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November 13, 2018

Hon. Rod Phillips
Minister of Environment, Conservation and Parks
Ferguson Block, 11th Floor, 77 Wellesley St W
Toronto, ON M7A 2T5

Dear Minister Phillips,

MECP's Review of the proposed Amendments to the MNRF's Class EA for Resource Stewardship & Facility Development (EBR Registry # 012-3289)

The Georgian Bay Association (GBA) is an umbrella organization for 19 property owner associations along the east and north shore of Georgian Bay. We have been advocating on behalf of our members for over 100 years. Our mandate is to work with our water-based communities and other stakeholders to ensure the careful stewardship of the greater Georgian Bay environment.

We are writing to you to outline our concerns with the use of the Class EA for Resource Stewardship & Facility Development when reviewing applications for open net cage aquaculture licencing and land use permits that is permitted to operate in the pristine waters of Georgian Bay and the North Channel areas of Lake Huron.

To our knowledge, the MECP has yet to finalize its Policy Paper that sets out water and sediment quality objectives for the long-term environmental sustainability of commercial-scale cage aquaculture operations in Ontario (proposed March 2016). Its objective is to oversee the environmental requirements of cage aquaculture licences issued by the MNRF in its Application Guidelines for Cage Aquaculture Facilities (EBR #012—5045). The MNRF Guidelines were finalized September 5, 2017. Hence there is still no formal policy for the cage industry to follow, as it continues to operate in the Georgian Bay and Lake Huron waters. We assume that the Class EA is still being used, even as it too is under review.

The demand for freshwater farmed fish is steadily increasing. If the industry is allowed to continue to use open net technology through which farm waste and uneaten food is disbursed into the surrounding public waters, history reveals that Phosphorous levels will eventually increase to levels that will severely impact the environment. Ontario has shown its commitment to preserving water quality by introducing the Great Lakes Protection Act, just as the federal government has done with the Great Lakes Water Quality Agreement.

Georgian Bay and its North Channel to Lake Huron is a unique, fragile, finite water basin in this Great Lakes system. Together they represent one of the most pristine ecosystems in the Great Lakes. Our governments must preserve these cleaner areas of the Great Lakes to avoid the considerable expenditures incurred cleaning up areas in other Lakes, such as Lake Erie.

We should not be giving way to pressure for the industrial application of this antiquated method of fish farming for economic growth, when there are alternative closed containment technologies that have little impact on the receiving waters. Allowing this industry to continue to operate in Georgian Bay and the North Channel flies in the face of both the (Ontario) Great Lakes Protection Act and the (Federal) Great Lakes Water Quality Agreement. Moreover, the recently released, binational *Lake Huron Lake-wide Action and Management Plan,* Section 4.6.5, has identified open net cage aquaculture as a potential threat to water quality.

Phosphorous is the nutrient of concern.

Our main concerns are:

1. The Class Environmental Assessment (EA) as it has been applied to the existing cage aquaculture licences should be increased to at least a Category "C" from the current, completely inappropriate Category A level.
2. This industry does not comply with the waste disposal provisions of the Ontario Environmental Protection Act.
3. The Land Use Permits and Licensing processes for this industry grant it free use to dispose of waste in public waters without any remediation provisions.
4. The industry is currently operating without proper licences in place because MNRF has not posted any decisions on the applications on the Environmental Registry since 2015.
5. The large number of significant net negative environmental impacts that have been identified and documented by both your ministry and ourselves over the last 20+ years are not being taken into account when assessing the appropriate: EA Class; licensing & permitting processes; waste disposal requirements; and waste remediation provisions.

The Appendix below provides more detailed background information on our concerns.

We look forward to hearing from you in this respect.

Respectfully yours,

Rupert Kindersley
Executive Director

Claudette Young
Aquaculture Committee Chair

CC:

Hon. John Yakabuski	Minister of Natural Resources & Forestry
Jennie Weller	Special Project Officer, Ministry of Environment, Conservation and Parks
Dave Bell	Special Project Officer, Ministry of Environment, Conservation and Parks
Paula Allen	Supervisor, Ministry of Environment, Conservation and Parks

APPENDIX

This existing profit-oriented cage farms have been deemed as only requiring a ***Class A Environmental Assessment (EA) for MNRF Resource Stewardship and Development Projects*** when applications are made for re-issuance of Aquaculture Licenses and Land Use Permits. To our knowledge this *Class A EA RSFD* has not been amended since its original assignment in 2002, despite considerable evidence of negative environmental impacts provided to government by GBA and others over the years.

These commercial open net cage aquaculture sites do NOT fit the description for projects subject to the Class EA, as described below within the *Class A EA RSFD* Document where it states:
2.2.1 Similarities and Differences among the Projects
Generally, the projects subject to this Class EA are characterized by environmental effects that are well understood, recurring in nature and have minimal and/or localized short-term effects on the environment. Often a project may involve several components (e.g., access road to an access point and shoreline stabilization work).

There is nothing in subsection ***2.2.4.4 Fish Culture Stations and Sub-stations*** to suggest that existing commercial open net cage aquaculture industries should be considered under the same classification as the MNRF operations that provide fish for stocking into Ontario waters, which are required to support provincial fisheries management of the Great Lakes and inland waters.

By not requiring proper waste disposal from these commercial fish farms, MNRF is actually working counter to the purpose of Section **2.2.8 Waste Disposal** which states:
The purpose of MNRF's waste disposal service is to dispose of hazardous and non-hazardous waste in a satisfactory manner to eliminate any health hazard and minimize any contamination of the air, land or water. In this regard, MNRF complies with all applicable laws, including the Ontario Environmental Protection Act.

Section ***2.2.14 Disposition of certain or all Rights to Crown Resources*** allows MNRF to dispose of its rights to the Crown lands it is responsible for as stewards of public resources. Though very confusing to the public, it seems that, in the case of the existing open net cage fish farms, MNRF has given these rights over pursuant to MNRF's legislation/policy under the Fish and Wildlife Conservation Act of 1997, and the Public Lands Act. This disposition of Crown Land is granted through a Land Use Permit or Crown Lease of the lakebed – water-lot/mixing zone.

The operators of the open net cage farms are required to apply for renewal of their Land Use Permits and the associated Aquaculture Licences. The decision on whether to renew is made by MNRF in partnership with MECP (for water quality and sediment issues of concern). To our knowledge, through the information postings on the **Environmental Registry** EBR #012-3945, dated April 24, 2015, the existing open net cage farms have been operating without licenses for the past 3 years because no decision notice has been posted. This in itself is a matter of public concern. Furthermore, this is an application for an increase in food quota from 1,800 tonnes to 2,500 tonnes.

When asked, the MNRF response was they were awaiting the passing of the Coordinated ***Application Guidelines for Cage Aquaculture in Ontario***. However, according to the public notice on the Environmental Registry, these **Guidelines** were approved as Policy, then posted as such on Sept 5, 2017, EBR # 012-5045.

It appears obvious to us that there is a possible conflict/dispute between the MNRF's **Guidelines** and the MECP's ***Provincial Policy Objectives for Managing Effects of Cage Aquaculture Operations on the Quality of Water and Sediment in Ontario's Waters*** given that the MECP's policy proposals, posted on March 31, 2016, EBR#012-7186, have yet to be finalized, despite receiving the allotted 90-day public comments and review.

Meanwhile, The Land Use Permit for tenure of 13 hectares for AquaCage Fisheries Ltd. was screened under the Class EA RSFD to a Category A by the Ministry of Natural Resources and Forestry (MNRF). This screening makes it easy to: "*expedite planning and implementation for projects that have potential for low net negative environmental effects or level of concern of interested persons, government agencies or Aboriginal communities.*"

GBA has repeatedly reported our concerns to both MOE and MNRF on both the social and environmental issues of concern related to this industry on behalf of the approximately3,000 members of our associations, as well as other recreational users and business operators dependent on long lasting environmental stewardship measures for maintaining their livelihoods, water based leisure activities and the businesses that support them, These concerns themselves ought to have required the EA Category to be upgraded to Category C, so that it would: "*provide an appropriate planning and consultation process for projects that have potential for moderate to high net negative environmental effects ....*" MOECC's very own studies on *The State of Lake Wolsey*, 2016, should be sufficient to confirm our affirmations that commercial size open pen net cage aquaculture operations do indeed qualify for ***Category C: Potential for high net negative environmental effects and/or concerns***.

A review of the License Applications of the existing 6 cage farm sites shows that the feed quotas totaled 4,736 tonnes/year in 2014 and by 2016 these had increased to 5,686 tonnes/year, an increase of 950 tonnes. From this number, our mass balance calculations of TP (assuming 1.3% P in feed, 1.25 FCR, and 0.4 in trout, and no escapes occurring) predict the Phosphorous pollution to be 55.7 tonnes/year flowing freely into public water.

Please also note, this letter does not include concerns the MNRF should also be addressing – that of large numbers of escapements competing for food and habitat with the wild fish, that occur due to storms and faulty nets.

We are pleased to learn that the MECP is still reviewing and updating the ***CLASS EA FOR MNRF RESOURCE STEWARDSHIP & FACILITY DEVELOPMENT PROJECTS***, since its posting on the EBR Registry #012-3289 of September 2015 and we assume that our comments are still welcome to help influence these important amendments.

In accordance with your duties to review the Proposed Class EA Amendments under the requirements of the Environmental Assessment Act, we do hope you will ensure that existing cage aquaculture applications for licence are eliminated from the Pre-Assigned Category A projects of the Class EA so they may in future go through the correct Category C process, and all its provisions on consultation and its requirement for an Environmental Study Report.

To underline this point, please find below details regarding the potential for high net negative environmental impacts from open net cage aquaculture in Lake Huron:

- There is the case of the open net cage aquaculture operation located in La Cloche Channel, where the undesirable anoxic (low oxygen) condition of the water was attributed to this operation, which was documented by Hamblin and Gale (2002) and Clerk et al. (2004) in two refereed journals. (Please refer to Exhibit A attached)
- At the open net cage aquaculture farm located in Grassy Narrows, Milne (2008) has documented that it took approximately nine years, after operations ceased in 1999, for most of the accumulated fish deposits and excess feed to dissipate, and that some detectable deposits of fish manure on the lake bed near the cage location still remain. Close to 1/3 of the phosphorus occurring in the surrounding waters was attributed to this fish farm.
- The open net cage aquaculture farm located in the embayment known as Lake Wolsey has turned that lake's total phosphorus concentration from the naturally oligotrophic, (meaning low concentration, which supports the normal low plant growth characteristic of healthy lakes) to levels well into the mesotrophic range, resulting in the overgrowth of plants. In other words, phosphorus levels reached the "the impacted water quality" range, as documented by Hamblin and Gale (2002) and Milne (2012).
- Hamblin and Gale (2002) also documented that near-farm phosphorus concentrations had reached hypereutrophic levels in Lake Wolsey, meaning the water was determined to be excessively rich in phosphorus, a nutrient which supports excessive plant growth. This is a concern since such nutrient rich waters are at risk for algal bloom growths and oxygen deficiency, and can also become generally undesirable for drinking water and other needs. (Please refer to Exhibit B attached) This prediction has proved to be correct as there have been blue green algae outbreaks in Lake Wolsey in each of the last 4 years.
- Applications were made to the State of Michigan to support licencing open net cage aquaculture in Lake Michigan and Huron. After commissioning independent studies, the State clearly ruled against allowing any cage farms into their waters. Currently, none of the U.S. States permit aquaculture in their Great Lakes waters, whereas Ontario does permit it.
- No decommissioning cleanup/bonds or tax is required from the operators for closed sites. This is an unjust use of public/Crown freshwater and lakebed resources.
- It is well known that the increase in invasive zebra and quagga mussels in Georgian Bay/Lake Huron has changed the nutrient levels. Claims made that adding phosphorus through the normal operations of cage aquaculture (which feeds these invasive species, that habituate on/near the pens) are beneficial does not make for sound science or practice.

It should also be noted that the *Canada-US 2012 Great Lakes Water Quality Agreement's Annex 4 on Nutrients (Environment Canada, 2012)* states as a lake ecosystem objective, that the waters of Lake Huron should be maintained in an oligotrophic state and that algal species, which produce toxins that pose a threat to humans or ecosystem health, such as cyanobacteria, should be maintained at healthy levels in the nearshore waters of Lake Huron. According to the *Lake Huron Bi-national Partnership, (2011)*, a massive wildlife die-off occurred in Georgian Bay in 2011. Net pen aquaculture is operated in nearshore waters. Since phosphorus contributes to water quality conditions that can facilitate the growth of algae, it would be responsible and prudent to be concerned about the phosphorus loading into nearshore waters from fish farm operations.

Negative environmental impacts associated with fish farm operations have been documented and have led to ongoing research in Canada and internationally on ways to minimize or eliminate the negative environmental impacts of aquaculture.

Exhibit A

La Cloche Channel 10 years after the fish farming cages were removed. The methane created by the fish manure in the sediment below the cage sites was still sufficient to melt the ice above where the cages used to be. Fish farming using open net technology is not a benign practice.

Exhibit B

The following two pictures are from a research report published by Kelly Amber Hille in 2008 on the effects of cage aquaculture on epilithic biofilms.

The portion of her report that focuses on Lake Wolsey concludes in part, “even though the aquaculture operation may not be the main impacting agent on the system, it still plays a part. Every new invasion, every added nutrient and every physical change to the system adds stress to this already highly disturbed system.”

Phytoplankton bloom in the near-shore region of Lake Wolsey adjacent to fish farm.
Photo by K. Hille September 2006

Aquaculture cage and Phytoplankton bloom at Lake Wolsey.
Photo by K. Hille September 2006