October 23, 2026

Brief to the Canada Water Agency on the National Water Security Strategy (NWSS)

Submission from the International Association for Great Lakes Research (IAGLR)

The International Association for Great Lakes Research (IAGLR) welcomes the opportunity to provide input on the development of Canada's National Water Security Strategy. As an organization dedicated to advancing aquatic science and informing evidence-based water management, IAGLR supports the creation of a strategy that is science-informed, equitable, and capable of addressing current and future water challenges across Canada.

IAGLR offers the following recommendations to be considered as priorties for the NWSS:

1. Establish a Clear and Actionable Definition of Water Security

A National Water Security Strategy should begin with a clear, shared, and operational definition of "water security." The strategy must explicitly identify who and what is being protected, ensuring that water security encompasses people, communities, economies, and ecosystems.

Importantly, ecosystem health should not be treated as a secondary outcome but as a foundational element of water security. Protecting water quantity, environmental flows, water quality, biodiversity, and ecosystem resilience is essential to sustaining the long-term benefits that healthy aquatic systems provide to Canadians.

The strategy should also explicitly address water security for First Nations. Achieving this objective will require sustained investments in water and wastewater infrastructure, the application of science and engineering expertise, and dedicated support for Indigenous capacity-building, training, and long-term operation and management of water systems. A commitment to Indigenous water security should be embedded throughout the strategy rather than addressed as a standalone issue.

2. Build the Strategy on Science, Multiple Knowledge Systems, and Effective Governance

An effective national strategy must be grounded in robust scientific evidence while recognizing the value of diverse knowledge systems, including Indigenous Knowledge and local community expertise. Meaningful engagement with Indigenous Peoples, watershed organizations, municipalities, researchers, and civil society should inform both the development and implementation of the strategy.

Equally important is the governance framework that supports implementation. Water security outcomes depend not only on sound knowledge but also on effective institutions and decision-making processes. The strategy should clearly define responsibilities across jurisdictions, establish accountability mechanisms, and promote collaborative governance models that can adapt to changing environmental, social, and economic

conditions. Strong governance structures will help ensure that scientific knowledge and community perspectives are translated into sustained action.

3. Adopt an Ecosystem-Based Approach

The National Water Security Strategy should embrace a holistic, ecosystem-based approach to water management. Humans are part of interconnected watershed systems, and water governance must reflect this reality.

An ecosystem-based framework recognizes the relationships among water, land, biodiversity, climate, and human well-being. Managing water resources at the watershed scale will improve resilience to climate change, support biodiversity conservation, and protect the ecological functions upon which communities and economies depend. Long-term water security can only be achieved when ecological integrity is maintained and restored across Canada's aquatic ecosystems.

4. Prioritize Shared and Transboundary Waters

Shared waters and transboundary basins deserve dedicated attention within the National Water Security Strategy. Canada is steward of numerous watersheds that cross provincial, territorial, and international boundaries, including the Great Lakes-St. Lawrence system and other waters shared with the United States.

The strategy should explicitly evaluate risks associated with current and emerging U.S. policies, changing water demands, climate-driven hydrological shifts, and evolving governance challenges. It should also strengthen mechanisms for binational and interjurisdictional collaboration, including coordinated monitoring, data sharing, scientific assessment, and response planning.

Given their ecological significance, economic importance, and geopolitical implications, transboundary waters represent a strategic national priority. A dedicated focus on these systems will help safeguard Canada's interests while supporting the long-term sustainability of shared freshwater resources.

Canada has a unique opportunity to establish a National Water Security Strategy that is clear in purpose, rooted in science, inclusive of diverse knowledge systems, and focused on long-term resilience. IAGLR encourages the Canada Water Agency to adopt a definition of water security that places ecosystem health, equity, Indigenous water security, and transboundary stewardship at its core. By combining strong governance with ecosystem-based management and sustained investment in knowledge and capacity, Canada can build a durable framework for protecting freshwater resources for current and future generations.

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