Public Notice – Administrative Application Posted

These documents have been submitted with respect to an administrative aquaculture licence / lease application. The information in these documents is provided as part of the routine disclosure of information by the Department of Fisheries and Aquaculture (the "Department"). Some information may be redacted as business confidential information or personal information.

These documents were provided to the Department by the applicant (with the exception of the attached Schedule "A" which was generated by the Department). The Department is not responsible for the content of these documents, including, but not limited to, the accuracy, reliability, or currency of the information contained within.

Applicant: DEON OYSTER COMPANY LTD.	**Type of Application:** Amendment
Application File Number: AQ#1400	**Current Species:** American oyster
Location: Salt Bay, Yarmouth County	**Current Method of Cultivation:** Suspended
Application Received On: December 5, 2023	
Amendment Type: Authorize bottom with gear cultivation of American oyster	

To learn more about the aquaculture lease and license application process, please visit https://novascotia.ca/fish/aquaculture/licensing-leasing/Aqua-Licensing-and-Leasing-Overview.pdf

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Aquaculture Amendment Application

Licence/Lease No: 1400

Applicant Information:

Applicant: DEon Oyster Company Ltd. Contact Person: Colton DEon

Nova Scotia Registry of Joint Stocks Number: 3231664

Revenue Canada Business Number: [redacted]

Telephone No. (Work): 902-648-3472 (Home): / (Cell [redacted]

Fax No.: / E-mail: Colton@deonoysterscompany.com

Mailing Address: 6590 Hwy 3. Lr. Eel Brook,

Yarmouth Co, N.S Postal Code: B0W 2X6

Civic Address: * Same as above *

Postal Code:

Amendment Request:

The amendment is requested for: (Check all appropriate boxes)

- ☐ Land-based
- ☐ Marine
- ☐ Marine Plants
- ☐ Finfish
- ☑ Shellfish
- ☐ Other species
- ☐ Change or addition of species
- ☑ Change of culture method
- ☐ Change of site boundaries (for marine applications)
- ☐ Other change

Submit completed applications to:

Nova Scotia Department of Fisheries and Aquaculture, Aquaculture Division
1575 Lake Road, Shelburne, NS B0T 1W0
E-mail: aquaculture@novascotia.ca

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Provide explanation of change requested. Add additional pages, as required.

Application Materials

A complete application includes the following:

- Amendment application fee (payable to Minister of Finance) according to Section 77 of the Aquaculture Licence and Lease Regulations for Nova Scotia made under Section 64, Chapter 25 of the Acts of 1996, *the Fisheries and Coastal Resources Act*
- Application Form
- Development Plan according to application
- Report on Public Engagement during Scoping (for adjudicative amendment applications and for other applications as applicable)
- Copy of up-to-date Shareholder's Register which sets out the shareholdings of the company (if applicable)

Public Notice and Disclosure

As part of the process for deciding on an aquaculture application, the Nova Scotia Department of Fisheries and Aquaculture ("Fisheries and Aquaculture") will disclose application information to other government bodies, including, if applicable, the Nova Scotia Aquaculture Review Board for use at an adjudicative hearing relating to the application.

In accordance with departmental policy, which seeks to promote public involvement in the process for deciding on aquaculture applications, Fisheries and Aquaculture may disclose application information – not including, however, personal or business confidential information – on the departmental website.

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Privacy Statement

The personal and business confidential information collected as part of an aquaculture application will only be used or disclosed by Fisheries and Aquaculture for the purpose of deciding on the application.

All application information collected is subject to the Freedom of Information and Protection of Privacy Act ("FOIPOP") and will only be used or disclosed in accordance with FOIPOP.

By signing and submitting this form, I acknowledge that I have read, understand, and accept the above statements regarding the collection, use, and disclosure of the information provided on this form.

Signature of Applicant [redacted]

Date: Dec 5/23

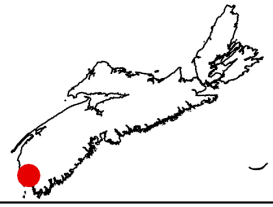
Signature of Nova Scotia Department of Fisheries and Aquaculture Designate [redacted]

Date: December 5, 2023

Submit completed applications to:

Nova Scotia Department of Fisheries and Aquaculture, Aquaculture Division
1575 Lake Road, Shelburne, NS B0T 1W0
E-mail: aquaculture@novascotia.ca

SCHEDULE A



Aquaculture Site
1400

Corner	Latitude	Longitude
1	43° 48' 56.325"	-65° 54' 46.019"
2	43° 48' 38.081"	-65° 54' 23.222"
3	43° 48' 32.900"	-65° 54' 28.882"
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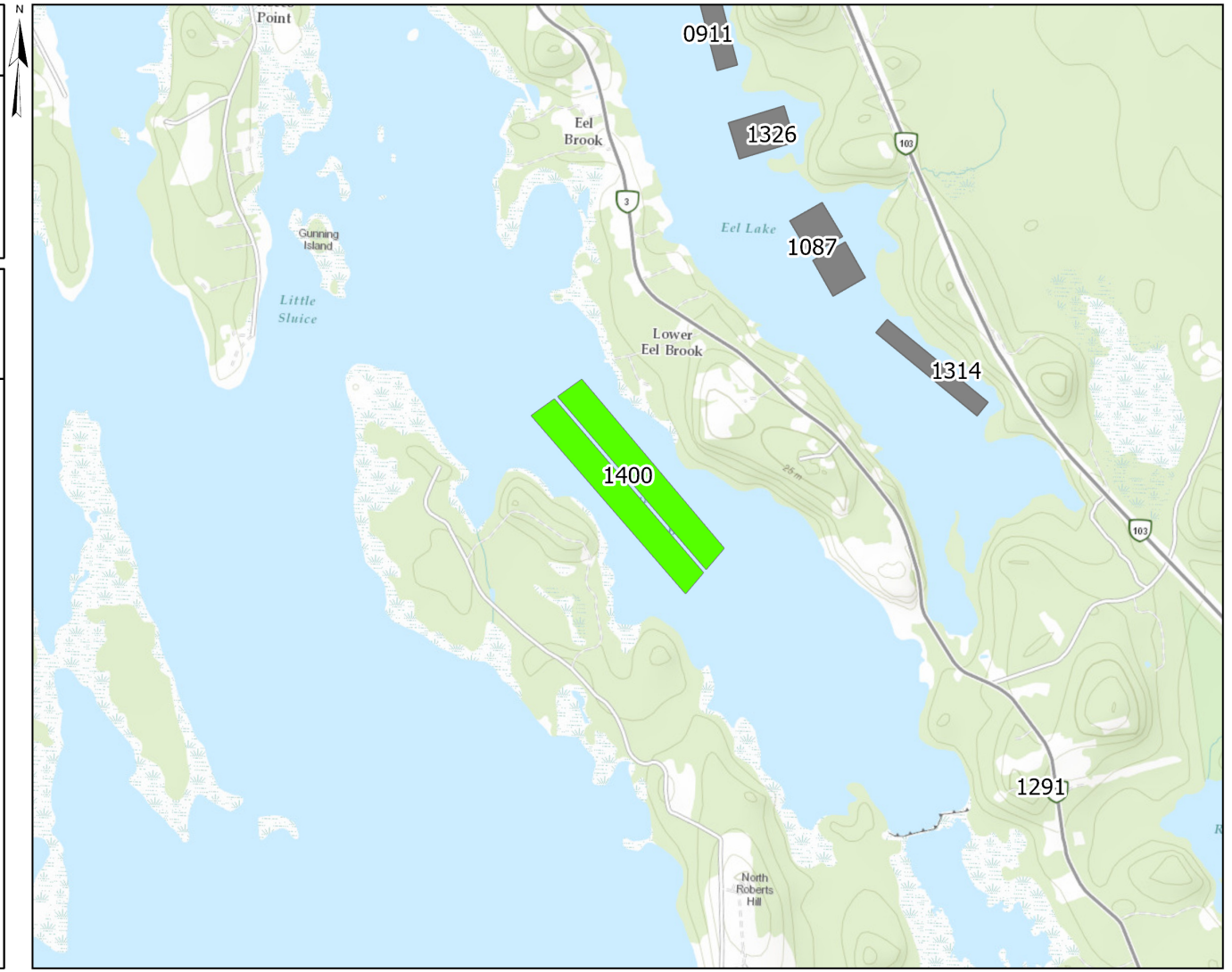
Centre	43° 48' 44.952"	-65° 54' 37.969"

DATUM NAD 83 CSRS UTM Zone 19
The above coordinates are not from a legal survey



License/Lease Holder	County	Waterbody	Hectares	Species Type	Culture Type	Chart
Deon Oyster Company Ltd.	Yarmouth	Salt Bay	15.03	Shellfish	Suspended Culture	4244

Proposed Commercial Application
Other Issued Commercial

0 0.25 0.5 1 km

NOVA SCOTIA
Fisheries and Aquaculture

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Date: 2024-04-25 Created By: MK

SCHEDULE A

Aquaculture Site
1400

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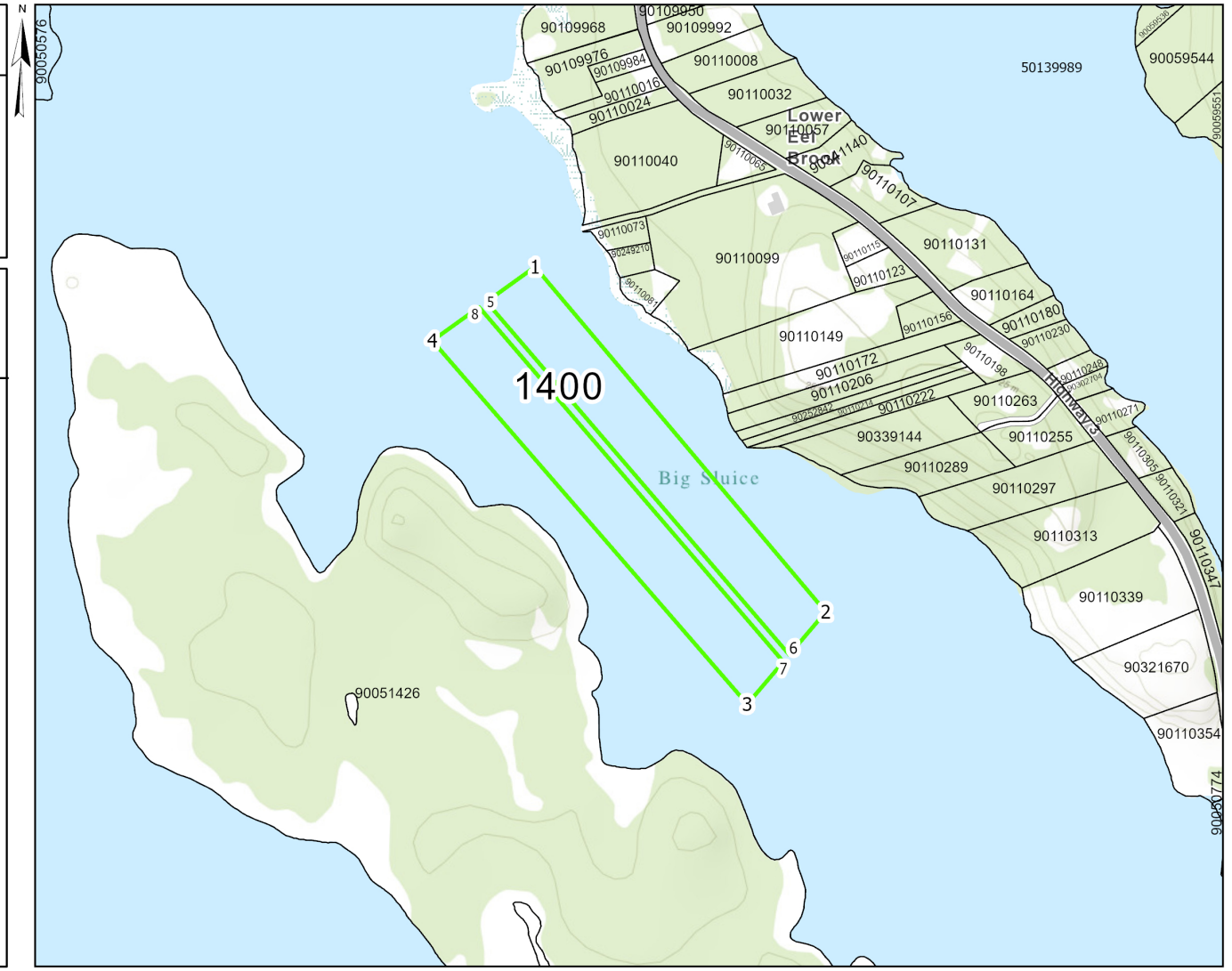

License/Lease Holder	County	Waterbody	Hectares	Species Type	Culture Type	Chart
Deon Oyster Company Ltd.	Yarmouth	Salt Bay	15.03	Shellfish	Suspended Culture	4244

Proposed Commercial Amendment
Property Boundary

0 100 200 400 600
Meters

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Date: 2024-04-25 Created By: MK

Lease # 1400 (Salt Bay)

Development Plan

Section 1: The optimum use of marine resources

DEon Oyster Company Ltd. (DOC) is coming up to its 10 years renewal (November 2024). This development plan is based both on the renewal and a proposed amendment to lease #1400 in Salt Bay.
Lease #1400 has been a staple area for DOC since its start. The location offers a sheltered environment protected from high winds and strong currents. Salt Bay also is difficult to enter via boat from the ocean as many ledges are only a couple feet under water. There is only two narrow channels that allow smaller boats to enter and exit.
Currently, lease #1400 is DOC's biggest lease. However, only roughly 7 hectares of a total 15 are being used with suspended cages. The remaining 8 hectares are situated in tidal areas that do not offer an optimal growing area for the specific suspended cages DOC uses.
The renewal of lease #1400 is crucial for DOC. Just shy of 3 million oysters are currently in cages on this lease.
With the proposed amendment, DOC will be able to utilize the tidal areas.

Atlantic Oysters are currently being cultivated from OysterGro cages. This cages sits just below the surface of the water column and allows oysters to benefit from this area. High feed counts, wave movement, and a group of other beneficial aspects help oysters grow with this method

With the proposed amendment, a new type of pod will be placed on the ocean floor (within the tidal area) and will hold oysters in the same bags that the suspended, OysterGro cages do. The pods can hold 18 bags (3 OysterGro cages worth) and with the rise and fall of the tide, no biofouling accumulates on the gear or product.

Should the renewal and amendment be approved, DOC will be able to start utilizing and optimizing the remaining parts of lease #1400 that haven't been used in the past. Thus, increasing productivity and not having to rely so heavy on neighboring provinces for a market size supply.

Section 2: The contribution of the proposed operation to community and provincial economic development

2.1 Production plan

Suspended Culture Method

DOC currently only cultivates Atlantic Oysters in suspended culture (6 bag OysterGro cages) in roughly 50% of lease #1400. The cages measurements can be found on attachment A. The reason the OysterGro only occupy that area is because the lease is located in a tidal area and the channel (area of water that always has a sufficient amount of depth) that runs through the lease accounts for roughly 50% of the space. Lease #1400 is located in southwest Nova Scotia where regular tides differ by 10-12ft (high to low tide). The remaining lease is situated in what we call the "tidal zone". Some parts are completely out of water at low tide, while others are only have 12-18" of water.

In the channel, 6 rows of lines run parallel with the lease. Each line is made up of 14 sections containing 17 OysterGro cages per section.

Currently DOC has 2,942,300 oysters in these 1,428 suspended cages.

In terms of availability for additional suspended cages, DOC has reached its maximum output. The cage carrying capacity per hectare for this location is much less, due to the severe rise and fall with the tides. Lease #1400 is 15 hectares with only about 7 hectares of usable space for suspended culture. The operational 7 hectares currently hold all of the 1,428 OysterGro cages. Each year, DOC replenishes the cages that the market product has been harvest from with spat that has been purchased from a hatcher and/or wild collection. Both ways are only done with an approved introduction and transfer permit from DFO.

Bottom Culture with Gear (<u>amended section</u>)

DOC has been for many years now, trying to figure out a way to utilize the remaining portion of lease #1400. With roughly an additional 8 hectares of unusable space for suspended culture, DOC has been looking for a system to operate that area of the lease. DOC has, with the help of Bouctouche Bay Industries (BBI), designed a product that will allow the use of the tidal zone to be sourced as a cost-effective growing area.

With a collaboration between DOC and BBI, a type of Oyster holding Pod was slightly modified to allow for it to not only hold market ready oysters for sale but to also allow the pod to sit on the ocean floor. In DOC's case, these pods could be located in our tidal zones and open up a significant portion of our lease that was previously marked off as inoperative.

Attachment B showcases the described pod. One of these pods holds the same amount of product as 3 oystergro cages. The ability behind this pod is that it self "cleans". Meaning that placing this pod on the tidal zone allows for the entire pod to be out of the water at low tide and completely submerged during high tide.

Biofouling is a huge problem for shellfish farmers throughout the province. Southwest Nova Scotia's location is the first area to see invasive species travel their way up from the east coast of the USA. One of DOC's main focuses in the spring, summer and fall months is air-drying. The suspended oystergro cages need to be flipped onto their pontoons on a biweekly schedule. This eliminates all forms of bio-fouling (natural, native organisms, to invasive species that aren't

from this area). Similar to “weeding” a garden on land, the oystergro cages need to be kept free of competing organisms to allow for a good growing season. Bio-fouling increases oyster mortality (by restricting oxygen, reduced nutrients, etc).
The action of flipping the suspended, oystergro cages is time consuming. It also takes 2-3 employees and the harvesting boat to do the work.
The pods will be placed in the tidal zone (at high tide) and be able to hold 3 oystergro cages worth of oysters. With each day, they will be temporarily exposed to air-drying but for a much shorter amount of time (3-4 hours vs the 48 hour oystergro flip). The action of having the pods out of the water every day, also controls bio-fouling.
Test have concluded that even with the oysters briefly being out of the water every day, it has no effect on growth or mortality.
These pods are also dual purpose. As final sale product cannot be directly harvested from suspended gear due to bacteriological concerns, oysters must be sunk to deeper depths (roughly 10-12’ below the surface) for a minimum of 14 days. With the suspended method, the oysters must be physically removed from the oystergro cage and transferred to another type of cage for “sinking”.
With the pods, the entire cage can simply be picked up at high tide, bags be kept in the same cage and sunk to the same depth as previously describe with the help of bigger floatation (buoys).

The same species of oysters will be grown in these pods (Atlantic Oysters). Also, since these pods are a new design and new to DOC, it is currently unclear on an exact number of pods that could be placed but conservative estimates show that, eventually, 4 lines of 250 pods could be placed on lease #1400 (within the tidal zone). That would the equivalent to an additional 3000 oystergro cages or 18,000 bags (over 2 times our current suspended cage capacity)
The pods measure 45”wide by 38” deep by 43” high. With each pod capable of holding 18 bags, we estimate that with the 1,000 potential pods that could be placed on the lease, they could hold approximately 4.5 to 5.4 million additional oysters.
The seed source will remain the same as the suspended culture. Either wild caught or from a registered hatchery with approved introduction and transfer permits from DFO.
DOC is currently planning on placing roughly 100 pods on lease#1400 in the spring of 2024. It is currently unclear how much time would be needed to reach maximum capacity as the pods could be placed closer than what is currently planned, extra lines could fit in the tidal zones, etc. However, DOC doesn’t expect that they’ll reach maximum production within the next 6-8 years.
When winter season comes, the pods will be moved from the tidal zone and harvested. The sub-market will be placed back into the pods and the pods will be placed in deeper water for the winter months. When springtime arrives, they’ll be placed back onto the tidal zone.

2.2 Infrastructure
DOC’s current infrastructure can easily handle the suspended cages. The tidal pods were designed so that the current infrastructure will also be capable of handling the work load.
The Salt Bay wharf was fixed back in 2015/2016 to allow DOC to use equipment to assist with harvesting. The wharf is still used every day by DOC.

2.3 Services and suppliers

With suspended culture, DOC has reached the maximum cage capacity (not to be confused with carrying capacity). While we won't see a big increase in services or supplier additions for OysterGro cages, we will potentially see a big demand for supplier equipment in the form of Tidal Pods. We are currently getting the pods built at BBI in Bouctouche Bay, N.B.
BBI has supplied DOC with all of the OysterGro cages on our farms since early 2000's.
With additional gear and equipment, DOC will see more wear and tear and therefore will eventually use local machinist shops to help with such issues.

2.4 Employment

DOC currently has [redacted] employees. The positions range from site manager to laborer. We expect this number to stay the same over the next five years as with most areas, finding reliable, experienced employees in rural areas is very hard. DOC is taking the approach of finding easier growing solutions that do not put extra strain on our current employees while being able to grow the business and offer better compensation to the current employees.

2.5 Other economic contributions to the local community and Province

Over time many local suppliers benefit from an oyster farm being in their community. Be it the materials needed to keep the lease in good condition (rope, buoys, cages, hydraulic needs, boat repairs, fuel, etc.). The list is ongoing.
Should the tidal pods prove to be a worthy type of growing gear, DOC will be investing into them. The ability to have them built locally is always an option that will be seriously considered.

2.6 Adverse economic impacts

There are no adverse economic impacts to helping grow an ongoing sustainable shellfish farm.

Section 3: Fisheries activities in the public waters surrounding the proposed aquaculture operation

3.1 Impacts on fisheries activities

Salt Bay holds no kind of commercial fishery.
There is also no recreational, food, social or ceremonial fishery that is held in Salt Bay or the nearby surrounding areas.

Section 4: Oceanographic and biophysical characteristics of the public waters

4.1 Oceanographic environment

Salt Bay holds no history of major events that would have caused any serious type of damage. It's quite sheltered from the wind in any direction (other than directly North) and is situated so that swells cannot form.
Salt Bay is classified and open.

4.2 Environmental monitoring

Salt Bay has been sustainably sea-farming oysters for almost 10 years now. During these years, all of the farming has been done with suspended gear and they only touched the bottom for 2 months a year (during winter to sink the cages so ice damage wouldn't hurt the animals or gear). With the proposed amendment, DOC is looking to add bottom culture with gear. The current benthic state is only mudflats. There is very little marine vegetation as you can see on attachment C.

4.3 Site design

The request for the site design will remain the same. Suspended gear is currently occupying the water channel and with the proposed amendment, DOC is hopeful that bottom culture with gear will be approved. If approved, the configuration of the tidal pods will run parallel with the suspended cages but be placed on the inter-tidal zones of the lease. Please see the attachment D for aerial and side views of how the pods will sit on the inter-tidal zones. Attachment D only shows a brief 10 pods to get good visual. A full line will run 250 pods long (running on the western side of the lease from the south to north ends).

During initial testing throughout 2023, a tidal pod was built and placed in the inter-tidal part of the lease. The pod was placed in the water on May 3rd and harvested on Oct 26th. During that time, Yarmouth had hurricane Lee pass by on Sept 16th with wind gusts of 90-110km/h and 15-25ft waves off the coast. The pod had no anchor system in place and did not tip over. As the pods can hold 18 bags of oysters, the oyster weight alone is roughly 600-650lbs, plus the weight of the pod at roughly 80lbs.
Salt Bay is sheltered bay and waves cannot build to any amount. The current also does not get strong on the inter-tidal zone. NSFDA placed a tide meter in the channel in Salt Bay in 2017 for a full lunar cycle. The greatest current recorded was just over 1 knot. This again was in the middle of the channel (not in the inter-tidal zone).
The pods will somewhat settle into the mudflats (roughly an inch or two) and a natural suction creates a strong base. However, if we find that pods do flip onto their side, we've designed a "U" shape anchor prototype with the manufacturer that will we feel will certainly keep the pods upright and in place.
Also, we filled the pod with overweight, heavy bags and the hydraulic winch we currently have set up on our working boats can easily lift the full pods. The winch is able to safely lift 1,000lbs.
The current plan to move the pods from the inter-tidal areas (spring, summer, and fall months) to the channel (winter months) would be to move them with our oyster boat. We can fit 6 pods on the deck of the boat. The pods will be placed between the oystergro lines for the winter months.
Production will follow what was described in **2.1 Bottom Culture with Gear - amended section.**

Section 5: The other users of the public waters surrounding the proposed aquaculture operation

5.1 Impacts to other users including wildlife

Lease #1400 has been located in Salt Bay for almost 10 years now. The area was specifically chosen by DOC as it hold no significance to any other form of marine activities. Oysters grow very well there and being a bay, there is only one way out of Salt Bay and it needs to be a specific tide (high tide) to get out. Which can even be difficult with an experienced captain on a small skiff. DOC equipment remains in Salt Bay and does not get taken out. The boats are moored out and a floating processing barge was even built as it is tricky to time the tides to be able to bring product to the wharf.

Salt Bay is away and hidden from any sort of fisheries and has not caused any disturbance to the community since it was originally approved in 2014.

To the best of DOC's knowledge, no local species is at risk that would dwell in or nearby the area that lease #1400 is located in.

5.2 Impacts by other users including wildlife

As briefly stated above, Salt Bay isn't an easy bay to get boats in and out of.

An old abandoned rock wharf was refurbished shortly after lease #1400's approval. DOC maintains that wharf to a safe and workable state. There is also two boat launches on either side of the wharf that remain clear so that members of the community, should they like, can also experience Salt Bay. Lease #1400 is clearly marked with larger than required corner buoys and the marine traffic waterway channel is clearly marked with red and green buoys to allow flow within Salt Bay.

Section 6: The public right of navigation

6.1 Navigation Protection Act (NPA) approval

DOC has spoken with and sent a package to Melanie LeBlanc on December 1, 2023.

Section 7: The sustainability of wild salmon

7.1 & 7.2 Identification and Support of the sustainability of wild salmon

In the 25+ years that we've been seafarming, we have never seen a salmon in our area. To the best of my knowledge, there are no wild salmon around this part of the province.

Section 8: The number and productivity of other aquaculture sites in the public waters surrounding the proposed aquacultural location

8.1 Interactions with other aquaculture operations

The renewal and amendment of lease #1400 will not interfere with any other aquaculture leases in the area. The nearest lease is owned by [redacted] of Grand Passe Oysters and is outside of Salt Bay and over a kilometer away. DOC and Grand Passe Oysters have and continue to work together to help grow the oyster industry in Nova Scotia.

Section 9: Development viability

9.1 Financial ability

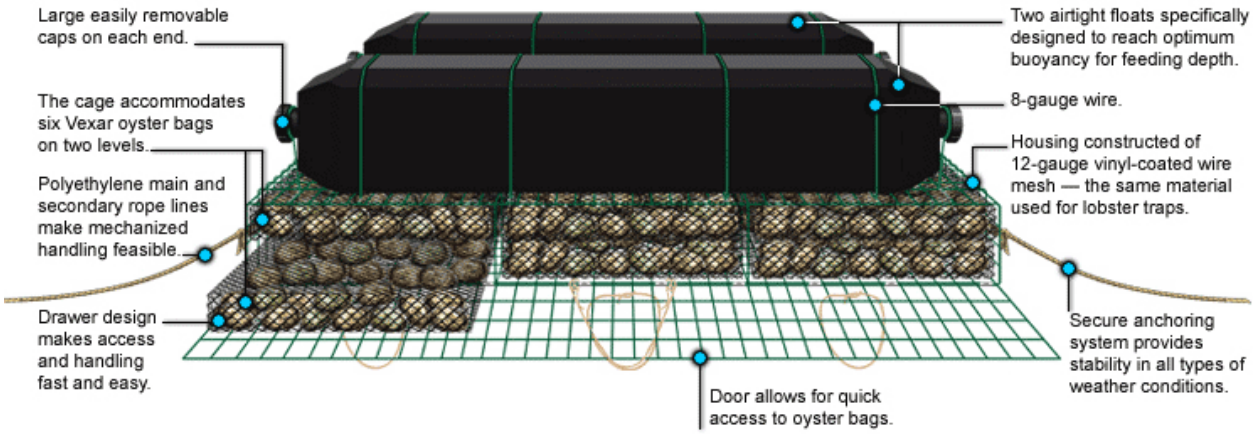
[redacted]

9.2 Technical ability

DOC's team will remain the same for the time being. With a combined knowledge of over 60 years, we are very confident that we are able to execute the renewal to allow another 10 years on this lease, while also achieving success in the proposed amendment request.

9.3 Compliance history

We feel that our compliance history is positive.



OysterGro measurements as follows (only the green mesh),

5ft long X 3ft wide X 8inches tall.

SCHEDULE A

Aquaculture Site
1400

Corner	Latitude	Longitude
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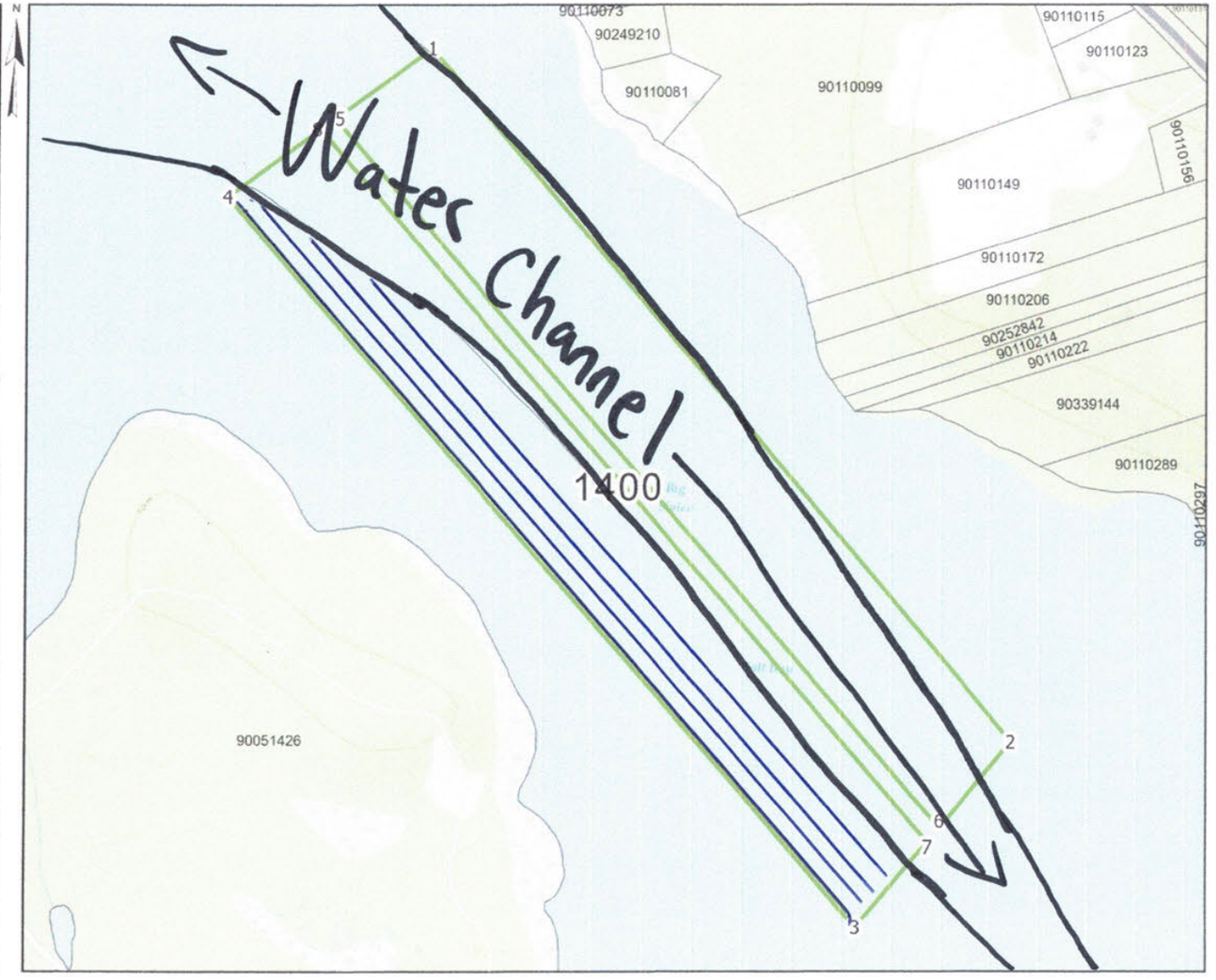

License/Lease Holder	County	Waterbody	Hectares	Species Type	Chart
Deon Oyster Company Ltd.	Yarmouth	Salt Bay	15.03	Shellfish	4244

Renewal Application
Property Boundary

0 50 100 200 300
Meters

NOVA SCOTIA
Fisheries and Aquaculture

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Date: 2024-03-04 Created By: MK

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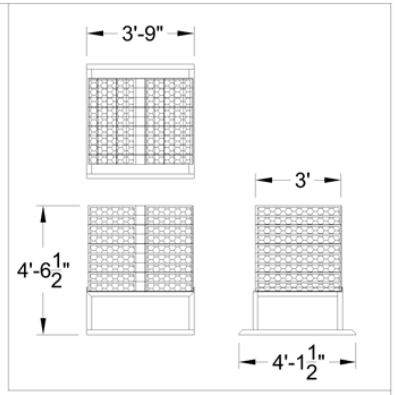
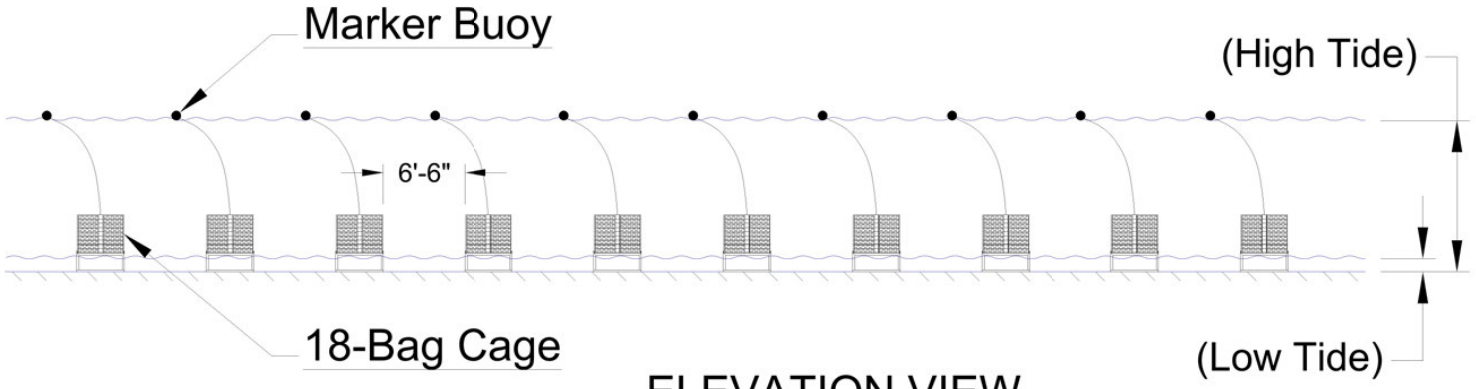
Made out of Rebar



AERIAL VIEW



ELEVATION VIEW

REV	DATE (MM-DD-YYYY)	DESCRIPTION
1	03-12-2024	INITIAL RELEASE

PO Box 2162, Bouctouche, NB E4S 2J2
Tel: 506-743-5455 Fax: 506-743-6729
www.OysterGro.com info@oystergro.com

OysterGro® AQUAFARMING SYSTEMS

TITLE:			REV:
LINE CONFIGURATION - Bottom Cage 18-BAG - 10 CAGES			1
DRAWING NO: SP18-6.5	DRAWN BY: MG	UNITS: FT-IN	
DATE: (MM-DD-YYYY) 03-12-2024	SCALE: NTS	SHEET NO: 1 OF 1	