

ONTARIO FEDERATION OF ANGLERS & HUNTERS



Ontario Conservation Centre

P.O. Box 2800, 4601 Guthrie Drive, Peterborough, Ontario K9J 8L5
Phone: (705) 748.6324 • Fax: (705) 748.9577 • Visit: www.ofah.org • Email: ofah@ofah.org

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Black Sturgeon River Camp 43 Dam Project
Project Manager
Ministry of Natural Resources and Forestry
Regional Operations Division, Northwest Region
435 James Street South, Suite 221A
Ontario Government Building
Thunder Bay, Ontario
P7E 6S7

Dear Sir or Madam:

Subject: EBR Registry Number: 012-9197. Black Sturgeon River Camp 43 Dam Project – Public Inspection of Draft Environmental Study Report

The Ontario Federation of Anglers and Hunters (OFAH) is Ontario's largest, non-profit, conservation-based organization, representing 100,000 members, subscribers and supporters, and 740 member clubs. The following submission is written in response to the Camp 43 Dam Environmental Study Report (KGS Group, November 2016) (referenced as "ESR" in the remainder of the document). The OFAH has participated in discussions related to this project proposal since 2004. We are represented on the MNRF-led Fisheries Management Zones 6 and 9 Councils, which composed a portion of the public consultation related to this project. We were also active participants in the Structured Decision-Making process in 2013, which was organized to facilitate discussions on this proposal. Given our long-standing and active involvement in this project, we would like to highlight our issues with the ESR's content, as well as the significant uncertainty and ecological risk that would accompany the proposed action should it carry forward.

The OFAH does not support the ESR's stated preferred alternative of the partial removal of the existing Camp 43 Dam on the Black Sturgeon River. The proposal is to remove the Camp 43 Dam to allow for upstream passage of Walleye and Lake Sturgeon, while concurrently constructing a new dam, approximately 50 kilometers upstream at the previous Camp 1 Dam site. While the comments below are not intended to be exhaustive, they are presented to introduce issues of major concern that need to be addressed in a meaningful way before proceeding with the Environmental Assessment.

The Treatment of Uncertainty within the ESR

The level of uncertainty generated by a proposed project and the number and significance of major data gaps bears directly on project acceptability. In its most fundamental form, an environmental assessment seeks to eliminate the uncertainty and "unknowns" posed by a given project. Contrary to conventional EA practice, this draft ESR does the opposite by simply acknowledging them and proposes a blanket acceptance: Page 121 of the ESR states that "the impact that Rainbow Trout, Pacific Salmon and other non-native and invasive species will have on native species and the aquatic environment of the Black Sturgeon River and its tributaries above the Camp 43 Dam will only be known once the dam is removed". We strongly believe that abdication of responsibility to mitigate is unacceptable.

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Concerns Related to the Recovery Goals

Walleye population recovery in Black Bay – The greatest assumption in the draft ESR is that the habitat upstream of the Camp 43 Dam is necessary for the recovery of the Walleye population in Black Bay as suggested by Bobrowicz (2012). There has been no evidence-based connection between Black Bay Walleye populations and the Camp 43 Dam. During the Structured Decision-Making Process, a leading MNRW Walleye expert indicated that the Walleye population in Black Bay does not appear to be limited by appropriate spawning habitat. Given that this project is predicated on the recovery of the Black Bay Walleye population, why was this important detail omitted from the ESR? If spawning habitat is not limiting the Walleye population in Black Bay, then removal of the dam has no merit for recovery. In addition, according to the ESR, only portions of Black Bay have been assessed for spawning habitat. If only certain portions of the bay have been characterized, then why is the hypothesis of spawning habitat being the limiting factor in the recovery of the Black Bay Walleye population being presented as fact?

There is further uncertainty related to the accessibility and productivity of the spawning habitat upstream of the Camp 43 Dam. Can Walleye physically access the upstream habitat, and is that habitat productive enough to facilitate the desired outcome of rehabilitating the Walleye population in Black Bay and the Black Sturgeon River? **Potential** upstream (of Camp 43 Dam) spawning habitat is identified throughout the document as being 325,000 m², though there is very little detail on how this habitat was assessed. Sakamoto (2007) identified approximately 325,000 m² of rapids in the reach of river upstream of the proposed Camp 43 Dam site, although at no point in the ESR was there evidence provided suggesting that these rapids were actually suitable Walleye spawning habitat. Is there a detailed analysis of the spawning habitat upstream of Camp 43 beyond an estimate of total area that has potential (i.e. how much of the rapids will actually be used by Walleye for spawning)? How does this area estimate then translate into the 100 percent spawning rehabilitation potential that is assumed during the comparison analysis? Where is the research suggesting that Walleye did, do, or would use this habitat? The productivity of this habitat is a fundamental element of the proposal to decommission the Camp 43 Dam; however, it remains a significant uncertainty because there are absolutely no details or evidence to support it.

The ESR suggests that a telemetry study should be conducted to help to inform on the probability of fish spawning upstream of the Camp 43 Dam to reduce the uncertainty around how much of the habitat will be utilized. High Falls is a natural barrier that is only 5.5 kilometers upstream of the Camp 43 Dam. Should this prove to be a significant barrier for the passage of Walleye, this would significantly reduce the estimate of available spawning habitat. In turn, it would significantly reduce the potential productivity increase that the ESR assumes to be possible with dam removal. The OFAH agrees that more research is required to determine the accessibility of potential spawning habitat upstream of the Camp 43 Dam, and until there is more evidence to inform a decision, it remains another source of significant uncertainty. Unfortunately, Section 5.7.1 of the draft ESR treats this significant assumption as fact: “High Falls is not a barrier to Walleye and Lake Sturgeon migration. Both Walleye and Lake Sturgeon have access to all spawning habitat downstream of the Camp 1 site to the mouth of the River at Black Bay.” It is our understanding that the MNRW carried out a telemetry study that released 30 tagged Walleye above the Camp 43 Dam, and that none of these fish moved above High Falls. Why were the results of this study not included in the ESR? Even preliminary findings of this research would help to inform a critical source of uncertainty.

Sea Lamprey – The sensitivity analysis in the draft ESR indicated that the greatest environmental concern associated with the selection of Alternative 3 (decommissioning of the Camp 43 dam) is the likelihood of a significant increase in Sea Lamprey production. The OFAH fully agrees with this assessment. Additionally, the Great Lakes Fishery Commission (GLFC), Fisheries and Oceans Canada (DFO), and U.S. state agencies have raised concerns regarding the predicted increase in Sea Lamprey production should the Camp 43 Dam be decommissioned. Prior to the construction of the Camp 43 dam in 1959-1960, the 70 kilometer stretch of river below the Camp 1 Dam site as well as four main tributaries were treated with lampricide to prevent infestation of Sea Lamprey. The additional cost to resume treating this habitat should the Camp 43 Dam be removed is a significant source of concern for the agencies responsible for Sea Lamprey control in Lake Superior.

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Lake Sturgeon Rehabilitation

One of the stated objectives of this project is to rehabilitate the Lake Sturgeon population in Black Bay by allowing for an increase in accessibility to spawning habitat that is currently blocked by the Camp 43 Dam. However, should this dam be decommissioned, there will be the associated requirement to treat the now exposed reach from the proposed Camp 1 Dam site downstream to the Black Sturgeon River mouth with lampricide to prevent a significant increase in the population of Sea Lamprey in Lake Superior. The ESR states that juvenile Lake Sturgeon are susceptible to lampricide treatments, and that “As such, an increase in lampricide treatment under Alternative 3 may have a potential negative impact on Lake Sturgeon recovery in the Black Sturgeon River and Black Bay.” (Pg. 113-114). Why is this not considered in the Lake Sturgeon recruitment potential for Alternative 3 found in Section 3.3.5? The positive and negative impacts must both be presented and assessed in the assessment of Alternative 3; otherwise, this is not an objective and transparent consideration of the different alternatives.

Northern Brook Lamprey – There is a large population of native Northern Brook Lamprey (estimated larval population of 14 million), a species of special concern in Ontario, in the reach of the Black Sturgeon River downstream of the proposed Camp 1 Dam site. Should the Camp 43 Dam be partially decommissioned and a new barrier built at Camp 1 as per Alternative 3, the section of the river that supports this population will require lampricide treatment to control Sea Lamprey as indicated above. Lampricide treatments cause significant mortality in Northern Brook Lamprey (Great Lakes Fishery Commission), meaning that this population will be significantly impacted should the Camp 43 Dam be decommissioned. While the Draft ESR states that these impacts will occur, it is unclear how these probable impacts are integrated into the decision analysis and how they were weighted in the comparison against the other alternatives.

Pacific Salmonids – There is significant uncertainty regarding the outcome of interactions between native Brook Trout and naturalized Pacific Salmonids, primarily Rainbow Trout and Chinook Salmon, should the Camp 43 Dam be removed. While Rainbow Trout are currently present in the reach between the Camp 1 and Camp 43 Dam, the numbers would likely increase if the Camp 43 Dam is removed.

Departure from Recognized EA Practice

Inappropriate Project Scope – The scope proposed in the subject EA falls far short of project requirements. Proper scoping is arguably the most important part of the EA process. It sets the physical and “intellectual” boundaries of the EA upon which identification and mitigation of all adverse effects are based. The following points outline the limitations of the project assessment from a spatial and temporal perspective:

- i. The Project Assessment Area is described as ranging to Eskwanonwatin Lake with a new dam/weir proposed near the outlet to the lake at the former Camp 1 Dam site. The ESR provides little on potential adverse effects to Eskwanonwatin Lake itself and focuses on the river downstream. The construction of a new barrier at the Camp 1 site as recommended in Alternative 3 in the ESR is projected to result in a 2.2 meter increase in the water levels of Eskwanonwatin Lake. No inventory information on the lake's existing aquatic and riparian processes is provided and potential effects of water level increase are not discussed. Unanswered questions arise as to the impacts this proposed barrier might have on current recreational users (given that this area falls outside of the scope of the draft ESR). Clearly, the scope of the project should at least include Eskwanonwatin Lake and upstream habitat potentially affected by backwater from the new dam.

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Additionally, four significant tributaries to the Black Sturgeon River: Mound, Mouseau, Shillabeer, and Larson (three of which needed to be treated with lampricide prior to the construction of the Camp 43 Dam in 1959) that outflow between the Camp 43 Dam and the former Camp 1 Dam site were deemed by the ESR as being out of scope. This is not the case as considerations will need to be made regarding the further construction of barriers at the confluences of these tributaries with the main branch of the Black Sturgeon River to prevent colonization of Sea Lamprey in these tributaries. This fact is reflected in the associated 2016 amendments to the Black Sturgeon River Provincial Park Management Plan, which states that these considerations will need to be made. How can these tributaries be considered out of scope of this project when modifications will need to be made should the Camp 43 Dam be decommissioned?

- ii. "Regional Assessment Area"- ESR drawings showing the limits of "regional assessment area" include the Wolf River and several major streams/watersheds to the immediate west of the Black Sturgeon River that all drain into Black Bay. Since the Black Sturgeon River is not the only watershed affecting Black Bay, we agree that those additional watersheds should be included in the assessment. The ESR, however, is silent on the fisheries productivity of those streams and their significance to Black Bay Walleye and Lake Sturgeon populations relative to the Black Sturgeon River.
- iii. Scope of the Assessment – Canadian Environmental Assessment Agency (CEAA) defines the Scope of the Assessment as the consideration of influencing "factors" in an EA. Regardless of ESR assertions to the contrary, Sea Lamprey are known to range widely and are able to move beyond Black Bay into international waters of Lake Superior proper: Based on discussions with experts from the Great Lakes Fishery Commission (GLFC) and partners, it was illustrated that the report erroneously implies that production of juvenile Sea Lamprey from the Black Sturgeon River will remain within Black Bay. The implication that Sea Lamprey produced in the Black Sturgeon River will remain within Black Bay is not actually supported by the studies (Kaye et al. (2003); Harvey et al. (2008)) cited in the ESR. Kaye et al. evaluated adult male Sea Lamprey, and not newly metamorphosed parasitic Sea Lamprey. Adult Sea Lamprey are no longer migratory and are instead focused on reproduction. Harvey et al. evaluated Sea Lamprey that are 25-200 grams in mass. These lamprey are actively feeding, and although the ESR does identify that the diet of the Sea Lamprey captured within Black Bay is different than other ecoregions of Lake Superior, there is no basis to conclude that these lamprey remain within Black Bay. The ESR correctly cites data on newly metamorphosed lampreys [Section 4.6, P.122] with 69 percent of the lamprey being recaptured more than 200km from their initial release site. This data includes Sea Lamprey released in the Wolf River, adjacent to the Black Sturgeon River in Black Bay (GLFC). Accordingly, the scope of the assessment must include consideration of the effects of potential increased Sea Lamprey production on greater Lake Superior, including US stakeholders. This is a requirement for Ontario under the Joint Strategic Plan for Management of Great Lakes Fisheries.

In addition, Foster (2009) notes the presence of an earthen dam in the upper watershed that could potentially allow fish access to the Lake Nipigon watershed to the east, further suggesting an expansion of assessment scope.

- iv. Temporal Boundaries - are set at 25 years as "the time estimated to rehabilitate the walleye population in Black Bay", yet ecological justification for the 25 year period is not provided. Interestingly, this same time period can be considered an industry standard for evaluation of costs in engineering studies, as later seen in this report.

Selection of Alternatives – The proponent's method for selection of alternatives is questionable. The ESR states that the selection of the five alternatives presented was completed by the MNRF. It would appear that the Consultant did not participate in the selection of alternatives. This seems inappropriate because it may limit the alternatives to be considered, prevents input of new ideas and effectively narrows the project scope without justification.

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Conclusion

Although it is recognized that dam safety repairs are needed for the Camp 43 Dam, the ecological goals related to the Black Bay Walleye and Lake Sturgeon populations require more information to determine an optimal strategy. Other management options should be considered for improving the Walleye population in Black Bay. The OFAH strongly opposes the proposed preferred alternative 3: Partial demolition of the Camp 43 Dam and construction of a new multi-purpose dam at the Camp 1 Dam site near the outlet of Eskwanonwatin Lake. **Without sufficient evidence to support dam removal, the OFAH recommends that a barrier be retained at the Camp 43 location to prevent the upstream passage of Sea Lamprey.** The major uncertainties outlined above, and their associated ecological risks provide an overwhelming basis to reject the ESR's preferred alternative. This ESR has not properly evaluated the ecological trade-offs and, therefore, it does not sufficiently inform the decision that needs to be made regarding the fate of the Camp 43 Dam.

We appreciate the opportunity to comment on this Draft Environmental Study Report and are committed to continuing our involvement in this important decision that will have significant implications for Lake Superior.

Yours in Conservation,



Tom Brooke, M.Sc.
Fisheries Biologist

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cc: OFAH Zone B Executive
OFAH Fisheries Advisory Committee
Angelo Lombardo, OFAH Executive Director
Matt DeMille, OFAH Manager, Fish & Wildlife Services
OFAH Fish & Wildlife Staff