

ONTARIO FEDERATION OF ANGLERS & HUNTERS



Ontario Conservation Centre

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Fish and Fish Habitat Protection Program
Fisheries and Oceans Canada
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Subject: Seeking input to continue modernizing and/or developing policies, frameworks, instruments, and guidance to further implement the fish and fish habitat protection provisions of the *Fisheries Act*

The Ontario Federation of Anglers and Hunters (OFAH) is Ontario's largest, non-profit, fish and wildlife conservation-based organization, representing 100,000 members, subscribers and supporters, and 725 member clubs. We appreciate the ongoing consultation under the Fish and Fish Habitat Protection Program's (FFHPP) Wave 2 Engagement and offer the following feedback on the Prescribed Works and Waters Regulation (PWWR), the proposed classes, and the Framework to Identify Fish Habitat Restoration Priorities.

The new *Fisheries Act* was intended to strengthen the legislation and provide modern safeguards for the protection and conservation of fish and fish habitat. However, PWWR and other instruments and tools like Letters of Advice and Codes of Practice are underperforming and compromising the protection provisions of the *Act*. We offer a number of high-level recommendations to improve the regulation and provide strategies for approaching the proposed classes. Identifying fish habitat restoration priorities is a necessary first step and we hope our suggestions provide some guidance, but the undertaking will require significant and ongoing funding and resourcing with no room for shortcutting.

Prescribed Works and Waters Regulation

Ongoing fish and fish habitat losses

According to Fisheries and Oceans Canada (DFO), death of fish and harmful alteration, disruption or destruction of fish habitat (HADD) are "unlikely to be fully avoided" by routine projects that fall under PWWR. Despite this, proponents are not being made to compensate for these losses because the Department believes them to be predictable, localized, or of a short duration. A project may be relatively benign on its own but combined with innumerable projects across the landscape that admittedly cause death of fish or HADD, the overall impact is magnified and compromises the conservation and protection of fish and fish habitat. DFO affirms managing and reducing risk will be overcome by fish-friendly designs, national standards, mandatory notifications, and enhanced enforceability, which are all useful tools, but this framework does not actively regain fish and fish habitat losses nor address cumulative effects.

We acknowledge conducting full reviews, having site-specific authorizations, and traditional offsetting requirements is impractical for routine works, undertakings or activities (WUAs), and would take resources away from larger-scale projects and/or bigger threats. For this reason, during Wave One of the FFHPP, the OFAH recommended establishing a fee-in-lieu framework as an alternative option to compensate for these losses. However, DFO states the *Fisheries Act* does not currently allow fee-in-lieu options for offsetting impacts to fish and fish habitat and is beyond the scope of this exercise. Furthermore, DFO uses other non-regulatory tools like Letters of Advice that conflict with the HADD provisions of the new *Fisheries Act* and rely on proponents to self-regulate and self-monitor in order to remain compliant with the *Act*, leaving us with little to no confidence that fish and fish habitat are being adequately protected. In the face of ongoing habitat losses with PWWR, Letters of Advice and Codes of Practice, we firmly believe a non-regulatory fee-in-lieu framework is within the scope of this exercise and, though not ideal, would at least provide some level of compensation where losses are currently not being regained.

Upholding the purpose of the new *Fisheries Act*

A comprehensive evaluation of DFO's Fish Protection Program indicated all development projects near or in Canadian waters (even "small private docks") have an impact on fisheries (Fisheries and Oceans Canada, 2016). Like authorizations, the PWWR enables DFO to permit fish and fish habitat losses, but it is not yet clear whether there will be mechanisms to prevent or address the residual harm caused by the cumulative effects of multiple projects. This is unsettling and contradicts the purpose of the new *Act* to provide a framework for: a) the proper management and control of fisheries; and b) the conservation and protection of fish and fish habitat, including by preventing pollution. How does permitting the death of fish or HADD, notwithstanding the legislative responsibility to 'consider' cumulative effects, uphold the core components of the new *Act* and its intent? The OFAH urges DFO to develop landscape-level, evidence-based, and quantitative thresholds for cumulative effects that can be widely applied to various environments (e.g., urban, rural, pristine). This approach will need to be supported by routine auditing and mechanisms to regain habitat losses from minor WUAs that are going unchecked and unaccounted for. This framework would guide the path forward for addressing cumulative stressors, moving whole-ecosystems away from thresholds and towards a more resilient state.

Classes under the Prescribed Works and Waters Regulation

The FFHPP is seeking input on classes for the PWWR including Shoreline Stabilization and Aquatic Habitat Rehabilitation Projects (AHRPs). In general, the OFAH is supportive of AHRP being included as a prescribed class, but we are concerned about the residual impacts to fish and fish habitat caused by shoreline stabilization works and offer the following recommendations for your consideration.

Shoreline Stabilization

The OFAH supports the use of vegetative plantings, bioengineering, and the measures to reduce impacts on fish and fish habitat for the purpose of remediating ongoing shoreline erosion and appreciate the pre- and post-project notification conditions included in Table 1. However, it would be beneficial to further elaborate on what will be required under the "summary of project implementation." Specific post-project completion reporting requirements should be listed in the regulation and include a minimum level of monitoring and assessment of baseline data on the in-water and shoreline conditions, reporting during the construction phase, and a final overview of the completed project. Alternatively, detailed post-construction monitoring could be performed by DFO for a subset of sites instead of having this be a requirement of every proponent.

Some consideration and documentation must be given for the reasons for the site instability. For example, if a significant upstream alteration has occurred and resulted in a downstream erosion event then the prescribed work may be inappropriate. The stabilization activity may be out of scale when compared to the alteration and the resultant effect may be ongoing and long-lasting. As such, it may be important to identify situations where shoreline stabilization is a "no-go" and potentially requiring additional review and/or authorization. The OFAH is encouraged by the inclusion of measures to reduce impacts on fish and fish habitat but, for these conditions to be effective, there will need to be routine compliance inspections, follow-ups, penalties, and enforcement action (where necessary) to ensure they are strictly adhered to.

As outlined in Quigley and Harper (2004), a hydrological assessment should be made mandatory if projects demonstrate any potential to alter fluvial processes. The Engagement Technical Paper states no additional conditions are being proposed for shoreline stabilization projects whereas, for AHRPs, a requirement for Qualified Environmental Professionals (QEP) is being considered for the project design, implementation, and/or reporting stages. Why isn't the FFHPP considering the same QEP standards for shoreline stabilization projects? As outlined in the technical paper, eleven percent of all projects submitted to DFO for review are shoreline stabilization projects (nearly 25,000 prior to 2019). Therefore, the aggregated impacts to ecological processes at the landscape-level could be significant for some areas. For this reason, monitoring, reporting, professional oversight and, where applicable, mapping (including in-water and shoreline habitat features), should be required for these works as this will lend itself to improving DFO's overall understanding of and strategy for managing cumulative effects.

DFO is proposing shoreline stabilization projects have a threshold that cannot extend more than one hundred metres along the shoreline. This value appears to be arbitrary and not an established measurable standard, because thresholds can vary considerably by location. For example, one hundred metres of riprap materials placed in a degraded system suffering from erosion could provide overall benefits to fish and fish habitat. However, the same application in a less degraded system that results in the loss of natural habitat and/or significant features (e.g., groundwater upwelling) will cause negative effects to fish and fish habitat. As such, we recommend tailoring the extent based on the quality and function of the existing shoreline and in-water habitats. There is also a need to develop policies to prevent proponents from doing multiple projects within the one hundred metre threshold (or any other standard) and developing longer distances of shoreline to riprap, thereby avoiding further DFO review and potential authorization and offsetting requirements.

Aside from various short-term management recommendations for riprap projects, Quigley and Harper (2004) also provide longer-term considerations such as establishing working groups of government agencies, industry, and other relevant stakeholders to help in the development of strategies to conserve watersheds and protect against excessive use of riprap. For example, Aquatic Habitat Canada is a national network that already integrates various parties and stakeholders to help conserve and restore fisheries and could be leveraged for this purpose. The working group could also be used to help identify additional permitting and approval requirements with other governing authorities. For example, this becomes especially important when dealing with the Ontario Public Lands Act and property boundaries that are a specified distance away from or directly at the high-water mark or land that is owned but under water. Taking a proactive approach to long-term planning is critical for increasing the options available for controlling erosion issues, as opposed to applying riprap on an ad hoc basis. Lastly, funding should be earmarked for further research into landscape level cumulative effects caused by shoreline stabilization projects and how to adequately mitigate these impacts.

Aquatic Habitat Rehabilitation Projects

The OFAH is pleased with the decision to include AHRPs as a class under the PWWR. Earlier on, the OFAH was a proponent of greater leniency for restoration activities that achieve net gains in habitat productivity, as well as considering exemptions and/or expediting the review process for conservation organizations. We highlighted the need to clearly outline exactly what constitutes a “restoration project” and indicated these initiatives must be standalone and without any ties to development projects. DFO has implemented some of our recommendations and we offer the following comments to further advance AHRPs.

Nearly ninety per cent of AHRPs reviewed by the FFHPP did not require a *Fisheries Act* authorization and most projects have been carried out by conservation groups. This provides us with some level of reassurance because, generally, conservation groups will have the necessary experience/expertise to carry out these activities and likely have the right intentions. We acknowledge death of fish or HADD are potential outcomes but as long as overall net benefit in habitat is achieved, we recognize the greater good these projects can bring to adding residual gains in habitat amount and/or quality across Canada.

The FFHPP states named works must only use hand-tools or light machinery, take no more than three days to complete, and extend no further than 15 metres along or across a waterbody. It would be beneficial to elaborate and define “light machinery,” as well as provide greater flexibility for the fixed three-day period for projects that implement best management practices and adhere to the measures to protect fish and fish habitat. Separating AHRPs into two classes (named works and broad-scale works) is an important distinction and a good strategy for regulating these types of projects. Section 4.2 of the Engagement Technical Paper provides examples of establishing processes to reviewing and approving AHRPs, but what is meant by funding through “established habitat rehabilitation funding programs”? This phrasing is open for interpretation and will be confusing to proponents; therefore, the FFHPP should consider developing specific criteria, standards, and/or conditions that would apply.

The OFAH supports the proposed safeguards for AHRPs listed in sections 4.1 and 4.2 of the technical paper but feel strongly that long-term monitoring, assessment, and reporting should be mandatory components for both named works and broad-scale works. As we see it, this is the only mechanism that would facilitate the understanding of the performance of an AHRP, whether death of fish or HADD have occurred (and to what extent), if habitat gains have been achieved, and to help guide methods and techniques to be applied in future projects. We would also like to see further consideration of invasive species and steps towards preventing the spread and/or introduction during rehabilitation activities. Additionally, there should be a requirement for these projects to be included under the Public Registry for tracking purposes, accountability, and greater transparency.

From our experience, there is often jurisdictional confusion and uncertainty between provincial/territorial and federal governments that can leave projects at a bureaucratic standstill, especially during the review and approval process. The FFHPP will need to outline expectations, duties and responsibilities, specific projects that would fall under the broad-scale works, and the relevant provincial, territorial, or Indigenous governing bodies that should be involved in the review and approval process: a consistent framework to be relied on by all governing authorities.

Framework to identify fish habitat restoration priorities

Regional and watershed level approaches

The definition of fish habitat under the *Fisheries Act* includes water frequented by fish and any other areas on which fish depend *directly* or *indirectly* to carry out their life processes. From our perspective, DFO's responsibilities intersect with Indigenous, provincial, and municipal jurisdictions when terrestrial activities directly or indirectly impact fish and fish habitat. When considering regional and watershed level approaches to identify fish habitat restoration priorities, the relationship between land use and fish habitat will be an important shared responsibility to acknowledge with other organizations to achieve restoration goals and objectives.

Fish habitat restoration has been found to be more effective when looking at "out-of-stream solutions" prior to instream intervention (Kline and Cahoon, 2010). As such, DFO's approach for identifying and prioritizing fish habitat restoration should focus on ecological processes and sources of degradation at the regional or watershed level including improving water quality, ensuring adequate flow, addressing sources of sedimentation, erosion and eutrophication, riparian rehabilitation, and reducing/removing pollutant inputs (e.g., wastewater/stormwater discharges). In many instances, the removal of dams and barriers will help reconnect isolated habitats and regain ecological connectivity at regional/watershed scales. Using web-based GIS platforms that identify tributary barriers (e.g., Fishwerks, Canadian Aquatic Barriers Database), agencies can expand on these datasets to determine dams that can be removed, dams that serve an ecological and/or societal function and should remain (e.g., Sea Lamprey barriers), candidate dams for being retrofitted with fishways and fish-friendly designs, and other mitigation actions.

Passive/active restoration and special designations

Using a top-down approach, priority should consist of conserving high-quality, high-functioning habitats (e.g., refugia) to help maintain healthy watersheds and aquatic habitat conditions, prevent degradation, and allow for natural recovery and succession (USDA, 2005). Candidates for passive restoration will likely have greater biodiversity and are important for providing broader ecological stability and creating resiliency and adaptability in the face of climate change (Noss et al. 2009). As such, assessing and quantifying biodiversity will facilitate conservation planning (i.e., areas to be conserved/maintained) while diagnosing more degraded, less diverse areas that may require strategies for active restoration. A site may also be ranked as a lower candidate for restoration if invasive species are already established and restoration might encourage off-site spread or increase the suitability of the site for invasive species. Active restoration efforts can be directed outward from protected areas to maintain ecological connectivity to healthy populations and intact habitats (Beechie et al. 2008).

Special designations at the federal or provincial/territorial levels could be leveraged to help identify conservation priorities, goals, and objectives for fish habitat restoration. For example, Ecologically Significant Areas and National Marine Conservation Areas could be ‘hot spots’ for passive restoration and whole-ecosystem priorities and efforts. Similarly, in Ontario, Provincially Significant Inland Fisheries have special socio-economic and ecological importance that could serve as a starting point for identifying restoration priorities within entire watersheds of these features. Great Lakes Areas of Concern and other special designations (e.g., Provincially Significant Wetlands, Areas of Natural and Scientific Interest) could be excellent springboards for fish habitat restoration priorities as well.

Establishing working groups and factors to consider

Many factors will need to be considered when identifying and prioritizing fish habitat restoration including the degree of degradation. Greater emphasis should be placed on areas that have been disturbed by human-related activities; however, if damage is determined to be irreversible and/or the cost effectiveness unreasonable, these sites should be a lower priority. According to cited examples in Noss et al. (2009), greater priority should be given to moderately degraded areas (i.e., sites that can be restored more easily, economically, and with a higher degree of success).

Other frameworks have benefited by harmonizing relevant intergovernmental plans and strategic documents, applying multidisciplinary approaches, and engaging and consulting stakeholders, landowners, and Indigenous communities: a platform for creating long-lasting partnerships, sharing ideas and technical expertise to help achieve mutually beneficial restoration goals. For example, in Ontario, Fisheries Management Zone (FMZ) Advisory Councils consist of government agencies and various stakeholders that collaborate on fisheries management planning processes across large ecological units (i.e., FMZs). Facilitated by DFO, similar provincial or territorial working groups could be established to assist in the identification of fish habitat restoration priorities.

Decision-support systems

Establishing a decision-support tool will help provide guidance for restoration efforts. This could involve a simple scoring or ranking system where values are given to various physical, biological, and cultural indicators and then totaled, or the application of complex models to prioritize waterbodies and watersheds for fish habitat restoration. Decision-support tools (models, scoring/ranking systems) may consider factors such as degree of degradation, threats, and other stressors; social, economic, and environmental values; existing designations; presence/absence of major contributing factors (forestry, mining, development, wastewater, etc.); species at risk/species of special interest (e.g., sportfish); watershed processes and ecological considerations (water quality, land use, biodiversity, aquatic health, road density, surface erosion, sediment, connectivity, riparian habitat, etc.); and project costs and cost-benefit ratio. Collaboration with working groups will be necessary to determine which factors are most important to consider; moreover, baselines, references, and targets that will need to be quantified in order to prioritize fish habitat restoration.

Remote sensing and field data

Remote sensing is recognized in the Great Lakes Binational Priorities for Science under Annex 7 and can be used to characterize and evaluate aquatic habitats and species, and the landscape and factors that affect them (e.g., Essential Fish Habitat Mapper, Great Lakes Aquatic Habitat Framework) (Binational.net, 2019). Building off these methods and techniques and establishing fish and fish habitat restoration criteria will help identify regional and watershed level priorities, goals, and objectives.

A science-based framework should integrate desktop approaches (i.e., remote sensing, spatial analysis, GIS) with physical field data. This may include, for example, existing watershed records gathered by Conservation Authorities (e.g., Ontario Stream Assessment Protocol), and data collected by the Ministry of Natural Resources and Forestry’s Fisheries Assessment Units under the Broad-scale Monitoring Program. Community science platforms (e.g., iNaturalist) may contain datasets that could also be leveraged to help support the identification of fish habitat restoration priorities. Assessing the current statuses of fish and fish habitats using these techniques will help inform restoration needs, act as a gauge to compare future goals and conditions to and find efficiencies.

Closing Remarks

The FFHPP began the engagement process with Indigenous Peoples, partners, and stakeholders in Fall 2020 but not until now, June 2022, did we receive the Wave 1 Report (“What We Heard”): a general overview of feedback that has been received. Unfortunately, the document fails to include comments that were provided on SMART approaches for performance objectives for offsets (i.e., Specific, Measurable, Achievable, Realistic and Time-sensitive), establishing greater than 1:1 offsetting ratios (habitat gained:habitat lost), and fees-in-lieu for minor WUAs that are causing death of fish or HADD and contributing to cumulative effects (PWWR, Letters of Advice, Codes of Practice). DFO maintains that it is committed to govern with openness, effectiveness, and transparency but overlooking stakeholder feedback in this way is a disservice to participants, the engagement process, and ultimately the results that can be achieved for fish and fish habitat.

Summarizing the feedback that was heard is an important initial step to inform the development of new regulations, policies, and guidance to support the implementation of the fish and fish habitat protection provisions of the *Fisheries Act*. More importantly, the OFAH wants to see meaningful consideration and execution that demonstrates how feedback has (or hasn’t) been integrated by the FFHPP and the rationale behind decision-making. Our concern is that the consultation process could be perceived as a box-ticking exercise to satisfy requirements as opposed to assessing the actual merit of the input received and using this information to shape the various modules of the FFHPP. Seeing that the report neglected to document several key recommendations and other issues experienced during the engagement process for Waves 1 and 2, our confidence that fish and fish habitat will be adequately protected and conserved is waning.

The means to alter the course of ongoing fish and fish habitat losses and address aggregated stressors that are contributing to cumulative effects is available but not being used to the fullest extent possible. Prior to establishing an effective framework for identifying fish habitat restoration priorities there is a need for addressing these concerns; otherwise, government agencies, Indigenous communities, conservation organizations, and other stakeholders will be continually attempting to regain preventable fish and fish habitat losses. We hope the continuation of Wave 2, the engagement sessions, relevant modules, and future developments will change the current outlook and lay the new groundwork for a *Fisheries Act* for the future.

Yours in Conservation,



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References

- Beechie T, Pess G, Roni P, and Giannico G. 2008. Setting River Restoration Priorities: A Review of Approaches and a General Protocol for Identifying and Prioritizing Actions. *North American Journal of Fisheries Management* 28:891–905.
- Binational.net. (2019). Public comment period open: draft 2020-2022 Great Lakes binational priorities for science and action. Retrieved from <https://binational.net/2019/07/30/psa-pbasa-jul-2019/>.
- Fisheries and Oceans Canada. 2016. Evaluation of the Fisheries Protection Program and Its Aquatic Invasive Species Component (Final Report) – Project Number 6B139. Evaluation Directorate/Chief Financial Officer Sector. 68 pp.
- Kline M, Cahoon B. 2010. Protecting river corridors in Vermont. *J. Am. Water Resour. Assoc.* 46(2):227–36.
- Noss R, Nielsen S, and Vance-Borland K. Prioritizing Ecosystems, Species, and Sites for Restoration (Chapter 12) (158-171 pp). 2009. *Spatial conservation prioritization: quantitative methods and computational tools* (edited by Moilanen A, Wilson KA, Possingham HP). England Oxford University Press. 304 pp.
- Quigley, JT and Harper, DJ. 2004. Streambank protection with rip-rap: an evaluation of the effects on fish and fish habitat. Canadian Manuscript Report of Fisheries and Aquatic Sciences 2701: xiv + 76 pp.
- U.S. Department of Agriculture. 2005. Aquatic Restoration Strategy. Forest Service – Pacific Northwest Region. 12 pp.