

International Joint Commission
Canada and United States



Commission mixte internationale
Canada et États-Unis

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Dear Ministers Wilkinson, Bibeau and Parliamentary Secretary Duguid,

We trust this letter finds you well, and that you have been able to spend some time with family and friends over the summer months.

The International Joint Commission (IJC) would like to offer some thoughts and ideas on what a Canada Water Agency (CWA) could be, and most importantly, what it could achieve. Our long history of interjurisdictional water management working across boundaries, both political and institutional, has provided some important insights we wish to share with you.

First and foremost, water knows no political boundaries: its stewardship requires interjurisdictional cooperation and collaboration. Watersheds dictate that no single department or agency oversees all aspects of water management nor is that even feasible in a country like Canada, or the United States for that matter. Water is the lifeline that ties together our economic, social and ecological well-being. Federal leadership is essential, particularly when dealing with transboundary waters.

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Aboriginal peoples occupy crucial areas in the watersheds, particularly on interconnecting channels and significant wetland areas, and they have longstanding rights. All sectors of society have definite responsibilities in making our water clean, safe and secure now and into the future.

The litany of water issues and challenges facing Canada are well known, however progress in resolving them has been impeded. Jurisdictional protectionism, institutional resistance, differing priorities, and unreconciled competing interests have impacted our ability to remedy our water problems. As a result, the current state of water resource management in Canada is highly fragmented and less effective. We believe a Canada Water Agency could be well positioned to play a key role as a catalyst for marshalling the necessary people and information together to tackle our most pressing water challenges. In doing so, the CWA could lead a much-needed transition to a more collaborative approach to water management in Canada. This approach, in time, must be developed in concert with the provinces, territories, and Indigenous People. We feel that the CWA can emulate nationally what the IJC has successfully accomplished in transboundary waters and that this will be to the benefit of both organisations.

Challenges impeding effective water management

Though the following examples are not new, each could benefit from focussed national attention through a Canada Water Agency:

- Severe and increasing impacts of climate change, especially as those impacts are operating at the regional scale
- Less than optimal flood and drought forecasting capability and resiliency preparedness
- Less than optimal relationship between Canada, provinces, territories, and indigenous governments
- Difficulty understanding water priorities of governments in Canada and how those priorities are reflected in water related programs and policies

Advancing solutions to these problems requires an investment in sustained federal leadership with a focus on problem solving through science and collaboration.

Science and engagement as the basis for effective problem solving

The IJC operates as an independent arms-length binational organization that reports to both the Canadian and United States federal governments. Commissioners strive for consensus to find solutions that are in the best interests of both countries. Watershed boundaries are the frame for our work.

The IJC contributes to the prevention and resolution of watershed issues by building a shared scientific understanding of watershed issues, harmonizing data and information, developing shared tools, knowledge and expertise, and expanding outreach and cooperation among stakeholders and Indigenous communities. The IJC endeavours to consider and balance a wide

range of interests in formulating its advice, including municipal water and wastewater, commercial shipping, hydroelectric power, agriculture and aquaculture, industry, recreational users, and the needs of shoreline property owners. The Commission supplements and complements domestic efforts to manage and protect domestic waters. The IJC is viewed as a major asset for both countries to address those issues that cannot be and should not be dealt with from solely a national perspective. Federal leadership in the provision of freshwater science is foundational for all our work in the Great Lakes and elsewhere along the boundary.

What follows are some examples of what the IJC does and how it works across jurisdictions and disciplines to provide solutions to local water issues. We also emphasize the merits of these approaches in the context of the CWA concept.

Interjurisdictional harmonization of data, sharing of information and knowledge transfer

Understanding change and predicting future water supply and quality conditions require common water management methods and data protocols so that the information used on one side of the border is understood and agreed to by those on the other side. Traditional knowledge and data from generations of Indigenous Peoples are important information sources from which we can all benefit. Using these common methods and protocols is a fundamental precondition to being able to manage and understand a resource like water that does not recognize borders.

Data sources are diverse and constantly evolving, which makes achieving harmonization a multi-faceted, multi-stakeholder, and multi-year process. Ensuring that every initiative (e.g. studies, projects, consultations) also considers opportunities for data harmonization will make progress toward this goal. Ongoing work by the Great Lakes Coordinating Committee to update the International Great Lakes Datum (IGLD 2020) is a great example of a data harmonization endeavour that involves many stakeholders, to the benefit of many more. The CWA could facilitate interjurisdictional (or regional as the case may be) agreements to collect and harmonize nationally significant datasets and better link information holding across the country and thus improve our common understanding of this shared resource. There is also an opportunity for the CWA, over time, to develop national tools and approaches that are supported and regularly evaluated and improved.

All provinces could benefit from the economies of scale in the development of these common approaches. Ideally a collaborative trans-Canada community of experts will emerge and the ensuing knowledge transfer will lead to stronger application and use of national water science across Canada

Collaboration at the watershed level

A big part of current challenges in managing water in Canada may be due to a predominantly “top-down” approach. Bringing together a diverse range of people and ideas at the local level to understand what is happening in a watershed -- and work collaboratively for its sustainable shared future – is a key operating principle for the IJC. This is a key concept of the IJC’s International Watersheds Initiative, and it is embraced to the extent possible with all of IJC’s Boards.

The management challenges presented by the scale of most watersheds in Canada and the United States – including those on the boundary – are well known, not only from an ecological standpoint but also from a governance perspective. The ‘nested’ (top down and bottom up) approach to the management of watersheds is one that IJC’s Boards also strive to accomplish. Although the majority of IJC’s Boards cover large basins (e.g. Red River), many board members are also involved with smaller watershed governance bodies operating within that basin (e.g. Pembina River Basin Advisory Board). This permits the IJC to connect with and leverage the knowledge, tools and approaches and advice of these ‘nested’ watershed governance entities.

Another important factor in assuring this strong regional connection is supporting the longevity and effectiveness of Boards and keeping the lines of communications open. Twice a year, the IJC invites Boards to meet with Commissioners and share issues of interest and address those of concern. The IJC has proven to be effective at supporting the orderly fact-finding, discussion and provision of advice, and the IJC’s Boards are central to this effort. This nested approach could certainly benefit the CWA in dealing with interjurisdictional (interprovincial or territorial and Indigenous) collaboration at a more regional scale.

Collaboration with Indigenous Peoples

The IJC is taking steps toward a more comprehensive and strategic engagement with First Nations, Métis, and Tribes on both sides of the border. We view Indigenous engagement as a priority.

Doing this well requires an understanding of the role of all Indigenous nations, governments, organizational players, the unique relationships Indigenous Peoples have with water, and a better appreciation of Indigenous rights, interests and concerns relative to the IJC’s mandate. Expanding the IJC’s Boards and Committees to include Indigenous members is also a key step towards our objective of full engagement in IJC processes and activities. The IJC is also seeking to better understand and respectfully enable the sharing and incorporation of Indigenous Knowledge into its work. Through these efforts, the IJC hopes to sustain an environment that welcomes and supports effective and meaningful collaboration with Indigenous Peoples.

We encourage the CWA to work with Indigenous nations closely, by cooperation or agreement-making for example, to develop clarity of purpose and to understand the scope of their respective or overlapping authorities and how to work more collaboratively together. Much like the IJC does for shared waters, the CWA could become a much needed enabling body coast to coast to help build partnerships with Indigenous governments, nations, organisations and peoples that possess the knowledge, authority, and influence that is required to address our most pressing challenges. This role would also greatly complement and benefit the work the IJC.

Utilizing Adaptive Management approaches

Unexpected and severe weather events due to a changing climate have served to remind us that our current confidence on historical data for the management and regulation of water resources may be deficient.

The IJC has embraced the concept of adaptive management (AM) for transboundary watersheds. We have developed a Climate Change Guidance Framework to help our boards track the watershed impacts of a changing climate through time and to adjust accordingly. Boards identify their watershed vulnerabilities and hence the risk of not being compliant with IJC Orders and meeting their mandates. As monitoring and trend analysis of their vulnerabilities signal a change, boards "adaptively manage" by engaging with stakeholders, watershed and Indigenous governments and organisations. Long-term systems and analyses are being put in place through, for example, the investigations conducted by the IJC Great Lakes Adaptive Management Committee (GLAM). Where jurisdictions may have had difficulty in instituting a realistic and operational plan for addressing climate change, the IJC is already doing this (within the confines of its mandate).

It is also important to recognize that Indigenous Adaptive Management is a foundation of current Adaptive Management thought, since Indigenous Peoples have had to adapt to the changing political, ecological, social and economic situation in Canada and the United States for centuries.

The CWA could enable and support collaboration by promoting AM, which requires long-term attention and agreed upon adaptable plans. The CWA could ensure AM success by providing some form of sustained support for these plans, through data management, dedicated fora, and network stewardship. The CWA could increase efficiencies by enabling dialog and developing and promoting market-based solutions at the regional scale which the IJC could include in its watershed AM toolbox to help prevent disputes. Furthermore, the CWA should be empowered to promote the concept of AM nationally so that institutions all across the country are encouraged to revisit and possibly reform the way in which they do business in light of climate change.

Improving predictability in light of climate change

In this era of climate change, accurate predictive models of water supply are of the utmost importance. Any effort at water management, and specifically for dealing with flood and drought, will require a determined effort at improving short to mid-term meteorological predictions. We emphasize the need for research and international cooperation by all agencies toward that goal.

The IJC is currently conducting studies on international basins (i.e. Souris and Lake Champlain Richelieu River) and has evidenced regionalism (i.e., local self interest) in providing hydrological forecasts in Canada and binationally with the US. New research and the latest in hydrological forecasting is being considered by jurisdictions to enable decisions in these binational watersheds that will mobilize communities in their quest to mitigate extreme events. The IJC is working to obtain agreement with various jurisdictions on climate and hydrological models. The CWA could adopt and adapt these approaches at the national scale.

Innovations in water management through collaboration

Water management in transboundary watersheds is binational, multidisciplinary and complex. Governments are coming to the realization that old ways of regulating and managing water are not effective in serving all the interests that are calling for more integrated innovative solutions. The IJC's Lake Champlain Richelieu River Reference Study is using an “eco-hydraulic” approach along with a decision support tool. This novel approach is evaluating what the impacts of fluctuating water levels are on the ecosystem, and the socioeconomic and political feasibility of proposed mitigation measures.

The eco-hydraulic approach suffers from a lack of broad use. Consistent with Canada’s Innovation and Skill Plan, the CWA could assist the IJC in making such approaches known and used by a larger community of practice where for example, businesses could invest and benefit from their application and use. This includes the hosting, sharing, and management of the big data used in these approaches.

Furthermore, the U.S. maintains strong national water management support across the transboundary. Numerous departments (e.g., NOAA, EPA, USGS, USACE) provide national technical support and develop standardised tools and approaches for water management used throughout the U.S. and abroad (e.g., flood/drought forecasting). In some cases, Canadian jurisdictions have no capabilities or capacity in a particular area and work defaults to the U.S. approach.

Finally, building on the IJC example, the CWA could enable strategic collaboration for water resource management between the provinces/territories and Indigenous People.

Key success factors for a Canada Water Agency

Constitutionally, the CWA cannot take over oversight for all water management in Canada but it can and should catalyze the federal role, particularly as it pertains to freshwater science leadership. Its success will be based on how well it can work with all governments with a role in water decision-making (Indigenous federal, provincial, territorial, municipal) to forge common goals.

Our recommendation to the CWA team is to carefully examine the why, what and how of the current water management regime in Canada with an initial emphasis on removing internal impediments to problem solving (e.g., siloes, turf protection, competition, disincentives, atrophy, etc.). This will lead to a focus on building the appropriate cost effective tools into the very structure of the agency. Solving problems should be a preeminent focus and it should predominate over form and structure. Collaboration and knowledge generation should be the pillars of the agency. The CWA should consider what its optimum size should be so as not to hamper efficacy and efficiency.

A new CWA should serve to revitalize the federal role in water to the benefit of all by working with well established institutions in close collaboration with Indigenous governments and

nations, Provinces and Territories. It should develop national tools and approaches informed by Traditional Knowledge and best practices from jurisdictions and make them available to other jurisdictions. Further it should provide focus and collaborative strategies to address a limited number of major issues such as flood and drought forecasting, and bring together all the actors, including Indigenous governments and nations, Crown governments, NGOs and citizen groups. A key success factor and measurable indicator of water health will be the integration, validation, utilization and tracking of Traditional Knowledge by the CWA.

The IJC sees many opportunities to assist you in shaping the CWA, and thus we would be pleased to elaborate on any of the concepts in this letter in a follow-up meeting if that would be helpful. Feel free to contact Pierre Béland (belandp@ottawa.ijc.org) or Jane Corwin (corwinj@washington.ijc.org) directly if we can be of any further assistance to you at this time.

Sincerely,



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Jane Corwin, Chair, US, Section



Merrell-Ann Phare, Canadian Commissioner



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Robert Sisson, U.S. Commissioner

cc. The Honourable François-Philippe Champagne, Minister of Foreign Affairs