

Canadian Water Network's 
Canadian Municipal Water Consortium

2018 MUNICIPAL CONSORTIUM UPDATE

*A nationwide collaboration to advance
municipal water management*

DECEMBER 2018



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MESSAGE FROM CANADIAN WATER NETWORK

December 31 will mark the end of a very successful year for the Canadian Municipal Water Consortium. Several key initiatives culminated in actionable insights for decision-making, policy and practice. Strong uptake of this information by stakeholders and the media reflect the Consortium's growing influence in shaping national narratives on municipal water challenges.

Over the past year, new partnerships with key industry and government stakeholders were formed, and several exciting new initiatives are planned for 2019 as a result. Work already underway for the year ahead will address resiliency and flood risks, emerging contaminants, affordability of water services and lead in drinking water. These continue to be critical topics for the Canadian water sector, where the Consortium feels that bringing the right people, resources and knowledge together across sectors and disciplines will yield significant progress.

The Consortium's core group of municipal water leaders continues to be central in informing and shaping national priorities and defining sector needs. Over the past three years, the Consortium experienced steady growth, particularly within this leadership group. Over the next two years, Consortium membership will expand to include new industry, academic and government partners. This growth will create a platform with broad perspectives and expertise from end-users and knowledge/technology/service-providers, helping shape targeted, impactful and shared

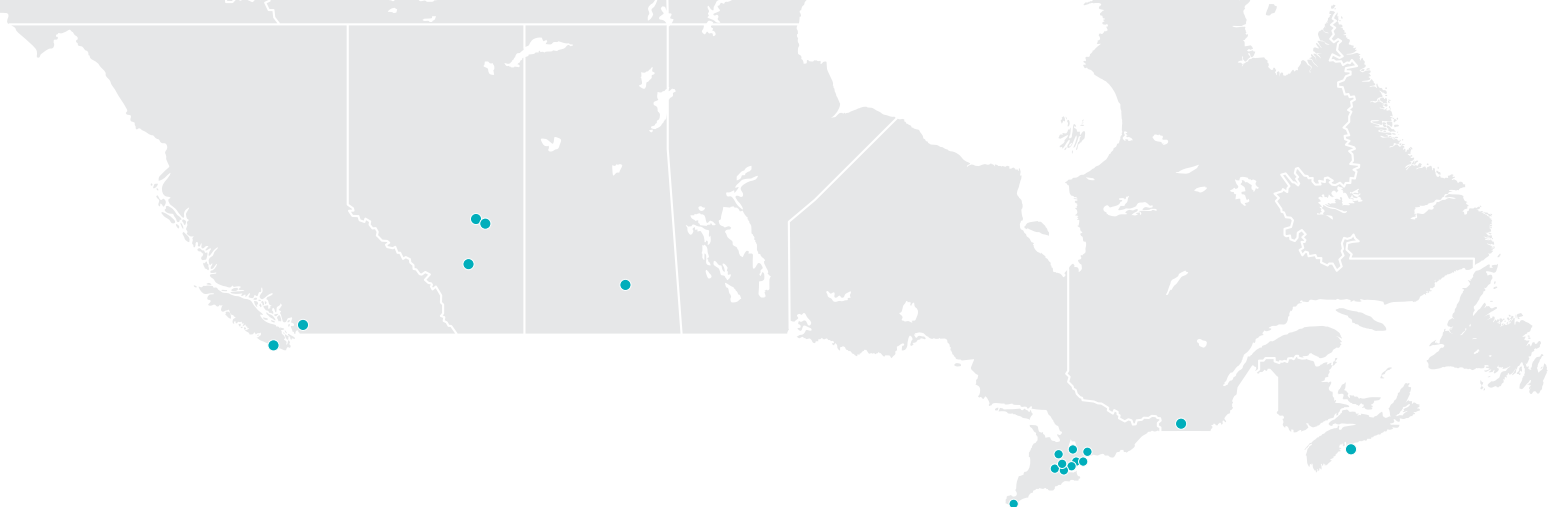
outputs that can effectively support water management in Canada. This influential and cross-sector group will also create a focal point for investment from stakeholders seeking to engage and collaborate toward actionable outcomes.

Recently Canadian Water Network (CWN) launched a new website, featuring a streamlined view of its activities, research insights and Consortium-related projects. The website will continue to highlight and extract more value from past work from CWN's 16 years as a federally-funded Network of Centres of Excellence, but more importantly, convey the organization's transition to a national non-profit whose mandate is to accelerate, advance and improve water management decisions in Canada. I hope you'll visit this new website and share your feedback with us.

Bu Lam



Manager of the Municipal Consortium
Canadian Water Network



ABOUT THE CONSORTIUM

The Canadian Municipal Water Consortium connects utilities, municipalities, researchers, industry, government and other organizations to address Canada's municipal water management challenges.

Each year, the Consortium undertakes national initiatives that accelerate, advance and improve municipal water management decisions. Consortium members contribute to, or collaborate on, these national initiatives and also exchange knowledge with peers, expand their network of contacts, and access leading knowledge.

As a trusted broker of insights for the water sector, Canadian Water Network facilitates the Consortium's activities and extracts valuable knowledge that can accelerate policy and practice improvements in water, wastewater and stormwater management.

CONSORTIUM LEADERSHIP

Setting goals and charting a clear course is critical to advancing progress in the complex, multi-stakeholder world of water management. The Consortium is advised by a group of leading senior decision-makers from progressive municipalities and utilities across the country. Together, they identify key challenges and priorities to help direct the Consortium's initiatives. Their willingness to invest in the Consortium ultimately results in better outcomes for the water sector as a whole.

Members of the Consortium's Leadership Group (CLG) provide water, wastewater and stormwater service to more than 56% of Canadians. These member utilities have varying populations, settings and practices; are both publicly- and privately-operated; implement a range of governance models; and bring a wealth of diversity and insights to how water is managed in Canada. The members all share a common goal: to accelerate, advance and improve water management in Canada.



DELIVERING
**DECISION-READY
KNOWLEDGE**

In 2018, three significant projects were delivered that accelerate, advance and improve water management on a national scale.



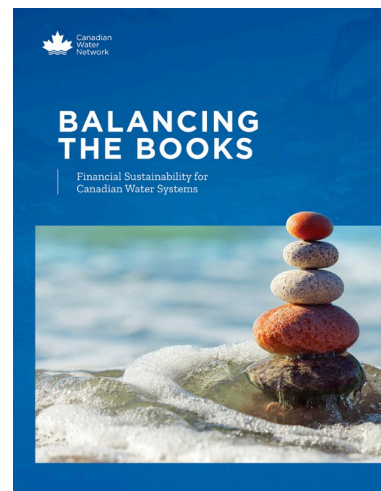
Financial Sustainability for Canadian Water Systems

PROJECT PARTNER: National Water and Wastewater Benchmarking Initiative

[DOWNLOAD THE REPORT AT: CWN-RCE.CA/BALANCING-THE-BOOKS](https://cwn-rce.ca/balancing-the-books)

Achieving financial sustainability requires that water utilities balance the books for the long term, by securing sufficient revenue to recover system costs, buffering against unexpected circumstances, servicing debts and saving for future capital needs. Potential impacts from climate change extremes — such as flooding, freezing, wildfire or drought — add uncertainty and can carry huge price tags for recovery, repair and rebuilding, which makes it increasingly important for utilities to capture and account for as many costs as possible to achieve financial sustainability.

CWN examined data collected by the National Water and Wastewater Benchmarking Initiative over a 17-year period (1999-2016) to provide a snapshot of the financial state of water management in Canada. The report articulates key challenges municipal utilities are experiencing and identifies opportunities to improve financial sustainability. As utilities continue to adjust financial plans to align revenues to costs, this information can be used to support the development of long-term goals, inform decisions and broaden public understanding of the costs of water services.



Sector outreach

The report's reach was extensive. Publication was covered by more than 30 media outlets, including Canadian Business Journal, Globe Advisor, Morningstar, Corporate Knights, Business Insider, Shaw Connect and Water Canada, with a potential audience of over two million people. Insights from the report continue to be discussed by local municipalities and at national water conferences.

Media coverage on March 22, 2018

MEDIA PLANET Op-ed

industryandbusiness.ca/development-and-innovation/how-will-we-cover-the-costs-of-climate-change

Business Insider

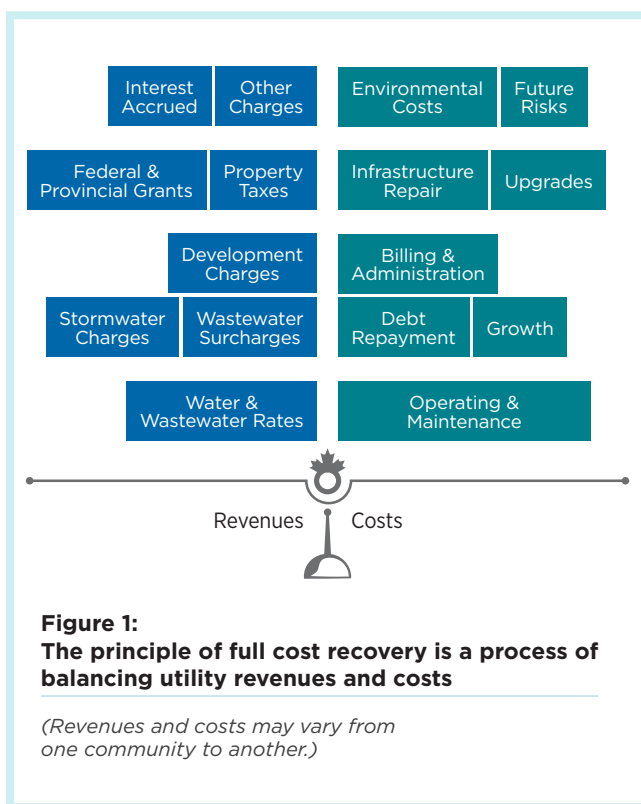
markets.businessinsider.com/news/stocks/canadians-will-need-to-spend-more-on-water-to-maintain-high-quality-systems-1019062465

Water Canada

watercanada.net/municipal-water-pricing-report-highlights-challenges-opportunities

What to watch for in 2019...

Achieving financial sustainability for water systems may require customers to pay more for water services, which means that equity and affordability, particularly for low-income customers, is an important and growing issue. Increasing understanding of these impacts and identifying strategies and financial innovations to address them will be central to the Consortium's activities in the coming year. To support this and other work focused on improving financial sustainability, CWN launched a national survey in September 2018 to understand what knowledge gaps and barriers for implementing financial best practices persist. The results of this survey will help guide the development of follow-up initiatives in early 2019.



Leveraging Asset Management Data for Water Infrastructure Planning

PROJECT PARTNERS: PSD Inc., Canadian Water and Wastewater Association

 [DOWNLOAD THE REPORT AT: CWN-RCE.CA/LEVERAGING-ASSET-MANAGEMENT-DATA](http://cwn-rce.ca/leveraging-asset-management-data)

Good asset management practices are critical for effective decision-making in the management of water systems. In Canada, much of the focus over the last decade has been on the development and adoption of asset management plans by municipalities, and many utilities have implemented asset management plans to some extent. However, *how* the data for asset management are being used to support decision-making and long-term planning has not been well established.

This project provides a snapshot of Canadian state-of-practice and how asset management data are being applied to identify issues and make decisions regarding maintenance, repair and replacement, as well as investment and long-term strategic planning. The analysis was derived from a national survey of asset managers and water system managers in 58 municipalities across Canada serving over 50% of the nation's population. In-depth interviews were also conducted with utilities who have been implementing more advanced asset management approaches.

The report highlights potential challenges in data reliability that may impact the confidence that can be placed in subsequent decisions that are informed by the available data. These findings point to opportunities for all levels of government to strengthen asset management programs by focusing on the collection of accurate data.



Sector outreach

The report highlights the need to improve asset management practices in Canada. Support from governments to date has focused largely on plan development, but a greater emphasis on supporting the ongoing collection of good asset data will advance and improve municipal decision-making. Initial discussions with the federal government on strategies to better support ongoing (and more accurate) data collection by municipalities followed shortly after the release of this report. These discussions presented options on potentially expanding federal infrastructure funding programs to include funding support for ongoing asset management plan maintenance, including data collection.

What to watch for in 2019...

The uncertainties of climate change pose significant risks to municipal assets. While future extremes from climate change are challenging to predict, municipal utilities are still required to make investment decisions within this context of uncertainty. Many utilities have used data in creative ways to identify system vulnerabilities to climate change, pinpointing where investments would best mitigate against impacts from future extremes. CWN is partnering with PSD Inc., the Canadian Water and Wastewater Association and the Federation of Canadian Municipalities to develop a report in 2019 that will feature a collection of case studies showing how municipalities have applied a climate change and sustainability lens for analyzing data. Key insights will allow better assessment of system vulnerabilities and ultimately support better decision-making for improved system resilience.

Dive deeper: Webinar discussion on leveraging asset management data



with Tyler Sutton, PSD, Inc.

Bu Lam, Canadian Water Network

Robert Haller, Canadian Water and Wastewater Association

Daryush Esmaili, City of Guelph

 [Listen to the recording at:
cwn-rce.ca/2018-asset-management-webinar](http://cwn-rce.ca/2018-asset-management-webinar)

Canada's Challenges and Opportunities to Address Contaminants in Wastewater

SUPPORTED BY: Environment and Climate Change Canada



DOWNLOAD THE REPORT AT: CWN-RCE.CA/CONTAMINANTS-IN-WASTEWATER

There is a growing complexity of chemicals entering Canadian wastewater treatment facilities, and treatment approaches are highly varied across the country. With financial support from Environment and Climate Change Canada, CWN undertook a national review of contaminants in municipal wastewater to better understand the current state-of-the-knowledge and to identify ways to minimize risk and maximize benefits through strategic infrastructure investment. A national expert panel was convened to consider which contaminants are priorities, what treatment options exist, and the key opportunities and trade-offs involved. The panel engaged a national network of researchers and practitioners for their input and published a culminating report that provided critical insights for decision-makers, including a Blueprint for Federal Action. At the request of the federal government, the panel has met with senior leaders at Environment and Climate Change Canada to discuss the panel's recommendations for a national plan of action.

What to watch for in 2019...

CWN continues to engage with the federal government on how to begin implementing the Blueprint recommendations provided in the expert panel report. In addition to its work directly supporting the federal government to connect with other groups to support the Blueprint, CWN will be working with provincial and local governments and other partners to advance options outlined in the panel report.

Sector outreach

The expert panel submitted their report to the federal government in March 2018. The report was later released at Blue Cities, a national conference for water leaders from government, academia, NGOs and industry. CWN was pleased to welcome Jonathan Wilkinson, the Parliamentary Secretary to the Minister of the Environment and Climate Change, to provide opening remarks. The panelists presented their findings and responded to questions from the delegates. To coincide with the release of the report, *The Star* published an article with national reach.

thestar.com/vancouver/2018/04/30/expert-panel-calls-for-holistic-approach-to-wastewater-management.html

This project was conducted in response to a recognized need by the federal government and municipalities to address the growing questions and concerns surrounding the impact of contaminants from municipal wastewater systems. A tremendous opportunity exists to make wiser decisions on major investments in wastewater infrastructure and this effort is expected to accelerate and focus ongoing discussion about investment to improve the value obtained.





CONNECTING PEOPLE AND PERSPECTIVES

Accelerating, advancing and improving water management in Canada requires collaboration. Connecting the many stakeholders involved is central to the Consortium's mandate.



BLUE CITIES 2018: SMARTER WATER MANAGEMENT



Blue Cities is the Consortium's annual flagship networking event, bringing together decision-makers, industry executives and knowledge providers to advance important conversations and directions for municipal water. **Blue Cities 2018** focused on *Smarter Water Management*, which is about making effective decisions in the face of the complex challenges and uncertainty that water leaders are facing. The event brought together an impressive lineup of speakers and delegates who collectively shared their knowledge, experience and insights on what key decisions for water management look like, what clear priorities for action might be, and who needs to be involved in establishing these forward-facing solutions.



Smarter water management is about finding ways to involve key resources and stakeholders in the design and adoption of robust solutions. The discussion at Blue Cities 2018 focused on sustainable infrastructure financing, designing for uncertainty, customer engagement, innovative technologies and business processes, and the role of insurance, private citizens and municipalities in flood risk mitigation and developing urban resilience to extreme storms. The closing panel included guest speakers from other sectors who shared their strategies to address challenges similar to those experienced in the water sector.



Sector outreach

By structuring critical conversations with municipal utilities, government, academia and industry partners, Blue Cities addresses complex water issues with decision-makers from multiple sectors who are in a position to move solutions forward. New partnerships have resulted from the event, creating coalitions that are willing to invest and advance key water management challenges. For example, a partnership between the insurance sector, academic experts, the federal government and municipal utilities has developed into a cross-sector project to improve foundational data for the evaluation of pluvial flood risk in Canada. Similarly, cross-border relationships have been established to compare U.S. and Canadian data on pipe breakage, which will lead to insights on the tracking of asset data and capital investment decisions.

Blue Cities also highlighted that problem-owners and knowledge and technology-providers share a common interest and responsibility to address water issues, which has led to a sector-driven desire for broader involvement in the Municipal Consortium. By incorporating and more effectively connecting multiple perspectives, future Consortium activities will provide even greater application and value in support of the advancement, acceleration and improvement of water management in Canada.



What to watch for in 2019...

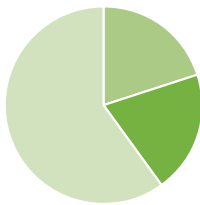
Next year's conference will be held on May 7 & 8, 2019 at the Delta Hotel in downtown Toronto. The theme, *Embracing Change in Water Management*, reflects the reality that when utilities recognize and embrace the changes that will inevitably occur to the environment, regulations, financing and other factors, the resulting innovative and proactive strategies can be more effective and impactful. At Blue Cities 2019, we will consider this theme in discussions on resource recovery, affordability and equity, asset management, emerging contaminants, bridging the public-private divide, and good governance. We'll also be embracing change and innovation with the format of some of the sessions, including a "fishbowl" opening plenary and increased opportunities for participant engagement.

For 2019 program and speaker updates, visit:

bluecities.ca

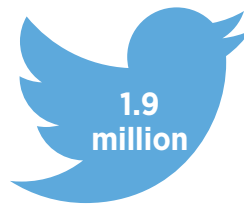
Blue Cities 2018 by the numbers

Attendees



- President/CEO/Director 60%
- Management 20%
- Academic/Government/Dignitary/Young Professional 20%

Social Media Outreach



- Twitter impressions May 1-2, 2018

Media Coverage

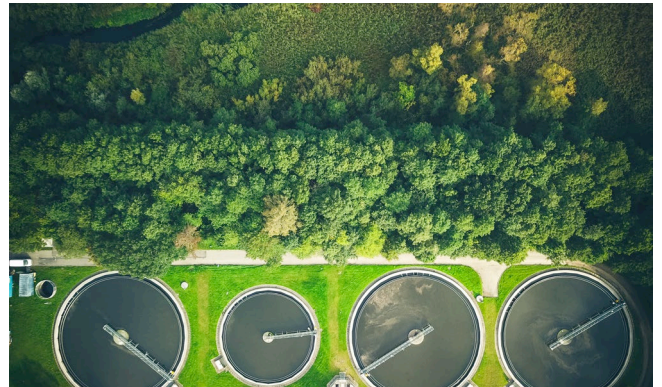




GLOBAL WATER RESEARCH COALITION

CWN is one of 14 international members of the Global Water Research Coalition (GWRC). The GWRC provides an opportunity to leverage insights and resources through cooperative planning and implementation of international research and knowledge synthesis regarding municipal water issues. As Canada's representative on the GWRC, Canadian Water Network brings Canadian water priorities and perspectives to an international table to help shape GWRC initiatives, and gather insights from emerging international research findings and trends to inform the Consortium and the broader Canadian water sector.

In 2018, the Consortium helped connect Canadian researchers and leading experts to several international initiatives, including work on evaluating the reliability of measurement techniques of micro- and nano-plastics in water to assess their abundance in the environment. The Consortium is also participating in and following international research on the evaluation of current bioanalytical assessment tools, identification of research gaps in antibiotic resistance in the water environment, a decision framework for the prioritization of research efforts on emerging contaminants, and the development of a global compendium of wastewater-derived phosphorus recovery technologies. In September 2018, CWN's Chief Executive Officer was elected to the position of Vice Chair of GWRC's Board of Directors.



What to watch for in 2019...

The Consortium will be developing research primers summarizing recent insights from GWRC findings and emerging international trends. These primers will support decision-makers in Canadian municipal water management by providing leading knowledge on the state-of-science and practice from international partners and researchers. Also, CWN will be hosting the spring 2019 GWRC Board meeting in Toronto in conjunction with Blue Cities 2019, which will provide an opportunity to meet many of these international leaders directly.

CWN will be working with The Water Research Foundation and GWRC in 2018 and 2019 to build on earlier work on emerging contaminants and other issues to better inform the Consortium's next steps in these areas.



SINGAPORE INTERNATIONAL WATER WEEK

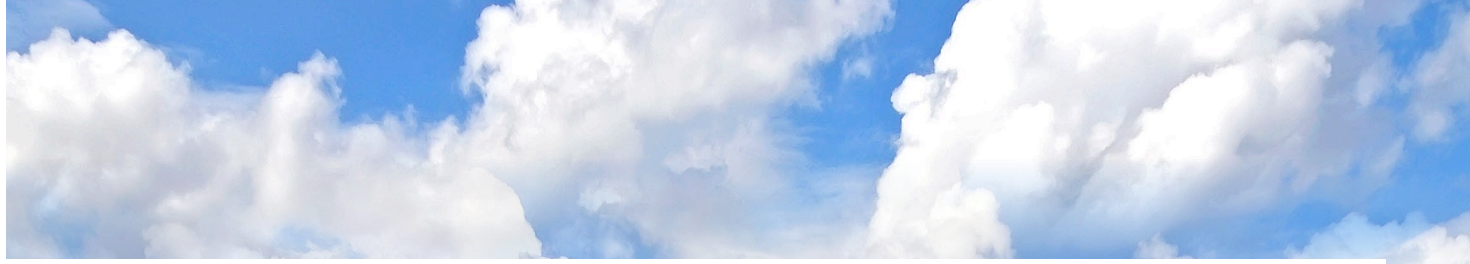


The Canadian Municipal Water Consortium, in partnership with PUB — Singapore's national water agency — provided three scholarships (total value: \$14,000) to promote international exchange at Singapore's International Water Week. Municipal water leaders from EPCOR, Halifax Water and York Region were selected from among the eligible CLG members who applied to join a North American delegation to learn and share with utility leaders from around the world. This initiative allowed the Consortium scholars, accompanied by two CWN representatives, to interact as an identifiable delegation at the event, which enhanced the value of their participation. The Canadian delegation provided a panel presentation of key insights to the Consortium's leadership group in November.

What to watch for in 2019...

Forming and supporting a Canadian delegation for Singapore International Water Week was the Municipal Consortium's first attempt to deliberately structure active engagement between water leaders in Canada with the international water community. On the heels of this successful global exchange of knowledge and practice insights, the Consortium will be looking at other opportunities to engage and support Consortium leaders in strategic peer sharing at other international events in 2019, either through coordination and/or financial support. This enables the Consortium to bring leading solutions and progressive options from international leaders to the Canadian water sector to further advance, accelerate and improve water management decisions.





LEADING
**NATIONAL
CONVERSATIONS**

Researchers, governments, industry and other organizations see the Consortium as an important group to connect with about municipal water issues and perspectives.





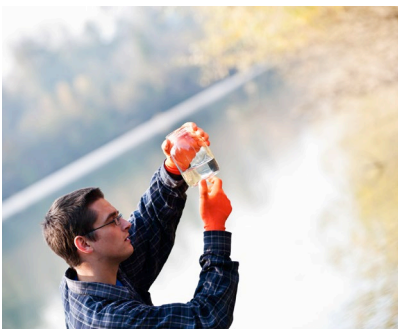
IDENTIFYING PRIORITIES IN THE MUNICIPAL WATER SECTOR

Annual Consortium leadership meetings continue to provide a valuable opportunity to exchange strategic and practical knowledge, learn about new research and progressive practices, anticipate emerging issues, identify gaps and accelerate progress in priority areas of water management. In November 2017, the CLG met in Halifax to discuss current challenges, which helped inform and focus the Consortium's efforts throughout 2018. These areas included:

- Roles and responsibilities in emergency response/climate resiliency
- Addressing emerging contaminants of concern (e.g., microplastics)
- Managing risks related to lead in drinking water
- Pursuing options for wastewater as a resource

What to watch for in 2019...

The Consortium completed two major initiatives related to these priorities in 2018 (see pages 8 & 16) and developed other initiatives which will be completed over the next two years (see Looking Ahead on page 19). The challenges identified by the CLG will also be featured on the Blue Cities 2019 program, where participants will engage with these issues in a national forum. The Consortium Leadership Group's 2018 meeting was held on November 8 & 9 in Ottawa and considered future priorities and initiatives in sustainable financing, building system resiliency, lead in drinking water, water reuse, and emerging contaminants, helping develop targeted initiatives that will greatly impact decisions in the municipal water management sector.





COORDINATING ACROSS SECTORS TO IMPROVE PLUVIAL FLOOD RISK EVALUATION

Municipal flooding as a result of extreme rainfall (i.e., pluvial flooding) is an increasing concern in many regions of Canada. In 2018, the Consortium identified a need to support stakeholders on how to better assess the risks of pluvial floods, particularly regarding how to identify and prioritize investments that will mitigate the impacts of these floods. In response, the Consortium and the Insurance Bureau of Canada convened a national meeting on April 30, 2018 with municipal water leaders, the Government of Canada and representatives from the insurance sector — including insurers, reinsurers, brokers and modelers. The objectives of this meeting were to:

- Gain a better understanding of how flood risks are managed by each sector
- Discuss strategies that improve the evaluation and pricing of flood risks
- Identify opportunities and actions for better sector coordination to improve risk identification and inform strategic investments

The meeting provided much-needed clarity on how flood risks are being assessed by the insurance sector and modelers, and how these risks are being managed and mitigated by municipal utilities. The discussion that ensued highlighted a mutual desire to improve communication and coordination between the insurance sector, governments and utilities, and identified individuals best positioned to contribute to progress in this area. The meeting's outcomes have been shared with a federal working group examining financial risk and consumer awareness of flood risks, and a second federal

working group that is looking at ways to improve flood mapping. The outcomes of this 2018 meeting created a springboard for the initiation of a pilot project (see below).

What to watch for in 2019...

Following the national meeting, CWN initiated a pilot study with Natural Resources Canada and the Insurance Bureau of Canada that will consolidate and coordinate high-resolution and municipal flood defense data to refine flood models and ultimately improve data access and flood risk evaluation. The results of this pilot — which will be available in April 2019 — will yield insights on the data needed to improve flood modelling in Canada and suggest a framework for how this data can be better shared and incorporated into current models. In addition to this study, the results of earlier research funded by the Consortium, *Using a Coupled Hydrologic-Insurance Model to Examine Flood Policy Responses in an Era of Climate Change*, will be released in 2019, describing the range of impacts on flood hazards and risks under different climate change scenarios over a 100-year time horizon.



EXTRACTING AND SHARING EXPERT KNOWLEDGE ON NUTRIENT MANAGEMENT

Over the past three years, CWN has collaborated with academia to deliver insights to provincial and federal government departments on effective nutrient management practices in agricultural and urban settings, particularly regarding non-point sources such as stormwater and combined sewer overflows.

Assessing the Adequacy of Urban Nutrient Load Measurements

SUPPORTED BY:

Environment and Climate Change Canada

CWN was tasked with assessing whether tributary nutrient loading measurements and statistical approaches meet the needs of urban wet weather water managers. An expert advisory group was appointed and asked to draft a state-of-the-knowledge whitepaper, which was commented on by 36 Canadian experts through a survey and workshop. The whitepaper was then updated to include additional knowledge and gaps for decision-making.

CWN prepared a synthesis document with a recommended framework for decisions on managing nutrients from urban sources to inform policy design, practice and investment. This framework, as well as other insights, will be used to investigate the next steps for decision makers to improve how nutrient estimates are used to manage and protect receiving waters.

Examining the Efficacy of Nutrient Management Practices for Agricultural Landscapes

SUPPORTED BY:

Ontario Ministry of Agriculture, Food and Rural Affairs

CWN led a project to summarize the state-of-the-knowledge on the effectiveness of existing approaches to phosphorus management. The project's overall goal was to better inform action and investment by policy makers, Conservation Authorities and farmers in Ontario. A state-of-the-knowledge report was developed on conditions and factors that influence the ability of best management practices to mitigate phosphorus losses from agricultural landscapes.

What to watch for in 2019...

CWN will capitalize on these parallel initiatives in urban/municipal and agriculturally dominated settings to accelerate progress in addressing key nutrient management needs and issues in Canada. During the summer of 2018, CWN advised and participated in a "listening tour" that was organized by the United States Embassy on nutrients and algal blooms in the Lake Erie Basin. CWN will continue its work to bring urban and agricultural managers together with government to develop holistic solutions that will lead to more effective results.



SHAPING A NATIONAL NARRATIVE ON MUNICIPAL WATER MANAGEMENT ISSUES

The Consortium is considered a key sounding board to understand priority needs and to gauge the perspectives and views of the Canadian municipal water sector. Over the past year, there have been several instances where the Consortium was called upon for critical input, including:

- An invitation to provide testimony to the House of Commons' Standing Committee on Transport, Infrastructure and Communities on lead in drinking water. Impending Health Canada guidelines will reduce the maximum acceptable concentration from 0.01mg/L to 0.005mg/L. CWN spoke about the need to find ways to address the challenges of public-private sector ownership and liability in reducing exposure. The Consortium has initiated discussion with municipalities on how to address this important premise plumbing issue and is launching an initiative in 2019 that will curate existing knowledge and options for bridging the public-private divide (see project details on page 19).
- Meetings were held with the Parliamentary Secretary for the Minister of Environment and Climate Change and other senior federal staff to discuss opportunities to advance the national expert panel's Blueprint recommendations to address contaminants in wastewater (see page 8).
- The Consortium assisted Statistics Canada in enlisting utility participation in a pilot project to monitor cannabis metabolites in municipal wastewater before and after legalization. Five CLG members are currently participating in this project. The preliminary results were released on November 29 and can be accessed at:

✉ www150.statcan.gc.ca/n1/daily-quotidien/181129/dq181129d-eng.htm

LOOKING AHEAD

The Implications of Changing Water Use on Municipal Systems

In many municipalities in Canada, per capita water use has been decreasing, resulting in deferred capital expenditures for water and wastewater treatment, extended water supplies and fewer environmental impacts. This trend is also contributing to system challenges such as:

- Impacts to flow and the concentration of wastewater that exacerbate corrosion, cause odour issues or increase sewer blockages
- Chemical, biological and physical water quality issues in drinking water distribution systems from water residing in pipes for longer periods
- Discrepancies in water demand estimates, lower than anticipated sales revenue, increased rates and challenges in sizing infrastructure appropriately

In 2018 and 2019, a series of CWN webinars for decision-makers will look at how declining water use is impacting municipal water management and feature examples of progressive actions being undertaken to mitigate against the impacts of these trends. The first of these free online webinars was presented in November 2018. Visit cwn-rce.ca/cwn-webinars to listen to the recording or to register for the next webinar in February 2019.

Low Impact Development for Stormwater Management

Low impact development (LID) can increase system resiliency, and there is a growing body of literature on the performance of these approaches for stormwater management. In 2018, CWN and the Toronto and Region Conservation Authority signed an agreement to collaborate on a project to synthesize leading knowledge on the capabilities and limitations of LID in a Canadian context. The project will feature practical case studies and compile existing guidance documents into a directory, providing decision-makers with tools to assess the applicability of LID within a local context and support better-informed infrastructure decisions. The estimated completion date for this project is March 2020.

Reducing Lead in Drinking Water

Health Canada will be introducing new guidelines that will reduce the maximum allowable concentration of lead in drinking water from 0.01mg/L to 0.005mg/L. Many municipalities have already been moving towards implementing programs to replace municipal lead service lines. Despite these efforts and investments, the challenge in meeting the proposed lead targets at the tap will be bridging issues of public-private sector ownership and liability. Since municipalities do not have responsibility for decision-making on private property, the replacement of lead pipes on private premises remains a key challenge for reducing lead exposure in drinking water.

Building on past research funded by CWN, the Consortium will be undertaking a project in 2019 to curate the existing state-of-the-knowledge and options available for municipalities to address lead. As part of this work, the Consortium will synthesize current municipal policies and practices being implemented to advance and incentivize private-side replacements.

Water Reuse in a Canadian Context

Water scarcity is typically not the principal driver in Canada for implementing water reuse. Historically, our focus has been centred on security of supply, reducing treatment costs, energy efficiency and decreasing greenhouse gas emissions. Furthering our understanding of the benefits, drawbacks and limitations of water reuse, along with the regulatory requirements and other implications in a Canadian context, will be useful for utilities to assess whether water reuse presents a relevant and favourable option to improve water management in the near-term.

In 2019, CWN will be exploring opportunities to examine the feasibility of water reuse in Canada, providing context to regulatory barriers, local drivers and the social, environmental and economic case for the adoption of reuse in Canada. The intended activities will help formulate insights that will allow Canadian utilities to better assess the applicability and benefits of water reuse for their local context.

Canadian Water Network's 
Canadian Municipal Water Consortium

cwn-rce.ca