



The House of Commons Standing Committee on Environment and
Sustainable Development
Fresh Water Study Comments
Conservation Ontario
May 25, 2021

Conservation Ontario (CO) represents the network of Ontario's 36 conservation authorities (CAs), local watershed based natural resource agencies located throughout Ontario. Almost 95 % of Ontario's population lives in watersheds managed by conservation authorities (close to 40 % of Canada's population). Conservation authorities are legislated under the Province of Ontario's Conservation Authorities Act.

We appreciate the opportunity to provide our input to The House of Commons Standing Committee on Environment and Sustainable Development's Fresh Water Study.

Conservation authorities deliver a wide range of watershed management programs and have worked very successfully and closely with the Federal government for many years. Outcomes from our collaborations protect Great Lakes water quality, build local watershed resiliency, including, shorelines and nearshore areas and address growing climate change impacts. The conservation authorities offer a unique and very beneficial opportunity for the Federal government to address a number of fresh water priorities in one of Canada's most populated provinces.

Conservation authorities deliver services and programs that protect and manage water and other natural resources in partnership with government, landowners, businesses and other organizations. Conservation authorities implement a number of targeted activities to protect and manage freshwater within the Great Lakes and St. Lawrence River and Hudson Bay Basins, such as:

- Water-related natural hazard management to reduce the impacts of flooding and erosion including regulatory responsibilities under the *Conservation Authorities Act*
- Drinking Water Source Protection legislative responsibilities of the *Clean Water Act*, including the development and updating of locally developed Source Protection Plans and policies focused on municipal drinking water supplies from both surface and groundwater. Currently 80% of Ontarians rely on municipal drinking water sources
- Rural and Urban Stormwater Management (Green Infrastructure, Low Impact Development) to reduce the impacts of runoff on watercourses and lakes
- Agricultural Best Management Practices to reduce phosphorus and other runoff, to improve water quality and to protect water quantity
- Monitoring (Water Survey Canada – hydrometric network), Provincial Ground Water Monitoring Network, Provincial Surface Water Quality Monitoring Network, etc. to track local conditions and to identify water quantity and quality issues
- Habitat Enhancement and restoration projects to promote greater biodiversity, improve water quality, and to reduce shoreline hazards (e.g. flooding/erosion) especially through the protection of wetlands, riverine and shoreline naturalization
- Participation on the Great Lakes Water Quality Agreement Great Lakes Executive Committee and Binational Subcommittees including Lakewide Action Management, Nutrients, Science, Ground Water and Climate Change Annexes.

Collaboration & Engagement

Conservation authorities have built collaborative and supportive relationships with various departments and program staff in the Federal Government. We are fortunate enough to have many examples of successful engagement and collaboration. One of our most noteworthy examples is the ongoing collaboration on the Great Lakes Water Quality Agreement Executive Committee (GLEC) structure and the Annex Committees. This Committee work, led by Environment and Climate Change Canada (ECCC) is focused on binational collaborations with regard to nearshore assessments, lakewide action plans, nutrient management, groundwater resources, climate change science and science/monitoring initiatives. A specific domestic example of this collaboration between ECCC, CO, CAs and other partners includes the development and implementation of the Canada-Ontario Lake Erie Action Plan. CO, CAs and other partners leverage technical support and funding that is provided through the Federal Great Lakes Protection Initiative to implement “on-the-ground” actions to meet water quality targets.

Another positive example is the Great Lakes Adaptive Management Committee for the International Joint Commission which is premised on multi-level coordination/collaboration with Environment Climate Change Canada staff. Through this committee, the ECCC has been supportive through the provision of tools and information related to Great Lakes water levels, coastal flooding and associated issues. Having a bi-national agency and federal partners work to clarify their science for local residents is an important role. It is noted that although this is a positive example of engagement and collaboration, support for resilience notably falls short of what is undertaken in the U.S. (e.g. NOAA, USGS), which provides technical guidelines, training and financial support for Great Lakes coastal adaptation and resilience.

In addition to these successful ECCC partnerships, we also engage with following departments of the Federal Government with a focus on freshwater management; the Canadian Wildlife Service on habitat stewardship and restoration initiatives (including wetlands), the Water Survey of Canada for hydrometric monitoring, the Weather Office for Flood Forecasting and Warning, the Geological Survey of Canada for groundwater monitoring, Agriculture and Agri-Food Canada (AAFC) and the ECCC Great Lakes Protection Initiative for agricultural stewardship projects, and the Department of Fisheries and Oceans (DFO) on various programs and projects. CA flood mapping and infrastructure projects (natural and low impact development and others for flood resilience) have recently benefitted from investments through the Natural Disaster Mitigation Program (eg. Public Safety Canada, Natural Resources Canada) and Disaster Mitigation and Adaptation Fund (Infrastructure Canada). These programs have been implemented in collaboration with municipalities.

Although the current level of federal engagement, directly with conservation authorities in Ontario, is positive in many regards, it is noted that this engagement is often limited to specific committees like those of the GLEC and programs noted above, which may result in missed opportunities for information sharing and collaboration on other areas of freshwater management.

Overall, while CAs do experience positive engagement from the federal government on freshwater issues in some regards, there continues to be limited engagement in the watershed planning and management work of CAs and the lack of a clear National Water Policy has compelled some of the provinces and territories to develop their own freshwater policies or strategies. Clear federal policies,

standards and protocols for freshwater protection and management would further support multi-scale coordinated action and engagement across Canada.

Lastly, it is important that the federal government not lose sight of providing sufficient resources to implement policies and legislation which already exists. For example, funding cuts to DFO made a few years ago has meant that fewer DFO staff are available to deal with enforcement issues and review of plans for in-water works, particularly in inland systems. Those staff who are available to deal with such matters are often located in a different part of the country, and lack the local knowledge necessary to make local decisions.

Gaps and potential barriers

In order to facilitate the coordination of efforts and cooperatively address local and regional freshwater issues, additional funding is needed, particularly at the local/regional implementation level. One potential solution is to modify the terms of grant programs, so that funding can be more easily leveraged between different programs for a single project that benefits multiple objectives/sectors and levels of government. Presently, “stacking rules” between different federal grant programs limits the total amount that can be leveraged, which may exclude some higher-value projects from being undertaken, even though they have benefits across multiple sectors / levels of government. As an example, a wastewater treatment plant upgrade may be a candidate for funding through the Clean Water and Wastewater Program with Infrastructure Canada; however, such a project could also have benefits to fisheries. Presently it is difficult to pursue funding from DFO and Infrastructure Canada for the same project, even though it benefits both.

We also encourage the federal government program administrators to ensure that applicants for programs confirm the willingness of third parties like Conservation Ontario and conservation authorities to partner before approving funding. This is to ensure that the appropriate and sufficient conservation authority resources are available and that work plans have considered these partnerships in advance towards successful delivery of the initiative.

The federal government continues to make positive strides on the Climate Change file, however there is a need for consistent and available up to date science through guidance for research and policy. All jurisdictions (government, agencies, industry, etc.) should be encouraged to utilize a single comprehensive and encompassing climate change model. Consistency in modelling approaches is particularly important, as there is often inconsistencies in the modelling used across multiple levels of government and agencies, which may lead to duplication of effort.

Climate Change adaptation requires that we not only consider long term averages and extremes in freshwater systems, but also consider more recent trends and predicted swings to more extreme weather. Additional research, collaboration, and discussion amongst the scientific community will assist with adaptation efforts. As an example, recent research on the loss of ice cover for Lake Ontario (due to climate change) by Environment and Climate Change Canada has informed Conservation Authority Shoreline Hazard Management Plans, and provided awareness that greater wave energy and shoreline erosion rates should be anticipated. These considerations will guide local policies and regulation of shoreline development in Ontario. Similarly, we need federal investment and climate change science

collaborations to understand the influence of the Great Lakes water levels on coastal processes causing disastrous erosion, which is occurring along the Great Lakes/St. Lawrence shorelines. To achieve coastal resilience and to effectively manage the impacts, significantly enhanced investments and collaboration between all levels of Government on science and policy is required.

Another identified gap is linked to the availability and access to current and historical science and data. Currently in Canada, freshwater science is fragmented and largely uncoordinated. A significant amount of freshwater data is not publicly available, and freshwater management roles across all levels of government are not clearly defined, which can lead to duplication of effort among all levels of government and other freshwater management agencies such as CAs. There is a need to create an agency which champions freshwater management across Canada. The opportunities listed in the Canada Water Agency (CWA) discussion paper offer a positive approach to better coordinating freshwater science through the CWA, including working with provinces, territories and others to develop a national freshwater science agenda and improve science integration and communication across governments, academia, and other agencies. To support this approach, the federal government is encouraged to have the CWA represented within each Province or major watershed area in Canada in order to better coordinate freshwater management and protection strategies among all scales (local/community, regional/watershed, provincial, and federal) in each management area.

Furthermore, to ensure that water agencies have the science and data they need to effectively manage and protect transboundary waters, robust information collection, data management, and reporting programs must be in place at all times to ensure decision making is fueled by scientific information rather than opinion or political influence. Adequate long term reliable funding is further necessary to ensure information programs run uninterrupted. For example, over the past four years, Conservation Ontario has led an initiative to enable conservation authorities to make their data more discoverable, accessible and available. This work was made possible by grant funding from the Great Lakes Observing System (in the US). This type of funding, while welcome in the short-term, is not sustainable. Reliable long term funding is necessary to ensure sustained access to data with regular updates.

Successful models for continued Federal and Conservation Authorities' collaboration

The Great Lakes and St. Lawrence River basin is a significant freshwater resource on a national and global scale. We rely on this important resource for drinking water and for economic, agricultural, health and recreational uses.

Of the 36 Conservation authorities, 35 drain into the Great Lakes and St. Lawrence River Basins (one drains into Hudson Bay) and 26 of these Conservation authorities include Great Lakes and/or St. Lawrence River Shoreline as part of their jurisdiction.

Conservation authorities have had success in resource management and more specifically in watershed management through the application and implementation of Integrated Watershed Management.

An integrated watershed management approach encompasses five principles:

- watershed-based and informed by science;
- manage human activities and natural resources together;

- consider the connected interests of ecosystems, our economy and people;
- use an adaptive management model which requires us to plan, implement, monitor and update plans and strategies in order to adapt to uncertain or new emerging conditions; and
- collaborate with a wide variety of stakeholders to share priority setting and decision-making and implementation.

Another positive model and an example of a successful partnership for CAs has been one with Environment and Climate Change Canada (Water Survey Canada) and the Ontario Ministry of Natural Resources and Forestry and includes a cost-share agreement that provides funds for the purchase and installation of monitoring sites along federal waterways. CAs undertake the monitoring and provide data back to all partners. These types of partnerships benefit from solid agreements at the outset that define the ownership of intellectual property (IP) and structure the rights and responsibilities governing the release of open data to the public. A lack of such agreements can be a barrier to the eventual release of the information as open data.

Finally, the Drinking Water Source Protection Program in Ontario is a successful example in using a multi stakeholder, local management approach. In terms of a data management model, which included access and sharing as a consideration, it produced a set of collaboratively developed data formats and standards that allowed data collectors (municipalities and their consultants as well as CAs) to manage and share data amongst each other and the Province of Ontario. However, this initiative was a costly and lengthy one due to the standards being developed by the data recipient (the Province) with input from the data collectors.

International interests

There are many potential existing and new opportunities being explored for private, public sector as well as research institutions and non-government organizations to collaborate on shared goals for freshwater at various scales of governance including at the international level. This includes providing and developing innovative financial mechanisms, solutions and incentives as well as technologies and tools that can be used to improve and enhance environmental performance and best practices for water management, data management and reporting. By including all sectors at the tables, for decision making and implementation, trust can be developed towards a recognition that we all have a shared role to play in managing freshwater resources. Also as a freshwater nation, Canadian private sector companies and resources can transfer their expertise to other nations across the globe.

Freshwater-related Research and Development

The federal government already plays a significant role in supporting freshwater-related academic research, Research and Development, products and services. The most important role the federal government can play to enhance this effort is to support a mechanism for communicating and reporting research study results to decision makers as well as researchers and practitioners to allow the application of the findings to occur. For example, CAs have been partners in various types of applied research initiatives using a watershed or catchment approach with research institutions, local and federal government partners and others. The findings of these studies should be considered and used to

inform decision making to support the existing and future health of fresh water resources across Canada.

Conclusion

To conclude this submission, conservation authorities, provide resource management expertise at local, regional and provincial levels. Many positive examples of successful partnerships and engagement with the federal government have been provided and it is our hope to perpetuate those successes.

Additionally, the barriers and identified gaps can be viewed as potential opportunities for the federal government, Conservation Ontario and conservation authorities to work together to overcome.

Finally, Conservation Ontario applauds the federal government for recognizing the value of our environment to the economic, environmental and personal well-being of Canadians. Your commitments to tackle the impacts of climate change, ensure the health and safety of people, and support economic prosperity are commendable. Conservation authorities can leverage your efforts for broad benefits in one of Canada's most populated provinces.

Thank you for the opportunity to comment and provide a submission, for consideration, to the House of Commons Standing Committee on Environment and Sustainable Development Freshwater Study.

Sincerely,

A handwritten signature in black ink, reading "Kim Gavine". The signature is fluid and cursive, with the first name "Kim" and last name "Gavine" clearly distinguishable.

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