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Responding to the Opportunities in a Canada Water Agency

The development of a new Canada Water Agency was a welcomed announcement by the federal government in late 2019. This document responds to the opportunities that lie in the establishment of the Canada Water Agency with a focus, where appropriate, on the needs and benefits to New Brunswick and the Atlantic region.

Why we need a Canada Water Agency:

- Many organizations and water policy thinkers have been calling for modernization of national water strategy for over 30 years; our current guiding national water management framework, the Canada Water Act, hasn't been significantly updated since 1970.
- The current legislation that lays out how the federation manages water does not account for a changing climate which is now the major driver of how much water, and when, we have to manage and for an increasing number of needs.
- It also does not acknowledge the inherent, Aboriginal, and treaty rights and responsibilities of Indigenous peoples, which has made significant progress in recent years.
- New Brunswick is a small jurisdiction with limited resources (financial and human) to deal with mounting water and climate impacts, with flooding becoming an almost annual recurring concern.
- The St. John river basin in particular is a complex transboundary system, involving two provinces, two countries, and an Indigenous nation.
- Our country's fragmented approach across provinces and territories, while water respects no political boundaries, has caused significant challenges in managing between water responsibilities.
- The federal government, while respecting provincial, territorial and Indigenous jurisdictions, can play a leadership role in bridging these challenges.

Key Priorities of a Canada Water Agency

The federal government has a key role to play in setting a national vision for protecting, enhancing and restoring our water resources for the benefits of all, for all generations. The issues we face, particularly as climate change impacts increasingly manifest as changes to water quality and quantity across the country, call for strong leadership with ambitious goals. These goals must align with and build off of current climate and biodiversity goals and action planning at the federal level.

Science and data

- As the basis for evidence-based water management decision-making, data is constantly being collected but perhaps not being used to its full potential.

- The CWA can play a coordinating role in data management and use by developing or adopting standards necessary to make data interoperable. The FAIR (Findable, Accessible, Interoperable, and Reusable) principles are already used by many organizations doing community-based water monitoring across the country.
- The CWA can help ensure data is moved into active use by providing more pan-Canadian analysis of interoperable data by breaking down silos between data collectors and users.
- The CWA can provide the data infrastructure for data-driven monitoring, analysis and follow-up necessary to implement an adaptive management model for water management.
- The CWA can work closely with the tri-council agencies to ensure more effective financing of research (both natural and social science) that aligns with pressing water management issues.

Transboundary Water Management

Federal authority on transboundary freshwater issues is clear but it cannot be exercised in isolation from provinces, Indigenous peoples, and civil society.

We appreciate the spotlight on transboundary water issues in the draft discussion paper especially given that two of New Brunswick's 13 primary watersheds, the St. John and St. Croix Rivers, are both transboundary waterways.

Recognizing the need for integrated watershed planning, the International Joint Commission (IJC) successfully piloted a Watershed Initiative that identified the St. Croix, Rainy, Red, and Souris River basins as pilot areas for the establishment of international watershed boards. In 2007 the IJC designated the St Croix River Watershed Board as its first international watershed board and broadened its mandate to "proactively assist in preventing and resolving disputes regarding the boundary waters of the St. Croix River by working with stakeholders within the watershed," as well as reporting annually on progress made under its mandate.

We also appreciate the work of ECCC and its science-based national hydrometric monitoring network on behalf of provinces and territories. The data about the atmosphere, ocean, cryosphere, ice, groundwater, and soil moisture and its work collaboratively with the province of New Brunswick and St. John River watershed groups has provided critical inputs to powerful weather prediction tools. The collaboration has been timely, given the back-to-back severe flooding in 2018 and 2019 and last summer's "flash drought."

We support the ideas generated in the draft discussion paper in the section "possible opportunities for transboundary freshwater management." We recommend the new Canada Water Agency develop a pilot initiative in the St. John River watershed that could serve as a 'quick start' for its work, supporting activities that ensure go-forward ecosystem protection. The pilot project could undertake to demonstrate on the ground activities that:

- represent better coordinated support to the IJC and/or the province of NB to ensure that they have the science, data, and information needed to fulfill their responsibilities, and to anticipate and prevent freshwater problems;

- produces a regionally based review of transboundary management experiences to demonstrate how a new transboundary agreement or mechanism focused on the Basin drives all parties forward to address current freshwater problems and prevent future ones, especially increased nutrient pollution, forest loss, and climate change impacts;
- tests modern engagement strategies focused on watershed and environmental organizations, towns and villages, the provincial and State governments and supports the work and participation of the Basin's Indigenous peoples; and
- plans to fill any science, data collection, and analysis gaps so we have the information needed to develop a St. John River watershed plan.

Flow Forecasting

Climate changes are contributing significantly to changes in the timing and volume of basin flows, particularly in the St. John system which has been plagued with three of the four worst floods in NB history since 2008; with 2018 and 2019 record breaking floods costing nearly \$80M each.

Flow forecasting and flood prediction will become increasingly complex, with critical infrastructure, lives and property at risk. While the act of predicting floods and the subsequent decisions to issue public alerts and response measures is importantly an area of provincial jurisdiction, the federal government can play a critical role of increasing the province's capacity to do this job effectively by building a national support system with equity of data, modelling and forecasting capabilities.

A national approach to supply the best available flow information can act as a pan-Canadian cooperative, accessible to flow forecasting offices of all provinces and territories, regardless of their in-house size and human resources. In fact, Canada is one of the last G12 countries to provide such a national system.

Governance

Proper and responsible governance (both formal and informal governance mechanisms) is imperative to the long-term health of our freshwater ecosystems. This is really about the who, how, what, and accountability of decision-making as it relates to freshwater.

A successful CWA must recognize that Indigenous, local and regional leaders and organizations are the ones who know the most about their waters. Their insight, knowledge, experience is invaluable and needs to be included and considered during decision-making processes.

Locally, nationally and internationally governments are moving away from top-down, government-driven approaches to a more collaborative and shared approach to watershed management and governance. Freshwater is benefiting from changes to governance based on meaningful engagement with affected communities and stakeholders, better involvement of First Nations, and improved human and financial support and capacity at the watershed level. It is important to recognize that water is a path to reconciliation and that co-governance with First Nations strengthens their rights and title.

Much of the responsibility for freshwater in Canada falls to provincial and territorial governments, yet watersheds don't adhere to these political boundaries. As noted in the discussion document there are many models for collaboration between national governments and others, including provincial/territorial governments, Indigenous peoples, non-government organizations, stakeholders, the private sector, and citizens. Canada has significant experience using formal agreements to manage freshwater with other jurisdictions and it will be imperative moving forward that these consider the watershed boundaries as well as political boundaries to ensure a consistent, holistic, watershed-based approach to freshwater management. Given the vastness of our freshwater; that governance happens at multiple scales; and, there is such a diversity of threats facing freshwater, it will be imperative to have a "regional" aspect to the governance model. Whether this means regional water hubs, or some other mechanism, recognition of the unique and varied challenges facing freshwater across Canada is crucial. Having a "regional" component would be invaluable in assisting different levels of government work together - at a very basic level this entity would be responsible for disseminating knowledge and information between all freshwater stakeholders.

Establishing some guiding principles for the governance system would be advantageous and ensure that the solution arrived upon is, in fact, the best suited option for ensuring healthy water now and into the future.

Citizen Engagement through Water Data and Science

The community-based water monitoring (CBWM) movement has grown drastically across the country in the number of organizations collecting water quality data, groups' credibility, and the amount of data being collected. Organizations in the Atlantic Region have demonstrated leadership in creating programs that generate robust water quality datasets, and respond to the concerns of their local communities, often on a shoestring budget. The Canada Water Agency has an opportunity to support these networks of CBWM organizations to help fill data gaps and act upon the knowledge generated.

To further amplify the work of CBWM programs the CWA can:

- Create long-term funding opportunities to continue baseline water monitoring programs - with changing climates long-term data is needed to identify trends. The CWA must support data collection but also provide support to analyze and get data into the hands of decision makers with an emphasis on acting upon the data being collected.
- Support existing CBWM hubs to build capacity and be a point of contact for the CWA. Across the country there are several environmental nongovernment organizations who coordinate networks of CBWM organizations to share knowledge and build capacity. Rather than reinvent the wheel, the CWA can coordinate with these existing networks to both understand and learn more about engaging citizens.
- Create opportunities for knowledge transfer between CBWM groups and jurisdictions - it is not always clear if or when data is used by decision makers, several organizations collect water quality data that they then use to inform their own monitoring projects but it is unclear whether any level of government includes CBWM data in their own decision

making. The CWA can create a transparent knowledge system where it is clear when, how and who is using CBWM data.

- Support data rescue projects - in many cases, data has been collected either by CBWM organizations, consultants or academics, but the data isn't accessible. One way that the CWA can support access to water quality data could be supporting recovering historical data sets
- Create regional data collection and management standards for CBWM - the CWA can draw upon examples of where this is already happening and can endorse and expand these to incorporate regional various in baseline water quality.