

STANDARD LEASE APPLICATION: NON-DISCHARGE

1. APPLICANT CONTACT INFORMATION

Deemed Complete 2/13/2020

Applicant	Acadia Aqua Farms LLC		
Contact Person	Alex de Koning		
Address	806 Bar Harbor Road		
City	Trenton		
State, Zip	ME 04605		
County	Hancock		
Telephone	(207) 288-8924		
Email	info@acadia-aquafarms.com		
Type of Application	Draft Application [submitted before scoping session session]		<input checked="" type="checkbox"/> Final Application [submitted after scoping session]
Dates	Pre-Application Meeting: 11/7/19	Scoping Session: 1/23/20	Draft Application Submitted: 11/12/19

Note: If applicant is a corporation or a partnership, the “Corporate Applicant Information Document” available at: <http://www.maine.gov/dmr/aquaculture/forms/standard.html> must also be completed.

2. PROPOSED LEASE SITE INFORMATION

Location of Proposed Lease Site	
Town	Bar Harbor
Waterbody	Frenchman Bay
General Description (e.g. south of B Island)	SW of Googins Ledge
Lease Information	
Total acreage requested (100-acre maximum)	48
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

Note: If you selected yes, you need to complete the steps outlined in the section titled: “19. Landowner/Municipal Permission Requirements”.

3. WATER QUALITY

Directions: Water Quality Information can be found here: <http://www.maine.gov/dmr/shellfish-sanitation-management/closures/pollution.html>

Pollution Area (e.g. "19-A"):	47
Pollution Area Section (e.g. "B.2". or "none"):	None
Water Quality Classification (e.g approved, restricted, etc.):	approved

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 you plans at the following email: DMRPublicHealthDiv@maine.gov

4. SPECIES INFORMATION

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

Name of species to be cultivated (include both common and scientific names):	Name and address of the source of seed stock, juveniles, and/or smolts	Maximum number (or biomass) of organisms you anticipate on the site at any given time
1. Blue mussels	Natural seed set on site	1000 ton
2. Sea scallop <i>Placopecten Magellanicus</i>	Natural spat collection from within the same biosecurity zone.	10 Million animals (Counting 5 year growth cycle and 2M/yr production)
3. Softshell clam <i>Mya Arenaria</i>	Natural spat collection under special license, or buying seed from the Down East Institute	1000 ton
4. Hard shell clam <i>Mercenaria Mercenaria</i>	Natural spat collection under special license, or buying seed from the Down East Institute	1000 ton

B. Do you intend to possess, transport, or sell whole or roe-on scallops? Yes No

If you answered "yes" please contact the Bureau of Public Health to discuss you plans at the following email: DMRPublicHealthDiv@maine.gov

We have had contact with Kohl Kanwit at the bureau of public health, we will move forward with a special license if we decide to sell live scallops.

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.gov5.

VICINITY MAP *(Appendix page 2)*

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

6. BOUNDARY DRAWING *(Appendix page 3)*

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 as accurately as possible (e.g., to the nearest second or fraction of a second). 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.

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.

Mussel pipe system and predator net: Appendix pages 4-5 & pictures on pg 16-20

Longline: Appendix pages 6-8

Lantern net: Appendix page 9

Ear hanging line: Appendix page 10

2. **Gear Table:** List and describe each individual gear type that you will use in the table below. Only include gear that will hold organisms to be cultured (e.g. Polar circles, marine algae longline, oyster cages).

Specific gear type	Dimensions	Time of year gear will be deployed	Maximum amount of this gear type that will be deployed on the site	Species that will be grown using this type of gear
Mussel pipe farm unit	500'x1x	year round	200	Blue mussels
Predator net	500'x30x	year round	200	Blue mussels
Longline	2'x1600'	year round	200	Scallops, clams, mussels
Lantern net	6'x1.5'	year round	5000	Scallops, clams
Ear hanging dropper	60'x3/8"	year round	55000	Scallops

B. Maximum Structure and Mooring System Schematic

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.

Mussel pipe based seed collection system: *Appendix pages 11,12*
Longline: *Appendix page 13*

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).

Mussel pipe based seed collection system: *Appendix page 4,5*
Longline: *Appendix pages 6-8*

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.

A Harvest machine will be moored on site, on a raft. (See picture on page 14 and 15 of the Appendix). Our harvest vessel the Stewardship (Appendix pg 21) may occasionally be on site, as well as various skiffs and tenders.

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

The harvest machine will have a hydraulic system using biodegradable hydraulic oil from the Stewardships integrated hydraulic system. All haz mat will be stored below decks where the hull functions as secondary containment. Hydraulic hoses will be regularly inspected, and replaced when needed before a rupture occurs.

D. Gear Color

Provide the color of the gear and structures proposed to be used at the lease site.
All metal will be stainless steel ,treated aluminium or steel painted in non obtrusive colors, the pipes will be black or grey HDPE, marker buoys will be colored either yellow, green, red,or blue.

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. *Mussels: see Appendix pages 16-20 page 20 is approximately what will be visible standing on the low tide mark at Leland Point for the mussel pipe based system if the lease were to be fully utilized. Scallops: see Appendix page 22.*

F. Marking

Will you be able to mark your site in accordance with DMR regulations, Chapter 2.80? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> 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: 1st 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 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.

For mussels; the seed will naturally set on the netting. We may need to clean the biofouling off the nets once in spring, prior to seed set(exact month will vary somewhat with the environmental conditions per year). The primary goal for this lease will be to supply mussel seed for our bottom culture mussel leases. We will likely be on site ranging from weekly to daily, depending on time of year, to monitor seed set, grow out, maintain predator nets and to inspect the installation.

For scallops; we will transfer scallop spat from the spat collection bags into lantern nets of the correct mesh size for the scallop size. Once they reach 2” in size the scallops will be bought to our on shore facility, have a hole drilled in their ear and get pinned on a line. These lines will be bought back and hung back on the longline. See Appendix page 10 for images of ear hung scallops.

For clams: Wild caught clam seed by special license, or hatchery sourced clam seed will be utilized while we are experimenting with grow out techniques.

B. Please explain your proposed tending/maintenance activities.

For mussels we will be monitoring growth, removing seed to thin as needed, removing predators, hanging predator nets over the pipes, removing bio fouling with brushes or pressure washers, and adjusting buoyancy.

For scallops we will be transplanting from one lantern net to another, thinning out the layers, cleaning the nets, and managing the ear hanging scallops.

For clams, we are expecting similar monitoring and maintenance as scallops.

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

Somewhere between daily and once a week depending on what is on the site, the rate of bio fouling and the time of year.

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

For the mussel pipes, the harvest machine is a purpose built unit. This machine is placed over the pipes, clamps onto them with special drive wheels, and lowers a double sided conveyor, or brush over the net. These conveyors close onto the net and turn on, starting to brush the mussels off. At the base of the conveyors is a large pump that sucks the mussels up, allowing them to be piped over to the transport vessel.

For scallops and clams we will be hauling up the lantern nets onto the boat, or hauling in and stripping off the ear hanging lines.

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

Daily to weekly

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

G. If no, please 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.

Not applicable

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 site?

Skiffs, the harvest machine, and our main mussel vessel the stewardship (74’ long converted landing craft(*Appendix pg 20*)).

The frequency and timing of these vessels being on site will depend on various factors: to what percentage we are utilizing the farm, where we are in the harvest cycle and what the season is. It may vary from a once weekly inspection with a small skiff, to daily harvesting with the Stewardship and the harvest machine pontoon.

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 harvest machine has a hydraulic system plumbed into the Stewardship, as well as pumps running, and we may use the equipment already in place on the stewardship (power, hydraulic, water, and air). Depending on what we learn about bio fouling, we may use pressure washers and graders to aid in biofouling control. Also, aids the reseeding efforts for scallops and clams. The frequency of use will have to be determined by how fast the biofouling is accumulating. Since there are no scaled scallop ear hanging farms in use yet in Maine, we do not have data on the frequency of cleaning required at various depths. We estimate performing this activity 1 to 4 times per year

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

All non portable internal combustion engines will be in secondary containment to reduce sound levels. According to the manufacturer the noise of the running harvest machine is very mild, less than a 4 stroke outboard engine. When harvesting the stewardships main engines will be shut down when possible, so only the hydraulic motor and generator in the forward engine room will be running.

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.

None during normal operation, unless required by the Army Corp of Engineers or other agency.

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

During the winter season where daylight is short we may be there outside of daylight hours, otherwise the only times would be in emergency or urgent situations eg. storms or closures, or if there is some other imminent threat to the product or structure that needs to be mitigated. In these rare occasions the floodlights on F/V Stewardship along with flashlights will provide all the lighting we need.

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.

We currently farm 158.45 acres of bottom culture leases in five locations for the cultivation of blue mussels on the seabed, as well as experimenting with two LPA longlines for mussel seed collection and scallop and clam farming in Frenchman Bay.

Our current leases and LPA's are:

East OP2-31.59ac., East HP-40.36ac., Fren BI-32.24ac., Flan WN-14.35ac., PEN SN3-39.91ac.

LPA's ADEK219(200'x2'), ADEK 319(200'x2'), ADEK 419(200'x2'), TDEK119(400'x1'), TDEK219(400'x1'), TDEK319 (200'x2')

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.

We would continue the bottom culture leases as the suspended caught mussel seed is intended to help us more effectively utilize those leases. For now we will likely continue the LPA longlines as well to be able to compare biological, and physical conditions in multiple locations. (growth and bio fouling rates, wave exposure, anchoring stress, ect.)

These Leases and LPA's are:

East OP2-31.59ac., East HP-40.36ac., Fren BI-32.24ac., Flan WN-14.35ac., PEN SN3-39.91ac.

LPA's ADEK219(200'x2'), ADEK 319(200'x2'), ADEK419(200'x2'), TDEK119(400'x1'), TDEK219(400'x1'), TDEK319 (200'x2')

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?

40-80ft

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

52-92ft

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

Looking at the hydrodynamic model of the Frenchman Bay area done by Dr. Lauren Ross University of Maine 2018/19, it appears maximum current speed at a spring tide has the potential to be as high as 0.2m/s. These farm systems have been in use in up to 2.0m/s current

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. **We are doing both, the video is available**

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

All mud.

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

Gently sloping, but smooth, when you are diving it it appears almost flat.

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?

Alex de Koning and two other experienced divers performed a 1200ft transect dive(on 8/16/19) in which I saw about a dozen rock crabs, and three shrimp and that was all. The mud showed rock crab tracks but no lobster tracks. We did find an abandoned lobster trap (with the rope and buoy still in the trap) This ghost trap had two lobsters in it which we released, and sent the buoy to the surface for pick up. This was the only sign of any lobster we saw the whole dive, and it is possible that the lobster had been in the trap for some considerable time.

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

None, the only evidence of bivalves I observed was one single empty, half of a mussel shell lying on the mud.

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.

None observed on dive performed on 8/16/19. My feeling is that it is too dark down there for most vegetation. We definitely needed lights to perform the dive.

6. Describe the general shoreline and upland characteristics (rocky shoreline, forested, residential, etc.)

The nearest shore is almost 1000ft away, rocky shore of Leland Point. It has a home on it that does not appear to be visible from the water, is forested, with stone and ledge narrow beaches.

E. Is your proposed lease located within a Maine Department of Inland Fisheries and Wildlife designated Essential Habitat?

Yes 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, phone: 207-287-5254) prior to application submission.

12. EXISTING USES

<p>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 the activity occurs; c) frequency; and d) proximity to the lease site.</p>
<p>1. Commercial Fishing</p>
<p>Minimal lobstering as of 8/13/19 there were an average of 3 traps in the 48 acre parcel and most of those were at the edges of the proposed lease. There has been no dragging on the proposed lease site observed in the formal observation period of the summer of 2019 and none observed informally in the last decade. There is occasionally some scallop and cucumber dragging outside the lease towards googins ledge.</p>
<p>2. Recreational Fishing</p>
<p>None observed.</p>
<p>3. Boating Activities (please also include the distance to any navigable channel(s) from your proposed site at low water).</p>
<p>The recreational boat traffic is very seasonal and is low compared with areas more known for recreation. Any vessels observed have been small motor boats and an occasional sailboat. The whale watch vessel based in Bar Harbor occasionally passes when moving to their storm mooring in the narrows but there is still room for passage along side the proposed lease for all vessel traffic. There is 1750ft of deep water from the lease boundary to the Googins point navigational marker.</p>
<p>4. Riparian Ingress/Egress</p>
<p>There should be no impact on riparian ingress/egress as the lease site is not near shore.</p>
<p>5. Other uses (kayaking, swimming, etc.):</p>
<p>No swimming observed, there are occasional kayakers in this section of the bay but they tend to stay closer to the shore and well out of the lease area.</p>

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 proposed lease.

None, there is only one small section of leland point that is within 1000ft of distance from the lease, and there is no dock or anchorage there. The rest of the lease is significantly further than 1000ft from the nearest land. There is a singular mooring ball just over 2500ft to the NW.

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.

No.

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 request there to be no bottom dragging allowed within the lease boundaries by anyone other than us. This is to remove the risk of drags entangling with anchor hardware. There is currently no reason to drag there.

We would request no diving for scallops within the lease boundaries by anyone other than us. Because we are hoping to farm scallops and it would be impossible to know if the animals came from our farm or the bottom. Currently there is no sign of scallops on the bottom.

We would request that lobstermen have direct communication of the lease holder if they want to have traps within the boundary of the proposed lease. Initial spacing of the pipes will be 40m (131ft), (so it would be possible to make arrangements to have traps between the pipes), and fully utilized spacing could go as low as 10m (33ft), so even in that situation there should be enough space for traps, for an experienced fisherman. We would need traps moved anytime we have to move any of the pipes or mooring system.

We would request vessels not affiliated with the farm not to be moored within the lease boundaries to mitigate the risk of both chemical and biological pollution.

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), 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
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.
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.

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

They will not affect riparian ingress and egress.

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: Bar Harbor

MAP #	LOT #	Landowner name(s) and address(es)
207	46	Frances W. Seymour revocable trust 73 Ledyard Road, West Hartford CT 06117

Please use additional sheets if necessary and attach hereto.

CERTIFICATION

I, Sharon M Linscott, Town Clerk for the Town of Bar Harbor 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: Sharon M Linscott DATE: 08/19/2019

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.

We have been operating since 2008 157 acres of bottom culture mussel farm, have a trained engineer on staff, and are working with a company that has many of these farms installed throughout the world. The company owner has 33 years experience in shellfish farming, and access to prior experience with mussel pipe systems in the Netherlands, Germany, Norway and Denmark.

16. Financial CAPABILITY

A. Financial Capability

Please provide documentation to demonstrate you have the financial resources to implement the proposal. For example, you may submit a letter from a financial institution or funding agency indicating that you have an account in good standing, or their willingness to commit funds.

Note: 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 from Machias Savings Bank

B. Cost Estimates

Please provide cost estimates of the proposed aquaculture activities.

We estimate around 1 million USD to begin the operation. More funds may be required as the lease becomes fully utilized over a number of years.


17. ESCROW ACCOUNT OR PERFORMANCE BOND

Check the category that describes your operation:

Check Here	Lease Category	Amount of Required Escrow or Performance Bond
	No gear/structure, no discharge	None
	No gear/structure, discharge	\$500.00
	≤ 400 square feet of gear/structure, no discharge	\$1,500.00
X	>400 square feet of gear/structure, no discharge	\$5,000.00*
	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, *Alex de Koning* 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.

 Operations Manager
Applicant Signature

2/7/2020
Date

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

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: Alex de Koning

Title (if corporate applicant): Operations Manager

Signature:  _____ Date: 2/7/2020

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? Yes No

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

Brief Project Description

The primary reason we are applying for this lease is to provide consistent, high quality mussel seed for our existing farms. Historically the intertidal area has provided sufficient seed for our farms to remain well stocked. Over the last few years wild sets have been more sporadic, lower in volume, and varying considerably in the timing of the set. This change may be tied to the warming of the gulf of Maine; if that is in fact the case, then it is predicted that this problem may only get worse moving forward.

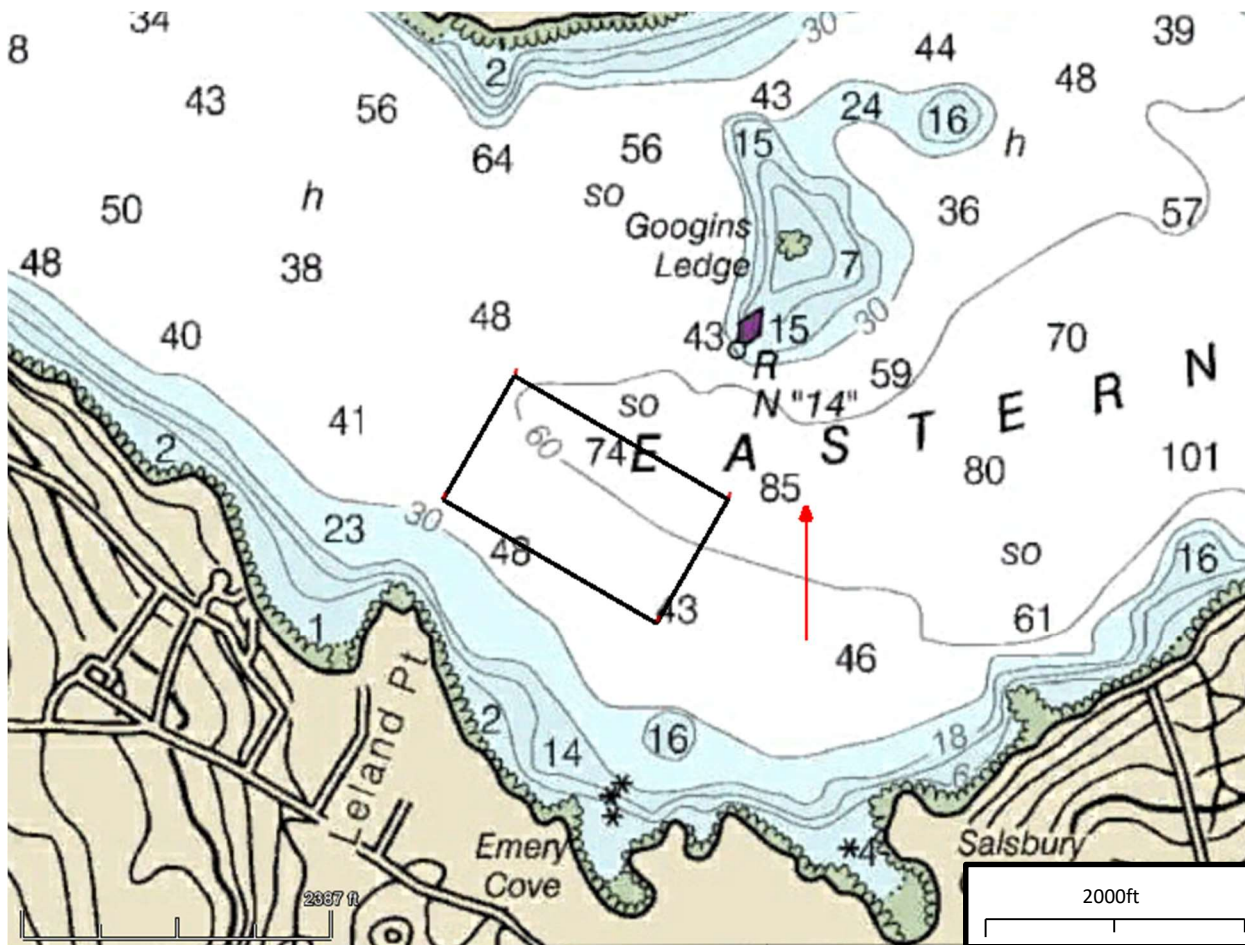
In our research over the last five years or so, we have identified multiple ways to collect mussel seed, and decided on one of the systems that use a net as the collector material, hanging under a floating pipe.

In addition to mussel seed collection this lease provides us the opportunity to diversify our operation from a single species to a wider range of organisms. Though other than for mussels we are still in the experimental stages, there is tremendous potential for shellfish aquaculture, including sea scallops, quahogs, and softshell clams.

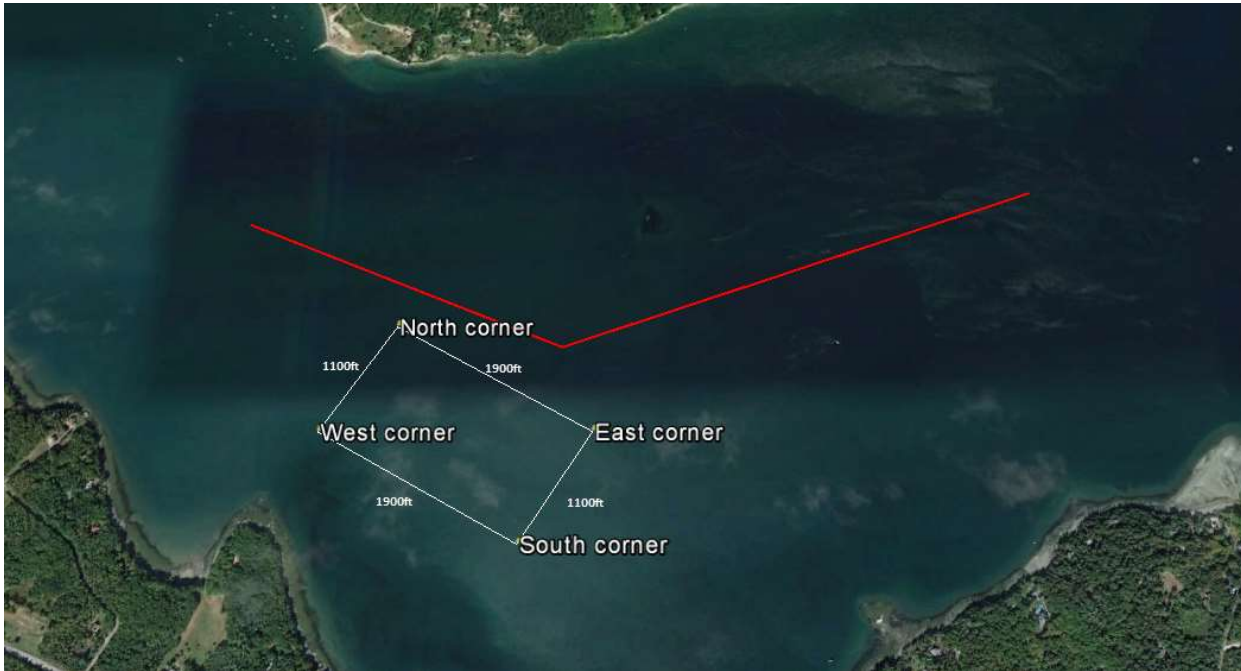
The mussel farming pipe system will likely be the first thing you see on the lease since the need for seed is the most immediate and pressing issue we are facing.

Given that the growing requirements for scallops and clams are not yet well known, we are asking for flexibility to vary our growing techniques between mussels and other shellfish on this lease site. If, for example scallops show potential, and we are able to farm the mussels we need on a smaller surface, we would like the opportunity to add scallop/clam lines in between, or below the mussel pipe systems.

To comply with the lease application regulations we must portray the impact of this lease showing the lease *fully utilized* for mussel farming using the pipe system, and drawings showing the lease *fully utilized* for scallop and/or clam farming, using longlines. Obviously we cannot fully utilize the lease in both growing techniques at the same time. In practice there will be some combination of the two techniques depending on environmental/climate changes, the farming success of new species and market dynamics.



Vicinity map, red arrow is true north



Boundary drawing using WGS 84 coordinates

Note: the red line denotes the town line between Bar Harbor and Lamoine

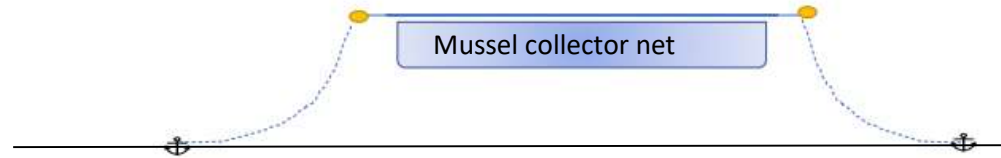
Directions:

- W to N 30 degrees 1100ft
- S to E 30 degrees 1100ft
- N to E 120 degrees 1900ft
- W to S 120 degrees 1900ft

Coordinates decimal minutes				
West corner	44	26.40774	68	17.88006
South corner	44	26.25138	68	17.50074
East corner	44	26.40816	68	17.37396
North corner	44	26.56452	68	17.75328

Specification of SmartUnits

- Pipe 142 meters
- Ø 315 mm
- Headrope 150 meters
- Collector net 135 meter
- Mesh Size 175x175 mm
- Collectornet depth 4 meters
- Water depth 20 meters
- Anchor chains 80 meters







Gear Drawing and Cross-Section view -mussel pipe system

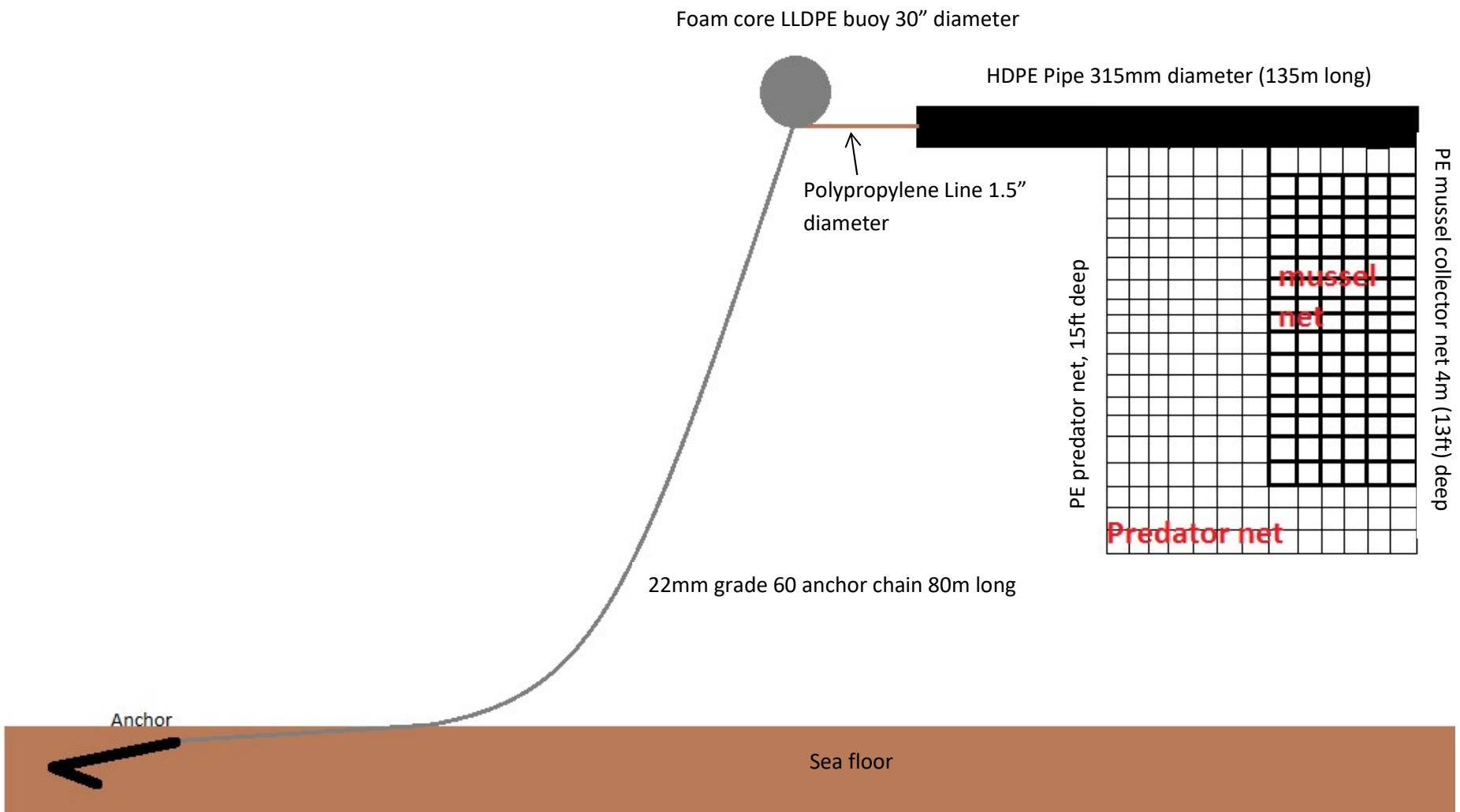
Note the predator net is not shown to prevent confusion. It will be 445 ft long by 15 ft deep.

The anchors, chains, and flotation buoys will be sized appropriately according to the equipment manufacturers experience in anchoring these systems in areas that encounter drift ice.

Key:

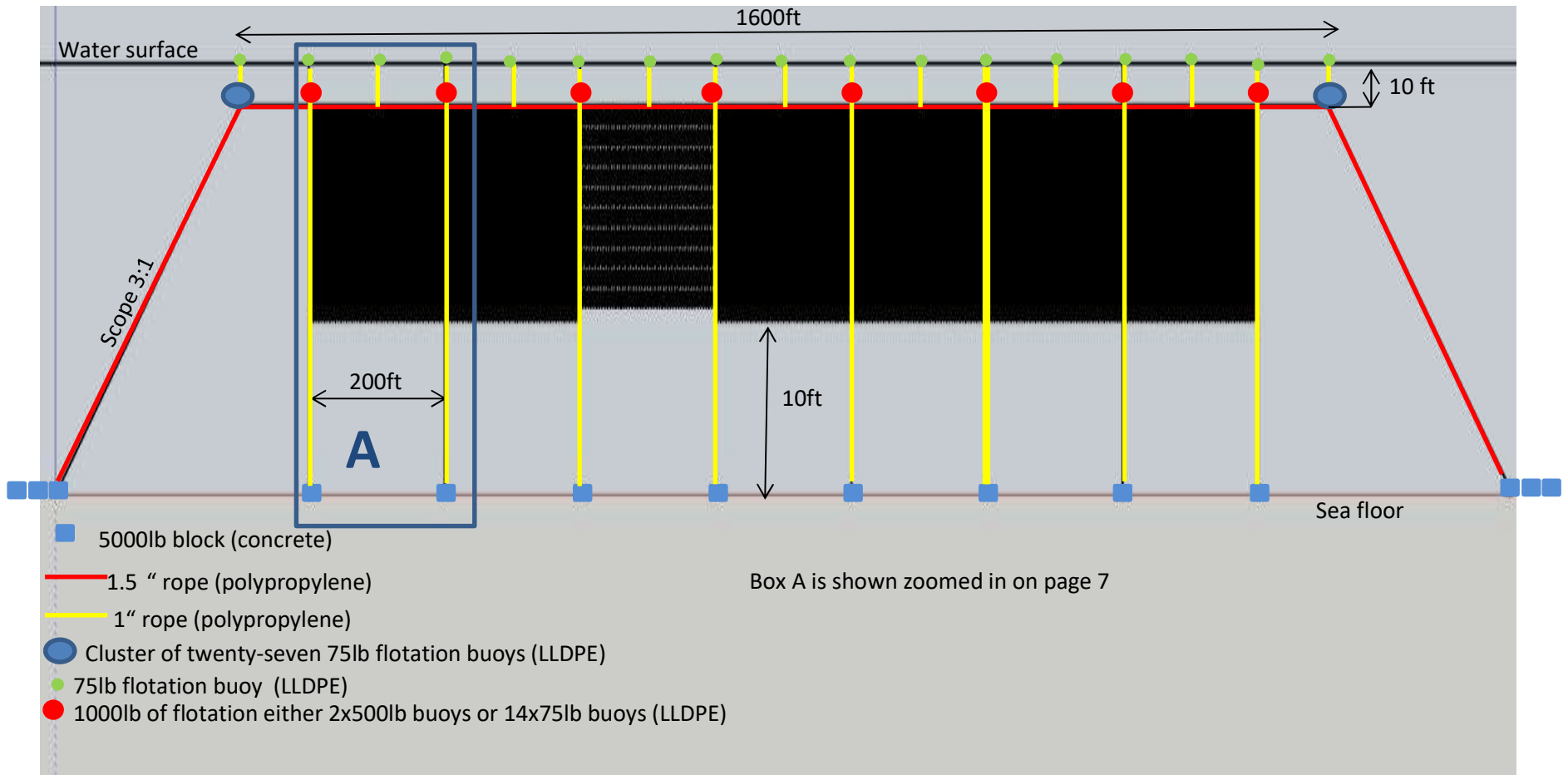
-  Anchor
-  Tensioning float to prevent the chain sinking the pipe
-  Anchor chain
-  Pipe with collector net beneath it

Anchor specs: 1100lb plow anchor, Width 2197mm Length 2040mm Fluke length 1233mm Height 1035mm. Anchored with 80m of 22mm grade 60 chain.



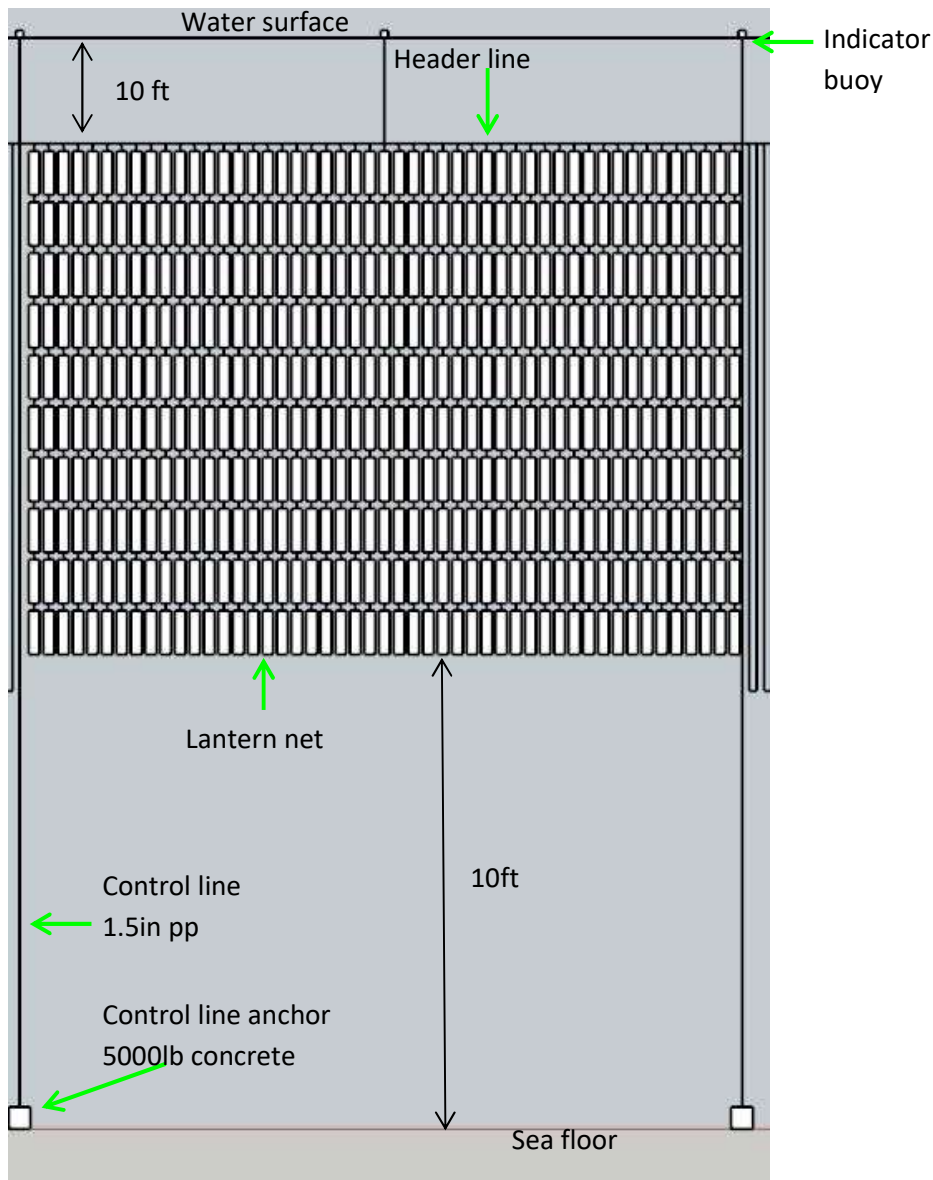
Gear Drawing and Cross-Section view -mussel pipe system detail

Anchor specs: 1100lb plow anchor, Width 2197mm Length 2040mm Fluke length 1233mm Height 1035mm. Anchored with 80m of 22mm grade 60 chain.

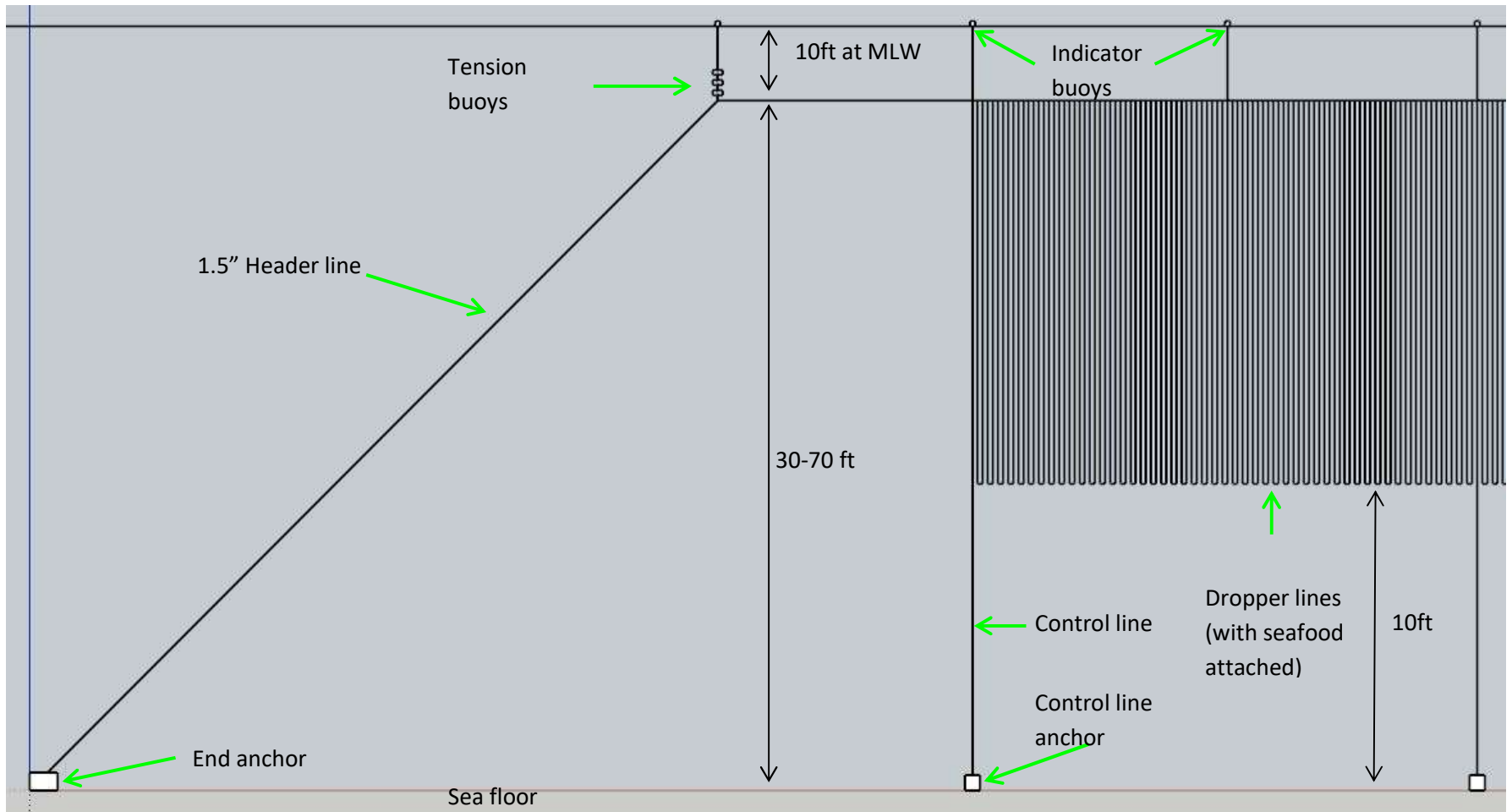


Gear drawing and Cross-section view, Longline

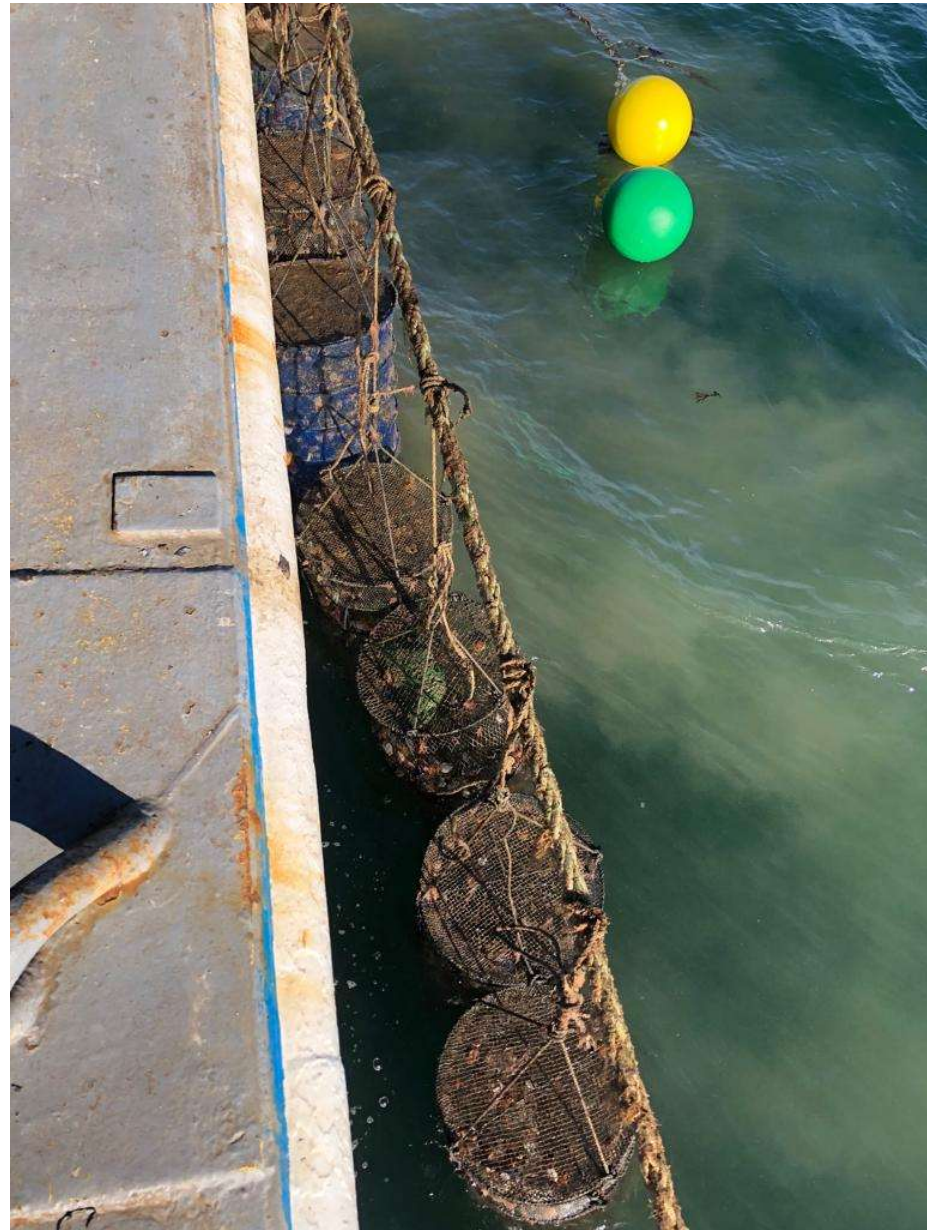
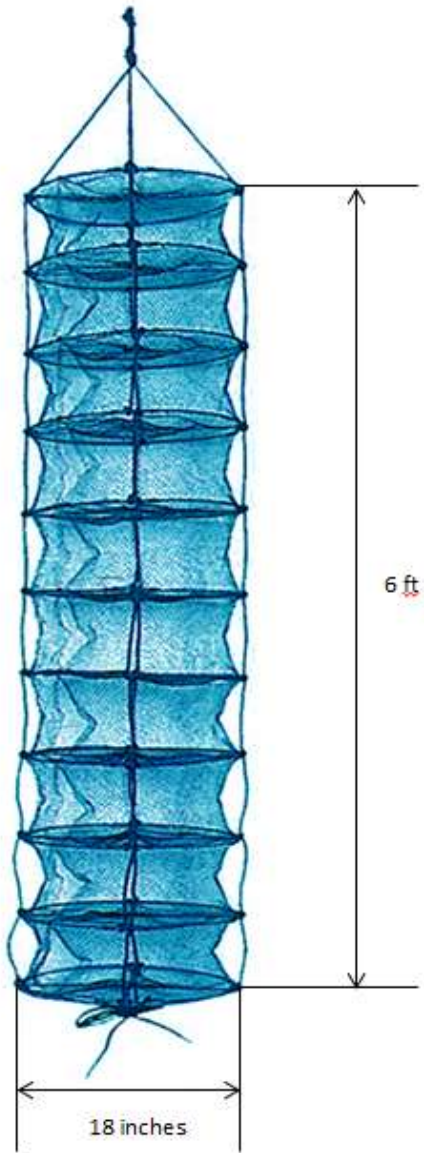
Front view of a whole scallop, or clam longline



Gear drawing, Longline detail (Box A from page 6) Front view detail of the lantern nets, note experimentation will have to determine how deep we can go with them. The above image shows 10 nets deep, (two or three may be all that is practical)



Gear drawing, Longline detail



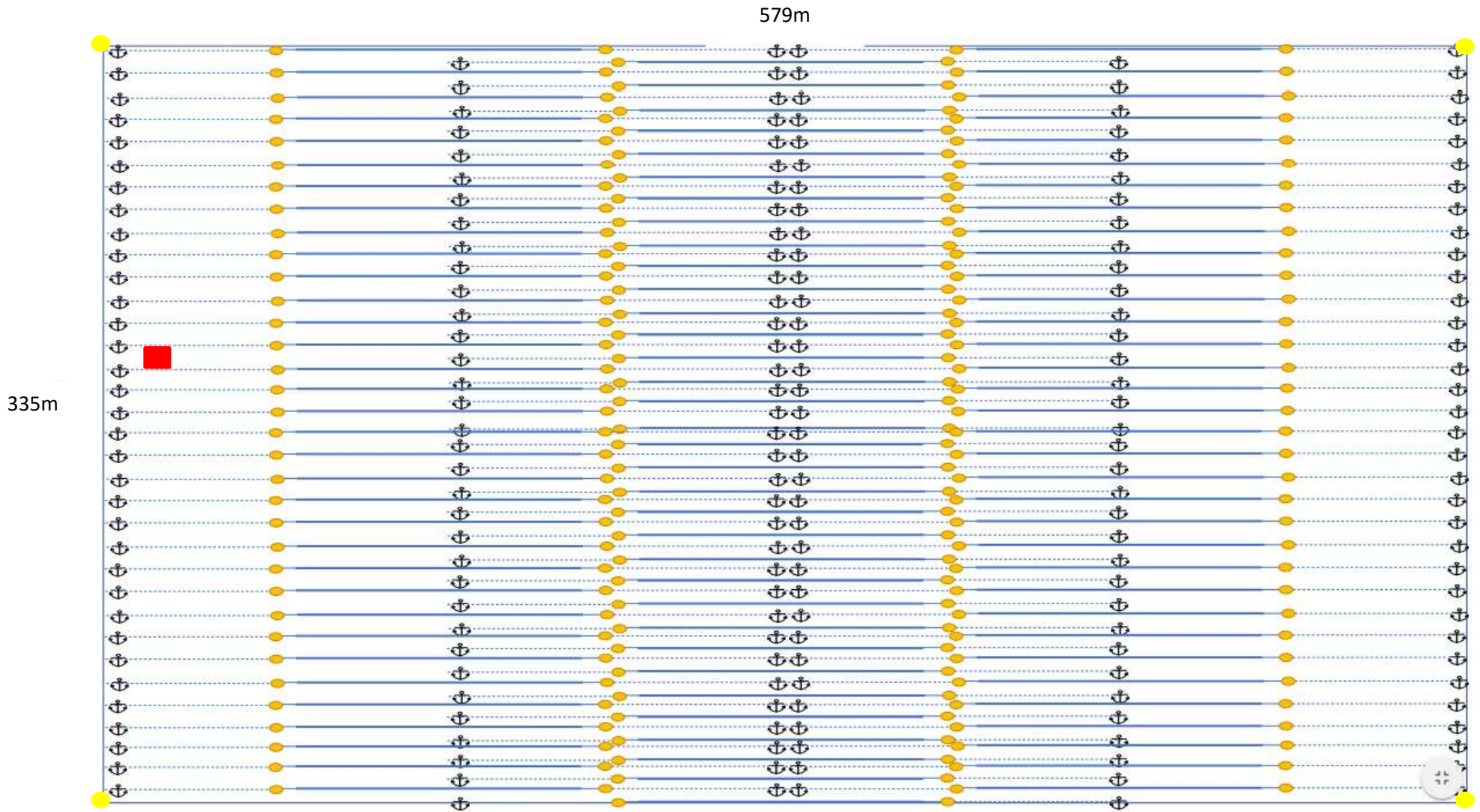
Gear Drawing- lantern net, and an image of the lantern nets hanging under the LPA scallop longline we currently have.



Gear Drawing-Ear hanging line detail Rope diameter 3/8", the rope length will be determined by the depth. From the longline to 10ft from the bottom. 60ft max.










Gear drawing zoomed out view



Overhead view of mussel pipe system

Anchor specs: 1100lb plow anchor, Width 2197mm Length 2040mm Fluke length 1233mm Height 1035mm. Anchored with 80m of 22mm grade 60 chain.

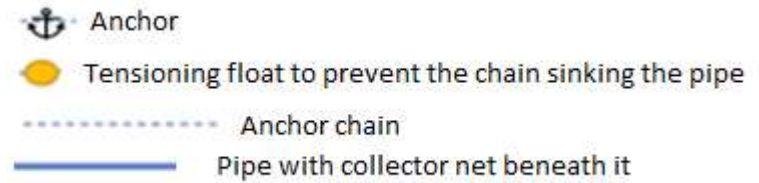
-  Anchor
-  Corner marker
-  Tensioning float to prevent the chain sinking the pipe
-  Anchor chain
-  Pipe with collector net beneath it
-  20x20 raft to store the harvest machine when not in use.
-  Anchored using a 5000lb block



Specification of SmartUnits

- Pipe 142 meters
- Ø 315 mm
- Headrope 150 meters
- Collector net 135 meter
- Mesh Size 175x175 mm
- Collectornet depth 4 meters
- Water depth 20 meters
- Anchor chains 80 meters

- Concession 633X350 meters on seafloor



Anchor specs: 1100lb plow anchor, Width 2197mm Length 2040mm Fluke length 1233mm Height 1035mm. Anchored with 80m of 22mm grade 60 chain.

Overhead view of the mussel pipe system detail

Unit conversions

142m=466ft

315mm=12.4inch

150m=492ft

135m=443ft

175mm=6.9inch

4m=13.1ft

20m=65.6ft

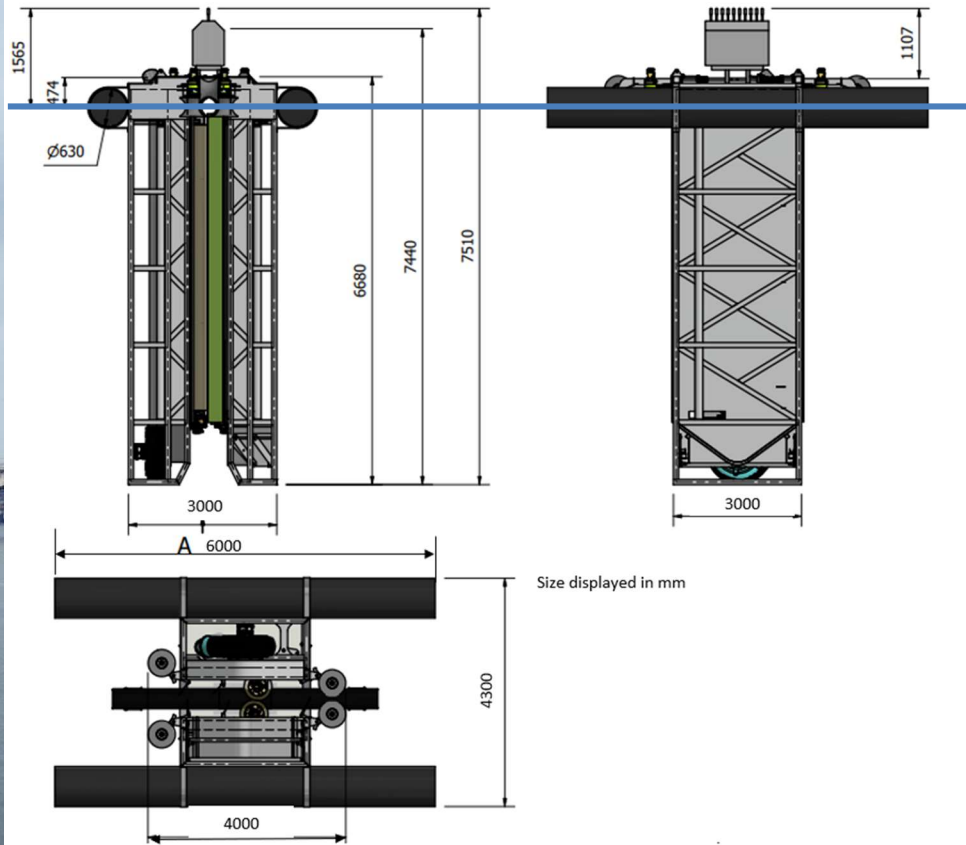
80m=262.4ft



Overhead View Longline setup, maximum structure, used for growing scallops, clams (hard and softshell).

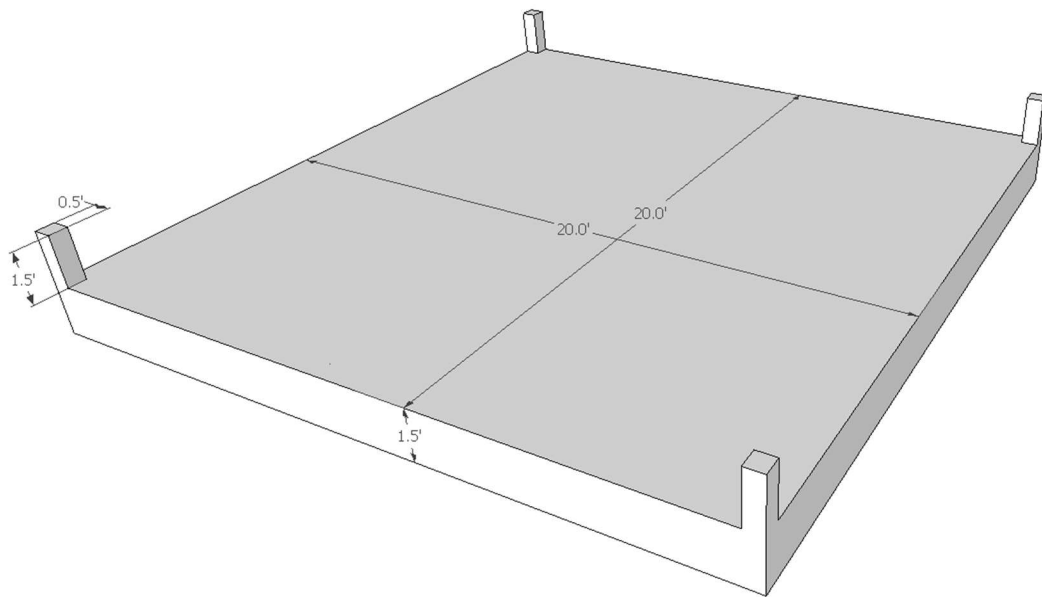
The rectangle represents the lease boundaries. The dots are to scale an 18" buoy.

Each longline in this diagram is spaced 25ft from its neighbor.



Harvest machine for mussel pipe system

While harvesting the machine will be submerged up to the blue line.



Schematic of the raft used to store the harvest machine lying on it's side. The raft will be anchored using a minimum of 1" line, attached to 5/8" chain and anchored on a 5000lb concrete block positioned on the lease as shown on Appendix pg 10. With the harvest machine on the raft, the highest point will be 12feet from the water.



Image of a deployed farm using the mussel pipe system.

*Note this farm has a spacing of 6-7m(*20-25ft) while our proposal allows for a minimum spacing of 10m (33ft) , however we will be starting with a spacing of 40m(131ft).*



Image of one of the pipes pulled up so the seed on the netting material is visible.



An image from a plane of a deployed mussel pipe farm in Malasia



A deployed farm.



A deployed farm(in Denmark) as seen from the coast (200m(656ft) from shore. Proposed lease is 250m (820ft) from shore and shows 10m (33ft) spacing, (though we are planning to start with 40m (131ft) spacing.)



Our harvest vessel the Stewardship



Equipment layout For the scallop longline the only thing visible will be alternating red and blue buoys at 100ft spacing. This image is from our existing LPA longline in the center of Frenchman Bay.

DOMESTIC
LIMITED LIABILITY COMPANY

STATE OF MAINE

ARTICLES OF ORGANIZATION

FORM NO. MLLC-6

File No. 20090936DC Pages 3
Fee Paid \$ 175
DCN 2082881600012 LTLC
FILED
10/09/2008


Deputy Secretary of State

A True Copy When Attested By Signature


Deputy Secretary of State

Pursuant to 31 MRSA §622, the undersigned executes and delivers the following Articles of Organization:

FIRST: The name of the limited liability company is

Acadia Aqua Farms, LLC

(The name must contain one of the following "Limited Liability Company", "L.L.C." or "LLC" - see 31 MRSA §603-A 1)

SECOND: (Check only if applicable)

This is a professional limited liability company* formed pursuant to 13 MRSA Chapter 22-A to provide the following professional services:

(Type of professional services)

THIRD: The Registered Agent is a* (select either a Commercial or Noncommercial Registered Agent)

Commercial Registered Agent

CRA Public Number P10025

David J Champoux

(name of commercial registered agent)

Noncommercial Registered Agent

(name of noncommercial registered agent)

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

(mailing address if different from above)

FOURTH: Pursuant to 5 MRSA §1083, the registered agent as listed above has consented to serve as the registered agent for this limited liability company.

Form No MLLC-6 (1 of 3)

For Organizer(s) which are Entities**

Name of Entity _____

By _____
(Authorized signature) (Type or print name and capacity)

Name of Entity _____

By _____
(Authorized signature) (Type or print name and capacity)

Name of Entity _____

By _____
(Authorized signature) (Type or print name and capacity)

*Examples of professional service limited liability companies are accountants, attorneys, chiropractors, dentists, registered nurses and veterans
(This is not an inclusive list – see 13 MRSA §723.7)

- **Articles **MUST** be signed by
- (1) all organizers **OR**
 - (2) any duly authorized person

The execution of this certificate constitutes an oath or affirmation under the penalties of false swearing under 17-A MRSA §453

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

Submit completed form to
Secretary of State
Division of Corporations, UCC and Commissions
101 State House Station
Augusta, ME 04333-0101
Telephone Inquiries: (207) 624-7752 Email Inquiries: CPC_Corporations@Maine.gov

Form No MLLC-6 (3 of 3) Rev 7/1/2008

FIFTH: (Check one box only)

- A. The management of the company is vested in a member or members.
- B. 1. The management of the company is vested in a manager or managers
The minimum number shall be _____ managers and the maximum number shall be _____ managers
2. If the initial managers have been selected, the name and business, residence or mailing address of each manager is:

<u>Name</u>	<u>Address</u>
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

Names and addresses of additional managers are attached as Exhibit _____, and made a part hereof

SIXTH: Other provisions of these Articles, if any, that the members determine to include are set forth in the attached Exhibit _____ and made a part hereof

Organizer(s) **

Dated October 7, 2008



(Signature)

David J. Champoux

(Type or print name)

(Signature)

(Type or print name)

(Signature)

(Type or print name)



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: *Acadia Aquafarms LLC*
- 2. Date of incorporation: *10/7/2008* State of incorporation: *Maine*

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

Name	Address	Title
Mattheus de Koning	10 Bunchberry Rd, Bar Harbor, ME, 04609	President

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

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

Name	Address
Mattheus de Koning	10 bunchberry Rd, Bar Harbor, ME, 04609

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.

Lease	Applicant	Status
East OP2	Acadia Aquafarms LLC	Approved
East HP	Acadia Aquafarms LLC	Approved
Fren BI	Acadia Aquafarms LLC	Approved
Flan WN	Acadia Aquafarms LLC	Approved
PEN SN3	Acadia Aquafarms LLC	Approved

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
Mattheus de Koning	10 Bunchberry Rd, Bar Harbor, ME, 04609	100%

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. If none, write, "None."

Name	Address	Lease Acronym	Acreage
Mattheus de Koning	10 Bunchberry Rd, Bar Harbor	EAST OP2	31.59
Mattheus de Koning	10 Bunchberry Rd, Bar Harbor	EAST HP	40.36
Mattheus de Koning	10 Bunchberry Rd, Bar Harbor	FREN BI	32.24
Mattheus de Koning	10 Bunchberry Rd, Bar Harbor	FLAN WN	14.35
Mattheus de Koning	10 Bunchberry Rd, Bar Harbor	PEN SN3	39.91
Mattheus de Koning	10 Bunchberry Rd, Bar Harbor	TDEK119 (LPA)	0.0092
Mattheus de Koning	10 Bunchberry Rd, Bar Harbor	TDEK219 (LPA)	0.0092
Mattheus de Koning	10 Bunchberry Rd, Bar Harbor	TDEK319 (LPA)	0.0092
Total			158.48

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.



Experienced people. Exceptional service.

August 19, 2019

State of Maine
Department of Marine Resources
Patrick Keliher, Commissioner
State House
Augusta, Maine 04333

Re: Lease Application - Acadia Aqua Farms, LLC

Dear Commissioner Keliher,

Please be advised that Acadia Aqua Farms, LLC of Trenton, Maine, has been an excellent customer of Machias Savings Bank for many years. All accounts have been handled completely as agreed and in a totally satisfactory manner.

The owners, Mattheus and Fiona DeKoning, are very well known and very highly regarded by the Bank. They have consistently exhibited the financial, operational and managerial expertise to make Acadia Aqua Farms a very successful, family-run business venture. Their commitment to the highest standards of quality and sustainable harvesting practices have also made them a leader in the Maine aquaculture industry.

Please let me know if there are any questions or if we can provide any further service.

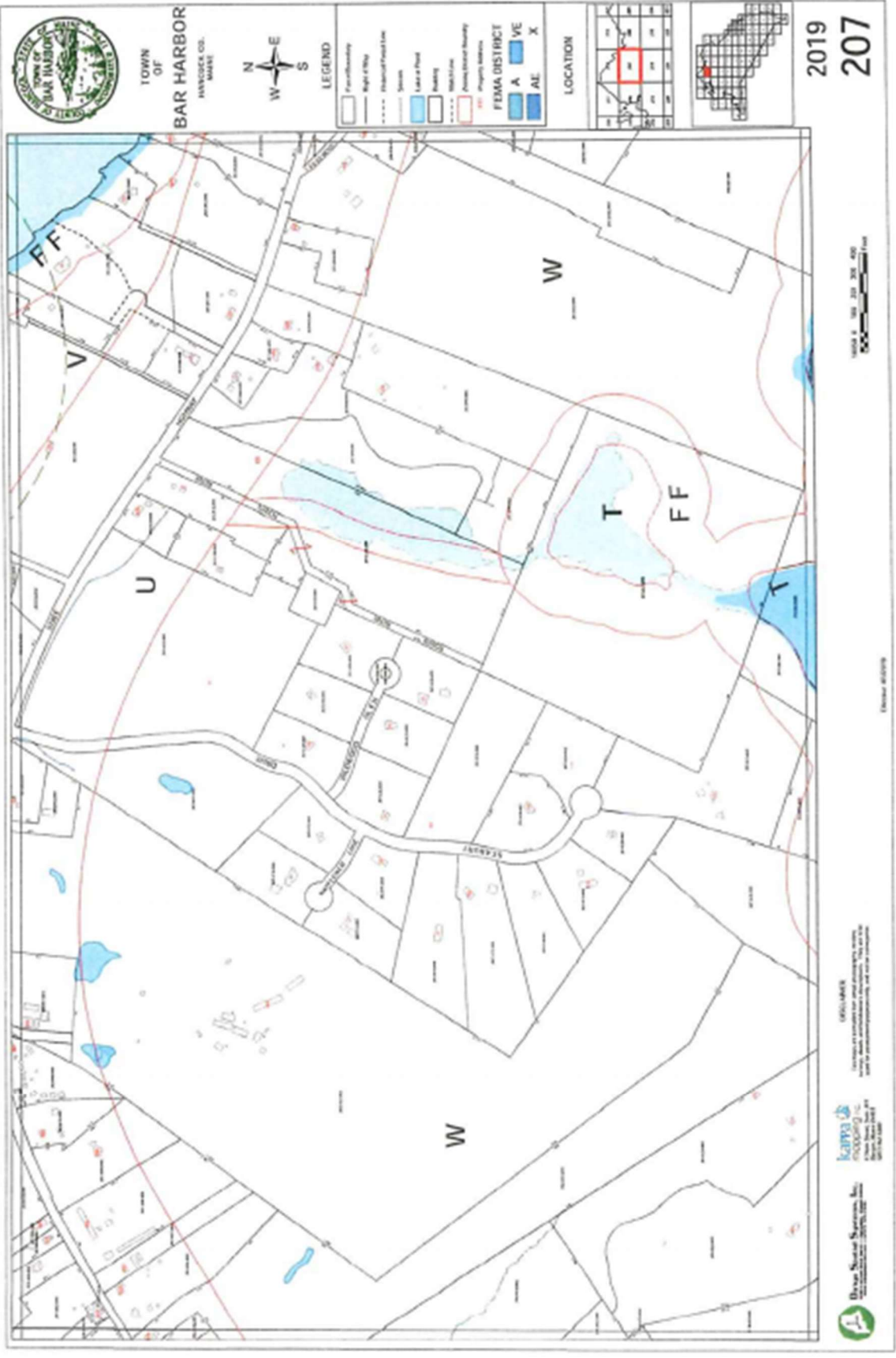
Sincerely,

A handwritten signature in blue ink, appearing to read 'Jeffrey C. Dalrymple', is written over a light blue horizontal line.

Jeffrey C. Dalrymple
Vice President

4 Center Street, PO Box 318 | Machias, ME 04854-0318
(T) 800-339-3347 | (F) 207-255-9347 | (W) machiassavings.com
Member FDIC | Equal Housing Lender

Tax Map





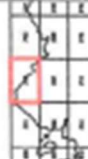
TOWN OF
BAR HARBOR
MAINE



LEGEND

- Parcel Boundary
 - Highway Right-of-Way
 - Water
 - Shoreline
 - Lot #
 - Building
 - Subdivision
 - Strong Flooding Boundary
 - Property Address
- FEMA DISTRICT
 A AE VE X
 A AE VE X

LOCATION



2019
202

Key: Proposed lease

EASTERN BAY

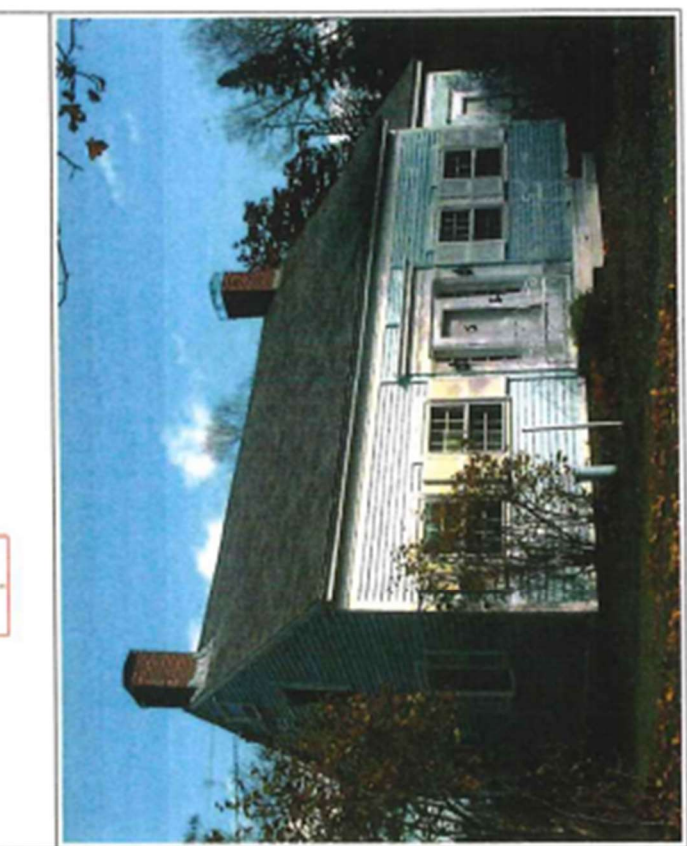
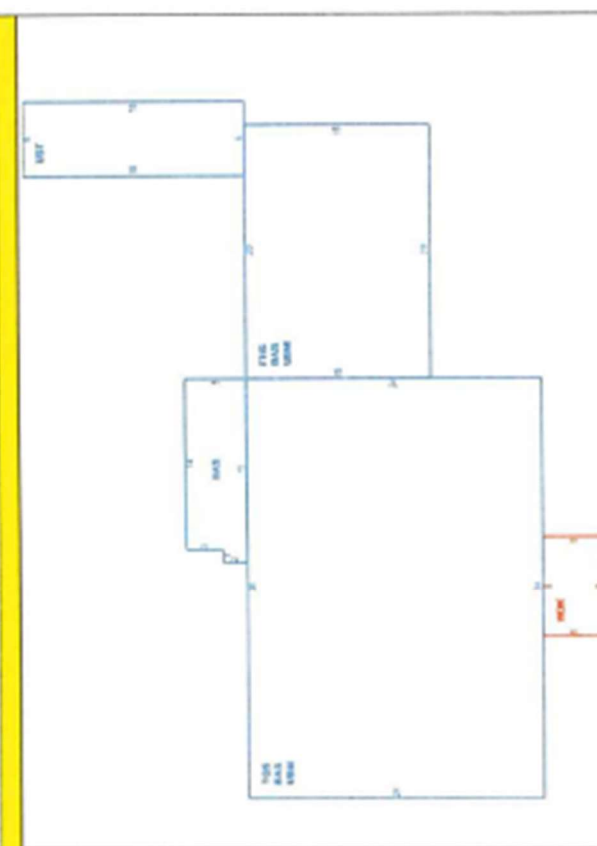
FF

U

SCALE 1" = 100' 0" 200' 300' 400' 500'

DISCLAIMER
This map is provided for informational purposes only and does not constitute an offer of insurance or any other financial product. For more information, please contact your insurance agent.





Element	Description	Cd	Element	Description
04	Cape Cod			
01	Residential			
03	C			
1.75	1 3/4 Stories			
11	Ceilingboard			
06	Board & Battin			
03	Gable/Hip			
03	Asph/F Gls/Cmp			
05	Drywall/Sheet			
12	Hardwood			
14	Carpet			
02	Oil			
04	Forced Air-Duc			
01	None			
03	3 Bedrooms			
1	1 Full			
6	6 Rooms			
02	Average			
02	Typical			

Parcel Id	C	Description	Owner

Adjust Type	Code	Description	Factor%

Condo Unit	Building Value New
	213,375
Year Built	1920
Effective Year Built	
Depreciation Code	G
Remodel Rating	
Year Remodeled	34
Depreciation %	0
Functional Obso	0
Economic Obso	1
Trend Factor	
Condition %	66
Percent Good	140,800
RCNLD	
Dep Ovr Comment	
Misc Imp Ovr Comment	
Cost to Cure Ovr	
Cost to Cure Ovr Comment	

OB - OUTBUILDING & YARD ITEMS(L) / XF - BUILDING EXTRA FEATURES(B)										
Code	Description	L/B	Units	Unit Price	Yr Bt	Cond	Cd	% Gd	Grade Adj.	Appr. Value
FPL	FIREPLACE	B	2	4000.00	1972	00	68	0.00	0.00	5,300
PAT1	PATIO AVERA	L	520	3.50	2006	A	50	0.00	0.00	900
PAT1	PATIO AVERA	L	288	3.50	2006	A	50	0.00	0.00	500
BUILDING SUB-AREA SUMMARY SECTION										
Code	Description	Living Area	Floor Area	EIF Area	Unit Cost	Undeprec Value				
BAS	First Floor	1,188	1,188		94.33	112,064				
FHS	Half Story, Finished	150	300		47.17	14,150				
TQS	Three Quarter Story	612	816		70.75	57,730				
UBM	Basement, Unfinished	0	1,116		18.85	21,036				
UST	Utility, Storage, Unfinished	108	108		27.95	3,019				
WDK	Deck, Wood	0	40		9.43	377				
Ttl Gross Liv / Lease Area				2,058	3,568	208,376				

TAX MAP TITLE
Town of Bar Harbor



GEOGRAPHIC INFORMATION SYSTEM
VISION APPRAISAL TECHNOLOGY

