



THE FUTURE OF FRESHWATER IN CANADA

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Report on the discussions during the Symposium, The Future of Freshwater in Canada on Wednesday, on September 20th, 2023 at Massey College, University of Toronto, 4 Devonshire PL, Toronto, Ontario, Canada.

Hosted by the Forum for Leadership on Water (FLOW) and Massey College

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FOREWORD FROM MASSEY COLLEGE

The preservation and enhancement of both Canada's and the world's freshwater resources is a long-standing and explicit priority of the Public Policy program at Massey College, University of Toronto. Since 2015, Massey College has partnered with organizations like the Forum for Leadership on Water, Global Water Futures, the International Institute for Sustainable Development, the Gordon Foundation, and the de Gaspé Beaubien Foundation to explore and promote the concept of a national water agency. Climate change, extreme weather, flooding, and drought have all made the protection and management of our freshwater resources an urgent challenge. A logical response to this need is to pull together the many (over 20) programs and organizations working on water within the federal government into a streamlined, proactive, well-funded agency to ensure that water is top of mind in national decision-making.

In 2020, working with our partners, Massey College was engaged in a series of national and regional webinars with the water community to promote the idea of a Canada Water Agency and these efforts were rewarded by the announcements of the Federal government in the 2022 budget that such an Agency would indeed be created and in the 2023 budget that the Agency would be headquartered in Winnipeg, Manitoba. The Forum for Leadership/Massey conference on September 20, 2023, brought together water experts from across Canada to delve into the key issues of implementation- what exactly should the new Agency do? -, what role should the Agency play in administering the Freshwater Action Plan and how should the 1970 Canada Water Act be redrafted and brought up to date for 21st century use? These are some of the core water issues over the next five years.

We are indebted to the United Nations University Institute for Water, Environment and Health (UNU-INWEH) for joining us in the publication of the report of the Conference which will help ensure the widest possible dissemination. This conference was about the domestic impact of the Agency, but I hope we can continue the partnership with UNU-INWEH to have a future meeting about the role of water in Canada's international development policies and what Canada can do to help achieve an equitable global water policy that achieves the UN's Sustainable Development Goals (SDGs).

Thanks to all who contributed to the conference and to the writing of this report.



Thomas S Axworthy

Public Policy Chair, Massey College.

FOREWORD FROM FLOW

The year 2023 has the potential to be a turning point in the management and governance of freshwater in Canada. The Federal government has promised a historic investment to protect water in major basins across the country, the creation of a new Canada Water Agency has been announced, a Freshwater Study is currently taking place in Parliament and the United Nations hosted the first water conference in 30 years, in which many Canadians participated.

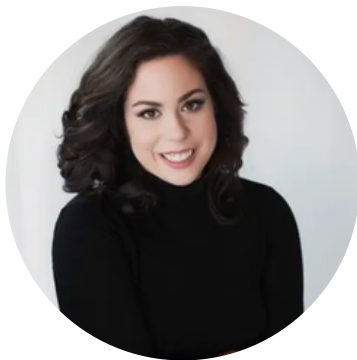
With these successes, there is still a great amount of trepidation amongst the water community – we want to better understand how the funds will be used and what the agency will do. The Forum for Leadership on Water (FLOW) and Massey College partnered to host the Canadian water community in September to get answers to these questions, and to engage thought leaders across disciplines, expertise and geographic regions in discussions over the future of our country's most precious resource.

Representatives from over forty organizations attended the invitation-only forum and engaged in a day of debate, discussion and communal action in protecting our waters. Arguably, each panel could have been a day-long event, and since the symposium, the dialogue has not ceased.

The day was emblematic of the passion across our sector to protect freshwater. We're seeing it at every level; community-based water monitoring of local basins, provincial funding into freshwater opportunities, and international co-operation across our shared bodies of water with the US.

It was a symposium full of big ideas, urgent questions, and bigger solutions, and it ensured that the future of freshwater is in good hands,

For the Love of Our Water,



Emily Lorra Hines
Director
Forum for Leadership on Water



Oliver M Brandes
Chair
Forum for Leadership on Water

FOREWORD FROM UNU-INWEH

As the academic arm of the United Nations (UN) and its global think tank, the United Nations University (UNU) has the mission of contributing, through collaborative research and education, to efforts to resolve the pressing global problems of human survival, development, and welfare that are the concern of the UN, its Peoples, and Member States.

The United Nations University Institute for Water, Environment and Health (UNU-INWEH) is one of the 13 UNU research and academic institutions around the globe that comprise the global UNU system. Known as the UN Think Tank on Water, UNU-INWEH has played a major role in addressing the world's growing water security problems, thanks to the generous support of the Government of Canada since 1996. Besides its international contributions, UNU-INWEH is currently working with leading water researchers and professionals in its host country to address its water challenges.

We hope that by continuing to support the water community in Canada by assisting in the publication of the proceedings of conferences like this one, supporting the standing up of the new Canada Water Agency, and creating new UNU hubs across Canada, we can help advance water science and governance and help Canada to use its water knowledge to address global water security challenges and shine on the world stage – as it should.



Kaveh Madani

Director

United Nations University Institute of Water, Environment and Health

TABLE OF CONTENTS

- 6 INTRODUCTION**
Background to the Canada Water Agency and introduction of Chatham House Rules.
- 7 MORNING KEYNOTE**
Keynote address from The Honourable Elizabeth Dowdeswell
- 8 PANEL ONE**
Flowing Together: The Canada Water Agency, Co-Governance and Co-Operation
- 12 PANEL TWO**
Show Me the Money, Spending the Freshwater Action Plan
- 15 AFTERNOON KEYNOTE**
Afternoon Keynote from Michael Miltenberger
- 17 PANEL THREE**
Bringing the Canada Water Act into the Twenty-First Century
- 19 CONCLUDING REMARKS**
Summary of the day's discussions from Bob Sanford
- 21 SPEAKERS' BIOGRAPHIES**
Meet the keynotes, speakers and chairs that sat on each panel.



INTRODUCTION

In September of 2023, the Forum for Leadership on Water and Massey College at the University of Toronto partnered to offer a symposium that aimed to bring the water community in Canada together to break down barriers, generate ideas and agree on solutions to a growing water and water-related climate crisis in Canada.

The purpose of the symposium was to engage and inspire meaningful conversation and debate across disciplines, affiliations and governments with respect to policy, legislation, finance and actions needed to ensure the sustainability of Canada's great freshwater resource.

This report, produced in association with the United Nations University Institute of Water, Environment and Health (UNU-INWEH) is a summary synthesis of the proceedings of what may well turn out to be a turning point in Canadian understanding of the threats global climate breakdown and the loss of hydrologic stationarity now pose and may pose in the future to water security in this country and how we can address them.

The symposium was conducted under the Chatham House Rule, which is an unwritten agreement that allows the use of information from a discussion without direct quote or attribution to a speaker or the organization they represent. Though it will identify the keynote speakers, this report will respect this rule and will highlight the ideas and discussions from the symposium without citing the specific speakers.

“

When a meeting, or part thereof, is held under the Chatham House Rule, participants are free to use the information received, but neither the identity nor the affiliation of the speaker(s), nor that of any other participant, may be revealed

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MORNING KEYNOTE: THE HONOURABLE ELIZABETH DOWDESWELL

The Lieutenant Governor of Ontario, the Honourable Elizabeth Dowdeswell, opened the conference with a reminder to all that freshwater is a major element of the Canadian identity, and that stewardship of this precious resource is vital to Canadian and global security.

Her honour observed that the symposium was a gathering of leaders across disciplines and domains, with wide-ranging perspectives. She invited the audience to test their leadership skills as the world faces polycrises of dimensions never faced before due to climate change.

On this matter, Her Honour offered three observations:

1. **The Need for Systems Thinking:** We live in a permeable world on so many levels and we need to understand and use that permeability to advance the common good.
2. **The Matter of Governance:** Working across government is more critical than ever to transcend our current paralyzed government situation.
3. **The Necessity of Reconciliation:** Reconciliation is critical for effective governance and the sustainability of freshwater. Indigenous co-creation and co-development of government policy is no longer an option. It may be impossible to deal with serious environmental problems like the deteriorating health of a major body of water like Lake Winnipeg without governance reform; and that governance reform is impossible without reconciliation. It follows then that major environmental issues, including those associated, not just with water, but also with climate heating, cannot be addressed without reconciliation.

Her Honour concluded on a hopeful note, offering that her confidence in leadership in Canada remains unshaken and that the leadership Canada needs exists now, today, in this symposium. How the tide will turn, however, is up to us.

PANEL ONE: FLOWING TOGETHER: THE CANADA WATER AGENCY, CO-GOVERNANCE AND CO-OPERATION

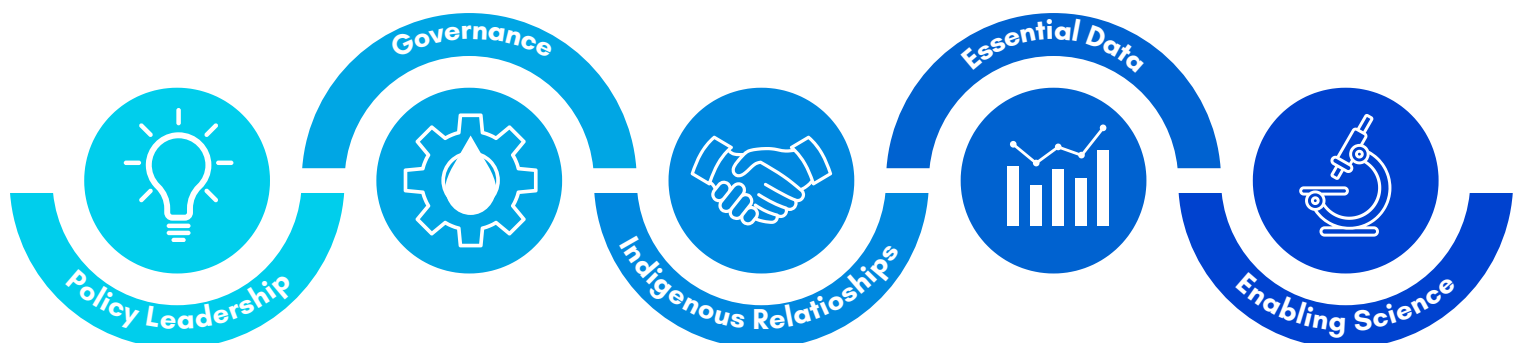
Chaired by Dr John Pomeroy, the first panel aimed to identify the opportunities within the Canada Water Agency (CWA) to convene leaders, ideas, and disciplines to identify and solve Canada's greatest water challenges.

The Panel opened by acknowledging the current situation that Canada is in; record-low river flows, dropping reservoirs, drying wetlands, record glacial melts, extensive wildfires, and the hottest summer in North America in recorded history. Change is "hurtling us into a dangerous and unfamiliar world where our experience and traditional approaches no longer provide adequate guidance for preserving our environment, building our prosperity, looking after each other and living in safe, healthy communities."

Although terrifying, such changes have gone ignored by Canada and the rest of the world. Instead, Canadians remain comfortable with the myth that Canada is a global climate oasis that will not be impacted by these changes in the same ways the rest of the world will be, and already is. Yet, it has been made clear this past summer that Canada is struggling to handle our own domestic climate challenges, and that the "myth of limitless abundance of water" that has followed Canada's reputation internationally, is in jeopardy.

The Canada Water Agency provides solutions to this national climate emergency. The Canada Water Agency provides the unique opportunity to identify the vulnerabilities of communities by mitigating disasters, promoting adaptation, flood and drought recovery, pollution abatement and the use of natural infrastructure to restore river basin function and health.

Currently, the Agency is nested within Environment and Climate Change Canada (ECCC), within a transitional team that will work to establish the Agency independently from ECCC through legislation tabled on November 30, 2023. The standalone Agency will be housed in Winnipeg, Manitoba, with hubs across Canada in Dartmouth, Montreal, the National Capital Region (NCR), Toronto and Vancouver. The Agency will report directly to the Minister of Environment.



The current five pillars of the Canada Water Agency as named by Environment and Climate Change Canada (2023)

Panel Discussions Topics

Co-Governance

It was noted that the Canada Water Agency must be rooted in rights-based co-development of water policy, including both Indigenous and scientific knowledge and techniques to manage water in Canada. The first way to do this is to acknowledge what we're managing. Water, Indigenous peoples maintain, is a living and breathing life source, and needs to be understood as possessing its own agency which must be respected. The only way to respect water in this capacity, is by way of treaty with Indigenous peoples.

To create a successful Agency, there are past mistakes that Canada must fix, and Indigenous voices must be heard. The future Agency has promised to facilitate these conversations and hear all voices to create a strong water-management future for all citizens of Canada. It will be necessary to adhere to the principles of the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) if we are to achieve the new levels of trust and cooperation throughout the establishment of the Canada Water Agency that will make this new institution successful.

In the first five years of the Canada Water Agency, the Agency should recognize the role of First Nations in co-governance and support Indigenous water strategies, which are some of the strongest known. First Nations should also be represented on the Prairie Provinces Water Board, located in Regina, Saskatchewan, and be allowed more involvement in the operations of hydro-water utilities, including decisions made by the International Joint Commission and related water bodies such as the Lake of the Woods Water Control Board.

One of the greatest hurdles to this success will be establishing trust between the Federal government and Indigenous nations.

Leadership

Key to a successful independent Agency is strong leadership, especially in its early years. This leadership must be brave and simultaneously look forward and backward. It must examine past setbacks, learn from them and think through them, and then look at long-term solutions.

Leadership must set the Canada Water Agency up for success in the first five years of existence, creating an agency to possess a range of skillsets that allow it to build trust and set the stage for successful cooperation and collaboration across all governments and stakeholders.

There is urgency in creating the Agency, and a too-cautious approach at the outset will be detrimental to its long-term prospects. The panel noted that Canada needs an active, ambitious, service-oriented Canada Water Agency now.

Data

The Agency can serve in the vital function of gathering and distributing freshwater data across Canada. The value of on-going accurate data collection cannot be ignored in the context of the evolution of water policy in a new era of water governance, and the Canada Water Agency can play a major role in this. Data is critical to effective response to both the water crisis and the climate emergency in Canada.

The Agency can become active in communities where there is already high engagement with respect to data collection, and amplify and harmonize these efforts across the country.

Cross-Government Collaboration

Local governance will be key in delivering the infrastructure that communities need to become resilient against the impacts of climate change. The community level of government is where policy, planning and infrastructure can make a real difference to on-the-ground action, and translate Federal promises into local deliverables.

Municipalities can act as convenors and coordinators of inter-jurisdictional cooperation, especially as it relates to the costs of infrastructure and resiliency.

Currently, water in Canada is managed by all governments simultaneously, and often jurisdictions don't talk to each other, plan together or invest collectively. We currently have a trickle-down, fragmented and competitive approach to managing water that doesn't work well when we face big challenges and bigger costs. Some have estimated that by 2050, the cumulative cost of natural disasters in Canada could be at least \$139 billion, and this year suggests this number could be even higher, meaning corresponding investments will be astronomical. The Canada Water Agency can level up our responses to water and climate resiliency, and could support the development of connected water infrastructure corridors that will make new ways to resource infrastructure and investment opportunities in addition to the Freshwater Action Plan.

We must also recognize that some places are unique, and relationships need to be developed that recognize regional uniqueness in the context of engagement.

Cross-Discipline Convenor

Panelists favoured a model of an Agency that is a convenor and aggregator of information, policy and infrastructure investments. Simply, the Agency will need to bring science, data, and people together.

Concerns

One concern of current Canada Water Agency leadership is not meeting the numerous expectations of the water community. As noted, water responsibility is split across over twenty federal departments, and the creation of one independent agency is a huge step forward for coherent management. But there are concerns. This stand-alone entity could make successful management and meaningful change difficult, as it may be harder to get cross-cabinet cooperation, interest and funds.

“If you ask ten different people about what the Canada Water Agency is, you’ll get ten different answers”. This, in itself, becomes a question of what the Canada Water Agency won’t do as much as a question of what it will do. If it’s not made clear what the Agency will do or how it differs from what we already have, we could fall into the trap of recreating the same model we currently use, one that is inefficient and ineffective.

There were further concerns that the Agency would fail to recognize water as possessing personhood and that, more broadly, the recognition of First Nations jurisdiction over water will not be enshrined in ever-shifting federal government policies.

Questions from the Floor:

Why Winnipeg?

Winnipeg is located centrally in Canada, “a gateway to the West”. It sits on the Lake Winnipeg watershed, the second largest watershed in Canada shared across four provinces and four US States, and is an established municipal and regional leader in water management. Winnipeg is further home to the International Institute for Sustainable Development, adjacent to the Experimental Lakes Area, and home to many Indigenous Leaders, including the Southern Chiefs Organization. Winnipeg has been recognized as a leader in advancing reconciliation and recognizes that water unites all, a foundation that the Canada Water Agency can build upon.

Where is the role of emotion and urgency in discussing the Agency?

It must be recognized that water is sacred, and feelings and emotions are important regarding the future of the agency, as notably seen through the passion that drove its creation from political champions like Parliamentary Secretary Terry Duguid, Winnipeg MP. It was also recognized that our emotions would be better served if we could learn to recognize that the land can speak to us. For further reading refer to the “Gaia Hypothesis” proposed by James Lovelock.

How might the Canada Water Agency improve industry accountability with respect to contaminants?

There is great opportunity in this space with respect to better data collection and sharing of this data at community and regional levels. The Canada Water Agency can better harmonize federal-provincial cost sharing programs that enhance bureaucratic cooperation. As importantly, the Canada Water Agency can ensure that when budget cuts happen, water remains a priority especially with respect to uninterrupted data collection and reporting.

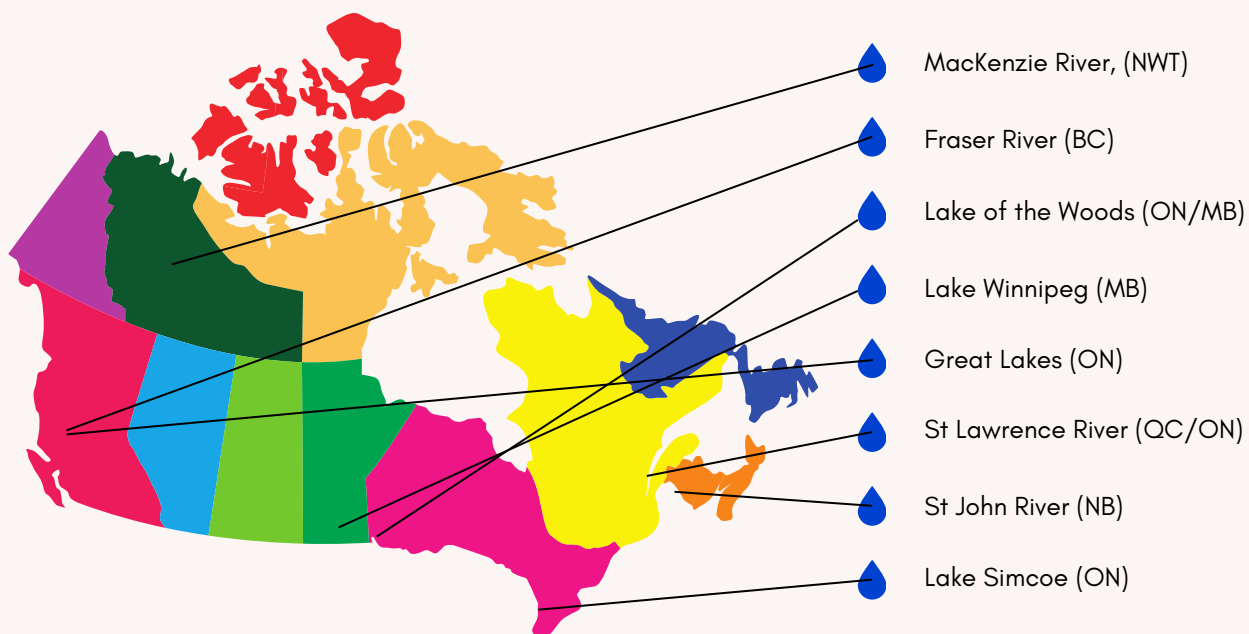
PANEL TWO: SHOW ME THE MONEY, SPENDING THE FRESHWATER ACTION PLAN

This panel opened with a few observations, notably the importance of enabling the independent Canada Water Agency to still have a focal point in Ottawa to engage federal departments with responsibilities for water and to meet on an on-going basis with politicians. In a clear response to the previous panel, it was also that it was clear that the Canada Water Agency would not start out with the capacity and all the expertise it needed, but that expertise was in the audience, expertise that the Canada Water Agency can take advantage of through roundtables and the establishment of deeper relationships with the expanded water community in Canada.

The panel went on to discuss what will make a successful Freshwater Action Plan, referring to the historic federal investment of \$650 million over 10 years to freshwater projects across the following eight basins: Great Lakes, Lake Winnipeg, Lake of the Woods, St. Lawrence River, Fraser River, Saint John River, Mackenzie River, and Lake Simcoe.

Of the \$650 million in funding, \$420 million has been allocated to the Great Lakes, leaving only \$230 million for the remaining basins to split.

BREAKING DOWN THE FRESHWATER ACTION PLAN



The 2023 Spring Budget announced \$650 million over ten years to support monitoring, assessment, and restoration work in eight pre-determined watersheds: Great Lakes, Lake Winnipeg, Lake of the Woods, St. Lawrence River, Fraser River, Saint John River, Mackenzie River, and Lake Simcoe. Of this \$650 million, \$420 has been allocated to the Great Lakes, leaving only \$240 million for remaining basins to share.

The Agency, alongside established partners like the International Joint Commission, can play a helpful role in maintaining a productive relationship between Canada and the US regarding water resources. The Freshwater Action Plan can facilitate nation building between and across shared watersheds and could potentially have the capacity to deal with international conflict resolution.

Freshwater Action Plan Processes:

It was noted that community accessibility to Freshwater Action Plan funding design, including application and reporting processes, needs attention, as it is unclear what type of projects would be eligible for the Freshwater Action funding. Such information should demonstrate how watershed projects across the country could be eligible for funding, and what the key indicators of project success would be.

We also don't know the criteria that the Federal government will be using when distributing funds across watersheds and projects. The US has been very successful with identifying indicators for specific projects, and Canada could look to them as an example for this. Similarly, the US has mechanisms for attracting and distributing funds that Canada could implement.

Mechanisms, Capacity and Distribution of Funds:

It is understood that the distribution and management of the Fresh Water Action Plan funds will be the responsibility of ECCC, including the Canada Water Agency, Science and Technology Branch and the Meteorological Services of Canada. As the Agency develops, it will be critical to understand and develop how it can move money more efficiently outside of government. To be truly effective, the Agency must include and fund local partners. Without these, the Agency will never be more than a "pipe dream."

The Role of Public Support:

Concern was subsequently expressed that while we presently have a Canada Water Agency that is striving to harmonize effective action on water issues across the country, we are still not unified as a nation on what constitutes those issues. In this context, the fear is that – even at this symposium – we may be talking to ourselves. Public support is not there. The question is how we create it?

In response to this question, the panel offered that what happened in Flint, Michigan and Toledo, Ohio changed the profile of water issues, at least in the United States. Here in this country, it might be that the biggest challenge may be to gain and maintain political support for action and that the best way to do that may be by way of demonstration of success.

THE LAST WORD

The way we managed water in the past 50 years can't be the way we manage water in the next 50 years. Unfortunately, we still don't see a whole-of-government approach, especially with respect to common action on water issues. Therein, lies great potential and opportunity for the Canada Water Agency.

Panel Discussions Topics:

Identifying Issues within Basins

It will be important for the Canada Water Agency to find out where public consensus really resides with respect to what matters most to Canadians. On top of this, consideration must be given to how the Agency is structured to assure inter-departmental and NGO cooperation in the face of the growing number of water-related issues in Canada.

Diversifying Funding:

Government won't be able to do it all. It is important to get the leverage of philanthropy on board at the early stages of the development of programs like the Freshwater Action Plan. Additionally, there is a role of industry, private enterprise and entrepreneurs to play.

The Great Lake Divide:

Equitable funding is critical, it can't all go to the Great Lakes.

The agency has an opportunity to do something brand new and not seen before. This is a watershed moment for Canada, and specific regions like British Columbia and the Prairie Provinces, which are disproportionately being impacted by climate change.

Lessons from and Support for British Columbia:

We shouldn't ignore British Columbia, where there is existing provincial momentum to assert urgently needed reliable funding for action on water issues across the province. BC is facing an unprecedented wildfire and drought emergency, more so than many other other provinces. Unique to BC is its commitment to UNDRIP, even during such disasters. There has been little to no federal investment in water for a very long time, and it is needed now as British Columbia faces serious climate impacts.

The US Experience:

In regard to the US, who promised 1 billion to the Great Lakes, it is easy to think that securing funding is easier than it is in Canada, which is not the case. To get this funding, it took decades of planning and support from philanthropic organizations and government. Moreover, scientific credibility was critical to building and retaining government attention and aid. It was necessary to pay constant attention to the political viability of the project, attention to which was made notably difficult during a very divided political climate that persists to this day.

Even with this investment, the US is not doing enough to deal with climate change or water governance injustice, and the Great Lakes restoration program remains under constant threat.

AFTERNOON KEYNOTE: MICHAEL MILTENBERGER



A view of the wildfires only 10 kilometres from Michael's home in Fort Smith, NWT, summer 2023. Photo Credit: Jason Johnson

After being thoughtfully and respectfully introduced by his colleague and friend, Merrell-Ann Phare, former Minister Michael Miltenberger shared his story about the experiences he recently had as a wildfire threatened to destroy his town of Fort Smith and the greater Northwest Territories.

The fires that threatened his home, Miltenberger explained, started in Wood Buffalo National Park, south of the 60th parallel in Alberta but eventually coalesced into one massive fire of nearly 500,000 hectares which became known as the Wood Buffalo Complex.

As the fire remained out of control it became clear that evacuation was the only safe option. As if to put an end to any question of whether feelings and emotions were a growing part of the calculus of climate change, Michael recalled walking around his home before leaving Fort Smith on August 12th "saying goodbye, thanking the house for sheltering him and his family all these years, thinking we may not have a home to come back to."

For Michael Miltenberger, fire and water are two sides of the same coin, and that coin - the often overlooked part of this metaphor - is our world. In the jurisdictionally complex domain of fighting fires of unprecedented scale and intensity, no one was prepared for what happened. Lessons learned from similar mega-fires that destroyed Slave Lake and Fort McMurray were not applied. There was no "whole of government" plan for an emergency of this scale. In the absence of even department-level plans, confusion reigned with near-fatal consequences.

“What saved us was the Creator, a couple of wind shifts at pivotal times when all seemed lost and the incredible efforts of the few hundred defenders that stayed behind, the firefighting personnel, the equipment operators, pilots, support staff of all kinds, they were relentless and indomitable, working around the clock, never giving up, never stopping, till our communities were saved.”



Jason Johnson, Miltenberger's Grandson, a firefighter, surveying the wildfires from above. Photo Credit: Pilot Ciaran Nolan

Specifically, The Department of Health wanted to close health facilities and evacuate all staff because of the risk, leaving firefighters with no medical assistance should it be required. The Justice Department, responsible for peace, order, and good government, initially pulled the RCMP out of the threatened communities, leaving people on their own to fight fires and any civil discord. The Northwest Territories Power Corporation, a territorial crown corporation, was initially going to shut off power to affected communities to protect their generators, leaving defenders of those communities doomed to failure.

The Executive branch of government finally declared a state of emergency it was not prepared for. There did not appear to be a “command central” where the Leaders and senior officials gathered to work with and support all the various operations on the ground. In fact, it seems that once the state of emergency was declared and evacuations announced, many of the Leaders and senior officials normally on the bridge of the NWT ship of state in Yellowknife, decamped and joined the exodus of evacuees.

Where does the Canada Water Agency fit as a new national agency and how do we get national buy-in and oversight from Federal, Provincial, Territorial, and First Nations governments without which the Canada Water Agency will not thrive and flourish?

We do not need more layers, structures, and staff. We need planning, agreements, collaboration, cooperation, and communication. We need governments to work together to create the conditions for us to survive and succeed.

PANEL THREE: BRINGING THE CANADA WATER ACT INTO THE 21ST CENTURY

The final panel of the symposium began with the question: “Are the aspirations you had 50 years ago the same as they are now?”, referring to the fifty-year-old Canada Water Act. The panel went on to identify priorities for a new Canada Water Act.

The Canada Water Act has not been meaningfully changed or adapted in over fifty years. To highlight this, consider that neither climate change, resilience, adaptation, or the Indigenous right to water and governance are referenced anywhere in the text of the Act.

Without a modernized Canada Water Act, there is little meaningful legal basis on which the government can look to manage freshwater at the Federal level.

Panel Discussions Topics:

Basin-Level approach:

It was noted that the original concept of the Canada Water Act was a basin-level approach with respect to programs and authorities, but suddenly the federal government got nervous. As a result, the Canada Water Act in the end pertained only to concerns of national interest. We do not need to tip-toe around provincial interests in this new Act. We need effective, on-going collaboration and co-governance.

Meaningful Action:

It was put forward that a modest place to start would be with the government doing its job. We can see what can happen when governments do their job. Acts have to do more than say what is important, they have to do what is important.

From a hopeful standpoint, a meaningful renewal of the Canada Water Act is both urgent and possible, with all panelists agreeing that rewriting the act was achievable even in the face of great adversity.

UNDERSTANDING UNDRIP IN CANADA

The United Nations Declaration on the Rights of Indigenous Peoples Act, received Royal Assent on June 21, 2021, affirming the Declaration as an international human rights instrument that can help interpret and apply Canadian law. UNDRIP provides a framework for reconciliation and cooperation based on the principles of justice, democracy, respect for human rights, non-discrimination and good faith. It is action-oriented and provides a clear vision for the future, ensuring that federal laws reflect the standards set out in the Declaration, while also respecting Aboriginal and Treaty rights recognized and affirmed in the Constitution.

Source: Government of Canada, Background on United Nations Declaration on the Rights of Indigenous Peoples Act

Indigenous Water Rights:

An anecdote was provided in which the word “Indigenous” was mistakenly replaced in a speech with the word “Ingenious,” and when researched, it was found that these words were near-synonyms for cleverness, originality, and inventiveness. Canada can look to Indigenous peoples' ingenuity as a place to start when rewriting the Act.

A modern Canada Water Act must commit to co-governance at all levels and begin by listening and working diplomatically. Diplomacy is the artful management in dealing with others, especially those charged with the responsibility for water. The process of renewal of the Act can be an opportunity for a meaningful diplomatic exercise in modern freshwater management.

There is an enormous opportunity to harmonize the new Act with the United Nations Declaration on the Rights of Indigenous Peoples. How do we do that? We do that by co-drafting the new Act. We must leave colonial applications behind. We must build the future together.

Such laws and legislation can set the stage for success even in multi-judicial systems. Laws, however, are just the start, accountability matters.

November 2023 Update: Legislation was tabled on Nov 30 to establish the Canada Water Agency as a standalone entity as a standalone entity.

FURTHER READING ON INDIGENOUS WATER RIGHTS AND CO-GOVERNANCE

Navigating Our Ongoing Sacred Legal Relationship with Nibi (Water), by Dr. Aimée Craft, in J. Borrows, L. Chartrand, O. Fitzgerald and R Schwartz (eds), *Braiding Legal Orders: Implementing the United Nations Declaration on the Rights of Indigenous Peoples* (Centre for International Governance Innovation, 2019) pp.101-110.

Collaborative Consent and Water in British Columbia: Towards Watershed Co-Governance, Phare, M-A., Simms, R., Brandes, O.M., Miltenberger, M. (2017). POLIS Project on Ecological Governance and Centre for Indigenous Environmental Resources. Available at:

Five Foundational Pillars for the Canada Water Agency, A collective submission signed by fifty-one organizations across Canada, 2021

Anishinaabemowin, Climate Change Glossary, Centre for Indigenous Environmental Resources (CIER), 2020

WaterTalk with Oliver M Brandes (Webinar), Hosted by the Water Institute (2020)

A Handbook for Water Champions: Strengthening Decision-Making and Collaboration for Healthy Watersheds, N. Overduin, T. Morris, R. Simms, J. Archer, O.M. Brandes, and S Eaves (2019)

Renewing the Canada Water Act, Water Security for Canadians, 2021

CONCLUDING REMARKS: BOB SANDFORD

“

What is the use, one might ask, of having spent decades and billions of dollars to develop science well enough to make accurate predictions of future climate heating impacts possible if in the end, all we are going to do is sit around and see those predictions to come true and watch them have the exactly the extraordinarily damaging impacts all our efforts were undertaken to prevent and avoid?

”

Bob Sandford began his detailed summary of the symposium by reminding the audience we are at a critical moment. The way we have managed water in the last 50 years cannot be the way we manage water now or 50 years from now.

This is not a time for caution. This is a time for bold action. In the early years of the Great Depression, the Government of Canada created the Prairie Farm Rehabilitation Administration. It did not have the time the Canada Water Agency has already taken to figure out its structure and what it is going to do. The PFRA had to get going immediately if it was to address what was clearly a national crisis.

Ours is no less a national emergency that Canada faced in the 1930s. If anything, it is an even greater emergency. While trying to undo the problems of the past, we have remained largely blind to the mistakes of the present. We are not seeing ourselves in a global context. We face compounding and cascading problems that are converging into a polycrisis that could make maintaining our prosperity and security difficult to sustain much longer.

Whether we want to admit it or not, this summer has shown us that what we are facing is a planetary emergency. We are getting to where we need to be with the creation of the Canada Water Agency and we will get there with the revitalization of the Canada Water Act. What is missing, however, is urgency. We continue to expect that Canada will be somehow immune to what is happening on the rest of the planet.

The new Director of the United Nations University Institute for Water, Environment and Health (known as the United Nations Think Tank on Water), Dr. Kaveh Madani, announced recently that, his scientific work would no longer be talking about the Global Water Crisis as such. A crisis, he said, is by definition a short-term emergency. We have been talking about a Global Water Crisis for many decades. It is no longer a crisis; it is a post-emergency state of failure. Leading scientists are now talking about a Global Water Bankruptcy, a bankruptcy that brought about decades of overdraft and mismanagement and ignoring the problem in many parts of the world, including our own.

As Michael Miltenberger clearly pointed out, is no longer just water that should be of concern to us, but also water's symbolic and diametric opposite, fire. If the previous five summers were not enough, this summer demonstrated beyond any shadow of a doubt how unprepared we are for what is happening now, let alone what we can expect in the future.

Emergencies show cracks in our system. Fire and water are different sides of the same coin that can be a catastrophe. No government was ready for this level of emergency. No government is ready for this level of catastrophic threat. Policies are out of date. No whole-of-government capacity exists. In these circumstances, jurisdictions can actually undermine one another. Serious questions come to the fore. How do you govern when everyone, even the government itself, has been evacuated?

Reacting to crisis is not a strategy. We need to hope less and do more. A properly organized and effectively functioning Canada Water Agency can help us do that.

We knew twenty years ago what climate heating would bring in its wake with respect to wildfire but we admitted we were just guessing and that there would be surprises. The other-worldly power and fuel-hungry intentionality of bigger, hotter, and faster wildfire is one of those surprises. The energy from these fires is greater than we have ever witnessed before and a warming atmosphere is creating fire phenomena that have never existed, as far as we know, in all of human history.

Nature is now offering us a fiery ultimatum. We have changed fire as we know it, and now fire will change us. We now face a fiery future no one wanted to see. With the other Earth elements out of balance, it is no surprise that water and fire have gone rogue.

There is much to be and can be done and much urgency. Fortunately, the fledgling agency has some of the most capable people in the country to help it off the ground. Many of those people were in this library today.

This symposium's message to the Canada Water Agency:

**We need you.
You need us.
We need each other.**

Together we can do this. Success is within our grasp. In the immortal words of Michael Miltenberger: "Let us now make it so."

MEET THE SPEAKERS



THE HONOURABLE ELIZABETH DOWDESWELL

29th Lieutenant Governor of Ontario

As the representative of His Majesty The King, Ms. Dowdeswell carries out constitutional and ceremonial duties and facilitates healthy citizen and community engagement. Ms. Dowdeswell has served the public interest at all orders of government and in the private sector. She contributed globally as Under-Secretary-General of the United Nations and Executive Director of the United Nations Environment Programme. In Canada her diverse portfolios ranged from education and culture to environment and the management of complex public enquiries. She was the founding president and CEO of the Nuclear Waste Management Organization, and later the president and CEO of the Council of Canadian Academies. She has served on the boards of Canadian and international corporate and non-profit organizations. Since taking office in late 2014, Ms. Dowdeswell has challenged Ontarians to think deeply about their role not just as residents of a province, but as global citizens. Building resilience and sustainability through inclusive economic prosperity, environmental stewardship, and social cohesion, as well as safeguarding democracy, has been the focus of her mandate. Ms. Dowdeswell has a bachelor of science in home economics and teaching certificate from the University of Saskatchewan and a master of science in behavioural sciences from Utah State University. She is an officer of the Order of Canada, a member of the Order of Ontario, and the recipient of numerous distinctions and fellowships. She holds 12 honorary doctorates.



MICHAEL MILTENBERGER

Principal, North Raven

Michael served in the Northwest Territories Legislature from 1995-2015, 14 years as a Cabinet Minister. His roles have been diverse, including Deputy Premier, Government House Leader, Minister of Health and Social Services, Minister of Education, Minister of Finance, Minister of Environment and Natural Resources, and the Minister Responsible for the NWT Power Corporation. He has worked extensively in water, the environment, and collaboration with Indigenous governments. He was responsible for and led the development of the co-drafting approach in the NWT government that resulted in the new Wildlife Act and Species at Risk Act. Michael is currently the Principal of North Raven, senior political advisor to National Chief Norman Yakeleya of the Dene Nation, a member of the Air Tindi Limited board of directors, and co-facilitator of the Collaborative Leadership Initiative in southern Manitoba. He lives in Fort Smith, NWT.



BOB SANDFORD

Global Water Futures Chair, Fellow at UNI-IWEH

Bob is Global Water Futures Chair and Fellow at the United Nations University Institute for Water, Environment and Health. He is the co-author of the UN Water in the World We Want report on post-2015 global sustainable development goals relating to water. Bob is committed to translating scientific research outcomes into language decision-makers can use to craft timely and meaningful public policy and to bringing international examples to bear on local water issues. He is Senior Advisor on water issues for the InterAction Council, a global public policy forum composed of more than thirty former Heads of State. He has authored or co-authored over 30 books, including Cold Matters: The State & Fate of Canada's Snow and Ice, Saving Lake Winnipeg, and Flood Forecast: Climate Risk and Resiliency in Canada.

Flowing Together: The Canada Water Agency, Co-governance & Co-operation



GRAND CHIEF JERRY DANIELS

Grand Chief of the Southern Chiefs' Organization (SCO)

Jerry Daniels is Grand Chief of the Southern Chiefs' Organization (SCO), representing 34 Anishnaabe and Dakota First Nations in southern Manitoba and more than 85,500 citizens. Mr. Daniels was first elected as SCO Grand Chief in 2017. In January 2020, he was acclaimed for a second term, the first time a Grand Chief has run unopposed in SCO's history. Grand Chief Daniels is a proud member of Long Plain First Nation, and a proud father to son Angelo Daniels. He was raised by his grandparents, Isabel and Donald Daniels, along with his aunties, uncles, and community members.



DANIEL WOLFISH

Acting Assistant Deputy Minister, Canada Water Agency, ECCC

Daniel's role is to oversee the creation of the agency as a standalone organization and implement the Freshwater Action Plan. Daniel has over 25 years of experience in the federal public service. He was the Director General of Regional Operations for the Canadian Wildlife Service (CWS) where he has worked with provincial, territorial, Indigenous and other partners on the implementation of several conservation initiatives, including Canada's Nature Legacy & Species at Risk. Prior to assuming this role, Daniel had been Director General for Legislative and Regulatory Affairs and for Bilateral and Multilateral Affairs in ECCC.



CAROLYN DUBOIS

Executive Director, Water Program, Gordon Foundation

Carolyn's works with partners across sectors in Canada focusing on improving freshwater stewardship through community engagement in decision-making and using the best available evidence. Carolyn is a passionate advocate for open data and has led the development of DataStream, an online system that provides access to information about water quality.



COLLEEN SKAR

Principal, Creative Resolutions

Colleen operates at the crossroads of diverse sectors, collaborating with municipal, provincial, federal and Indigenous governments, the business community and civil society leaders. She is spearheading the development of Plan 20-50, Manitoba's first 30-year regional plan for Winnipeg. Colleen's dedication to meaningful reconciliation is evident through her work with CIER on the National Collaborative Leadership Initiative, advancing reconciliation by building new partnerships and identifying co-development opportunities.



CHAIR: DR. JOHN POMEROY

Director, Global Water Futures Program at the University of Saskatchewan

Dr. Pomeroy is Director of the Global Water Futures Program – the largest university-led freshwater research project in the world. He is the Canada Research Chair in Water Resources and Climate Change, Distinguished Professor of Geography, Director of the Centre for Hydrology, Director of the Coldwater Laboratory, and UNESCO Chair in Mountain Water Sustainability. He is a Fellow of the Royal Society of Canada, the American Geophysical Union and the Royal Geographical Society, and a recipient of the J Tuzo Wilson Medal from the Canadian Geophysical Union.



DR. GLENN BENOY

Director of Sciences and Engineering, Canadian Section of the International Joint Commission (IJC)

Glenn has held key water science positions with multiple federal departments, including National Manager of freshwater fish and fish habitat science programs for Fisheries and Oceans Canada, and Research Scientist in aquatic landscape ecology held jointly between Environment and Climate Change Canada and Agriculture and Agri-Food Canada. He has a PhD from the University of Guelph in wetland ecology, an MS from McGill University in limnology, and a BSc from the University of Toronto in environmental science and zoology. Glenn's research interests include agri-environmental standards development, environmental fingerprinting, water quality modelling, and science diplomacy.



ZITA BOTELHO

Director of Watersheds BC

Zita co-leads the Healthy Watersheds Initiative and the Indigenous Watersheds Initiative to deliver \$42 million in watershed security funding across BC. Her work focuses on scaling BC's watershed security by supporting communities with resources, knowledge, training, and networks. She spent 15 years working for the federal and B.C. governments where she led the development of Living Water Smart - BC's Water Plan and the BC Water Sustainability Act.



JOEL BRAMMEIER

President and CEO, Alliance for the Great Lakes

Joel Brammeier is President and CEO of Alliance for the Great Lakes, a nonpartisan nonprofit working to protect the Great Lakes. Joel is a leading public voice on water protection issues. He has testified before Congress on invasive species solutions and advises on the implementation of the Great Lakes Compact. Joel has sat on a variety of boards and councils, including the Healing Our Waters Governance Board, Governors' & Premiers Maritime Task Force, State of Michigan Invasive Species Council, and the Blue Accounting Advisory Committee. He received his M.S. from the University of Michigan and his B.S. from Valparaiso University.



CHAIR: MARK FISHER

CEO, Council of the Great Lakes Region

Mark Fisher was appointed Chief Executive Officer of the Council of the Great Lakes by the Council's board in 2014. Mark is a seasoned professional with 13 years of experience in policy-making, strategic business planning, corporate communications, stakeholder engagement, public advocacy, and issues management. He brings a wealth of experience in international affairs, with a focus on advancing the United States-Canada relationship in the areas of trade, security, natural resource development and environmental protection. He also brings extensive experience providing advice to key decision-makers and influencers, including the Prime Minister of Canada, provincial premiers and ministers, parliamentarians, and C-level executives from the private and not-for-profit sectors.



KYLE VERMETTE

Métis Nation Lawyer & Negotiator, Special Advisor to the Firelight Group

Kyle Vermette (he/him) is a Métis Nation lawyer and negotiator who previously advised the Métis National Council and Manitoba Métis Federation on national and international issues relating to climate change, biodiversity, and the environment. He has represented the Métis Nation under the UN Framework Conventions on Climate Change and Biological Diversity, and the UN Water Conference. He is the Co-Chair of the Indigenous Advisory Committee for the Impact Assessment Agency of Canada and was formerly in-house counsel for the Water Security Agency.



MERRELL-ANN PHARE

Executive Director of the Centre for Indigenous Environmental Resources (CIER)

Lawyer and author of the books Denying the Source: The Crisis of First Nations Water Rights and Ethical Water, Merrell-Ann is legal counsel and advisor to several Indigenous governments, non-Indigenous governments, and organizations. As Founding Executive Director CIER, Merrell-Ann works to assist First Nations in addressing environmental and sustainability issues facing their communities. She was Chief Negotiator on behalf of the Government of the Northwest Territories in their negotiation of transboundary water agreements in the Mackenzie River Basin and in negotiating Thaidene Nene national and territorial parks. Merrell-Ann currently serves as a Commissioner on the International Joint Commission



OLIVER M. BRANDES

Project Lead, POLIS Project on Ecological Governance, University of Victoria

Economist and lawyer by training, Oliver serves as co-director of the POLIS Project on Ecological Governance at the University of Victoria and leads the POLIS Water Sustainability Project. His work focuses on water sustainability, sound resource management, public policy development, and ecologically-based legal and institutional reform. Oliver is an Adjunct Professor at the Faculty of Law and School of Public Administration and an Environmental Law Centre fellow. In 2012, Oliver co-developed and delivered B.C.'s first water law course at the University of Victoria.



CHAIR: PROF. AIMÉE CRAFT

Associate Professor, University of Ottawa

Aimée Craft is an award-winning Associate Professor at the Faculty of Common Law at the University of Ottawa, recognized internationally as a leader in Indigenous laws, treaties and water. She holds a University Research Chair Nibi miinawaa aki inaaakonigewin: Indigenous governance in relationship with land and water. Prof. Craft prioritizes Indigenous-led and interdisciplinary research, co-leads a series of research grants on Decolonizing Water Governance and works with Indigenous nations and communities on Indigenous relationships with and responsibilities to nibi (water). Breathing Life Into the Stone Fort Treaty, her award-winning book, focuses on understanding and interpreting treaties from an Anishinaabe inaaakonigewin (legal) perspective. Treaty Words, her critically acclaimed children's book, explains treaty philosophy and relationships.

THE FUTURE OF FRESHWATER IN CANADA

Report on the September 2023 Symposium hosted by the Forum for Leadership on Water and Massey College

A SPECIAL THANK YOU TO OUR ATTENDEES, REPRESENTING:

Alliance for the Great Lakes	Office of the Lieutenant Governor of Ontario
Canada Water Agency	Massey College
Canada Wildlife Foundation	Office of the Minister of Environment
Canadian Coalition for Healthy Waters	North Raven
Canadian Environmental Law Foundation	POLIS Project on Ecological Governance
Canadian Rivers Institute	Schulich School of Engineering
Canadian Water Network	Southern Chief's Organization
Centre for Indigenous Environmental Resources (CIER)	Swim Drink Fish
Council of the Great Lakes	The Polar Academy
Creative Resolutions	Toronto Metropolitan University
DAAS Consulting	United Nations University Institute for Water, Environment and Health (UNU-INWEH)
De Gaspé Beaubien Foundation	University of Calgary
Ducks Unlimited	University of Ottawa
ENVI Committee	University of Saskatchewan
Environment and Climate Change Canada (ECCC)	University of Toronto
Forum for Leadership on Water	University of Victoria
Firelight Group	University of Waterloo
Global Water Futures	Water Institute
Institute for Water Innovation	Water Rangers
International Joint Commission	Watersheds BC

Report on the discussions during the Symposium, The Future of Freshwater in Canada on Wednesday, on September 20th, 2023 at Massey College, University of Toronto, 4 Devonshire PL, Toronto, ON.

Hosted by the Forum for Leadership on Water (FLOW) and Massey College

