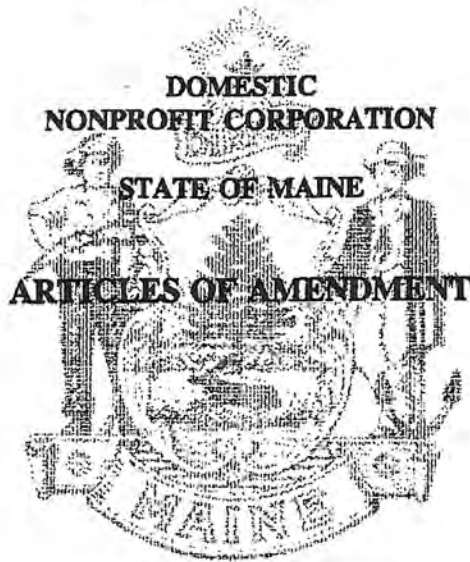
Enclosed please find copies of documents recently placed on file with our office. Each copy has been attested as a true copy of the original and serves as your evidence of filing. We recommend that you retain these permanently with your records.

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Charter #:      Legal Name:  
19960225ND      BEALS ISLAND REGIONAL SHELLFISH HATCHERY, INC.

(1)	CHANGE OF AGENT AND REGISTERED OFFICE DCN: 1970411600020	2 Page(s)
(2)	CHANGE IN PURPOSE DCN: 1970411600021	2 Page(s)
	Total	4 Page(s)
(3)	Change in name	
(4)	Change in members, directors	
(5)	Agent address change	





(Name of Corporation)

Minimum Fee \$5.00 (See §1401)

File No. 19960225ND Pages 2  
Fee Paid \$ 10.00  
DCN 1970411600021 PURP  
FILED  
02/10/1997

*Gary Cooper*

Deputy Secretary of State

A True Copy When Attested By Signature

*Gary Cooper*

Deputy Secretary of State

197942/0000/00/005 000

Pursuant to 13-B MRSA §§802 and 803, the undersigned corporation executes and delivers for filing the following Articles of Amendment:

**FIRST:** Describe **NATURE OF CHANGE** (i.e. change in name of corporation, purpose, number of directors, adding or deleting section or revision of section, etc.) as well as **TEXT** of amendment. Attach additional pages as needed.

*To Change Section Second To Include:*

The purposes of this corporation are exclusively

charitable, educational and scientific purposes

within the meaning of Section 501(c)(3) of the

United States Internal Revenue Code of 1954 as the

same may be amended, and in particular to develop and

enhance Maine's soft-shell clam and other shellfish

resources through applied scientific research, technology

transfer, public education and aquaculture.

\*

Statement included in original application  
to IRS for 501(c)(3). Application with Jess  
Herbert, Esq.

JSS

SECOND: ("X" one box only) The amendment was adopted on (date) January 24, 1997 as follows:

- By the members at a meeting at which a quorum was present and the amendment received at least a majority of the votes which members were entitled to cast.
- (If the Articles require more than a majority vote.) By the members at a meeting at which the amendment received at least the percentage of votes required by the Articles of Incorporation.
- By the written consent of all members entitled to vote with respect thereto.
- (If no members, or none entitled to vote thereon.) By majority vote of the board of directors.

THIRD: The address of the registered office of the corporation in the State of Maine is \_\_\_\_\_

HCR 70, Box 28, Outer Elm Street, Machias, ME 04654

(street, city, state and zip code)

DATED February 7, 1997

\*By Jane E. Hinson  
(signature)

Jane E. Hinson, Clerk  
(type or print name and capacity)

\*By \_\_\_\_\_  
(signature)

\_\_\_\_\_  
(type or print name and capacity)

<b>MUST BE COMPLETED FOR VOTE OF MEMBERS</b>
I certify that I have custody of the minutes showing the above action by the members.
<u>Jane E. Hinson</u> (signature of clerk, secretary or asst. secretary)

\*This document **MUST** be signed by (1) the Clerk or Secretary OR (2) the President or a vice-president and the Secretary or an assistant secretary, or such other officer as the bylaws may designate as a 2nd certifying officer OR (3) if there are no such officers, then a majority of the Directors or such directors as may be designated by a majority of directors then in office OR (4) if there are no such directors, then the Members or such of them as may be designated by the members at a lawful meeting.

SUBMIT COMPLETED FORMS TO: CORPORATE EXAMINING SECTION, SECRETARY OF STATE,  
101 STATE HOUSE STATION, AUGUSTA, ME 04333-0101





SECOND: ("X" one box only) The amendment was adopted on (date) JULY 21, 2000 as follows:

- By the members at a meeting at which a quorum was present and the amendment received at least a majority of the votes which members were entitled to cast.
- (If the Articles require more than a majority vote.) By the members at a meeting at which the amendment received at least the percentage of votes required by the Articles of Incorporation.
- By the written consent of all members entitled to vote with respect thereto.
- (If no members, or none entitled to vote thereon.) By majority vote of the board of directors.

THIRD: The address of the registered office of the corporation in the State of Maine is Perio Point,  
Beals Island, Maine 04611  
(street, city, state and zip code)

DATED JUNE 22, 2001

\*By Jane E. Hinson  
(signature)  
JANE E. HINSON, CHAIRMAN & CLERK  
(type or print name and capacity)

\*By BEALS ISLAND REGIONAL SHELLFISH HATCHERY, INC.  
(signature)  
 \_\_\_\_\_  
(type or print name and capacity)

**MUST BE COMPLETED FOR VOTE  
OF MEMBERS**

---

I certify that I have custody of the minutes showing the above action by the members.

  
  
 \_\_\_\_\_  
(signature of clerk, secretary or asst. secretary)

- \*This document **MUST** be signed by
- (1) the **Clerk** or **Secretary** OR
  - (2) the **President** or a vice-pres. together with the **Secretary** or an ass't. sec., or a 2nd certifying officer OR
  - (3) if no such officers, then a majority of the **Directors** OR
  - (4) if no such directors, then the **Members**.

SUBMIT COMPLETED FORMS TO: CORPORATE EXAMINING SECTION, SECRETARY OF STATE,  
 101 STATE HOUSE STATION, AUGUSTA, ME 04333-0101  
 TEL. (207) 624-7740

DOMESTIC  
NONPROFIT CORPORATION

STATE OF MAINE

ARTICLES OF AMENDMENT

File No. 19960225ND Pages 2  
Fee Paid \$ 10  
DCN 2081261400008 CHNG  
FILED  
04/22/2008

DOWNEAST INSTITUTE FOR  
APPLIED MARINE RESEARCH & EDUCATION  
(Name of Corporation)

*Julie R. Flynn*  
Deputy Secretary of State

A True Copy When Attested By Signature

*Julie R. Flynn*  
Deputy Secretary of State

Pursuant to 13-B MRSA §§802 and 803, the undersigned corporation executes and delivers the following Articles of Amendment.

FIRST: ("X" one box only.)  public benefit corporation  mutual benefit corporation

SECOND: Describe NATURE OF CHANGE (i.e. change in name of corporation, purpose, number of directors, adding or deleting section or revision of section, etc.) as well as TEXT of amendment. Attach additional pages as needed.

CHANGE IN NUMBER OF DIRECTORS  
FROM: NOT LESS THAN SIXTEEN AND NOT MORE THAN  
TWENTY  
TO: NOT LESS THAN EIGHT AND NOT MORE THAN  
SIXTEEN

**THIRD:** ("X" one box only.) The amendment was adopted on (date) MARCH 6, 2008 as follows:

- By the members at a meeting at which a quorum was present and the amendment received at least a majority of the votes which members were entitled to cast.
- (If the Articles require more than a majority vote.) By the members at a meeting at which the amendment received at least the percentage of votes required by the Articles of Incorporation.
- By the written consent of all members entitled to vote with respect thereto.
- (If no members, or none entitled to vote thereon.) By majority vote of the board of directors.

**FOURTH:** The address of the registered office of the corporation in the State of Maine is P.O. Box 83,  
BEALS, MAINE 04611  
(street, city, state and zip code)

**DATED** MARCH 28, 2008

\*By Jane E. Hinson  
(signature)  
JANE E. HINSON, CLERK  
(type or print name and capacity)

\*By \_\_\_\_\_  
(signature)  
\_\_\_\_\_  
(type or print name and capacity)

**MUST BE COMPLETED FOR VOTE  
OF MEMBERS**  
I certify that I have custody of the minutes showing  
the above action by the members.  
Jane E. Hinson, Clerk  
(signature of clerk, secretary or asst. secretary)

\*This document **MUST** be signed by any duly authorized officer. (13-B MRSA §104.1.B)

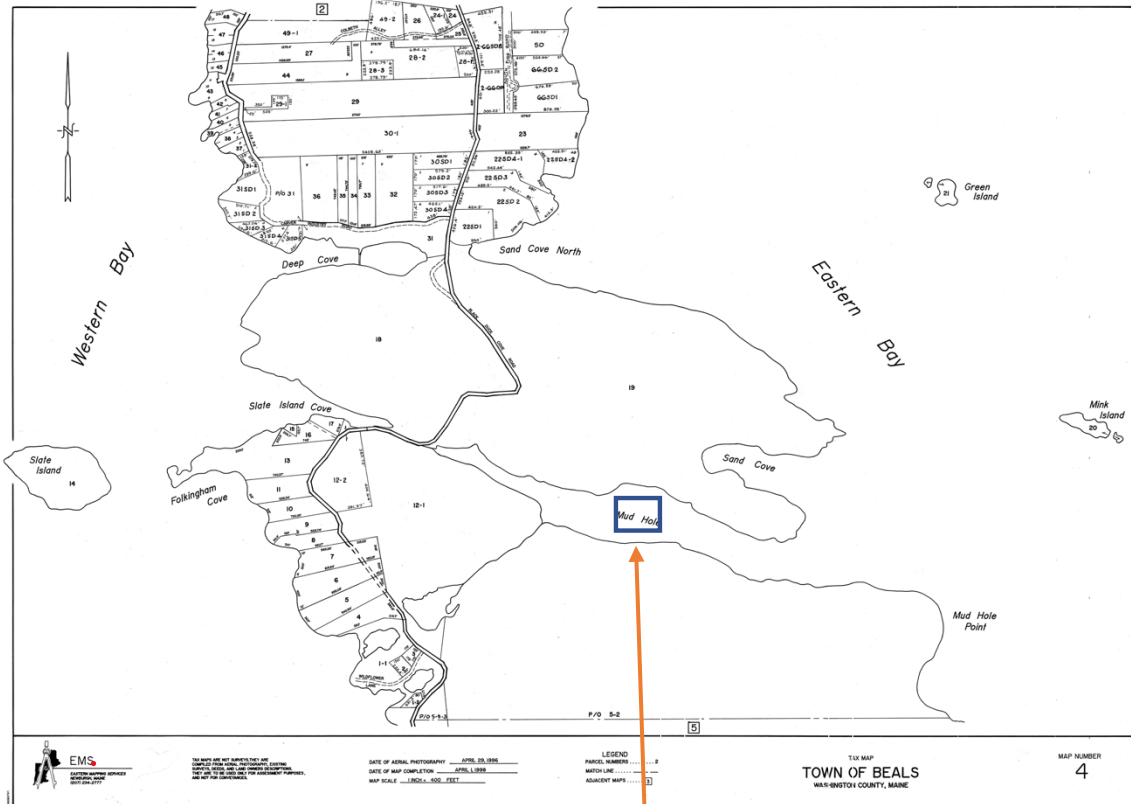
Please remit your payment made payable to the Maine Secretary of State.

**SUBMIT COMPLETED FORMS TO: CORPORATE EXAMINING SECTION, SECRETARY OF STATE,  
101 STATE HOUSE STATION, AUGUSTA, ME 04333-0101  
TEL. (207) 624-7752**

FORM NO. MNPCA-9 (2 of 2) Rev. 9/16/2005

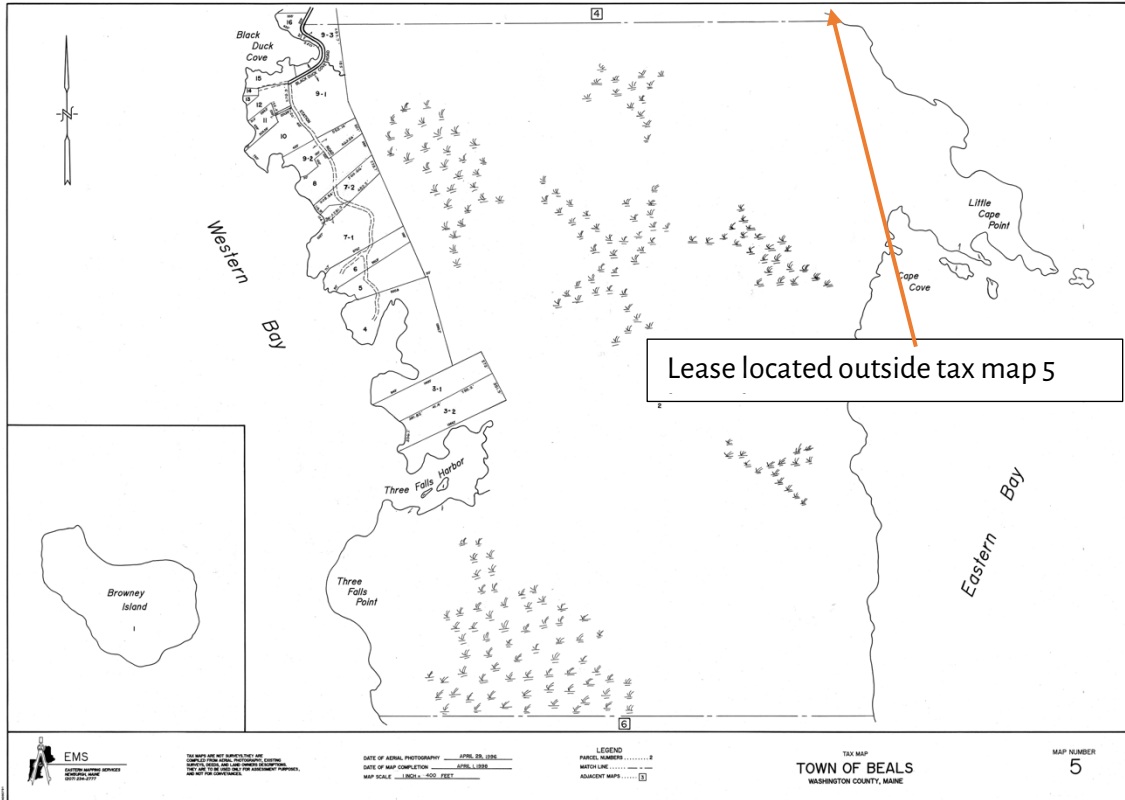
14. Riparian Owners and Site Access

Tax Map: Town of Beals  
Map #4



Proposed lease

# Tax Map: Town of Beals Map #5



# Brian Fairfield Beal

University of Maine at Machias  
9 O'Brien Avenue  
Machias, Maine 04654

Tel. 207-255-1314

FAX 207-255-1390

e-mail [bbeal@maine.edu](mailto:bbeal@maine.edu)

**Date and Place of Birth:** 19 November 1957; Machias, Maine

**Formal Education:** 1979: B.S. in Biology; University of Maine at Machias  
1983: M.S. in Marine Sciences; University of North Carolina, Chapel Hill  
1994: Ph.D. in Marine Bio-Resources; University of Maine, Orono

**Pertinent Experience:**

1984-1985: Marine Project Assistant; Univ. Maine Cooperative Extension Service, Machias, Maine  
1985-1986: Environmental Education Coordinator; University of Maine at Machias  
1986-1994: Environmental Resources Coordinator; University of Maine at Machias  
1989-1997: Assistant Professor of Marine Ecology; University of Maine at Machias  
1998-2002: Associate Professor of Marine Ecology; University of Maine at Machias  
1990-present: Graduate Faculty Member, University of Maine (School of Marine Science)  
1996-present: Cooperating Faculty member for the School for Marine Science at the Univ. of Maine  
2002-present: Professor of Marine Ecology; University of Maine at Machias  
2011-present: Director, Marine Science Field Station, University of Maine at Machias

**Fellowships/Scholarships/Other Awards:**

Switzer Foundation Environmental Fellow (1992-1993)  
Teacher of the Year, University of Maine at Machias (2000)  
Fulbright Scholarship (2000-2001), National University of Ireland, Galway (lecture/research)  
Distinguished Alumnus, University of Maine at Machias (2001)  
Trustee Professor, University of Maine at Machias (AY 2004-2005)  
Bourne-Chew Award, National Shellfisheries Association (2015)  
Maine Magazine's "50 Mainers to Admire and Inspire" (2019)

**Courses taught:** Introduction to Environmental Studies; Marine Biology; Marine Ecology; Population and Community Ecology; Algebra I; Algebra II; Pre-Calculus; Applied Statistics; Biostatistics; Introduction to the Marine Environment; Oceanography; Introduction to Mariculture; Introduction to the Local Marine Fauna and Flora of Downeast Maine

**Research Interests:** Shellfish ecology; population biology; resource management; mariculture

**Professional Organizations:** National Shellfisheries Association

**Local Organizations:** Maine Aquaculture Innovation Center (Chairman of Board of Directors); Downeast Institute for Applied Marine Research & Education (Director. of Research); Cobscook Bay Resource Center (Member, Board of Directors)

**Member:** Maine Department of Environmental Protection, Clean-up and Response Review Board; Scientific and Technical Subcommittee, Maine Climate Council.

**Selected Publications:**

Beal, B.F. 2002. Adding value to live, commercial size soft-shell clams (*Mya arenaria* L.) in Maine, USA: Results from repeated, small-scale, field impoundment trials. *Aquaculture* 210:119-135.

Beal, B.F. 2005. Soft-shell clam, *Mya arenaria*, mariculture in Maine, USA: opportunities and challenges. *Bulletin of the Aquaculture Association of Canada. Special Publication No. 9*:41-44.

Beal, B.F. 2006. Relative importance of predation and intraspecific competition in regulating growth and survival of juveniles of the soft-shell clam, *Mya arenaria* L., at several spatial scales. *J. Exp. Mar. Biol. Ecol.* 336:1-17.



- Beal, B.F. 2006. Biotic and abiotic factors influencing growth and survival of wild and cultured individuals of the soft-shell clam (*Mya arenaria* L.) in eastern Maine. *J. Shellfish Res.* 25:461-474.
- Beal, B.F., Bayer, R.C., Kraus, M.G., Chapman, S.R. 1999. A unique shell marker of juvenile, hatchery-reared individuals of the soft-shell clam, *Mya arenaria* L. *Fish. Bull.* 97:380-386.
- Beal, B.F., Coffin, C.R., Randall, S.F., Goodenow, C.A., Jr., Pepperman, K.E., Ellis B.W. 2020. Interactive effects of shell hash and predator exclusion of 0-year class recruits of two infaunal intertidal bivalve species in Maine, USA. *J. Exp. Mar. Biol. Ecol.* 530-53. <https://doi.org/10.1016/j.jembe.2020.151441>.
- Beal, B.F., Coffin, C.R., Randall, S.F., Goodenow, C.A., Jr., Pepperman, K.E., Ellis, B.W., Jourdet, C.B., Protopopescu, G.C. 2018. Spatial variability in recruitment of an infaunal bivalve: experimental effects of predator exclusion on the softshell clam (*Mya arenaria* L.) along three tidal estuaries in southern Maine, USA. *J. Shellfish Res.* 37:1-27.
- Beal, B.F., Kraus, M.G. 2002. Interactive effects of initial size, stocking density, and type of predator deterrent netting on survival and growth of cultured juveniles of the soft-shell clam, *Mya arenaria* L. in eastern Maine. *Aquaculture* 208:81-111.
- Beal, B.F., Lithgow, C., Shaw, D., Renshaw, S., Ouellette, D. 1995. Overwintering hatchery-reared individuals of the soft-shell clam, *Mya arenaria* L.: a field test of site, clam size, and intraspecific density. *Aquaculture* 130:145-158.
- Beal, B.F., Randall, S.F., Pepperman, K.E. 2020. Comparative field trials to examine the efficacy of a traditional management tool – brushing – to enhance local densities of 0-y class recruits in the soft-shell clam *Mya arenaria* L. fishery in Maine, USA. *J. Shellfish Res.* 39(3):1-15.
- Beal, B.F., Mercer, J.P., O’Conghaile, A. 2002. Field-based nurseries for hatchery-reared postlarvae of the European lobster, *Homarus gammarus* (L.): results of a 10-month, manipulative field experiment on the Irish west coast and implications for stock enhancement efforts. *Aquaculture* 210:137-157.
- Beal, B.F., Meredith, S.D., Jourdet, C.B., Pepperman, K.E. 2016. Diet of an underappreciated benthic intertidal fish, *Cryptacanthodes maculatus* (Cryptacanthodidae), in eastern Maine, USA. *AIMS Environ. Sci.* 3:488-508. doi: 10.3934/environsci.2016.3.488.
- Beal, B.F., Nault, D-M, Annis, H., Thayer, P., Leighton, H., Ellis, B. 2016. Comparative, large-scale field trials along the Maine coast to assess management options to enhance populations of the commercially-important soft-shell clam, *Mya arenaria* L. *J. Shellfish Res.* 35(4):1-17.
- Beal, B.F., Parker, M.R., Vencile, K.W. 2001. Seasonal effects of intraspecific density and predator exclusion along a shore-level gradient on survival and growth of juveniles of the soft-shell clam, *Mya arenaria* L., in Maine, USA. *J. Exp. Mar. Biol. Ecol.* 264:133-169.
- Tan, E.B.P., Beal, B.F. 2015. Interactions between invasive European green crab, *Carcinus maenas* (L.), and juveniles of the soft-shell clam, *Mya arenaria* L., in eastern Maine, USA. *J. Exp. Mar. Biol. Ecol.* 462:62-73.
- Vadas, R.L., Beal, B.F., Dowling, T. & Fegley, J. 1999. Experimental field tests of natural algal diets on gonad index and roe quality in *Strongylocentrotus droebachiensis*: A case for rapid summer production. *Aquaculture* 182:115-135.
- Vadas, R.L., Beal, B.F., Dudgeon, S.R., Wright, W.A. 2015. Spatial and temporal variability of spawning in the green sea urchin *Strongylocentrotus droebachiensis* along the coast of Maine. *J. Shellfish Res.* 34:1097-1128.



# JEFF ROBINSON

## Objective

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To obtain a position that will enable me to use my organizational skills, past work and management experience.

## Experience

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2016-Present Downeast Institute for Applied Marine Science and Education

### Facilities Manager

- Integrally involved with the daily operation of a shellfish hatchery, marine science laboratory, public education center, and on-campus housing.
- Responsible for upkeep and maintenance of all systems, facilities and grounds on the Downeast Institute's campus.
- Ensure a safe working environment for staff and visitors.
- Oversee contractors.
- Operate equipment. i.e. boats, small machinery.
- Fabrication of custom materials for marine research projects.
- Fabrication of various systems used in on-shore aquaculture

2005-2016 Cooke Aquaculture US Inc. Eastport, ME

### **IMTA Mussel Project** 2011-2016

- Integrate rope grown Blue Mussel cultivation with Atlantic Salmon farms in Maine.
- Work closely with people within the company and within Sea Grant/University of Maine to establish new/different methods that will aide in making mussel cultivation a viable and economic industry.

### **Marine Site Manager** 2005-2011

- Efficiently & economically operate/manage a marine farm for Atlantic Salmon cultivation.

- Train & manage employees on the farm & support personnel to facilitate daily tasks/projects safely and efficiently.
- Maintain integrity of farms containment systems and equipment.
- Operate vessels and large equipment.
- Experience with computers and Excel, Microsoft Word etc.
- Drug/pesticide applicator.
- First Aide/CPR training.
- Confined Space training.
- Oil spill training.
- Fabrication - metal, wood, fiberglass.

1993-2005 Heritage Salmon Eastport, Me

**Marine Site Manager** 1999-2005

**Marine Site Assistant Manager** 1995-1999

**Marine Technician** 1993-1995

1992-1993 Hall Security Brewer, Me

**Security Guard**

1992- 1993 Mahar Bros Construction Pembroke, Me

**Equipment Operator/Laborer**

1990-2005 Part Time Carpenter and Carpenter Assistant

1998-2004 Supervising experience with Balsam Christmas Tree farm work harvesting and retail.

#### Education

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1991-1992 University of Maine Orono, Me

1987-1991 Washington Academy East Machias, Me

#### Interests

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Family activities, most outdoor activities. Woodworking, carpentry

Kyle Pepperman  
67 Birch Ridge Rd  
Marshfield, Me 04654  
Mobile: (570) 337-8873  
Kyle.pepperman@downeastinstitute.org

Education:

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**University of Maine at Machias**

B.S. in Science September 2004-May 2009

Major: Marine Biology; Minor: Chemistry and Biology

Employment History

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**Downeast Institute for Applied Marine Research and Education, Beals, Maine**

Associate Director of Technology Transfer *March 2022-present*

Production and Hatchery Manager *December 2020-March 2022*

Shellfish Production and Research Assistant *October 2010 – December 2020*

Research Intern *2006 – 2010*

Research duties, hatchery operations management, and educational outreach to grade schools, summer camps, college students and community members

**University of Maine at Machias, Machias, Maine**

Field assistant *September 2008- September 2009*

Assisted Dr. Brian Beal by collecting of benthic core samples from soft bottom intertidal sites for Maine Oil Spill Advisory Committee, identified and measured infaunal invertebrates collected from mud samples

Laboratory Assistant *September 2006-December 2006*

Assisted Dr. Ruth Carmichael by preparing samples of hard-shell clam shell for acidification, extracting proteins from clam shell by acidification and filtration, preparing reagents used in acidification process, and preparing materials needed for Oceanography lab taught by Dr. Carmichael

Experience Summary

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Fourteen years' experience assisting with and participating in marine research projects, both in the laboratory and in the field, working with Dr. Brian Beal and Dr. Ruth Carmichael.

Research Experience:

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- Raising marine species for the purpose of supporting scientific study and applied research: soft-shell

scallops (*Placopecten magellanicus*), red footed arctic surf clams (*Mactromeris polynyma*), European oysters (*Ostrea edulis*) juveniles and larvae, juvenile Atlantic lobsters (*Homarus americanus*), Atlantic razor clam (*Ensis leei*) and phytoplankton, used as forage for the shellfish,

- Participated in multiple scientific studies
  - o 2017 NOAA Sea Grant funded research on commercialization of hatchery-reared blue mussel (*Mytilus edulis*) seed for use by mussel farmers in Maine
  - o 2015 NOAA Saltonstall Kennedy funded research expanding opportunities for blue and “gold” mussel (*Mytilus edulis*) farming in New England from hatchery to grow-out
  - o 2013 NSF funded applied research on the culture of arctic surf clams (*Mactromeris polynyma*) and blue mussels (*Mytilus edulis*) in eastern Maine
  - o 2009/2010 USDA-SBIR funded research evaluating subtidal and intertidal grow-out methods for cultured hard clams (*Mercenaria mercenaria*) in eastern Maine
  - o 2009 NOAA-NMFS funded research to examine methods to enhance local (costal) stocks using wild and/or cultured juveniles of deep sea scallops (*Placopecten magellanicus*)
  - o 2006 Maine Technology Institute funded research examining the hatchery, nursery and overwintering phases of the hard clam (*Mercenaria mercenaria*)
  - o 2006 Maine Department of Marine Resources funded research studying regional variations in the growth of American lobsters (*Homarus americanus*)

- Participated in published research

**Brian F. Beal, Chad R. Coffin, Sara F. Randall, Clint A. Goodenow Jr., Kyle E.**

**Pepperman, Bennett W. Ellis, Cody B. Jourdet and George C. Protopopescu**

Spatial Variability in Recruitment of an Infaunal Bivalve: Experimental Effects of Predator Exclusion on the Softshell Clam (*Mya arenaria* L.) along Three Tidal Estuaries in Southern Maine, USA. *Journal of Shellfish Research*, 37, 1-27.

**Protopopescu, G.C and Beal, B.F**

2015. Settlement response to various rope substrates in blue mussels (*Mytilus edulis* Linnaeus) in a hatchery setting. *Journal of Shellfish Research* 34, 383-391

**Beal, B.F. and G.C. Protopopescu**

2012. Ocean-based nurseries for cultured lobster (*Homarus americanus* Milne Edwards) postlarvae: field experiments off the coast of eastern Maine to examine effects of flow and container size on growth and survival. *Journal of Shellfish Research* 31, 177-193.

## **Breanna Salter**

Machias, ME 04654

bsalter@downeastinstitute.org / (860) 861-3012

### **EDUCATION**

#### **University of Maine**

- Bachelor of Science  
Ecology and Environmental Sciences
- Concentration: Marine Ecosystems Ecology

Orono, ME  
Sept 2015-May 2019

### **EXPERIENCE**

#### **Downeast Institute**

##### *Production and Research Hatchery Manager*

- Managing microalgae stock and mass cultures
- Participating in project planning and following research work plans
- Developing and implementing plans to rear larval and juvenile bivalves and other marine invertebrates
- Supervising research hatchery assistants

Jan 2023-Present

##### *Production Assistant*

- Performing sanitation and preparation of shellfish production equipment and systems
- Training new employees and interns
- Spawning and rearing shellfish and assisting with field-based experiments
- Maintaining microalgae stock and mass cultures

Oct 2019-Jan 2023

#### **University of Maine**

##### *Student Researcher*

- Tracked mussel heart rate in response to temperature change
- Collected, organized, and analyzed data

Orono, ME  
Oct 2018-Sept 2019

##### *Maine Learning Assistant-Biology of Marine Organisms*

- Facilitated in-class discussions
- Co-lead review sessions
- Assisted professor and TAs in preparation of lectures

Jan 2019-May 2019

#### **Dodson Boatyard**

##### *Launch Operator*

- Operated launch boat to transport customers from their moored boats
- Managed and organized mooring field

Stonington, CT  
May 2017-Oct 2019

##### *Dock Hand*

- Directed and secured vessels to dock
- Operated fuel pumps
- Performed general maintenance of facility (cleaning and organizing)

May 2016-Aug 2016

**Mystic Aquarium**

*Volunteer Exhibit Host*

Mystic, CT  
July 2019-Oct 2019

- Provided guests with information about exhibits
- Enforced exhibit rules to ensure guest and animal safety

**SKILLS**

- Proficient in Microsoft Word, Excel, Chart5, and ArcGIS
- Microscopy

## Tessa G. Houston

Jonesport, ME • (207) 939-3064 • thouston2017@gmail.com

### Education

**COLBY COLLEGE**, Waterville, ME

**GPA 3.69**

Bachelor of Arts in Environmental Science, 2021

Bachelor of Arts in History, 2021

*Applicable Courses:* Aquatic Ecology, Marine Conservation & Policy, Earth Systems Chemistry

**DIS COPENHAGEN**, Copenhagen, Denmark

Studied Polar Biology and Biology of Marine Mammals, 2019

### Research Experience

**Research Assistant**, *Downeast Institute*, Beals, ME

**November 2022-Present**

- Coordinate data collection for research projects in the hatchery and field
- Communicate with the Director of Research and hatchery staff to conduct research
- Research projects include developing best practices for spawning Atlantic scallops, producing a population of Eastern oysters that thrive in colder temperatures, and exploring the reproductive cycle of soft-shell clams

**AmeriCorps Environmental Steward**, Maine Conservation Corps

**January-November 2022**

*Rachel Carson National Wildlife Refuge*, Wells, ME

- Performed surveys for evidence of New England cottontails across Southern Maine using ArcGIS Field Maps
- Trained interns to survey and manage piping plover and least tern habitat
- Coordinated aquaculture surveys both independently and in a leadership role
- Supervised coworkers and volunteers in invasive plant management
- Developed a trail guide and activity book for visiting fourth and fifth graders
- Directed a Boy Scout in her project surveying macroinvertebrates in streams within Rachel Carson NWR in collaboration with Maine Audubon's Stream Explorers project
- Organized National Public Lands Day volunteer planting events
- \*Interned for Rachel Carson National Wildlife Refuge Summer 2020 and assisted in invasive plant management and piping plover, least tern, and saltmarsh sparrow management

**Intertidal Ecology Technician**, *Schoodic Institute*, Winter Harbor, ME

**June-November 2021**

- Conducted research on soft-sediment biodiversity and the relationship between marine worms and clam abundance and presented research findings in a poster presentation ([link](#)) and blog post ([link](#))
- Assisted in research on seaweed biomass mapping
- Co-led volunteer groups in field and labwork
- Collaborated on a mark and recapture project to track the movement of Jonah crabs
- Supervised University of Maine students in multi-day soft-sediment research projects
- Conducted water sampling projects including SPATT and ocean acidification sampling

**Research Intern**, *Schoodic Institute*, Remote

**January 2021**

- Conducted research with the guidance of Hannah Webber on how the frequency of foggy days has changed through time in the Acadia Region



- Authored a blog post of research results for Schoodic Institute titled “A brief investigation into Acadia’s foggy history” ([link](#))

**Researcher, *Environmental Science Capstone*, Waterville, ME** **Fall 2020**

- Conducted a research project in collaboration with classmates on the distribution of Atlantic sturgeon in the Kennebec River, Maine and compiled research into a full scientific paper
- Collaborated with Dr. Peter Countway of Bigelow Laboratory to confirm, using environmental DNA techniques, the effectiveness of a newly developed Atlantic sturgeon primer in detecting this species in both laboratory and environmental samples

**Research Intern, *Mook Sea Farm*, Walpole, ME** **Summer 2019**

- Conducted research with Dr. Meredith White on the effect of coastal acidification on calcification rates and gene expression of juvenile eastern oysters
- Maintained Mook Sea Farm’s seawater monitoring system
- Assisted in building an experimental upwelling system
- Monitored oyster health and survival rate throughout the experiment
- Presented findings at the SEA Fellows Symposium

**Research Assistant, *Assistant Professor Loren McClenachan*, Waterville, ME** **2018 - 2021**

Conducted research on a variety of projects integrating marine science and history, including:

- Assisted in research for scientific papers on the views of Maine lobster industry members vs members of the local scientific community on lobster population trends
- Researched the population trends and methods for determining these trends of Pacific and Atlantic gray whales
- Collaborated with LookBermuda in the creation of an online database consisting of deepsea fish data from the 1920s and 1930s
- Discovered references to the pre-1769 landscape and ecology of San Francisco using online newspaper and photo databases to assist The San Francisco Estuary Institute
- Compared historical photos, from historical society archives, of locations on the Maine Coast to current photographs and analyzed the change in rockweed abundance

**Technical Skills**

- Proficient experience with Excel
- Proficient experience with R and PAST
- Experienced with ArcMap, ArcPro, ArcGIS Online, and Survey123 Connect
- Wilderness First Aid (DOE: April 2024), CPR and AED (DOE: April 2024) certified

**Work & Volunteer Experience**

**Mentor, *Colby Cares about Kids*, Waterville, ME** **Fall 2017-Spring 2021**

- Mentored a local elementary school student
- Committed to weekly interactions and special events with mentee

**Sailing Instructor and Volunteer, *Southport Yacht Club*, Southport, ME** **2010-2018**

- Taught sailing, navigation, seamanship, and racing skills to children ages 7 to 13
- Received the Summer 2018 Instructor of the Year award



Experienced people. Exceptional service.

April 21<sup>st</sup>, 2023

Down East Institute for Applied Marine  
Research and Education, Inc.  
PO Box 83  
Beals, ME 04611-0083

To whom it may concern,

This letter is to inform that Down East Institute for Applied Marine Research and Education, Inc. has an account in good standing with Machias Savings Bank.

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If there is any way that I can be of further assistance please do not hesitate to call me directly at 255-9226.

Regards,

A handwritten signature in black ink, appearing to read 'Sean R. Daye', with a long horizontal flourish extending to the right.

Sean R. Daye  
Vice President  
Business Banking

SRD/bdd

