July 9, 2020

Honourable Jeff Carr
Minister of Environment and Local Government
Marysville Place
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Dear Minister Carr,

We are writing about Kelly Cove Salmon's proposals for new open-net pen salmon aquaculture facilities in Maces Bay and Beaver Harbour currently under review by the New Brunswick Department of Agriculture, Aquaculture, and Fisheries. We note that the provincial website for environmental impact assessment (EIA) does not list these proposals as registered for EIA. Based on New Brunswick's Environmental Impact Assessment Regulation (EIAR), the known environmental impacts of marine cage salmon aquaculture, the presence of endangered wild Atlantic salmon in the Bay of Fundy, and the close proximity of the proposed sites to Important Bird and Biodiversity Areas (IBAs), it is our opinion that these proposals are required to be registered for EIA and that completion of a full environmental impact assessment is also required. We support this argument with the following points:

1. **As per section 3(2) and schedule A(u) of the EIAR, registration is required** for "*all enterprises, activities, projects, structures, works, or programs affecting any unique, rare, or endangered feature of the environment.*" This includes any modifications or extensions of existing activities, projects, structures, etc. That this could trigger registration of marine-based aquaculture facilities has been anticipated, and your department has prepared specific guidelines to assist proponents whose planned aquaculture development is captured by the EIA process.

2. **Several species of fish and birds are rare and endangered features of the receiving environment.** There are two distinct population segments of wild Atlantic salmon in the Bay of Fundy: Inner Bay of Fundy (IBoF) and Outer Bay of Fundy (OBoF). IBoF adult salmon returns have decreased in abundance from ~40,000 in the 1980s to fewer than 100 in recent years. The IBoF segment was listed as "Endangered" under the Species At Risk Act (SARA) in 2003. OBoF salmon returns have decreased in abundance from over 100,000 historically to only a few thousand individuals. OBoF salmon were assessed as "Endangered" by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) in 2010. A decision to list OBoF salmon under SARA is pending.

   Wintering Harlequin Duck have been recorded near both proposed sites with observations as recent as March 2020 from New River Beach Provincial Park and Black's Harbour. The eastern population of the Harlequin Duck is listed under the federal Species at Risk Act as a Species of Special Concern (Species at Risk Act, Statutes of Canada, 2002) and under New Brunswick Species at Risk Act as Endangered (Government of New Brunswick, n.d.).

3. **Endangered wild Atlantic salmon and sensitive bird species will be affected by the proposed undertakings**. Bay of Fundy salmon pass intensive salmon aquaculture activities in southwest NB as they migrate to their ocean feeding grounds in the Gulf of Maine and the north Atlantic off Labrador and Greenland. Interactions between wild salmon and aquaculture operations occur in the immediate vicinity of marine cages and through interactions between escaped aquaculture salmon and wild salmon in both marine and freshwater environments (DFO 2014).

   There is an extensive body of scientific evidence demonstrating the negative impacts of open-net pen aquaculture on wild Atlantic Salmon (ICES 2016; Hutchinson 2006; Ford and Myers 2008; DFO 2013a). Negative impacts on wild Atlantic Salmon have been shown to occur when escapees interbreed with wild salmon causing introgression of genetic material from domesticated strains into wild stocks (Glover et al. 2013; Bourret et al. 2013), when escaped aquaculture salmon compete with wild salmon for food (Naylor et al. 2005), by increasing localized abundance of sea lice changing lice loads on wild salmon that come in contact with infected farmed fish (Helland et al. 2012, 2015; Middlemas et al., 2010, 2013; Serra-Llinares et al. 2014), and by acting as vectors for disease transmission (Garseth et al. 2013).

   Negative impacts from existing salmon aquaculture operations on wild Bay of Fundy salmon have been documented (Bourret et al. 2013), and interactions with aquaculture salmon have been identified by Fisheries and Oceans Canada (DFO) as a high-level threat to both IBof and OBoF population segments (DFO 2008; DFO 2014).

   In addition to wild Atlantic Salmon, wintering Harlequin Duck have been recorded near both proposed sites with observations as recent as March 2020 from New River Beach Provincial Park and Black's Harbour. The eastern population of the Harlequin Duck is listed under the federal Species at Risk Act as a Species of Special Concern (Species at Risk Act, Statutes of Canada, 2002) and under New Brunswick Species at Risk Act as Endangered (Government of New Brunswick, n.d.).

   Aquaculture activities have been cited as a direct threat to Harlequin Duck wintering grounds in existing management plans. Specifically, it has been suggested that aquaculture activities and increased ship/boat presence may result in the abandonment of wintering/moulting sites (Environment Canada, 2007). Potential entanglement of birds in aquaculture equipment and machinery has also been cited as a concern (Environment Canada, 2007).

   In addition to impacts on Harlequin Duck, the inclusion of new aquaculture pens could produce a number of negative impacts on several species of birds. Some of which include:

   - Nesting Common Eider on New River Island could be negatively impacted by this project, given that aquaculture operations can result in an increase of gull species attracted by the salmon feed. Gulls are predators to Common Eider eggs and chicks (Pers. Comm., Dr. Tony Diamond, 2020);

   - Increased nutrient, metal (e.g. copper, zinc), and chemical deposition could impact levels of dissolved oxygen, eutrophication, etc. These effects, in addition to organic deposition, may impact

the availability and quality of marine and intertidal food sources that are critical for bird species in the area, such as shorebirds, Common Eider, and Harlequin Ducks;

- Seabirds and other water birds could become entangled in nets, lines, and other equipment on site. Additionally, an increase in garbage, plastics, and other debris in the area is a concern for birds due to possibilities for direct ingestion (Provencher et al., 2014).

4. **As per section 6(4) of the EIAR, a full environmental impact assessment is required "*in relation to any undertaking which […] may in the Minister's opinion result in a significant environmental impact.*"** As noted in point 3 above, endangered wild Atlantic salmon in the Bay of Fundy will be affected by the proposed undertaking. Furthermore, there is strong evidence that the effects on wild salmon will represent a "*significant environmental impact*." DFO's Recovery Potential Assessments for Bay of Fundy salmon discuss in detail the nature of the aquaculture threat to endangered IBoF and OBoF salmon populations (DFO 2008; DFO 2014). These documents review the history of negative interactions between wild salmon and aquaculture operations in the Bay and conclude that "*The development of salmon farming in coastal areas of the Bay of Fundy and Gulf of Maine in the last 20 years may have increased transmission of disease and parasites (e.g., infectious salmon anemia [ISA] virus, sea lice) to wild salmon"* and that "*interactions with farmed and hatchery salmon (e.g., competition with escapees for food, parasite and disease outbreaks, and modified predator interactions)"* remain a leading high-level threat to survival and recovery of wild Bay of Fundy salmon.

   Importantly, negative interactions between wild and farmed salmon continue. For example, there were two reported escape events from Bay of Fundy salmon aquaculture sites in 2019 resulting in the spill of ~1225 domesticated salmon into the environment. Of these, 78 were recaptured at the fishway on the Magaguadavic River, indicating that these escapes have entered Bay of Fundy rivers where they could have spawned with endangered wild salmon. Likewise, there were 13 reported outbreaks of Infections Salmon Anemia (ISA) at aquaculture sites in New Brunswick in 2019, raising considerable concern about the potential spread of this harmful disease to wild salmon. Given the low abundance and precarious status of wild salmon in the Bay of Fundy and the significant stress already placed upon them by existing aquaculture activities, the only reasonable conclusion is that the cumulative effects of even a small expansion of the industry "*may result in a significant environmental impact.*"

   The proposed aquaculture sites in Maces Bay are located directly within the Point Lepreau/Maces Bay Important Bird and Biodiversity Area (IBA), internationally recognized for its importance as a stopover site for shorebirds as well as a migration corridor for waterfowl (Dietz & Chaisson, 2000). Both the proposed Beaver Harbour and Maces Bay aquaculture sites are also located near the Wolves Archipelago IBA, Quoddy Region IBA, and Grand Manan Archipelago IBA. These IBAs were designated given their importance for supporting continental and globally significant concentrations of shorebirds, waterfowl, gulls, and other species (Birds Canada, n.d). These recognized designations give further weight to the need for a full Environmental Impact Assessment for this project. For more information on the IBA designations please visit www.ibacanada.ca.

Given the various IBA designations, presence of species at-risk, and the potential for negative consequences to migratory and nesting birds, it is clear that this proposal "*may result in a significant environmental impact*," therefore requiring a full Environmental Impact Assessment.

In summary, we contend that the presence of endangered wild Atlantic salmon in the Bay of Fundy and the importance of the region for migratory and nesting birds including shorebirds, Harlequin Duck, and Common Eider are triggers for mandatory EIA registration of Kelly Cove Salmon's planned expansions at Maces Bay and Beaver Harbour. Furthermore, examination of the evidence pertaining to the known impacts of open-net pen salmon aquaculture on wild salmon and other species, both in the Bay of Fundy and elsewhere, can lead to no other reasonable conclusion that these expansions may have a significant negative impact on wild salmon and other species thereby triggering a full environmental impact assessment. We hereby request that your department require the proposals to be registered for EIA and order a full Environmental Impact Assessment as per sections 3(2) and 6(4) of the EIA Regulation.

Sincerely,

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CPAWS
CANADIAN PARKS AND WILDERNESS SOCIETY
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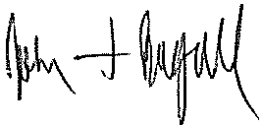

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St. John Basin Salmon Recovery Inc.

St. John Basin Salmon Recovery Inc.

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