



BRIEF FOR THE HOUSE OF COMMONS STANDING COMMITTEE ON ENVIRONMENT AND SUSTAINABLE DEVELOPMENT'S STUDY ON FRESH WATER

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Introduction

Canadian Environmental Law Association (CELA) appreciates the opportunity to participate in the ongoing Freshwater Study aimed at addressing the multifaceted challenges associated with managing the protection of fresh water in Canada.

Canadian Environmental Law Association is a specialty clinic funded by Legal Aid Ontario and dedicated to environmental equity, justice, and health. For decades, CELA has been committed to freshwater health and ensuring safe drinking water for all.

Protecting and managing fresh water, at the international, national, provincial, regional, and local levels has been at the forefront of CELA's work for many decades. CELA has been actively involved in seeking to alleviate environmental risks that are highly hazardous to the health of communities relying on fresh water and to living organisms within fresh water, such as plants and fish. In this supplementary brief¹, we emphasize critical areas related to fresh water, with a focus on vulnerable communities, environmental justice, and the wider implications of changing freshwater conditions in Ontario.

A focus for CELA is ensuring water justice, as it becomes an increasingly pressing issue in times of amplified water-based inequalities and discrimination, such as evidenced by the disproportionate impacts of climate change on vulnerable communities. Water justice begins by ensuring access to safe drinking water for all, which historically has not been the case in Ontario, as communities struggle with lead contamination and First Nation communities continue to suffer under long term boil water advisories.

One of CELA's significant undertakings is the Healthy Great Lakes program, the goal of which is to protect freshwater health throughout the Great Lakes, St. Lawrence River, and Ottawa River Basin. The program engages a broad network of individuals and organizations in understanding, shaping, effectively implementing, and making use of policies that promote freshwater health.

¹ See Canadian Environmental Law Association's earlier brief: "Brief for the House of Commons Standing Committee on Environment and Sustainable Development's Study on Fresh Water" (15 June 2021), online: <https://cela.ca/wp-content/uploads/2021/06/CELA_Brief_Study_on_Fresh_Water_in_Canada.pdf>.

For example, CELA has been advocating for zero discharge and virtual elimination of the “forever chemicals” - the group of per- and polyfluoroalkyl substances (PFAS).

Contaminants of Concern- PFAS and Radionuclides

Water contamination by toxin substances, including PFAS, radionuclides, and other emerging contaminants of concern, presents a major threat to public health and the quality of water. Bill S-5 and its implications for the now amended *Canadian Environmental Protection Act* (CEPA) are worrisome, particularly given the limited focus on toxic substances. The Bill S-5 amendments could potentially undermine CEPA’s effectiveness to address all substances that are found to be toxic under the Act and to meet Canada’s obligations under the Convention on Biological Diversity. CELA strongly believes in adopting stringent recommendations, as outlined below, to manage and mitigate the risks from toxic substances

Per- and Polyfluoroalkyls (PFAS)

In April 2023, CELA and other organizational colleagues submitted concerns and recommendations on the proposed objective for drinking water quality value for PFAS to the Water and Air Quality Bureau of Health Canada.² The following is a synthesis of the reported concerns and recommendations.

1) Health Canada’s proposed objective value for all PFAS chemicals does not consider health evidence

The suggested limit of 30 ng/L (nanograms per litre) for drinking water for all PFAS chemicals combined is based on the testing methods and water monitoring data we have from different groups since 2012. However, this suggested limit was not set using evidence on how PFAS affects our health. CELA recommends updating this limit to better address the health risks of PFAS, which include impacts on the immune system, developmental and reproductive impacts, endocrine system, liver, and association with certain cancers. As the accumulation of evidence showcasing the effects linked to PFAS exposure increases, the inability to establish a clear and unbiased value for PFAS stands out as a major shortcoming.

Children, developing fetus, and infants are especially at risk from PFAS. Women of childbearing age are at high risk of passing PFAS to their babies. Setting a limit of 30 ng/L, just because that is what our current tests can handle, means these vulnerable groups will experience continued

² Canadian Environmental Law Association, “Objective for Canadian Drinking Water Quality Per- and Polyfluoroalkyl Substances: Objective for Public Consultation” (12 April 2023), online: <https://cela.ca/wp-content/uploads/2023/04/Comments_POV_PFAS-in-Drinking-Water_April-12-2023.docx-rev.pdf>.

exposure to PFAS. Some jurisdictions including the United States have concluded that there are no safe levels of PFAS. With over 12,000 different PFAS in our environment, our ability to test for them in the environment and in people remains limited in scope.

2) The number of PFAS Health Canada proposes to track is insufficient

Health Canada has suggested that:

[t]otal PFAS should be derived based on the comprehensive list of substances outlined in EPA Method 533 or EPA Method 537.1 (or a combination of both) ... or by employing a validated method from another jurisdiction, ensuring the measurement of at least 18 PFAS...³

The target value suggested in the proposal encompasses up to 29 PFAS, which falls short in addressing the concerns tied to the myriad of other PFAS present in the market that are not being monitored or tested (reliance on the use of EPA Method 533 and EPA Method 537.1). The proposal depends on these two EPA methods for summing up the PFAS, while also mentioning the possibility of using validated methods from other jurisdictions, provided they cover a minimum of 18 PFAS. However, the proposal lacks clarity and specificity on what constitutes acceptable validated methods and which 18 PFAS are required to be monitored. This lack of detail introduces a higher degree of uncertainty regarding the thoroughness of the methods that will be utilized. CELA recommends utilizing the precautionary principle to apply the proposed approach on EPA Method 533, since it encompasses a wider scope, covering 25 PFAS, instead of settling for a mere minimum of 18 PFAS.

Safeguarding public health requires implementing specific targets for both perfluorooctane sulfonate (PFOS) and perfluorooctanoic acid (PFOA), particularly in regions where PFAS contamination of drinking water is evident, such as airports and military bases. In March 2023, the U.S. Environmental Protection Agency (EPA) recommended establishing Maximum Contaminant Levels at 4 ppt (parts per trillion; ng/L in metric) for each of PFOA and PFOS. If Canada continues to rely on current PFAS analytical methods, we will continue to fail in capturing the full extent of environmental and health-related impacts.

3) Reliance of wastewater treatment facilities to remove PFAS is an inadequate approach to protect health and the environment

The technologies to remove PFAS in a wastewater facility do not apply to all PFAS, and they do not address the issue of managing and disposing of bio-sludge that could contain PFAS. CELA

³ Health Canada, "Proposed objective value" (February 2023), online: <<https://www.canada.ca/en/health-canada/programs/consultation-draft-objective-per-polyfluoroalkyl-substances-canadian-drinking-water/overview.html#a3>>.

recommends that Health Canada develop a comprehensive strategy on PFAS as a class that focuses on the elimination of the production, sale, import, and use of PFAS and products containing PFAS rather than relying on wastewater treatment facilities to adopt removal technologies that cannot address the wide scope of PFAS, including those yet to be identified.

Regarding PFAS, CELA has made the following recommendations:

- Health Canada should establish objective value for PFAS in drinking water that are health-based rather than rely only on current analytical testing methods to ensure protection from PFAS in drinking water especially for developing fetus, babies, and children.
- Require tracking of all 29 PFAS captured by EPA Methods 533 and EPA Method 537.1 to calculate sum of 29 PFAS. Apply the precautionary principle and require the adoption of EPA Method 533 to account and track 25 PFAS rather than allow for use of validated methods capturing a minimum of 18 PFAS to calculate the sum of PFAS.
- Require review of objective value at a minimum of every 2 years to expand the PFAS substances tracked and measured under the objective value for drinking water to reflect the scope of use of and large number of PFAS substances in the market.
- Adopt individual objectives for PFOA and PFOS following the approach of US EPA set at 4 ppt (ng/L) rather than allow for integration of PFOA and PFOS in the total sum of PFAS.

Radionuclides

CELA advocates for a national radioactive waste policy framework that includes rules and policies that will protect human health and the environment and make the nuclear industry accountable and responsible⁴. In 2019, an International Atomic Energy Agency peer review committee urged Canada to update its nuclear waste policy. In April 2023, CELA and colleagues called on the government to ensure that the following five principles be met:

1. Canada needs an independent agency, arms-length from government and industry, to oversee radioactive waste management and decommissioning
2. Radioactive waste should NOT be abandoned; policy should direct perpetual care and monitoring
3. Government and industry must be open and transparent in the management of radioactive waste and its transportation; Indigenous Peoples and Canadians have a right to access information, engage in decision-making, and know the risks

⁴ CELA and colleagues drafted an Alternative Policy for Canada on Radioactive Waste Management and Decommissioning. We recommend ENVI review the Alternative Policy to inform a more responsible, accountable and robust policy that will protect fresh water and human health. See Nuclear Waste Watch's Radioactive Waste Review Group, "An Alternative Policy for Canada on Radioactive Waste Management and Decommissioning" (March 2022), online: <<https://cela.ca/wp-content/uploads/2023/03/Alternative-nuclear-waste-policy-for-Canada-NWW-Statement.pdf>>.

4. No importing of radioactive waste from other countries
5. No plutonium extraction (reprocessing or pyro-processing) of radioactive fuel waste.⁵

In respect of tritium, CELA advocates that Canada and the provinces should radically reduce the drinking water standards for that radionuclide as recommended by two different highly expert advisory committees previously. Presently the standard still sits orders of magnitude above their recommendations. Both the Ontario Drinking Water Advisory Committee in 2009 and the previous Advisory Committee on Environmental Standards. CELA is of the view that the Canadian drinking water standards should finally be adjusted in line with these two expert reviews. The ODWAC report in May 2009; called for a new standard to be set at 20bq/L annualized.⁶ The earlier but similar report by ACES in 1994 similarly recommended 20 bq/L; albeit not annualized.⁷ Both were provincial advisory committees, but are the most credible Canadian sources on this topic. Another CNSC review resulted in a recommendation of 100 bq/L in groundwater. None of these recommendations have been implemented, but all were based on stringent scientific reviews. The consequence is that radionuclides are "permitted" to be present in drinking water at levels estimated to be 70 times as carcinogenic as chemical standards normally permit for non-radiological substances. This inequity for more lax standards for chemicals just because they are radioactive is very difficult to justify in science, and unacceptable to the public.

On May 31, 2023, the federal government released its long overdue Policy on Radioactive Waste and Decommissioning, which CELA reviewed and gave a failing grade.⁸

CELA strongly recommends, particularly given the large increase of federal funding toward new nuclear projects, that Canada revisit the national radioactive waste policy to protect freshwater sources for all Canadians from tritium and other harmful radionuclides. CELA also strenuously encourages the federal government to explicitly ban reprocessing of nuclear fuel waste in Canada.

First Nations Drinking Water

Priority must be given to providing consistent access to clean and safe drinking water for First Nations.

⁵ Nuclear Waste Watch, "Key Points and Principles: Principles of Radioactive Waste Management", online: <<https://nuclearwastewatch.weebly.com/key-points-in-rad-waste-review.html>>.

⁶ Ontario Drinking Water Advisory Council (ODWAC), "Report and Advice on the Ontario Drinking Water Quality Standard for Tritium" (21 May 2009), online: <https://ccnr.org/ODWAC_tritium_2009.pdf>.

⁷ Advisory Committee on Environmental Standards, A Standard for Tritium: A Recommendation to the Minister of the Environment and Energy (May 1994) ACES Report 94-01, ISBN: 0-77782979-7 at 102.

⁸ Canadian Environmental Law Association, "CELA Gives Canada's Radioactive Waste and Decommissioning Policy a Failing Grade" (4 April 2023), online: <<https://cela.ca/cela-gives-canadas-radioactive-waste-and-decommissioning-policy-a-failing-grade/>>.

National Strategy Respecting Environmental Racism and Environmental Justice

CELA appreciates that Bill C-226⁹, the proposed National Strategy Respecting Environmental Racism and Environmental Justice Act, completed second reading in the Senate on October 26, 2023, as it is a welcome move toward recognizing and mitigating environmental racism. CELA's position on Bill C-226 is aligned with the following recommendations found in the Green Budget Coalition's Discussion Paper, "Preliminary Recommendations for Budget 2024"¹⁰:

- Establishment of a dedicated office to ensure effective implementation of environmental justice initiatives regarding preventing pollution of, and ensuring access to, fresh water. Additional resources will be required to empower the enforcement branch of Environment and Climate Change Canada (ECCC) to focus on and strengthen compliance and enforcement activities that will significantly benefit communities disproportionately affected by environmental harm. It is recommended that funds garnered from fines, court orders, and voluntary payments as a result of enforcement actions be specifically allocated to initiatives aimed at aiding the impacted community and promoting environmental justice. The recommended investment for this project is \$25 million per year, ongoing, starting in 2024.
- Canada's Anti-Racism Strategy 2019-2022 pledged to enhance the gathering of disaggregated data, which refers to data that is categorizable by race and/or ethnocultural origin dimensions. However, important environmental databases are missing this information, for example, the National Pollutant Release Inventory. We recommend ECCC develop and maintain a similar screening and mapping tool to the US's EJScreen¹¹ to identify and monitor areas with environmental justice concerns. The recommended investment for this tool is \$30 million in 2024 to develop the tool, then \$10 million per year, ongoing, starting in 2025 for ongoing data collection.
- A Canadian Office of Environmental Justice has an opportunity to play a convening role, bringing together federal departments and agencies (e.g., inter-departmental working groups), leveraging external expertise (e.g., an independent advisory committee), Indigenous and provincial/territorial governments, and communities. The Office could extend collaborative partnership grants to enable community groups to hire technical experts, participate in consultative processes, and fund local solutions (among other needs). The recommended investment for this responsibility is \$1 million per year,

⁹ Bill C-226, An Act respecting the development of a national strategy to assess, prevent and address environmental racism and to advance environmental justice, 44th Parliament, 1st session, November 22, 2021 to present (Referred to committee on October 26, 2023), online: <<https://www.parl.ca/legisinfo/en/bill/44-1/c-226>>.

¹⁰ Green Budget Coalition, "Preliminary Recommendations for Budget 2024" (6 June 2023), online: <<https://greenbudget.ca/wp-content/uploads/sites/5/2023/06/Green-Budget-Coalitions-Preliminary-Recommendations-for-Budget-2024-June-8-2023.pdf>>.

¹¹ United States Environmental Protection Agency, "EJScreen: Environmental Justice Screening and Mapping Tool" (September 2003), online: <<https://www.epa.gov/ejscreen>>.

ongoing, starting in 2024, to support collaborative partnerships, and \$150 million over five years, starting in 2024, for community grants.

First Nations Drinking Water and Wastewater Act

As part of the federal government's responsibility for fresh water, it must ensure that First Nations have consistent access to safe, clean, and reliable drinking water. As noted earlier, this is not the case for many First Nations communities. There is a severe gap in funding water-efficient infrastructure to ensure safe delivery of drinking water, construction of advanced water and wastewater treatment, source water protection, and building capacity within First Nation communities. Additionally, Indigenous Peoples have historically been excluded from decision-making at the federal, provincial, and territorial levels, highlighting a significant gap in meaningful consultation and accommodation where Indigenous Peoples' relationship with water is impacted.

The Truth and Reconciliation Commission's Calls to Action 45-47 call for a restructuring of legal, governance and institutional structures in Canada to permit the participation of Indigenous Peoples.¹² Given this legal and policy context, it is essential for the federal government to meaningfully engage with Indigenous Peoples in the structuring and operation of freshwater laws, policies and programs. This includes funding to facilitate engagement by Indigenous bodies and communities, so that existing resources, staff and community capacity are not taxed.

CELA is heartened that the federal government repealed *the Safe Drinking Water for First Nations Act, 2013* (which was accomplished in June 2022) as First Nations across the country had requested, and urges the federal government to continue its work in collaboration with Indigenous leaders and communities to develop replacement legislation (which is underway).

CELA hopes to see new drinking water legislation for First Nations communities introduced soon, which respects the varying conditions across the country; provides room for varied governance structures that work for First Nations in various circumstances to meet their self-identified needs; and allocates the needed capital and operations requirements of those systems.

Heat and Fresh Water

As a consequence of the climate crisis, the length, intensity, and frequency of heat waves in Canada are expected to increase. This is a public health crisis. The Government of Canada's National Adaptation Strategy recognizes that extreme heat events are the deadliest weather-

¹² Truth and Reconciliation Commission of Canada: Calls to Action (2015), online: <http://trc.ca/assets/pdf/Calls_to_Action_English2.pdf>.

related events occurring in Canada.¹³ Average mean temperature has risen by 1.7°C from 1948 to 2016 and is expected to increase between 1.8°C and 6.3°C by the end of the century.¹⁴ Various life-threatening conditions can occur when the body cannot maintain its core temperature of approximately 36.6°C due to excessive external heat.¹⁵ These include dehydration, cramps, heat exhaustion, and heat stroke.¹⁶ With these impacts to health in mind, CELA and allied organizations delegated to the City of Hamilton’s Public Health Committee regarding the City’s new proposed “Community Heat Response Plan”, resulting in a recommendation to establish a maximum heat bylaw in Hamilton.¹⁷

Further, increasing temperatures have additional direct impacts to human health and wellbeing, and impacts to vulnerable communities, including:

- Increased evapotranspiration due to rising temperatures threatens the water levels in the Great Lakes. Fluctuating water levels impact the ability to harvest Manoomin which have sacred, cultural, and livelihood values for many Indigenous communities.
- Hotter water temperatures threaten the aquatic ecosystems, leading to the possible extinction of sensitive species; some of these species are significant to Indigenous food sovereignty.
- Elevated water temperatures jeopardize the cooling process for nuclear and other industrial facilities, leading to safety and energy security implications.
- The rise in warmer water bodies could enhance the formation of water spouts, tornadoes, and wind events, posing safety concerns along the shoreline, and implications to shoreline infrastructure.
- Warmer waters threaten public health as they provide a conducive environment for the survival of pathogens, making drinking water treatment more challenging and expensive.

¹³ Government of Canada, “Canada’s National Adaptation Strategy” (1 August 2023) at 7, online: <<https://www.canada.ca/en/services/environment/weather/climatechange/climate-plan/national-adaptation-strategy/full-strategy.html>>.

¹⁴ Government of Canada, “Changes in Temperature” (9 April 2019), online: <<https://www.canada.ca/en/environment-climate-change/services/climate-change/canadian-centre-climate-services/basics/trends-projections/changes-temperature.html>>.

¹⁵ Government of British Columbia, “Extreme Heat and Human Mortality: A Review of Heat-Related Deaths in B.C. in Summer 2021” (7 June 2022) at 11, online: <https://www2.gov.bc.ca/assets/gov/birth-adoption-death-marriage-and-divorce/deaths/coroners-service/death-review-panel/extreme_heat_death_review_panel_report.pdf>.

¹⁶ *Ibid.*

¹⁷ Canadian Environmental Law Association, “Maximum Heat By-Law Necessary to Protect Vulnerable Communities” (12 May 2023), online: <<https://cela.ca/media-release-maximum-heat-by-law-necessary-to-protect-vulnerable-communities/>>.

CELA recommends implementing measures such as green roofs and urban tree cover to benefit communities directly through cooler communities, and indirectly through cooler lakes allowing for the continued enjoyment recreationally, and in terms of food and water security.¹⁸

Canada Water Agency (CWA)

The current fragmentation of roles and responsibilities over water in Canada has culminated in a reactive and crisis management mode to water governance and policy. As a result, there is a need for a coordinated, federation-wide mechanism to guide water governance, based on principles of co-operative federalism and reconciliation, including indigenous governance. In developing the Canada Water Agency, CELA recommends early clarity on the role of what the Agency will be responsible for, and who the Agency will be responsible to. Ultimately, with a strategic vision, CELA is supportive of the creation of the CWA to enhance water governance across the country.

CELA makes the following recommendations, which are critical to the CWA's efficacy:

- Develop a process to clarifying the primary initial roles and priorities of the CWA.
- Indigenous water stewards and guardians must be central in decision-making processes. The CWA is an opportunity to advance steps toward reconciliation, the braiding of knowledge, and the application of the *United Nations Declaration on the Rights of Indigenous Peoples Act* to Canadian water policy regimes. As per Assembly of First Nations (AFN) Resolution no. 53/2023, adopted on July 7, 2023, priority should be given to the creation of a national First Nations-led water stewardship committee¹⁹, dedicated funding and resources to support efforts to ensure First Nations inform the implementation and co-development of any such agency, including related legislation, policies, and initiatives.
- Create a centralized data system or portal for water governance to reduce duplication, promote knowledge sharing, and improve baseline datasets and ecological/climatic predictions.
- Ensure watershed collaboration at a national scale, working toward developing a nationwide strategy, with focus on freshwater ecosystem restoration and increased opportunities for Indigenous protected and conserved areas.
- Set the CWA's mandate to explicitly include vulnerable communities, equity, and responsiveness to the enormous challenges of climate change.

¹⁸ Canadian Environmental Law Association, "Recommendations for Municipalities Focus: Urban Tree Cover" (24 August 2022), online: <<https://cela.ca/wp-content/uploads/2022/08/1485-CELA-Urban-Cover-Recommendation-FINAL.pdf>>.

¹⁹ Assembly of First Nations, Resolution no. 53/2023, "First Nations-led Process for National Water Stewardship and the Canada Water Agency" (July 13, 2023), online: <<https://afn.bynder.com/m/60ab782a6a0ab78/original/53-2023-First-Nations-led-Process-for-National-Water-Stewardship-and-the-Canada-Water-Agency.pdf>>.

- The CWA should lead an early process on developing modern legislation to replace the *Canada Water Act*, for the consideration of Parliament, and in any event, also lead an early process to develop a modern Fresh Water Strategy for Canada which includes Indigenous Peoples; addresses climate change; is based on current science including watershed approaches; and is positioned within a framework that advances environmental equity.

Summary

CELA remains dedicated to promoting the well-being of vulnerable communities and advancing environmental justice. Given the significance of fresh water in sustaining life and ecosystems, it is imperative that water be given the attention it requires. We urge the Standing Committee to prioritize the highlighted issues and integrate them into their final report and recommendations.

All of which is submitted by CELA this 2nd day of November, 2023.