



January 2021

Hon. Bernadette Jordan,
Minister, Fisheries and Oceans Canada
129 Aberdeen Road, Suite 106
Bridgewater, NS
B4V 2S7

**Re: The Nova Scotia Salmon Association position on the federal
Species at Risk Act listing in Eastern Cape Breton & the NS Southern Uplands**

Between 2012 and 2014, the Department of Fisheries & Oceans (DFO) held consultations on the consideration of listing multiple populations of Atlantic Salmon under the Species At Risk Act (SARA) that were assessed by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) in 2010. In Nova Scotia, the Designatable Units (DUs) of Atlantic Salmon being considered for listing under SARA include: 1) Gaspé-Southern Gulf of St. Lawrence (assessed as Special Concern by COSEWIC); 2) Eastern Cape Breton (Endangered, COSEWIC); and 3) Southern Upland (Endangered, COSEWIC). The Nova Scotia Salmon Association (NSSA) supports the listing of Gaspé-Southern Gulf of St. Lawrence as Special Concern but, submitted concerns regarding the listing of Eastern Cape Breton and Southern Upland DUs indicating that we could only support the listing of these DUs under certain conditions. Nearly seven years later, DFO is inquiring as to whether the NSSA's position has changed since the 2014 consultation process. The NSSA's concerns remain the same.

The NSSA subscribes to the principles of biodiversity conservation. The pursuit of our passion and the mandate of our 57-year-old organization necessitates healthy populations of Atlantic Salmon. We pursue angling only when populations are robust enough to withstand this low-impact activity and we recognize that there may be scenarios where angling must be suspended for conservation reasons. However, consistent with our 2014 submission, we are concerned about the effectiveness of listing the Eastern Cape Breton and Southern Upland DUs as Endangered under SARA and question whether there are better tools to facilitate recovery. Accordingly, our support for listing the Eastern Cape Breton and Southern Upland DUs under SARA is contingent upon the following issues being addressed:

- Increasing DFO's capacity to recover populations;
- Clearly defining and facilitating permissible restoration and research activities;
- Expanding investment in recovery and restoration;
- Investing in data collection, monitoring, and research;
- Modifying the scale at which DUs are managed; and
- Fostering Stewardship.



Increasing DFO's capacity to recover populations

First, a major potential benefit of listing would be if additional resources were made available to recover populations and the requirement to develop Recovery Plans. The threats facing Atlantic Salmon are fairly well understood and are outlined in the recovery potential assessments that have already been prepared for each DU. Both the Southern Upland and Eastern Cape Breton DUs share many of the same threats with the exceptions of acid rain and the negative impacts of warmwater aquatic invasive species. Currently, the Federal Government supports recovery of Atlantic Salmon in both the Southern Uplands, and to some extent in Eastern Cape Breton, via funding programs such as the Canada Nature Fund for Aquatic Species At Risk. Indeed, the NSSA is the single largest recipient of this fund in eastern Canada and we are working diligently to address the threats facing Atlantic Salmon. It remains unclear as to how capacity for restoration would increase following a SARA listing.

Secondly, after listing the Inner Bay of Fundy DU of Atlantic Salmon as Endangered (SARA), DFO has not implemented widespread recovery actions. Arguably, the only widespread and effective recovery action that has occurred in the Inner Bay of Fundy (iBoF) is the initiation of the Live Gene Bank (LGB) program which began in 1998 – 5 years prior to the designation of Endangered in June 2003. The goal of the LGB is to conserve iBoF salmon genetic characteristics and re-establish self-sustaining populations to iBoF rivers. It is widely believed that this program has been a success and that without the LGB iBoF would be functionally extirpated.

Given the success of the LGB program and the fact that similar genetic concerns impact the Southern Upland and Eastern Cape Breton DUs, the NSSA believes that establishing comparable LGB programs is required immediately. Time is of the essence as genetic and haplotype (family lines) diversity is presumably following a similar trend as population abundance - declining rapidly. Extirpation would constitute an irreplaceable loss of Atlantic Salmon biodiversity in Canada. Like the iBoF, we ask that DFO commits to a widespread LGB program for these DUs prior to a SARA listing. It is unclear how DFO could successfully run such a program given that the Coldbrook Biodiversity Facility is a maximum capacity and that the only other regional biodiversity facility, the Mersey Biodiversity Facility, was dismantled in 2014 following nearly a half-million-dollar renovation. Without LGB programs, all other recovery actions are likely to be less effective as they require locally-adapted salmon to re-colonize newly restored habitats.

Finally, another major potential benefit of listing is the legislative requirement for added considerations regarding species-at-risk during Canadian Environmental Assessment Act reviews¹. This includes the redefinition of an 'environmental effect' to include the effects that a project **may** have on a listed species or their critical habitat and a requirement for further Federal-Provincial/Territorial harmonization. A current threat to Atlantic Salmon populations within the Southern Uplands is Gold Mining. How a SARA listing would impact the Canadian Environmental Assessment Act process and the protection of salmon is unclear. A better understanding of the provisions this would provide is important, including defining how a listing of 'Special Concern' would differ from 'Threatened' or 'Endangered' with regard to the ability to limit industrial activities such as mining or forestry in highly sensitive areas.



Clearly defining and facilitating permissible restoration and research activities

As mentioned, the NSSA has been a leader in research and habitat restoration in rivers lying within these DUs – most notably:

- (1) the widespread Adopt-a-Stream program – a 22-year program that has restored 2,537,728 m² of degraded stream habitat, planted 208,840 streamside trees, assessed 576 culverts for fish passage of which 168 were remediated, effectively re-establishing fish passage to more than 755 km of fish habitat, and engaging community-based groups in species-at-risk recovery including 4,572 volunteers contributing 189,350 hours of their time.
- (2) the West River Sheet Harbour acid rain mitigation project, where we have developed our innovative and comprehensive acid-rain mitigation program – the largest in Canada – which includes in-stream lime dosing, forest liming by helicopter, and many ancillary projects.
- (3) partnering with local affiliate groups to help with their recovery actions, such as the St. Mary's River Association who have been addressing the issues of instream physical habitat and have conducted a catchment liming program to reduce the negative impact of acid rain. They have been a key partner with DFO on monitoring/research projects such as the annual smolt wheel assessment and electrofishing, have partnered on research to track smolts and adult salmon, and were instrumental in programs such as kelt reconditioning and smolt-to-adult supplementation.

In all cases, much of this work, predates the 2010 COSEWIC assessment and is delivering measurable results for salmon populations and watershed ecology. It is a model that needs to be supported and expanded to other watersheds. Any listing under SARA must enhance rather than hinder these efforts.

Further, listing necessitates additionally permitting to conduct recovery activitiesⁱⁱ. As was the case following the listing of the iBoF DU, we experienced a period of several years when all restoration activities were halted while permissible restoration activities were defined. This is work that can be done prior to a listing so that we can avoid the catastrophic impacts of a work hiatus. We want assurances that our well-developed restoration and research programs will not be delayed or encumbered.

Expanding investment in recovery and restoration

As outlined above, there is currently a significant amount of recovery action occurring within the watersheds of the Southern Uplands and Eastern Cape Breton, for which the expertise and capacity currently lies outside of DFO but is reliant, in large part, on funding from the Federal and Provincial governments. DFO researchers have identified that working to improve the freshwater production of wild Atlantic Salmon is likely to reduce the chance of further salmon declines in the Southern Uplandsⁱⁱⁱ. Recovery plans for the Southern Upland and Eastern Cape Breton DUs will include work to restore freshwater productivity and will require extensive funding for implementation. It is unclear how a listing will further enhance efforts to restore freshwater productivity. One obvious potential benefit of a listing under SARA is that large-scale threats which are not typically addressed by community-led restoration, such as the removal of large dams or widespread changes to forestry within a watershed, could be addressed with the added legal backing of SARA. However, as evidenced by iBoF experience, the added



legal backing provided by SARA has not led to additional capacity to address such large-scale issues despite these threats being clearly identified in the Recovery Potential Assessment by DFO.

Further, research and action to address and alleviate the widespread effects of at-sea mortality will also be an important aspect of recovery planning. A SARA listing should theoretically result in additional funding for research and recovery actions, but again as evidenced by the iBoF listing, the only action that has yet to produce a measurable effect of salmon conservation has been the establishment of a LGB program.

Investing in data collection, monitoring and research

As is required by law, COSEWIC has applied the precautionary approach in assessing both the Eastern Cape Breton and Southern Uplands DUs, in the face of uncertainty due to insufficient data. The NSSA feels strongly that this data deficiency must be addressed immediately. Field assessments have been limited due to ongoing budgetary and staffing cuts within the population ecology division of the science branch. This has led to an over-reliance on historical data, data extrapolation and a complete absence of data for many of the streams and rivers in these DUs. More monitoring is required to assess the contemporary distribution of species, available habitat conditions, and the identification of opportunities to mitigate threats to salmon, with the aim of prioritizing actions that could increase freshwater productivity.

Modifying the scale at which DUs are managed

The definition of DUs for Atlantic Salmon follows the COSEWIC guidelines regarding discrete and evolutionary populations^{iv} and considers the genetic distinctiveness of populations, inherited traits, and eco-geographic considerations. These DUs span large geographic areas and, when considered under SARA, force multiple populations of Atlantic Salmon (i.e rivers) to be managed as one unit. Contradictory to this, the threats facing Atlantic Salmon and thus the most appropriate recovery actions occur at a river-by-river scale. Further, DFO-regulated fisheries and those fisheries self-governed by First Nations are managed at a river-specific scale.

The NSSA believes that DFO needs to acknowledge this juxtaposition. We request the ability to incorporate mechanisms to allow for legal salmon fisheries in specific watersheds when stocks in those specific rivers meet thresholds of sustainability – specifically river-by-river management. This reflects the unique life cycle of Atlantic Salmon, which brings fish back to their natal rivers to spawn. This limited straying minimizes any “spill-over” effects between populations and supports river-by-river management.

Finally, the resources to recover salmon populations are limited and it is likely that only a few populations will receive the resources required to recover. Thus, it is likely that, even with an unprecedented investment in recovery, we would be able to recover only a handful of priority populations within these DUs. If the SARA definition of recovery is based on distribution (as it has been for other SARA list fish (e.g Striped Bass), then recovery of these large populations would not trigger a reopening of recreational fisheries.



The NSSA requests that river-by-river management be incorporated. Doing so would provide some reassurance to anglers that their efforts to recover priority populations would have the potential to restore access to recreational fisheries. This is important given the resource gap where small populations within the DUs, or those with little opportunity to recover (e.g. with large instream dams) are not likely to be the focal point of recovery actions.

It is absolutely critical that the necessary financial resources are allocated to undertake a recovery plan with concrete objectives and firm timelines. The *Endangered* (SARA) listing of the Inner Bay of Fundy salmon population has been very disappointing for salmon conservationists. The process for the Southern Upland populations must be more proactive and accountable.

Fostering Stewardship

The listing of a species as Endangered or Threatened under the SARA triggers legal prohibitions which effectively put an end to recreational angling. A well-managed catch-and-release fishery fosters stronger public engagement in salmon conservation; provides important population data for stock assessment; and helps prevent poaching due to the presence of responsible anglers on the water. A SARA listing could also potentially curtail long-term research and habitat restoration efforts to which the NSSA and our local affiliates have devoted considerable resources.

For these reasons, the NSSA is opposed to the listing of the Eastern Cape Breton DU of Atlantic Salmon as Endangered under SARA, and requests that it instead be listed as Special Concern. This designated unit has a high degree of geographical variability, reflected in highly variable salmon populations in its rivers. In the Middle, Baddeck, and North rivers, salmon populations appear to be stable, indicating that the catch-and-release recreational fishery is not causing undue harm.

From our understanding and experience of the listing process and the resulting prohibitions, the only thing that will for certain occur is the closure of legal, low impact fisheries. Other threats will not immediately be addressed; not forestry, not gold mining, nor large scale dams. Any positive impacts to the population resulting from listing, over and above our current tools for restoration, are not assured.

The intended purpose of a listing under SARA is to advance the recovery of Atlantic Salmon. All of us at the Nova Scotia Salmon Association believe that continued investment of time, effort, and money by our local River Associations and conservation-minded anglers, along with research and support from our government partners, is the most proven and effective formula to realize that purpose.



In conclusion, in the absence of river-specific assessment and management, commitment and investment in live gene banking, freshwater recovery action and marine survival research and mitigation, we remain opposed to a SARA designation of Endangered for the Eastern Cape Breton and the Southern Upland DUs. We welcome the opportunity to collaborate, consult, and otherwise support DFO's efforts to support the recovery of Atlantic Salmon.

Sincerely,

Mr. Mike Crosby
President
Nova Scotia Salmon Association,

ⁱ https://www.registrelep-sararegistry.gc.ca/virtual_sara/files/policies/SARA-CEAA-LEP-LCEE-guide_0811_eng.pdf

ⁱⁱ https://registrelep-sararegistry.gc.ca/virtual_sara/files/policies/Permitting_EN.pdf

ⁱⁱⁱ Gibson, A.J.F., & Bowlby, H.D. (2013). Recovery potential assessment for Southern Upland Atlantic Salmon: Population dynamics and viability. *DFO Canadian Science Advisory Secretariat Research Document*, 2012/142. iv + 129 p.

^{iv} <https://cosewic.ca/index.php/en-ca/reports/preparing-status-reports/guidelines-recognizing-designatable-units>