Environmental flows and fish habitat
Submission to the Senate Standing Committee on Fisheries and Oceans (POFO) on Bill C:68: an Act to amend the Fisheries Act and other Acts in consequence

Forum for Leadership on Water (FLOW)
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This brief deals with the section 2(2) in Bill C-68, which incorporates the quantity, timing, and quality of water flows (i.e., environmental flows) into the definition of fish habitat in the Fisheries Act. It reviews the scientific basis for including environmental flows in the definition of fish habitat, acknowledges concerns raised by the regulated community, and proposes a solution to address these concerns while maintaining the intent of the provision. Some content is drawn from a brief submitted to POFO on March 1, 2019 by 23 environmental and conservation groups.

Scientific basis for incorporating environmental flows into the definition of fish habitat

Scientists have determined that natural patterns and conditions of water flowing through rivers, lakes, and wetlands are the “master variable” for ensuring the health of freshwater ecosystems. This means that changes in water flow influence all aspects of ecosystem health, including energy cycling, biodiversity, and habitat for fish and other species. It also means there are limits on the degree to which water flows can be altered before aquatic ecosystems, habitats, and species – and the many benefits they provide society – become compromised.

This science is the foundation for the practice of environmental flows management. The Brisbane Declaration, endorsed by over 800 global experts, defines environmental flows as: “the quantity, timing, and quality of freshwater flows and levels necessary to sustain aquatic ecosystems which, in turn, support human cultures, economies, sustainable livelihoods, and well-being.”\(^1\) Managing environmental flows balances the water needed to support fish and other species, habitats and aquatic ecosystems with water demands for agriculture, hydropower generation, communities, and industry.

In 2013, Fisheries and Oceans Canada sought expert advice from its Canadian Science Advisory Secretariat (CSAS) on managing environmental flows in the context of Canada’s fisheries. The mandate for the CSAS study was to “provide advice on the management of the flow regimes and water levels required to maintain the ecological functions that sustain fisheries associated with that water body and its habitat.” The resulting report concluded that:

> “The fact that there is no existing national framework to set environmental flow standards has led to a situation where fisheries resources, fish habitat, and the supporting freshwater ecosystems may not be consistently protected across Canada. With increasing water demand, and potentially changing background levels in water availability (as predicted by the Intergovernmental Panel on Climate Change and current scientific consensus on the long-term effects of global climate change), there is an urgent need to establish such an environmental flows framework in Canada.”\(^2\)

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Acknowledging and addressing concerns of regulated sectors

FLOW supports the approach to incorporating environmental flows into the definition of fish habitat in the current version of Bill C-68. It reflects the scientific basis reviewed above, and recommendations proposed by numerous environmental and conservation groups and Indigenous governments and organizations during consultations and the legislative processes for modernizing the Fisheries Act.

We have met with a number of industry and agricultural associations over the past six months to discuss Bill C-68. While we acknowledge concerns over how the updated definition of fish habitat will be interpreted in practice, we understand this to be a matter of implementation that will be dealt with in regulations, codes of practices and policy guidance, rather than a problem with the legislation. That said we also recognize that leaving such matters to yet-to-be-developed implementation mechanisms can introduce uncertainty for regulated sectors.

To address these concerns, we propose below alternative language for incorporating environmental flows into the definition of fish habitat. The language seeks to address uncertainty around interpretation of what water flows would be considered part of fish habitat while maintaining the intent of this important update to the Act. We believe this new formulation clarifies that the definition relates to the quantity, timing and quality of water flows within natural ecosystems (i.e., streams, rivers, lakes, wetlands) that are required to maintain the quality of, and access to, areas that fish depend on for their life processes, and does not include industrial or municipal water flows, or rainwater running off city streets or pooling in farm fields.

**Language in current version of Bill C-68**

Currently, Bill C-68 incorporates environmental flows into the definition of fish habitat through a deeming clause that falls under and augments the core definition of fish habitat as follows:

- **fish habitat** means water frequented by fish, and any other area on which fish depend directly or indirectly to carry out their life processes, including spawning grounds and nursery, rearing, food supply and migration areas.

2(2) For the purposes of this Act, the quantity, timing and quality of the water flow that are necessary to sustain the freshwater or estuarine ecosystems of a fish habitat are deemed to be a fish habitat.

**Proposed alternative language**

The alternative language would remove section 2(2) from the Bill and, instead, incorporate environmental flows language directly into the core fish habitat definition (see underscored).

- **fish habitat** means water frequented by fish, and includes the quantity, timing and quality of flows of those waters, and any other area on which fish depend directly or indirectly to carry out their life processes, including spawning grounds and nursery, rearing, food supply and migration areas.

The Forum for Leadership on Water (FLOW) is an independent think tank comprised of water policy experts from across Canada. FLOW works to advance public policy and governance solutions for the protection, restoration and sustainable use of Canada’s freshwater resources and ecosystems.

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