

Half Tide Rock Oyster Farm

Russell Hilliard, Partner

196 Drinkwater Rd

Hampton Falls, NH 03844

603-498-1938

Conor Walsh, Partner

196 Drinkwater Rd

Hampton Falls, NH 03844

203-313-5856

Application for Marine Aquaculture License NH

Hampton River Grow Out Area

Application Date 6/9/2017

1. Applicants

Name: Russell Hilliard

Business: Half Tide Rock Oyster Farm

Address: 196 Drinkwater Rd

Hampton Falls, NH 03844

Telephone: 603-498-1938

Email: Rghilliard@yahoo.com

Name: Conor Walsh

Business: Half Tide Rock Oyster Farm

Address: 196 Drinkwater Rd

Hampton Falls, NH 03844

Telephone: 203-313-5856

Email: Cbwalsh333@gmail.com

2. Species to be cultivated

- Eastern Oyster – *Crassostrea Virginica*
- Soft Shell Clams – *Mya Arenaria*
- Hard Shell Clams – *Mercenaria Mercenaria*

3. Proposed Project description

A. General Methods

Half Tide Rock Oysters has two generations of experience and relationships in Hampton harbor and knows that the public right and use of the harbor come first. We want to exist in harmony and are intent on small productive plots out of the public way to slowly build a recognized and trusted industry. This is why we are trying to work with areas far from abutters, away from navigable water ways and out of view. Half Tide Rock Oyster is seeking approval for a license of 1 acre of intertidal lands with a primary use of growing out juvenile oysters. In the future, Quahogs and soft shelled clams may be grown with simple grow out and harvest techniques using minimal to no aquaculture gear.

The oysters we plan to cultivate at this site will be bought primarily from Island creek oyster farm in Duxbury Massachusetts or approved pathologically certified sources from Maine. The first year our target is to grow out 20,000 oysters and observe the fecundity from the methods and environment. The spat is to be grown in bags. Once grown to a size of about an inch the juveniles will be placed in trays on the bottom and may be moved closer or further to the mouth of the Harbor; depending on licenses.

Clam Aquaculture is purely an environmental and ecological benefit closely tied to the success of the oyster culture. Plans for integration of clams will be later on in the project and involve little more than dispersing seed and raking for harvest.

B. Type of Culture

We plan on cultivating young oysters using the rack and bag method, in the future there may be some bottom planting. Rack and bag method will be used in the juvenile oyster stages spring-early fall.



The cages we use to rear and finish adult oysters will be built by hand and small enough to harvest and pull to the surface by hand. This minimally obtrusive culture system will be out of view to the public, except at the lowest of tides. This is the main type of culture used in this Oyster Finishing Area. Cage dimensions are spanning from 3 feet by 5 feet, with no more than 6-12 inches of height, there will also be smaller cages 2 foot by 3 foot by 1 foot closed top cages for holding market size product. All sizes are approximate.



When we hope to establish clam culture the seed will be dispersed from the boat with a shovel and spread on the bottom in spring, 100% bottom planted. Oysters and clams have a beneficial symbiotic relationship with one another that also greatly benefits the environment. The clams can thrive underneath these oyster culture methods.

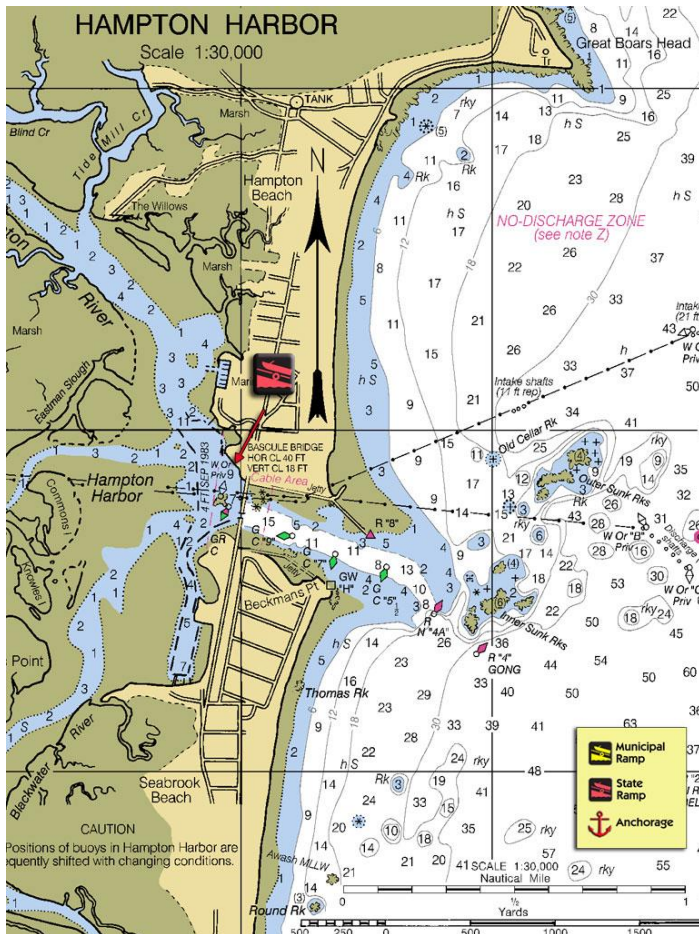
C. Location and Description of the Geographic Areas

We are proposing a 1.1 acre site with in Hampton harbor the town of Hampton, New Hampshire as defined below:



1. North Point 42.916009, -70.841491
2. North West Point 42.915434, -70.842385
3. South West Point 42.914974, -70.842731
4. South Point 42.914899, -70.842373
5. Mid South Point 42.915313, -70.842037
6. North East Point 42.915831, -70.841224

D. Site Specific Information



Tidal Swings- Depths were taken from land and from a boat, but tidal swings each day range from 10' plus at the highest tides and -2 feet at lowest tides the mean low tide depths in this farm area range from fully exposed to 6 feet deep.

Proximity to natural resources- A site survey conducted during low tide on 2/18/2017 showed no evidence of eel grass, natural oyster or clam beds were present in the proposed sites along with any other critical species.

Characterization of Sediment- The substrate of the proposed site is sand with small deposits of marsh mud.

Recreational commercial and navigational aspects- A small boat launch for Kayakers a few thousand feet up stream off of depot road. The area is largely surrounded by un-navigable water ways and lands. The closest moorings are over 3000 feet away.

Zone Clearance- the approved site will be marked as the state requires along with a floating sign.

E. Type, size and configuration of gear

Containment- Mesh bags will be used with a variety of different sized meshes depending on the oysters age at dimensions approximately 40" X 20" with little more than 6" heights. The vast majority of adult oysters grown in our plots will be set in cages. If weighted enough these containment methods will have no stakes no ropes and no buoys exposure at low tide will make them attainable. Light mesh bags with young oysters may need to be staked or tied into the ground. There may be need for small buoy markers for cages. Cage dimensions are spanning from 3 feet by 5 feet, with no more then 6-12 inches of height, there will also be smaller cages 2 foot by 3 foot by 1 foot closed top cages for holding market size product. All sizes are approximate.

Harvesting- Harvesting methods may include hand rakes tongs a towable rake or any other traditional oyster harvesting method, especially if the law is lifted and bottom planted oysters are the protected right of the farm.

4. Sources of Organisms to be Used:

Shellfish seed will only be acquired from approved hatcheries with certified disease free stocks. Alternatively, 1-1.5 inch oysters will be acquired from existing approved operations from NH, MA, and ME, and transferred to the proposed site. Import permits will be obtained from the NH Fish and game prior to importation of any seed. The first few years will be about networking and finding small batches of seed stock to see what oysters grow the best. This list is a work in progress, starting very small.

Sources for stock:

Island Creek Oyster Farm

Contact: Olav Goelet
PO box 348
Duxbury, MA 02331
(410)236-9373
Olav@islandcreekoysters.com

Mook Sea Farm

321 ME Route 129
Walpole, ME 04573
(207) 563-1456

Fat Dog Shellfish

Kyle Pfau
Great Bay New Hampshire
(413) 579-4459

5. Disposition of Oysters during various phases

The spat is to be grown out in cages or bags in the first years with plans for a small Floating Up Weller System (FLUPSY) after proven growth. We hypothesize their first year will be spent up harbor and their adult hood spent closer to the mouth of the harbor, finishing them with a more brine forward flavor.

6. List of any chemicals used:

None

7. Descriptions of restrictions to public use of proposed area:

Any harvesting or tampering with/of Half Tide Rock oyster farming property.

8. Written statement to substantiate that the applicant either owns the land or has the owner's permission for use or access:

State owned tidal lands with permission via approved License

9. List of all Agencies to whom copies of the completed application will be sent:

Shellfish Inspection and Licensing Division of Public Health Services

Wetlands Program NHDES Wetlands Bureau

New Hampshire Port Authority

United States Coast Guard

Army Corps of Engineers USACE Regulatory Division

New Hampshire Fish and game Department Marine Fisheries Division and Executive Director

10. List of Abutters

Not Applicable

11. Benefits of Proposed Activities:

The proposed oyster farm presents the possibility to benefit every area that it gets involved in. The environment, society, and the business market all have close positive ties to an oyster farm. The fact that there has never been anything in this area like this before presents challenges, but also many unforeseen opportunities. With close transparent relationships and science based decision making, oyster farming in Hampton Harbor could greatly increase water quality, ecosystem development, fulfilling farm oriented jobs, branch off businesses, local healthy sustainable food systems, taxable revenues, and increase the focus on building businesses that regenerate and revitalize the environment.