

ONTARIO FEDERATION OF ANGLERS & HUNTERS



Ontario Conservation Centre

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August 29, 2014

Mr. Paul Norris, President
Ontario Waterpower Association
380 Armour Road
Peterborough, Ontario
K9H 7L7

Dear Mr. Norris:

Subject: OFAH Comments: Toolkit For Ecological Flows and Waterpower

The Ontario Federation of Anglers and Hunters (OFAH) would like to thank the Ontario Waterpower Association (OWA) for the opportunity to attend the stakeholder workshop, and to provide written comments on the Toolkit for Ecological Flows and Waterpower (hereafter referred to as draft toolkit). The OFAH has long-standing interest in ecological flows, as they are directly related to fish habitat, fish passage, and cumulative impacts to fish and wildlife species in the vicinity of these projects. We have reviewed the draft toolkit and have several comments, questions, and concerns.

Ecological Flows Assessment for Retrofits

The OFAH has concerns regarding the statement: *“As an example, projects taking place at existing infrastructure with little or no alteration of flow are less likely to require an ecological flow assessment whereas Greenfield projects which alter the existing flow regime are more likely to be expected to conduct an Ecological Flow Assessment with a Hydrologic Method and/or to confirm Ecological Flows using Hydraulic Rating or Habitat Simulation methods, as determined by the practitioner.”* An ecological flows assessment is extremely important in retrofits of existing infrastructure, as the structure and management plans for these facilities may be dated and inappropriate for the current industry standards. The OFAH recommends that ecological flows assessments be completed for all waterpower projects, including existing infrastructure retrofits.

The OFAH has concerns with guiding principle number 4: *“Recognize that baseline (existing environment) conditions are those of the aquatic ecosystem at the time the ecological flow assessment is being undertaken and used as the standard against which change will be measured.”* This principle only speaks to Greenfield projects where there is no existing infrastructure. Considering many of the waterpower projects proposed over the next decade will be retrofits of existing dams, how are ecological flows to be considered/measured at these sites? Many existing structures and their current flow regimes were based on using outdated regulations/guidance, or even prior to the development of any formal regulations/guidance. Therefore, it is extremely important to determine the appropriate ecological flows based on the original run of river data (if available) or habitat simulation modeling and species specific requirements based on current and historical records. It must be explicitly shown that the proponent has made every possible effort to determine the appropriate ecological flow.

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The Ecological Flow Assessment Process

The OFAH has concerns with the guiding principle number 7: *“Recognize that some waterpower projects may not require ecological flow assessments.”* When would an ecological flows assessment not be required? What screening criteria or considerations are made when deciding if a project requires an ecological flows assessment? We recommend including the specific criteria, adding examples and/or providing a list of situations where and when ecological flows assessment would not be necessary.

The OFAH has concerns with the statement: *“The ecological flows development process supports practitioners in decision-making regarding the appropriate methods to conduct and, as required, confirm ecological flows from a suite for methods summarized in the methods toolbox.”* Why is the term “as required” included in this statement? What would be the utility in choosing and conducting an ecological flows assessment method if the results are not being validated/confirmed at the project site? The OFAH is not opposed to desktop assessment methods utilizing current data collected from the field; however, it must be confirmed that the determined flow is appropriate for the impacted species and habitat at the site.

The OFAH has concerns with the tool selection matrix table and corresponding application table. We understand the purpose of this selection matrix is to aid in categorizing the various types of river systems and break them down by level of risk. However, we caution the oversimplification of considerations for when to administer an ecological flows assessment. Waterpower projects are extremely complex and comprised of significantly more variables than are found in this matrix. As stated previously, we strongly recommend requiring that ecological flows assessments, monitoring and reporting be performed for all waterpower projects moving forward. We are concerned that this screening table shows situations where no ecological flows assessment is required.

While we recognize that ecological flows can be inferred through the *“practical application of the framework which guides waterpower project development”* under Section 3.1 Legislative and Regulatory Context, it is inherent in prescribed considerations rooted in the Class EA for Waterpower, Lakes and Rivers Improvements Act (LRIA), and the Fisheries Act (FA). Both the LRIA and FA have provisions for the protection of fish passage for waterpower developments. Often fish passage is not possible without proper ecological flows. The FA also speaks to fish habitat protection. Without appropriate ecological flows, there are impacts to the availability fish habitat (see Habitat Suitability index).

The OFAH recommends referencing Canadian examples under section 3.2 definitions and guiding principles such as the DFO led initiatives Hydro-net and the Centre of Expertise on Hydropower Impacts of Fish and Fish Habitat (CHIF).

Socio-Economic Considerations & Determining Operational Flows

The OFAH has concerns with the statements: *“Subsequent to or concurrent with the development of ecological flows important social and economic flow considerations and requirements are/will be identified and incorporated to derive the integrated operational flow of the facility”* and, *“This Toolkit uses a practitioner-driven process intended to provide important background information and context, decision-support tools and methods for the development of ecological flows for new waterpower projects.”*

Again, the OFAH recommends that the toolkit be used for all waterpower projects. The OFAH understands the need to consider and integrate socioeconomic and engineering flow requirements when developing operational flow regimes under step three of section 4.2; however, ecological flows and operational flows should be developed and reported independently (acknowledging that ecological flows should dictate operational flows). The OFAH also recommends the determination of operation flows be removed from this toolkit and be addressed in another separate document. We feel that the overly simplified explanation of determining operational flows distracts from the toolkits main purpose of determining ecological flows for waterpower projects.

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We agree that ecological flows are extremely important for the determination of operational flows; however, there is a risk that ecological flows assessment will be chosen to meet specific operational flow requirements, unless they are treated and reported on separately.

The criteria and methods proposed in the toolkit for integrating the socioeconomic and engineering requirements are so broad and diffuse, it was impossible for us to understand how the health and perpetuation of local fish species (ecological flows) are weighted in relation to the impacts on revenue generation by the facility (operational flows). The OFAH recommends that the determination of operational flows should be reported transparently, showing the ecological flows assessment results and the steps, rationale, and analyses used. How are ecological, social, and economic considerations weighted when determining operational flows? The OFAH maintains that ecological considerations must remain a priority when making decisions on integrated operational flow of a facility.

The OFAH remains concerned that this is a proponent-driven process with little regulatory guidance as to what considerations, efforts, and methods are used to determine ecological flows. Considering this is a proponent driven process, the OFAH believes there is too much flexibility in the selection of tools to evaluate and determine the appropriate ecological flows. This could result in a greater risk of proponents choosing a method that will ultimately result in their desired operational flows (i.e. cost savings exercise) rather than selecting a method that will use the best available science to determine appropriate ecological flows (without any social/economic considerations). A clear decision matrix and standardization of required ecological flows assessments based on location and species present is required to ensure that ecological flows are developed in a consistent and transparent manner.

Habitat Suitability Index

The OFAH has major concerns with the statement under step two of section 4.2: *"In Ontario, few Habitat Suitability Indexes have been developed for resident fish species and the process to develop new HSI is both time consuming and very expensive."* The main purpose for considering ecologic flows is to lessen the impact of flow alteration for the aquatic species that rely on those flows for their life processes (migration, spawning, nursery, etc.). The OFAH acknowledges that there are currently gaps in the information available for consideration during ecological flows assessments. The proponent knows the fish species and flow rates at the site, but may not know what flows are appropriate for those species. It also appears that the main obstacle to the creation of Habitat Suitability Indexes (HSI) for specific fish species in Ontario is the time and expense. What data is the MNR using (if any) when considering the species-specific appropriateness of ecological flows during the review and approvals process? Considering there are legislative requirements (LRIA and FA) for the protection of fish and fish habitat, an HSI should be developed for the review of waterpower projects. There are already over 200 generation facilities in Ontario and more planned in the next decade. It is extremely important that HSI's be developed before these new works and retrofits break ground. The OFAH does not consider time and expense as viable reasons for not developing crucial scientific guidance documents for Ontario's aquatic species. We question the validity of determining ecological flows for a site without science-based data to show that the flow is appropriate for the species present. The OFAH would be happy to meet with the industry, government and stakeholder groups to discuss the development of HIS's for Ontario's game fish species.

The OFAH recommends that Species at Risk (SAR) (e.g. Lake Sturgeon) and their legislated habitat protection should be addressed in this section. There is a wealth of species specific SAR guidance that should be referenced and included in this toolkit.

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Monitoring & Adaptive Management

The OFAH is pleased to see that monitoring and adaptive management plans are suggested under step four of section 4.2. Specifically, we like the statement “*Adaptive management should include contingency plans in the event calculations, predictions and assumptions under or overestimate the impact to the riverine environment.*” We also suggest including Ontario specific examples (case studies) where this type of adaptive management has been exercised in the field. The OFAH recommends that the wording be strengthened in step four, to remove phrases like “as appropriate” and “should.” Further, the reporting should be done on an annual basis and be made available to the public for review and comment.

The OFAH has concerns with the guiding principle number 6: “*Encourage monitoring and adaptive management to track success, improve the effectiveness of ecological flows methods and inform future planning initiatives.*” The OFAH recommends strengthening guiding principle number 6 by making monitoring and adaptive management mandatory. In the absence of legislative documents requiring ecological flows monitoring and reporting, other legislation (e.g. LRIA and FA) could/should incorporate ecological flows into the mandatory reporting.

Appendix C – Case Studies

While we appreciate the inclusion of case study examples to help in the interpretation and application of the toolkit, we would like to see more variability in the types of projects and impacts to the ecological flows. We would also appreciate information on ecological flows compared to the operational flows for each site and how those decisions were made. Finally, considering these are already completed projects, we would also like to see the monitoring and reporting for the adaptive management of these projects.

Conclusion

The OFAH would like to thank the OWA for including us in the stakeholder meeting on ecological flows and the opportunity to provide comments on the draft toolkit for ecological flows and waterpower. The OFAH believes that a toolkit for ecological flows and waterpower will be invaluable to ministries, proponents and stakeholders in the development and review of waterpower proposals across Ontario; however, the proposed toolkit is not comprehensive enough for proponents to make informed decisions when determining ecological flows. Toolkits generally provide guidelines or options for management and are meant to provide recommendations based on current scientific knowledge of the effectiveness of each option. For the most part, these typical elements are lacking in the proposed toolkit. We have offered a number of comments and questions to highlight potential gaps and generate discussion on how the effectiveness of this toolkit could be improved. The OFAH would be happy to meet with the OWA, the MNRF, and any other interested stakeholders to discuss ecological flows further or help in the development of any guidance documents for waterpower in Ontario.

Yours in Conservation,



Chris Godwin
Land Use Specialist

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