

Waterline



Happy Holidays!

WINTER 2024

IN THIS ISSUE

Message from the CEO

Underground Water Infrastructure: Out of Sight But Not Out of Mind

OCWA Water Talks

Staff Announcements

Board Announcements

Back to School with OCWA's OneWater Education Program



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Message from the CEO

Hello everyone, I am delighted to share the latest issue of our OCWA *Waterline* newsletter with you.



To our clients and communities we serve, I would like to thank you for placing your trust in us and being an integral part of our journey and evolution. Our number one goal is to ensure we deliver on our solutions and services through the strong partnerships that we have with you.

I look forward to continuing to connect with you and learning more about your concerns and priorities as system owners. Your feedback and engagement are invaluable to us as we strive to meet and exceed your expectations. Know that you are always welcome to reach out to me at ihashemi@ocwa.com.

Reflecting on my first year serving all of you in the new role, I am proud of the unifying passion that we have at OCWA. With more than 30 years in the operations business, we have a unique responsibility of bringing together Ontario's two greatest resources – our water and our people – through the delivery of water, wastewater and stormwater technical services and solutions. This year, we added new clients that include large pharmaceutical operations with advanced treatment processes, First Nation communities, and a number of new municipal water and wastewater systems.

Looking into the new year, our areas of focus will include furthering the responsible and strategic use of artificial intelligence, enhancing the Agency's cyber security, continuing the implementation of major enterprise solutions (including SCADA and Energy Management), and promoting client participation in the provincial Energy Demand Response Program, which aims to reduce overall energy usage during periods of high demand.

In previous *Waterline* messages, I have mentioned that OCWA has been working on an important major initiative – our refreshed multi-year strategic plan. The plan outlines five strategies to ensure the Agency’s long-term growth and sustainability while best supporting our provincial mandates for the benefit of all OCWA customers and partners. At the core of this plan, we are focusing on our people, best-in-class operations, and digital solutions to enable and enhance our efficiency, resiliency, and financial sustainability. I am excited to share OCWA’s *Vision for a Sustainable Future* with you. Stay tuned for more details as we roll out the plan next year!

Turning to this issue of *Waterline*, our lead article emphasizes a critical issue – the need to maintain underground water infrastructure. Major watermain breaks in Calgary and Montreal this year have highlighted the significant impact that these infrastructure failures can have on communities. OCWA’s subject matter experts provide valuable insights on best practices for municipalities to ensure the longevity of their underground infrastructure and help prevent similar failures.

This issue also includes updates on our OneWater Education Program and a round-up of our fall Water Talks webinar series. We have a few staff announcements to share and are pleased to welcome several new members to the OCWA Board. I hope you enjoy the issue!

As we move into the new year, our focus remains on providing you with the highest level of service and support. Thank you for your continued trust and partnership. Best wishes for a safe and happy holiday season, and see you in 2025!

~ Iman Hashemi, President & CEO

Out of Sight But Not Out of Mind

Recent big pipe failures highlight the importance of underground water infrastructure

In 2024, major watermain breaks in Calgary and Montreal brought underground water infrastructure into the spotlight. These catastrophic pipe failures disrupted the water supply for thousands of residents in these cities and caused millions of dollars of damage. We spoke with OCWA’s **Sonya Semanuik**, Senior Project Manager, Studies & Condition Assessments, about what Ontario municipalities, both big and small, can learn from these events and what they can do to help prevent similar situations from happening in their communities.

Can you explain the importance of maintaining underground water infrastructure?

Sonya: Potable water supply and its sister, wastewater collection and treatment, are critical for the health and welfare of a municipality and its residents. Fortunately, experienced operations staff can easily identify and rectify issues for infrastructure that is above ground. Unfortunately, underground assets such as water distribution and transmission pipelines, and wastewater collection pipelines, are harder to assess, and failures like those seen in Calgary and

Montreal can happen.

What are the most common issues municipalities face with their underground water and wastewater infrastructure?

Sonya: This is not a simple question, as it can vary from municipality to municipality and season to season. In northern communities, frozen services are common. Older systems have issues with valve operability. Historically, water loss has not been viewed as a pressing issue (due to abundance of water in Ontario). However, leaking pipes can lead to accelerated break rates and reduce water pressure in your system. Catastrophic failures in transmission mains can have significant consequences, particularly for larger networks compared to smaller, more rural municipalities.

One challenge municipalities share is accurately assessing the condition of their underground water and wastewater assets. Using a pro-active, multi-pronged approach to condition assessment is key. In the last issue of *Waterline*, my colleague Nick Larson spoke about how the approach to asset management has changed. Rather than using an age-based approach, which often results in the premature replacement of infrastructure, OCWA relies on asset performance.

This means that someone needs to assess the asset itself and not just rely on a spreadsheet that lists their ages. Assessment approaches can be as simple or complex as needed and can be instrumental not only in determining the existing condition of the asset, but also its rate of deterioration. Municipalities need this good quality, reliable data in order to make informed spending decisions about their water and wastewater infrastructure.

What are some best practices for municipalities to ensure the longevity of their underground water and wastewater infrastructure? What preventive measures can they take to avoid major issues?

Sonya: There are a few approaches that help with long-term asset performance:

- **Proper installation:** Ensuring the pipes are properly installed prevents “break in” failures. Proper bedding around the pipe is also critical to provide the necessary support and is critical for long-term performance. Get an inspector on site and give them the authority to instruct the Contractor to make it right.
- **Measurement:** Select a few key performance metrics to compare the performance of your system over time. The simplest metric is Water Supplied versus Water Collected. Take the flow of treated water coming out of your water treatment plants and compare it to the raw wastewater flow going into your sewage treatment plants. This can help determine if your water pipes are leaking or if your sewage pipes have infiltration and guide your next step for investigation. One of our clients was supplying over 1400 L/person/day, which is more than four times the average for that area. As a result, OCWA did some leak detection and repaired five large leaks, one of which was leaking directly into the sanitary sewer. In this case, taking readily available information (flows) resulted in concrete improvements to not only the water system, but also the sewer system.
- **Maintenance:** Maintenance is often overlooked because it can be time consuming, but it can often make the difference between a small failure

and a larger disaster. Valves are usually installed and then forgotten until a watermain break needs to be isolated. A study by Wachs Water (2011) found that only 60% of valves are operable when needed. If you properly maintain your valves, you will be in a better place to quickly isolate a break, prevent unnecessary water loss, and affect fewer customers.

- **Risk Planning:** In many cases, an unexpected failure will result in a simple repair. However, there will come a time when something breaks catastrophically (usually at 4 p.m. on the Friday before a long weekend). Calgary has been incredibly proactive managing their watermain assets – and even still, they experienced a failure that resulted in significant impact to their residents. A municipality should understand which pipes are higher risk and have a plan for when they fail, whether that involves proactive assessment/replacement or a defined reactive repair plan. The local operations staff already intuitively know which pipes will cause them headaches, so it's a matter of getting it down on paper for newer staff and municipal planners.
- **GIS Mapping:** For all of the above (particularly items 2-4), a GIS map of buried infrastructure is critical. The map should be accessible online so that municipal staff, the Ministry of the Environment, Conservation & Parks, and external Consultants and Contractors can view the information in a timely manner. The Consolidated Linear Infrastructure Environmental Compliance Approvals (CLI-ECA) requirements for wastewater and storm pipelines require mapping, so this should be something that municipalities are already doing – just get it online. There are companies that can provide this service, so in-house GIS experts are not even required.
- **Integrating Assessment Information into your Asset Management Plan (AMP):** As Nick mentioned in his Waterline article, an AMP is a living document. This means that maintenance, break history and repair information (and costs) must be recorded to hone future planning assumptions and cost estimates. Condition assessments, be they visual, operational (like valve turning), or highly technical, provide critical information for engineers and planners to use to optimize the longevity of the asset.

Do you have any advice for municipalities as they plan and budget for 2025?

Sonya: Get started! It's ok to start small and add more information about your underground water and wastewater assets over time. Being able to compare even small data sets year-over-year can provide some indication of the rate of decay of your system. However, even a one-time snapshot provides more information than no snapshot at all.

OCWA Water Talks – Where Good Ideas Flow

Recapping our annual webinar series and looking ahead to 2025

The good ideas were flowing at this year's OCWA Water Talks, our free annual webinar series featuring subject matter experts on top issues in municipal water, wastewater and stormwater. Thanks to everyone who attended and brought

their questions.

We've begun planning our 2025 Water Talks line-up but wanted to take this opportunity to recap the topics we covered this past year. If you missed a webinar or attended live and would like a refresher, recordings are available.

We kicked off the series with **2025 Asset Management Planning: Compliance with O. Reg. 588 and Beyond** featuring OCWA's **Nick Larson**, Director, Business Asset Management Standards. The discussion included OCWA's evolving AMP program and where it's headed, the differences between desired and current performance levels (levels of service), and how a dynamic AMP can prepare you for funding programs.

Next up was **Your Canada Infrastructure Bank: Programs and Funds** with guests from the CIB. They discussed the latest funds and programs available for your water and wastewater projects available through the Bank, with a focus on its Infrastructure for Housing Initiative.

We closed the series with **Insurance for Water and Wastewater**, featuring guests from Marsh Canada, who joined us to talk about what coverage for water and wastewater systems means in 2025.

Looking for a recording or need OCWA's help?

If you are a municipality and would like to access a webinar recording or if you attended a *Water Talk* and have follow-up questions, please contact your local OCWA representative or send a message to ocwa@ocwa.com.

With the 2024 series wrapped up, we are now turning our attention to next year. Please help us plan our 2025 Water Talks line-up! Our aim with this webinar series is to provide information that our municipal partners can use to support their water, wastewater and stormwater operations. What topics are you most interested in having us cover? We would appreciate hearing your ideas. [Please get in touch](#).

Thanks again to everyone who joined us in 2024. See you next year for more Water Talks!

Staff Announcements

OCWA is pleased to share the following staff announcements.

Sangeeta Chopra, Vice President, Innovation and Infrastructure Solutions

Sangeeta has been part of the OCWA family for more than a decade. In her roles, she has supported project delivery, process optimization services, conceptual level designs, value engineering, energy efficiency, and biosolids and resource recovery projects for municipal, industrial and First Nations communities. Bringing over 20 years of private and public sector professional engineering experience, she has collaborated with our operations and technical teams, municipalities, regulators, consultants, and



other industry partners to deliver on services and provide advice to municipal and governmental clients.

Eric Dorman, Vice President, Information Technology

Eric has 12 years of experience in senior leadership and management positions and more than 20 years of experience as an IT professional. His leadership responsibilities have included information technology, data and business intelligence, and relationships with stakeholders including municipalities, Indigenous organizations, and Ontario Public Sector (OPS) ministries. Eric holds a master's degree (M.Eng.) in the Management of Technology and Innovation from the University of Waterloo, and an honours bachelor's degree in Electrical and Computer Engineering. He is a champion of building structures and processes to support service excellence.



Board Announcements

OCWA is governed by a Board of Directors. Members of the board are appointed by the Lieutenant-Governor-in-Council on the recommendation of the Minister of the Environment, Conservation and Parks. OCWA has recently welcomed several new members to the OCWA Board of Directors and expects a few more minister appointments in the new year.

Michele Grenier

As the Executive Director of the Ontario Water Works Association (OWWA), Michele is an advocate for sustainable water management. She leads initiatives that advance water quality, infrastructure resilience, and professional excellence across Ontario's water sector. With over 25 years of experience in the water industry, Michele is an expert in the planning, operation, and optimization of municipal drinking water and wastewater systems. Her expertise spans projects at more than 100 water and wastewater facilities, where she has contributed to the delivery of safe, reliable water servicing for communities across Ontario.



A graduate of the University of Ottawa with a degree in Chemical Engineering, Michele began her career with the federal government and later held senior roles with XCG Consultants and Associated Engineering. In addition to her work with OWWA, she has served on the boards of the Canadian Water and Wastewater Association, the Ontario Environment Industry Association, the Ontario Coalition for Sustainable Infrastructure, as well as the Toronto Metropolitan University Urban Water Centre Board of Advisors.

Joseph (Joe) LeClair

Joe is the Director of Corporate Finance and Administration for the Ontario First Nations Technical Services Corporation, where he is

responsible for leading the organization's finance and human resource functions. He has over 25 years of cross-functional experience in finance and information technology working within the banking, energy, mining and infrastructure sectors for North American and global organizations.

Joe is a member of the Bingwi Neyaashi Anishinaabek (formerly Sandpoint First Nation), located in Northwestern Ontario. He is a Chartered Professional Accountant (CPA, CMA) and has a Master of Business Administration degree from the Ivey School of Business, University of Western Ontario.



Scott Carter

Scott is a Senior Engineering Technologist. During his time at OCWA, he was a Water Treatment and Transmission Manager at South Peel and a Capital Projects Delivery Program Manager at the corporate office. He has served as a Commissioning Engineer, Designer and Project Manager on water and wastewater projects in Europe and North America that included desalination and solid waste facility run-off capture and treatment. Past experiences have included green energy research in Solid Oxide Fuel Cells and high energy radiation research using floating gate MOSFET technology with test equipment flown in the Space Shuttle.



Scott is a Certified Engineering Technologist with the Ontario Association of Certified Engineering Technicians and Technologists and holds certification from the University of Toronto in Project Management and Reliability Engineering Asset Management as well as obtaining certification as a Lean Six Sigma Black Belt.

Back to School with OCWA's OneWater Education Program

This fall, OCWA operators have been back in classrooms delivering the OneWater Education Program to Grade 8 students across the province.

The OneWater program teaches students about the value of water through curriculum-connected, hands-on activities that deepen their understanding of topics such as the water cycle, water and wastewater treatment processes, and ways to be more environmentally responsible.

This fall alone, more than 200 students have participated in the OneWater workshops, adding to the 4,000 students who have participated since the program began in 2014.

Looking ahead, we are excited to bring OneWater to even more schools in winter and spring 2025, continuing to inspire the next generation of water stewards.

Thank you to our dedicated OneWater volunteers for their enthusiasm and commitment and to our host schools for welcoming us into their classrooms!



OCWA is an agency of the Province of Ontario mandated to provide safe, reliable and cost-effective clean water services to the people of Ontario.

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Ontario Clean Water Agency | 2085 Hurontario Street, 5th Floor | Mississauga, ON L5A 4G1
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