

C: APPLICATION COVER SHEET FOR AN EXPERIMENTAL LEASE

Name: Nonesuch Oysters, LLC. By: Abigail Sarah Carroll _____

Address: PO BOX 311 _____

City: Biddeford Pool, Maine _____

County: York _____

State, zip: 04006 _____

Telephone: business _____ home _____ cell 207 749 5585

Email address: abigail@nonesuchoysters.com _____

RECEIVED

DEC 8 2011

MAINE DEPT OF MARINE RESOURCES
COMPLETE 1-6-11 DCR

town county waterbody

Location of lease site: Scarborough Cumberland Scarborough River

Additional description East of DownEaster tracks in Little Split
(e.g. south of B Island)

Total acreage requested (4-acre maximum): .413 acres

Growing Area # 8 Water Quality Classification OPEN

Type of culture (circle): Bottom (no gear) Suspended (gear in the water and/or on the bottom) Net Pen (finfish)

Name of species to be cultivated, common and scientific names:

American or eastern oyster (*Crassostrea virginica*) and European oyster (*Ostrea edulis*)

Name and address of the source of seed stock, juveniles, smolts, etc., to be cultivated:

Crassostrea Virginia : Tonie Simmons, Muscogongus Bay Aquaculture, Rr 12, Bremen, ME, 04551, (207) 529 4100

Ostrea edulis : Gary Arnold, Wawenock Trail, Boothbay Harbour, ME 04538, (207) 663 2670

\$50 license fee enclosed: YES

Amount of application fee enclosed: FULL
(\$100 payable to: Treasurer, State of Maine)

I hereby state that the information included in this application is true and correct and that I have read and understand the requirements of the Department's rules governing aquaculture.

Signature: [Signature] Date: 12-7-11

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.

PART D: EXPERIMENTAL LEASE APPLICATION INFORMATION

Applications must be typed and reproducible. Please use 8 1/2" x 11" paper. Using the numbering system below, an experimental application for aquaculture lease must provide the following information:

1. **Location of Proposed Lease.**

This is an important part of the experimental lease application. A well-documented, high quality site location will help to eliminate the need for a site review. A poor quality description will require a time consuming verification of the site location by the Department of Marine Resources.

A. Vicinity Map.

Using a NOAA Chart or USGS topographic map, show the general vicinity of the lease. Be sure to show the waters, shorelands, and lines of mean high and mean low water within the vicinity of the lease. Provide an arrow indicating true north. Show the approximate lease boundaries.

I used Google Earth to make accurate maps of the river, with precise measurements of distances and GPS readings. I have done my best to transfer that to the NOAA map which is a bit less user friendly. Both maps are included. The GPS coordinates are as follows:

NW

Latitude: 43°33'19.11"N Longitude : 70°20'34.97"W

NE

Latitude: 43°33'18.57"N Longitude 70°20'33.56"W

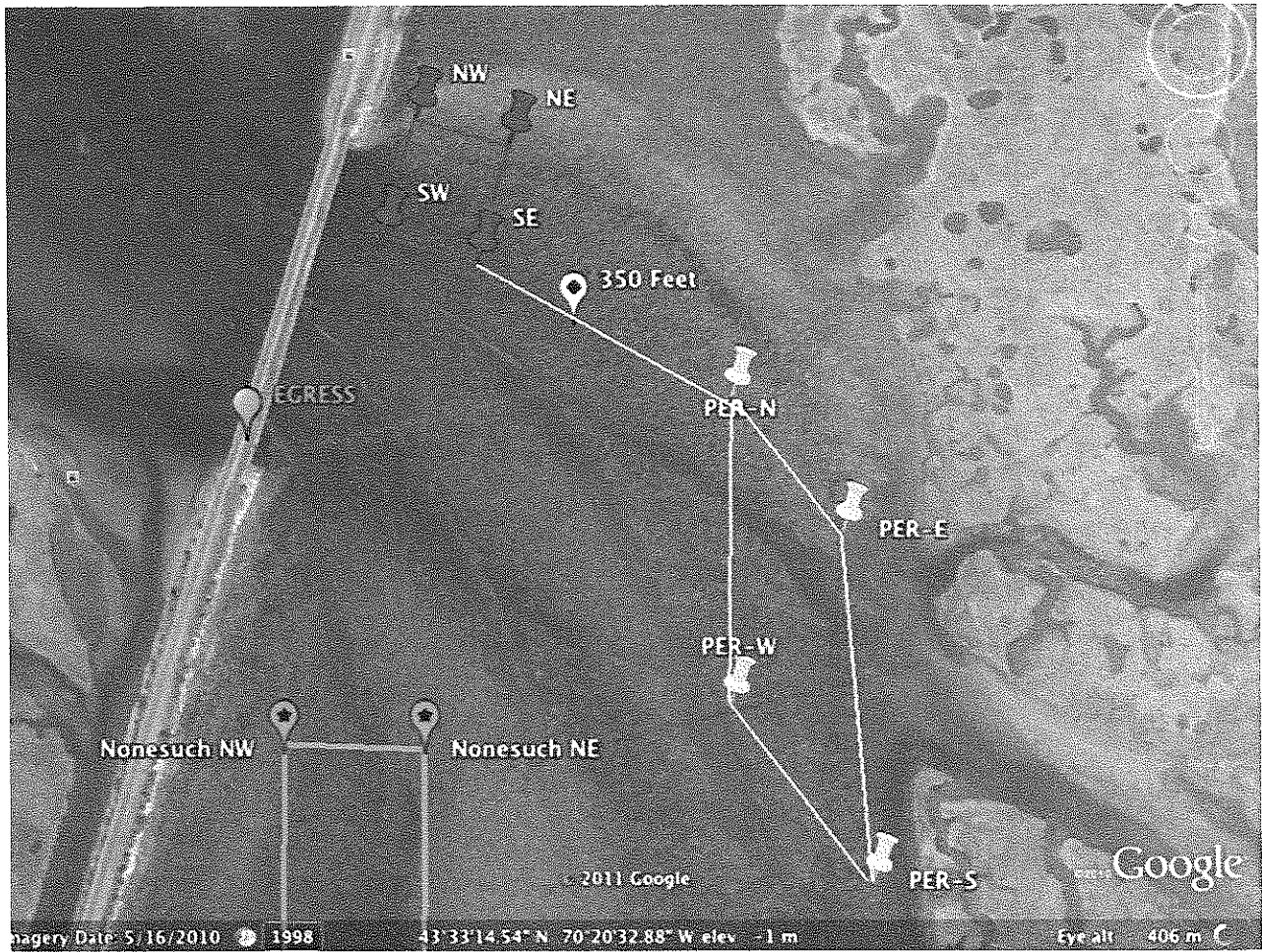
SW

Latitude: 43°33'17.81"N Longitude : 70°20'35.97"W

SE

Latitude: 43°33'17.27" N Longitude : 70°20'34.53"W

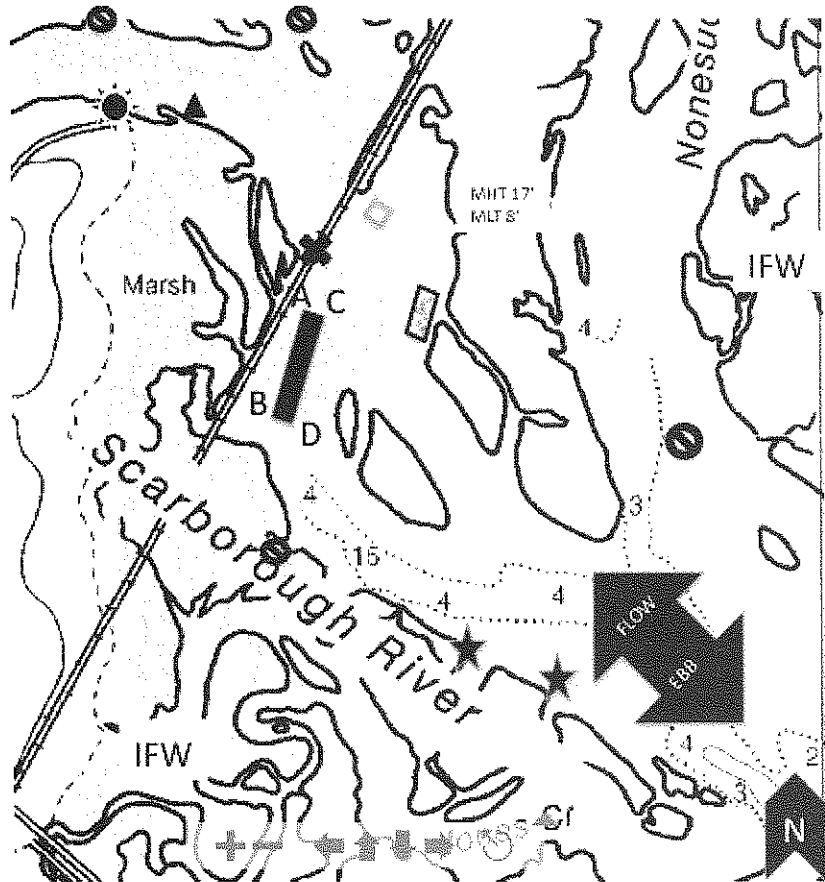
US GEOLOGICAL SURVEY 2010 (GOOGLE EARTH) April 21, 2006



NONESUCH OYSTERS EXPERIMENTAL APPLICATION – SITE MAP

- Nonesuch Experimental
- Bacterial closings
- Nate Perry LPA
- Nate Perry Experimental
- Ernest Heether LPA
- Seavey's Town Landing
- Boat Egress
- Nonesuch Proposed Experimental

NW
 Latitude: 43°33'19.11"N Longitude: 70°20'34.97"W
 NE
 Latitude: 43°33'18.57"N Longitude: 70°20'33.56"W
 SW
 Latitude: 43°33'17.83"N Longitude: 70°20'35.97"W
 SE
 Latitude: 43°33'17.77"N Longitude: 70°20'34.53"W



NOAA CHART #13287

*Feet plotted on Google Earth

1000 FT

2. **Land Owners** (*Who are your neighbors and do you have their permission to use their land?*) Attach a copy of a tax map or chart showing the location of the lease and the waters and shorelands within the general vicinity of the lease. List the name and address of every riparian owner of land within 1000 feet of the lease and the location of their property marked as shown on the map. If you need to use riparian property to access the lease site, or the lease activities would take place on intertidal land, provide written permission from every owner of such property to be used. The map and list of riparian owners must be certified by the tax collector or clerk of the municipality in which the lease is located as being an accurate copy of this information as maintained by the municipality. *The applicant must provide to the department proof of access to the lease area. If access will be across riparian land, the applicant shall provide to the department the written permission of every riparian owner whose land will be used to access the lease area (Sec. 1. 12 MRSA §6072-A, sub-§§8).*

The State is the sole riparian (see tax map & Riparian List) with IFW managing the land. Access to this site is gained from both the public pier at Pine Point and Seavey's Landing, a public landing West of the bridge. In no circumstances would I be crossing riparian land to access this site.

3. **Research Program and Operation**

Provide a concise description of the scientific or commercial research and development study you will be conducting on the experimental lease site. Describe:

A. The purpose and design of the study.

This Experimental Lease is part of a greater study designed to see if we can successfully extend the growing season, and stabilize growth, for very small spat (1,5mm) in an indoor nursery where we will heat the water and feed the spat homemade phytoplankton, grown from samples taken from the river. This is a private effort, informed by public research, and executed with the help of University of New England's staff and students. We may decide publish our results after a few years of experimentation as we hone the system for optimal results.

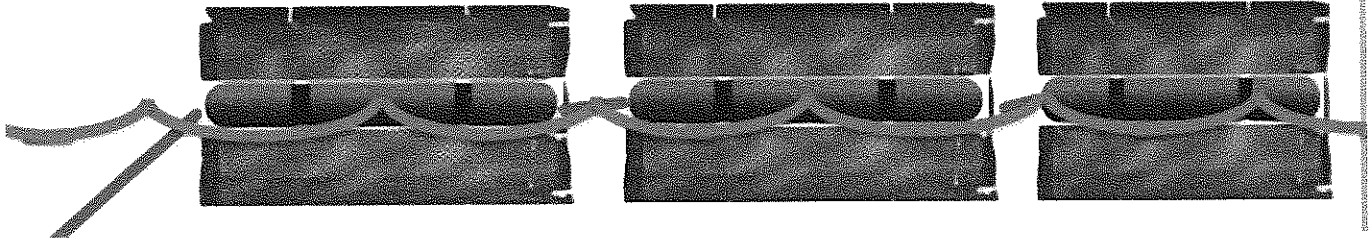
We intend to build the nursery in a facility at nearby Snow Canning Road, which sits atop Cascade Brook, the extension of Jones' Creek. Using pumps, we will pump water into our upweller during high tides, when the water has the greatest salinity concentration. The DEP has approved this and determined this usage "diminimus." (The official letter should arrive today, 12/7/11)

The shortcoming of this site is that the brook falls under the "prohibited" growing classification, and thus the outgoing spat will require a 6-month 'purging' period in open waters at a distance of 300 feet from any harvested site.

With the help of Dave Corbeau, I have scoured the pollution maps to find a place in Saco Bay outside the Essential Habitat zone where I could do this activity. Unfortunately, with all of the bacterial closures and the inaccessibility of other waterways, this remains essentially the only location. (I am starting a Friends of Saco Bay organization in order to raise money to change this.)

If all works well, I expect to achieve ¼"-1/2" spat in two month cycles, with the first batch of seed going in the nursery in April 2012. The last batch of seed will be set on the site by the end of November. All seed moved will be smaller than 1". Seed will remain on this site for six months following the arrival of the last batch. It will then be moved to my 4-acre experimental site. The cycle will reproduce itself every year.

I will also experiment with a different bag configuration. I will set the bags vertically in the water, instead of horizontally (see below). I hope this will make bag maintenance easier, and help reduce the infestation of mussel spat on the small seed that we experienced last year.



It is my greatest hope that this site will also be used to receive Belon stock from Gary Arnold's work with Brian Beale. Unfortunately, the project doesn't seem to be working well now, but I am headed to France to meet with some Belon growers. Maybe they can help.

B. The species, amount and proposed source of the organisms to be grown. (Note: You may apply to grow more than one species).

Eastern Oysters – hopefully I'd have a million survivors – though I dare not even hope! And possibly some Belons – but more like 10,000 or so of those, at best.

C. A description of the culture and harvesting techniques to be used.

You will see from the attached diagrams that I am using floating bags. I will not harvest from this site; it will be used for purging small animals.

D. The expected length of the study.

We will keep perfecting and working with the nursery for the duration of our Experimental Lease. At its expiration, or before, I'd expect it to roll into a Standard Lease with the other Nonesuch Experimental Lease. Frankly, I'd rather do that sooner than later.

E. Specify whether the research is for scientific OR commercial research and development. Note: Results of scientific research will be part of the public record.

Technically this is for commercial research but I am working with Jeri Fox, Head of Aquaculture Studies at University of New England on this project. We will apply the scientific method to our work and with some luck this nursery will be a "living lab" for UNE professors and students.

4. Existing Uses (Who uses or travels over the site now and why?)

Describe the existing uses of the proposed lease area, including commercial and recreational fishing activity, moorings, navigation and navigational channels, and use of the area by riparian owners for ingress and egress. Include the type, volume, time, duration, location and amount of activity. A signed statement from a Department Biologist or Marine Warden may be submitted to verify this information.

Harbor Master Dave Corbeau originally picked this site to be used by Nonesuch Oysters back in 2009 because it did not conflict with any commercial or recreational usage of the river. He maintains that stance today and supports applying to regain this area. Occasionally there is a kayaker who comes up this way, but there is really very little activity.

5. **Exclusive Use** (Who will be restricted from the site?)

Describe the degree of exclusive use required by the project and the impact on existing or potential uses of the area. Will others be allowed access to the site? Will fishing be allowed on the site? Will you request that certain types of activities be restricted? If so, please explain.

As long as people don't come tamper with the bags, they are welcome to come and fish and kayak and whatever else around the gear.

6. **Description of the Proposed Lease Site**

A. Environmental Characterization. (Written description or video)

NOTE: If your application involves structures, a permit from the U.S. Army Corps of Engineers will be required. The ACOE requires that the Environmental Characterization be in written form. A video will fulfill only the DMR requirements. If you are using structures, a single written description will satisfy both the ACOE and DMR requirements.

Describe the environment of the proposed lease site and your reasons for deciding that this site would work for your intended purposes. This may be done either by submitting a written description of the area, or, if no structures are involved, by submitting a video of the area. Both methods should include the following:

First off, this site as the advantage of having a shellfish classification of "open," which is rare in the Saco Bay! The bottom is a mix of mud and sand. When I used this area before as part of Nonesuch, it proved a great site. The moorings stayed put and the currents of about 3 knots (east-west) provided a nice strong flow of water through the bags. There is plenty of water as well. At low tide, we have about 7 feet and at high tide we have 16 feet. There are no plants and animals of significance on the bottom, other than the errant mussel or hen clam. The shoreline is several hundred feet to the North East, and is characterized by a mud base with seagrass. There is no eelgrass in the vicinity.

B. Environmental Impact.

Describe how you think your husbandry and harvesting techniques might affect the physical and ecological environment around the lease site.

There should be no environmental impact here from this activity. Our activity is quiet and calm and the oysters are good for the environment.

Provide the shellfish growing area classification for the area of the proposed lease. The classifications are available at either the town office or from the Public Health Division of DMR. Contact information is available at the DMR website: www.maine.gov/dmr/rm/public_health

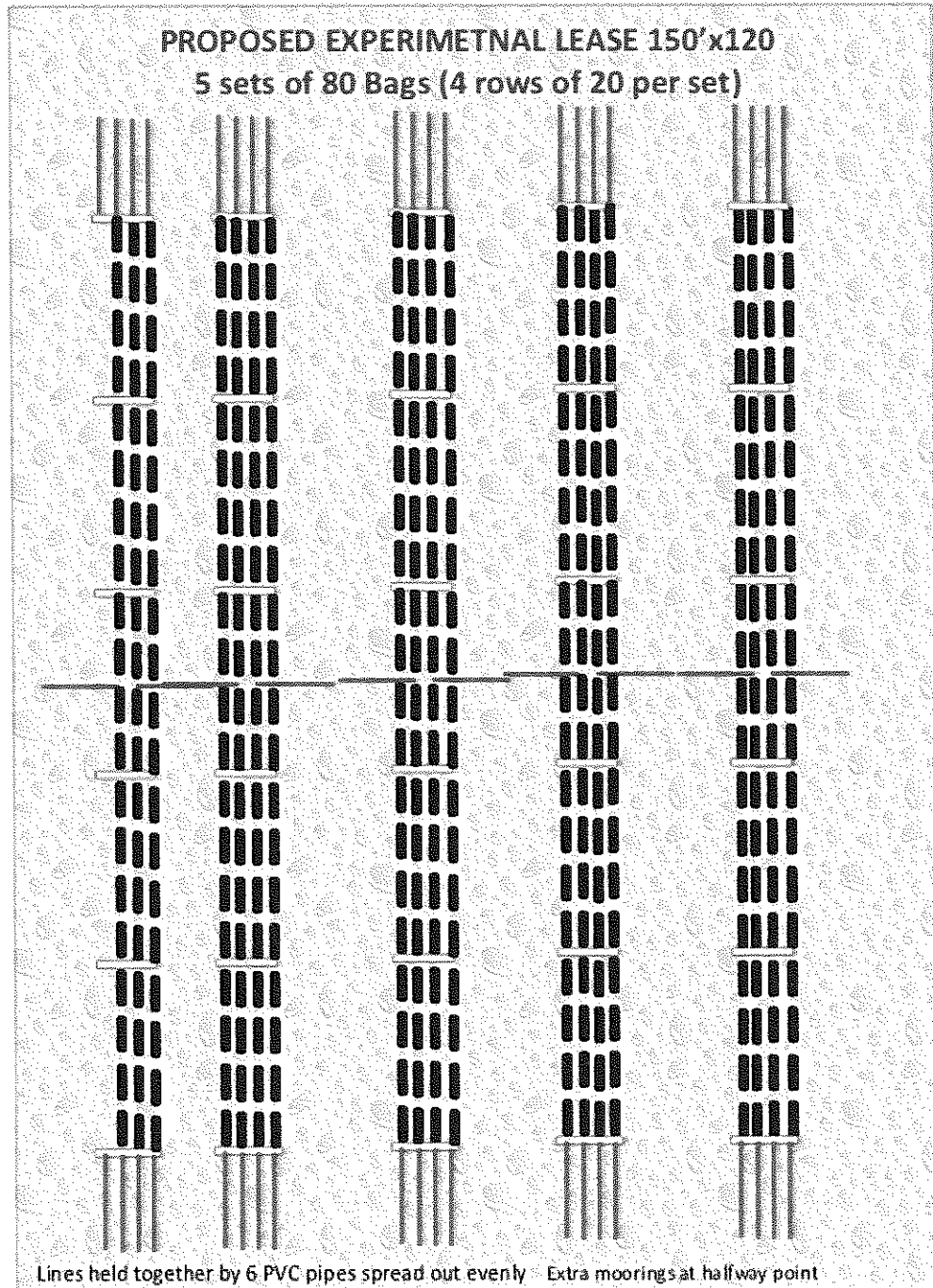
This is an open area.

7. **Structures (if applicable)**

If your operations require the use of 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 the following:

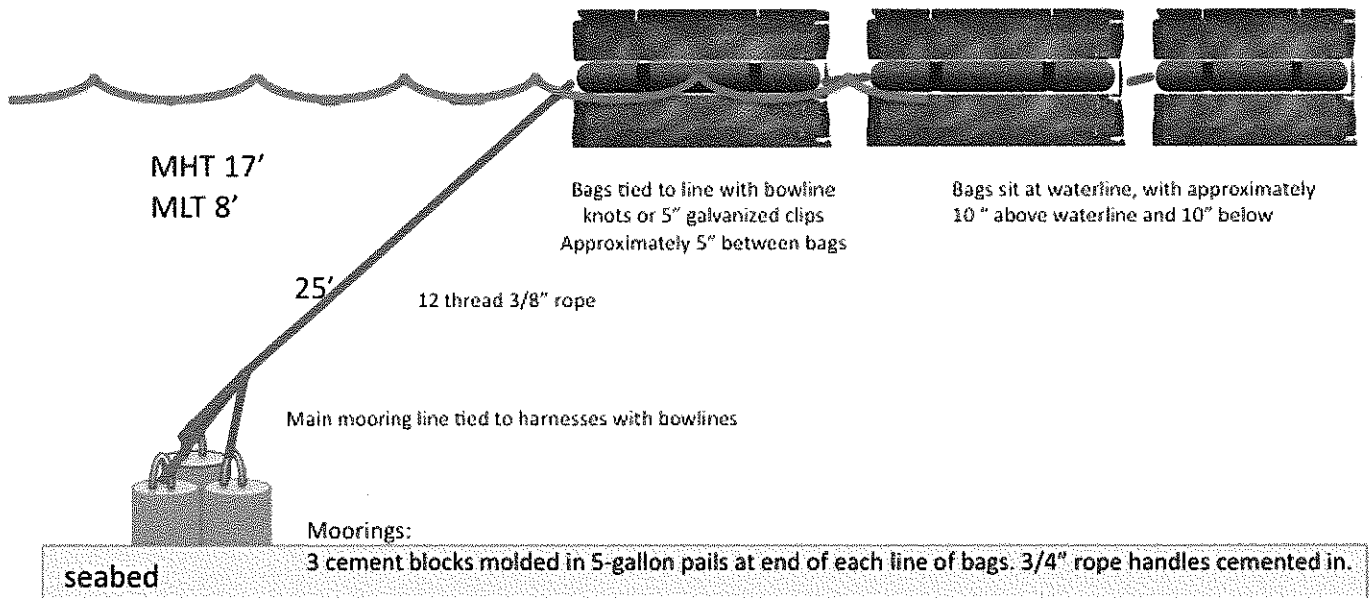
6

A. Plan View. Provide a drawing of the maximum area to be utilized by the structure(s) and moorings of the proposed lease. This drawing should include a layout of the lease boundaries and the location of all proposed markings. Please note that all moorings must be contained within the lease site.

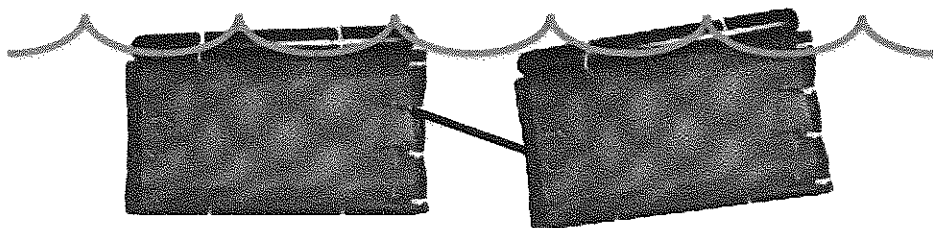


B. Cross Sectional View. Provide a drawing and description of the mooring system used to anchor your structure(s) to the sea floor. Provide dimensions and materials used. Label all parts. Provide depth from the bottom of your structure(s) to the sea floor during both mean low water and mean high water.

CROSS SECTIONAL VIEW



WINTERING OVER SOLUTION



I invented this overwintering technique for the Scarborough River which had not frozen over in more than a decade. With a single float on one side of the bag, the oysters are protected from the elements and when ice does come down the river in the early spring, the bags give way and pass underneath. I successfully used this technique in 2009-2010. If the river does show signs of actually freezing over, the floats can easily be removed and the bags left to sit on the bottom.

8. **Discharge (if applicable)**

If your operation will discharge anything into the water such as feed (pellets, kelp, etc.) or chemical additives (therapeutants, chemical treatments, etc.) you must submit a video of the bottom using a method prescribed by the Department. **The video must be filmed between April 1 and November 15.** Please note that this video can also fulfill the DMR requirements of Item 10, Description of Proposed Lease Site. Further sampling may be required by DMR, or DEP, depending on the characteristics of the site or the proposed activities.

There is no discharge.

9. **Marking**

According to Department rules, all lease sites are to be marked with a floating device, such as a buoy, which displays the lease identifier assigned by the Department and the words "SEA FARM" in letters of at least 2 inches in height in colors contrasting to the background of the device. The marked floating devices shall be displayed at each corner of the lease area that is occupied or at the outermost corners. If such marking requirements are unnecessary or impractical in your proposed location, provide information as to why that is so and suggest alternate markings.

Ok.

10. **Escrow Account or Performance Bond and Rental Fee**

A. Escrow Account or Performance Bond. Provide documentation confirming that the applicant has read MDMR Aquaculture Regulations 2.40 and that upon issuance of a lease by MDMR the lessee will either open an escrow account or obtain a performance bond, depending on the category of lease as follows:

<u>Lease Category</u>	<u>Amount of Required Escrow or Performance Bond</u>
No structure, no discharge	None
No structure, discharge	\$ 500.00
Structure, no discharge	\$
Total combined area of all structures on lease:	
≤400 square feet	\$1,500.00
>400 square feet	\$5,000.00
Structure, discharge	\$ 25,000.00

9

- RIPARIAN OWNERS LIST -

THIS LIST MUST BE
CERTIFIED

On this list, please show the current owners' names and mailing addresses for all shorefront parcels within 1,000 ft. of the proposed lease site. Ask the Town Clerk to complete the certification form below. If the parcels are within more than one municipality, provide a separate, certified, riparian list for each municipality.

TOWN OF:

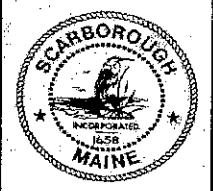
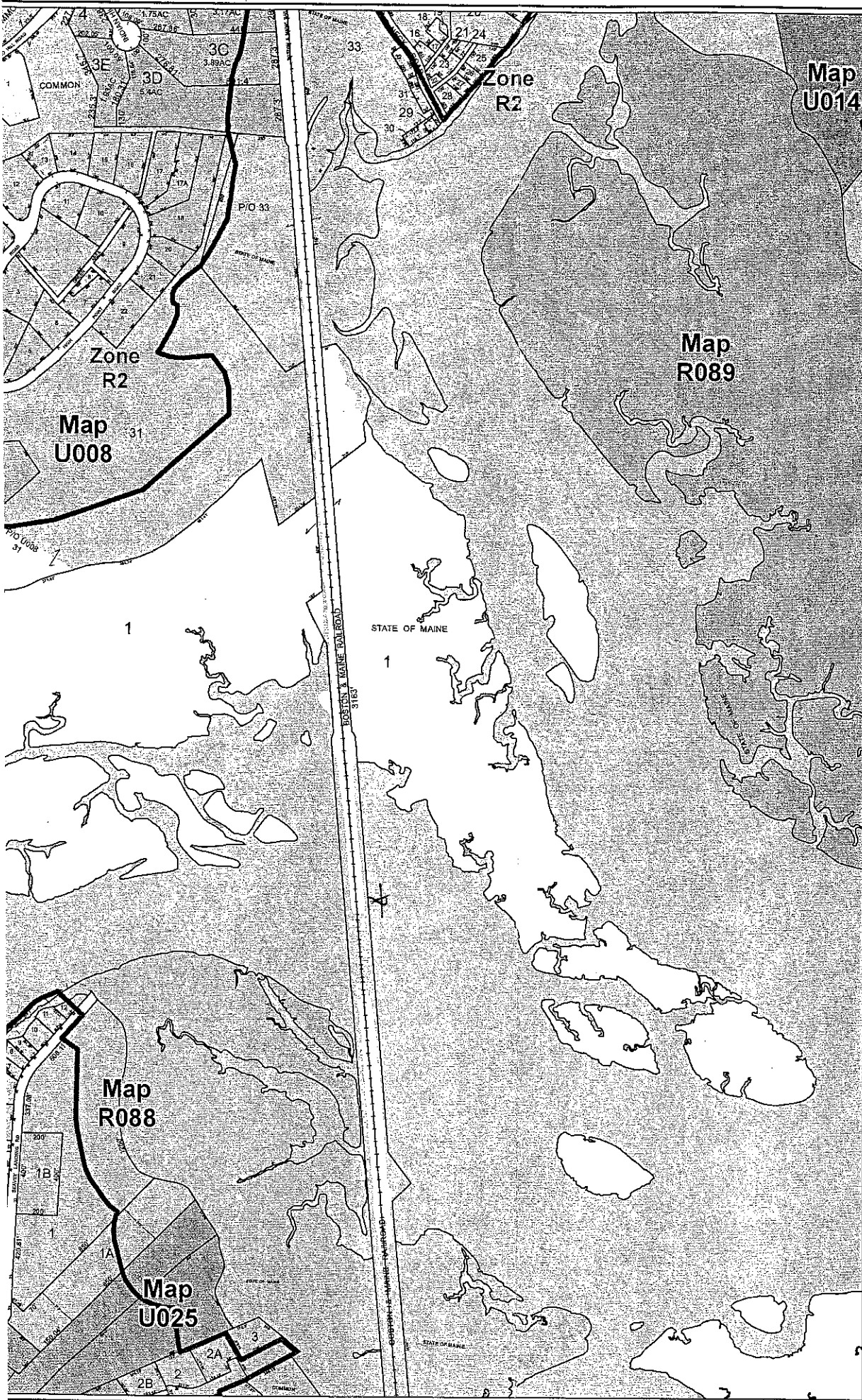
<u>MAP #</u>	<u>LOT #</u>	<u>Landowner name(s) and address(es)</u>
R070	"I" 1111	State of Maine

CERTIFICATION

I, Carrie Noyes, Dep., Town Clerk of Scarborough, certify

that the names and addresses of the property owners listed above are those listed by this municipality and are current as of this date.

SIGNED: Carrie Noyes DATE: 12/07/2011 SEAL:



Town of
Scarborough
Maine

For Assessing
Purposes Only

Legend

- Railroad
- Easement & ROW Lines
- Parcels
- Water
- Townlines
- Surrounding Towns
- Zoning

April 1, 2011



1 inch = 300 feet

**Map
Number**

R070

