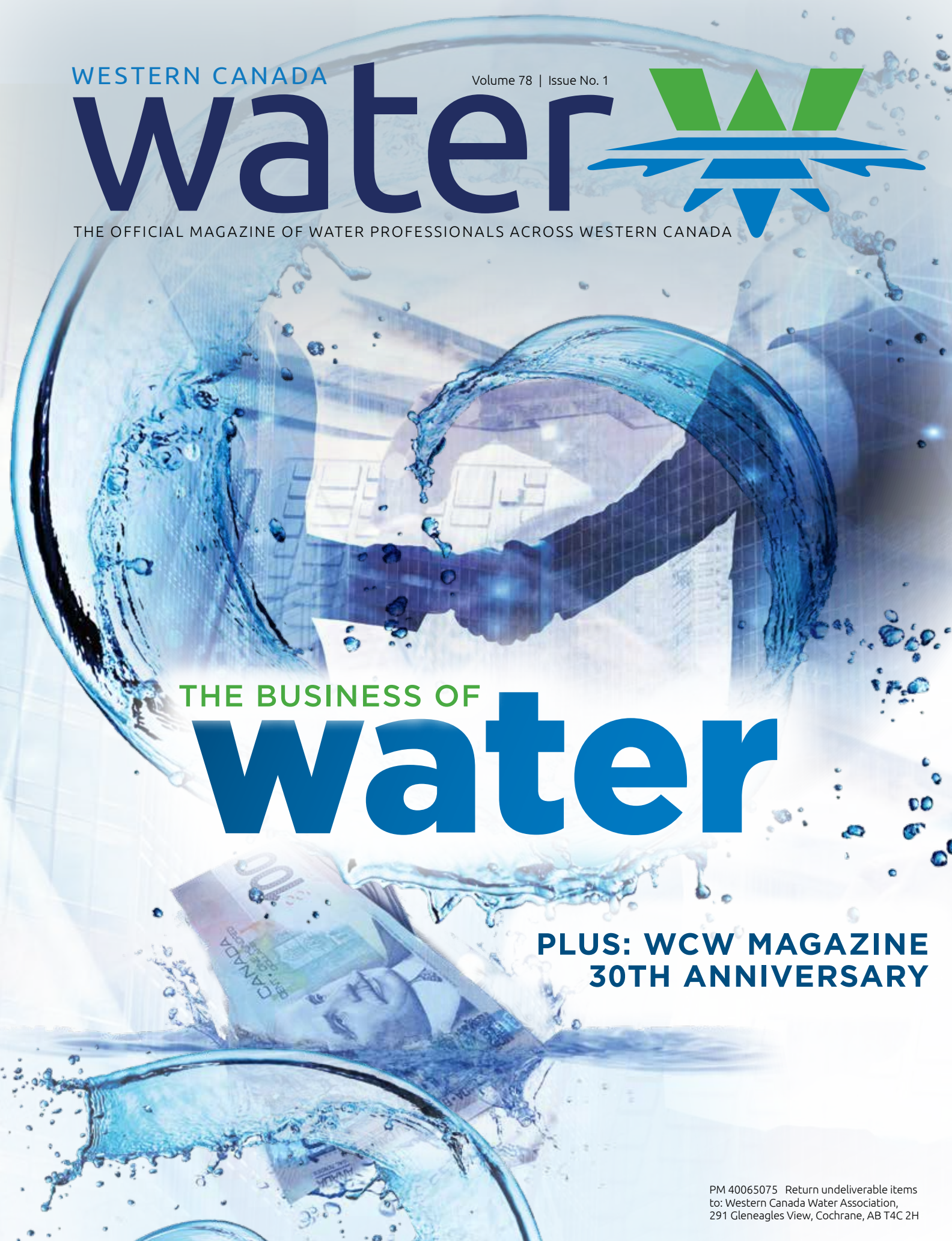
WESTERN CANADA
water
Volume 78 | Issue No. 1
THE OFFICIAL MAGAZINE OF WATER PROFESSIONALS ACROSS WESTERN CANADA



THE BUSINESS OF water

PLUS: WCW MAGAZINE 30TH ANNIVERSARY

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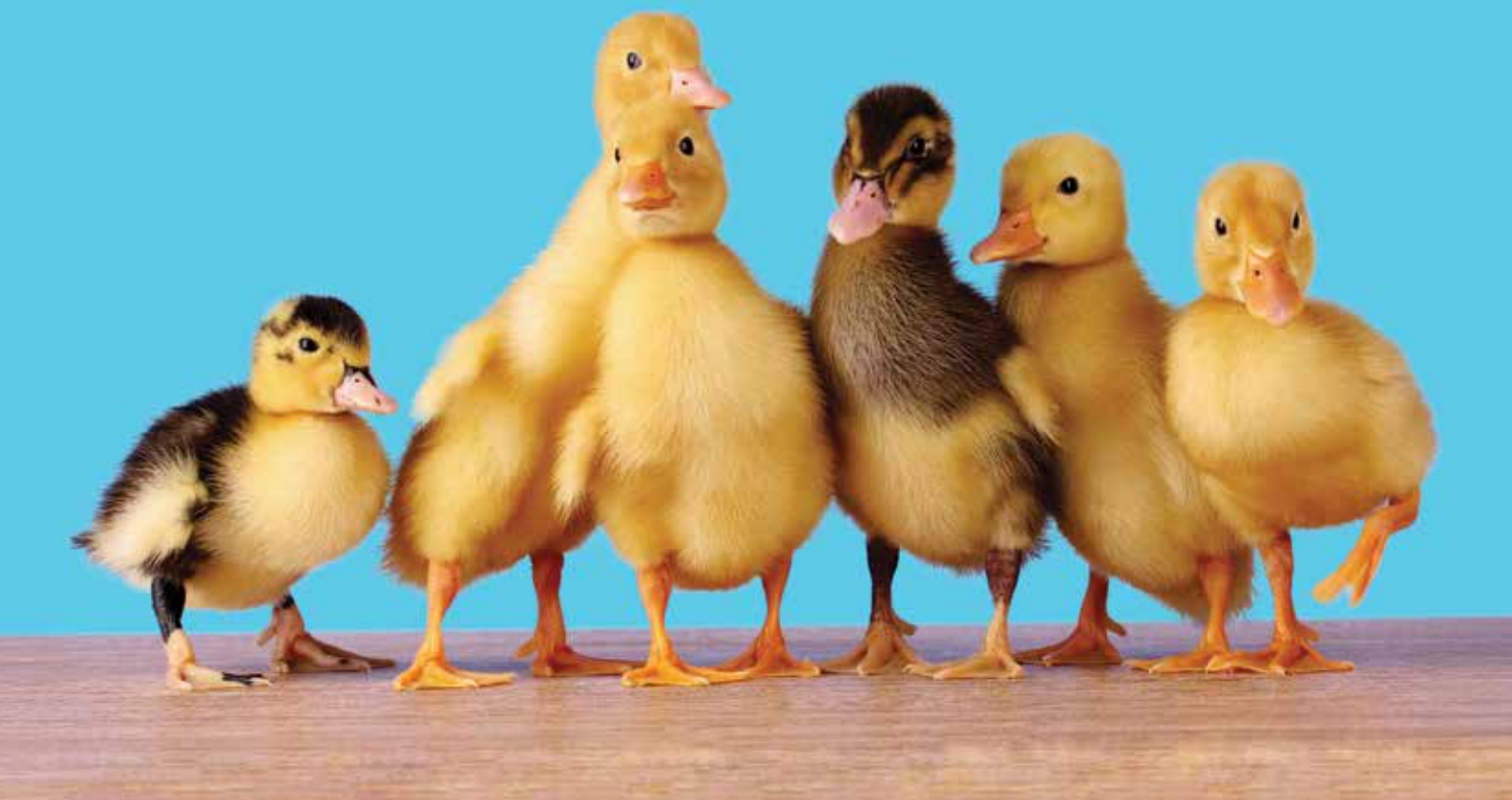

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THEME: THE BUSINESS OF WATER

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CO Reports

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New Product information to Rod Evason (rod@kelman.ca)
Calendar information to info@wcwwa.ca
Project Profiles, Last Drop Items, and Other Articles to Bill Brant (bill.brant@wsp.com)

Building the future: Leadership, strategy and the business of water

Bia de Freitas, President, *Western Canada Water*

As we move into a new year, I am reminded of how dynamic, interconnected, and people-driven the business of water truly is. While this issue highlights important themes such as project delivery models, financing, utility rates, public-private partnerships, and supply chain challenges, it also reminds us that our business is fundamentally about people: those who lead, those who operate, and those who will carry this work forward.

In December, the WCW Board held its strategic planning session in Calgary, and this year, we were pleased to welcome the Executive Directors from each constituent organization (CO). Bringing all EDs together allowed us to share organizational challenges, opportunities, and emerging needs. Their perspectives are invaluable, and I am encouraged by the increasing collaboration across our COs.

Looking ahead, the Board has agreed to slow down and focus on key deliverables, prioritizing what matters most. Over the next two years, we will concentrate on:

- Delivering an outstanding annual WCW conference
- Strengthening service and support to our COs
- Conducting a full governance review
- Enhancing our financial and human resource policies

This focus on governance and organizational resilience is, at its core, part of the business of water. Sustainable leadership, stable financial frameworks, and effective governance enable everything else we do, including education, training, events, and sector support.

In February, we held the Young Professionals Early Career Summit across four locations: Edmonton, Calgary, Saskatoon, and Winnipeg. This was one of our most successful early-career events to date. Each location saw strong participation, and I extend my sincere appreciation to the volunteers who organized and hosted the summit.

The momentum began earlier at the SWWA Conference, held in November 2025. One of my personal highlights was meeting the Saskatchewan Polytechnic students sponsored by SWWA to attend. Their curiosity, engagement, and excitement about joining the water sector were contagious. The Women in Water event was also a memorable opportunity to connect with women across the industry and strengthen the professional relationships.

These events, and the involvement of Saskatchewan Polytechnic students, reinforce an essential truth: when we invest in early-career professionals, we invest in the future of our industry. They are the future operators, engineers, mentors, managers, and leaders of our sector.

Looking ahead, I encourage you to participate in upcoming events across the region, including the MWWA Annual Conference in Brandon (February 22-25, 2026) and the AWWOA Operators Seminar in Banff (March 9-13, 2026). For a full listing of WCW and Constituent Organization events, please visit our website at *wcwwa.ca*.

The theme of this issue, The Business of Water, reminds us that behind every treatment plant, pipe network, regulatory framework, and financial decision, there is a shared responsibility to protect public health and strengthen our communities.

Whether we are navigating project delivery models, funding constraints, changing supply chains, or the evolving needs of our utilities, we each play a role in shaping a water sector that is resilient, well governed, and prepared for the future.

Finally, I extend a warm invitation to all members to join us in Regina from September 15-18, 2026, for WCW26. Conference chairs Sean Bayer and Ryan Evans, along with the Planning Committee, have been working hard to deliver a best-in-class conference experience. It will be a tremendous opportunity to continue the conversations highlighted in this issue, deepen our understanding of the business of water, and celebrate the dedicated individuals who keep our water systems strong.

Thank you for your commitment to our profession, your support of WCW, and the work you do every day.

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The Business of Water

Bill Brant, Editor, *Western Canada Water Magazine*

How often do you think of a water and wastewater utility as being a business? It is obvious that businesses such as the private firms that provide engineering and construction services, sell pipes, pumps, treatment equipment and chemicals, and provide human resource, legal and accounting services are part of our water sector. But perhaps because most Canadian W&WW utilities are directly or indirectly owned by municipalities, we don't think of these utilities themselves as "businesses". But there are privately owned and/or operated utilities in Canada, which are obviously businesses. In any case, both public and private utilities need to be run in a business-like manner.

Utilities contract with the aforementioned product and service provider firms in order to meet the needs of the public. The utilities hire staff to operate, maintain, and manage their operations. They generate revenue to cover all their costs by charging their customers for the water that they use and for the wastewater that they generate. All operations are supported by financial considerations.

Water meters are key components of our utilities. These devices may be small and often forgotten when we think about water infrastructure. That is unfortunate because "water meters are the cash registers of water utilities". Since in the day-to-day business world, "cash registers" seem to have been pushed to the sidelines by computerized billing and cash itself is fading in importance compared to electronic payment systems. The point is that bulk commodities like municipal water are not sold in one- or four-litre jugs like milk or juice, unless you buy the grossly overpriced bottled water in retail establishments. When you fill the tank of your car with fuel (or charge the battery on your EV), a meter registers the amount received and you are charged accordingly. The same holds true for the natural gas that heats many homes and other buildings, or the electrical power that is virtually universally provided by electrical utilities. So metering is a key component to having a sustainable utility. Appropriate water rates are also critical. The rates should cover the costs of operation, maintenance, repair, replacement, and upgrading needed to meet increasingly stringent drinking water and effluent quality standards.

Other sources of revenue should be considered to cover the costs of growth, treatment plant and pumping facility expansions, pipe upsizing and extensions, associated increased demands, and so on. Generally, existing utility customers should not bear the costs of providing infrastructure extensions and capacity upgrades for new developments. The principle of "user pay" suggests that those who benefit from growth and development should bear those costs. That includes private subdivision developers, commercial entities, and industries.

In many cases, governments provide incentives for such economic developments. That is a public policy decision, but the capital needed to finance government-supported economic developments should come from those senior government sources, or the industries themselves, but not higher utility rates paid by existing customers.

So, in view of all that, aside from all the technical, administrative, and general management staff needed to run a water utility, we need accounting specialists to keep track of the expenses and revenues, to keep water and wastewater utilities healthy. They are businesses.

I will close by acknowledging that this is the 30th anniversary of this magazine. As Editor since the beginning, I am thankful for the support of the many WCW members who have volunteered on our Editorial Committee; for the WCW Executive and Board of Director members who have provided encouragement and support; for our publisher, Kelman & Associates, whose staff have played a large role in pulling the content together in an attractive package; and for the advertisers whose financial contributions are essential. As with any successful venture, it is a team effort!

"Other sources of revenue should be considered to cover the costs of growth, treatment plant and pumping facility expansions, pipe upsizing and extensions, associated increased demands, and so on. Generally, existing utility customers should not bear the costs of providing infrastructure extensions and capacity upgrades for new developments.

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CALENDAR OF EVENTS

APRIL 2026	12-14	WEAO Conference	Niagara Falls, ON
	28-30	Aquatera Water Earth Innovation Conference	Grande Prairie, AB
	29-30	BCWWA Conference	Penticton, B.C.
MAY 2026	1	BCWWA Conference	Penticton, B.C.
	1	Aquatera Water Earth Innovation Conference	Grande Prairie, AB
	4-7	OWWA "Next Wave" Conference	Niagara Falls, ON
	2-6	Cross Connection Control Conference	Edmonton, AB
JUNE 2026	5	MWWA Golf Tournament	Teulon, MB
	8	AWWOA Golf Tournament	Black Bull Golf Resort Ma-Me-O Beach, AB
	12	SWWA Golf Tournament	Aspen Links Warman, SK
	21-24	AWWA ACE	Washington, D.C.
	25-29	2026 CWRA National Conference	Winnipeg, MB
	30	AWWA Water Infrastructure Conference & Exposition	Indianapolis, IN
AUGUST 2026	14	WCW26 Early Registration & Hotel Booking Deadline	

Check our websites for training updates:

http://www.wcsawwa.net
https://www.wcwwa.ca/events
https://www.awwoa.ca/training
https://www.mwwa.net/training
http://ntwwa.com/conference-events
https://www.swwa.ca/training
https://www.awwa.org/events-education
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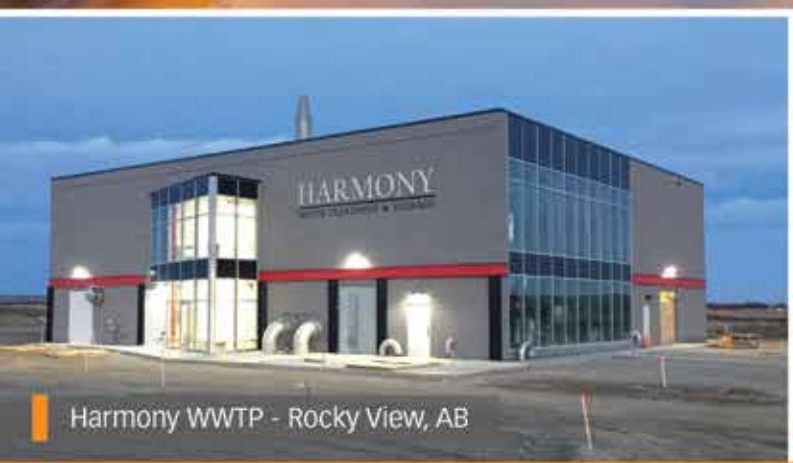
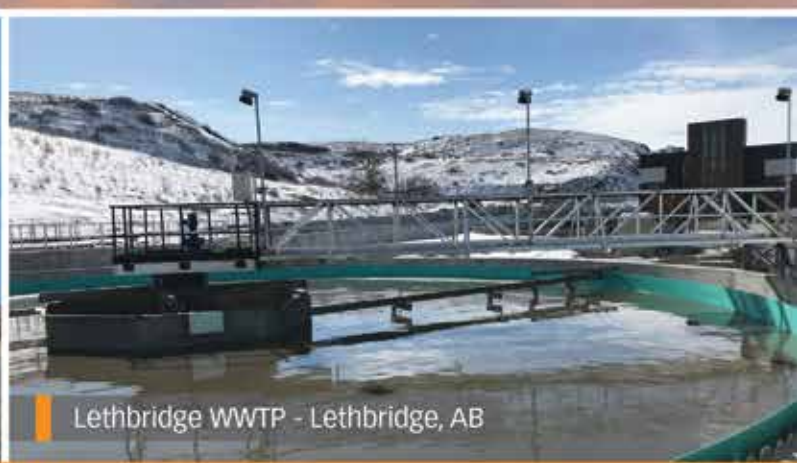


Harmony WWTP - Rocky View, AB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Register for the WCW events online

Our online Event Registration system includes the WCW Annual Conference, as well as seminars and events administered through the WCW office. This includes WCS AWWA and WCWEA sponsored events.

Event registration instructions

1. Click on the "Register Now" button.
2. Select the event from the drop-down list.
3. Select your registration type.
4. Members are required to log in (see below for User ID and password information). All other registration types require information to be entered manually.
5. Select your registration and event details.
6. Confirm your registration details and accept the cancellation policy.
7. Enter payment information. The transaction will be processed directly by Moneris on a secure page. WCW does not receive any credit card information.
8. The system will send a confirmation email.
9. Your Contact ID is a unique number in our database associated with your personal information. It appears in some member emails, on your AWWOA or MWWA membership card, or on your mailing label.
10. Default password: first initial followed by last name (e.g., wsmith).

If you have not received your online access information or require assistance, please contact the office at 1-877-283-2003 ext. 1 during business hours, or email *info@wcwwa.ca*.

Ensure your profile is up to date for this year's WCW Who's Who

This year's WCW Membership Directory will be published with the summer issue of this magazine, and we want to ensure we have the correct information on file for all members. You can view and update your profile online.

Our Profile Management portal allows you to update your information and select what details you wish to have published in the annual Who's Who.

The address listed under Personal Information will be used to mail your *WCW* magazine. The address listed under Professional Information will appear in the Membership Directory.

- Sign in at *www.wcwwa.ca*. Your default username is your first initial followed by your last name.
- Click on "My Profile", then "About", to update your contact information, add alternate details, and change the information published in the Membership Directory.

For assistance, please contact the office at 1-877-283-2003 ext. 1 during business hours or email *info@wcwwa.ca*.

> Our Profile Management portal allows you to update your information and select what details you wish to have published in the annual Who's Who.

Summit connects 100 emerging water professionals across four cities

The Early Career Summit took place on February 4, 2026, across four cities – Edmonton, Winnipeg, Saskatoon, and Calgary – bringing together 100 emerging professionals from across the region. Now in its fourth year, the Summit continues to grow as a dynamic forum for connection, learning, and mentorship within the water sector.

Participants engaged in interactive icebreakers, technical presentations, hands-on activities, and fast-paced mentoring sessions with experienced industry leaders. While technical content varied by location, themes included the water demands of AI data centres, watershed management strategies, and navigating commissioning. In addition, Indigenous Services Canada delivered a presentation to all four regions focused on emergency recovery.

During the hands-on sessions, participants had the opportunity to work directly with industry equipment and tools, including valves, chemical pumps, and asset management software.

A sincere thank you to the presenters, suppliers, and mentors whose contributions made this year's Summit a success. And – most of all – the dedicated organizing committee:

- Calgary team (Hashanth Sasitharan, Chella Ireri, Mandy Lim, Hang Nguyen)
- Edmonton (Sam Fritz, Sarah Larlee, Elizabeth Otto, Fiona Fox)
- Saskatoon (Burke Sebastian, Jessica Nkwa)
- Winnipeg (Matthew Winter, Ty Nelson, Dryden Lanoway)

Call for Nominations – Deadline April 30

If you know anyone worthy of a WCW Award please submit your nomination online at *https://www.wcwwa.ca/page/awards*.

WCW AWARDS

William McKay Honorary Life Member

Recipients should be retired from water and/or sewage field either by virtue of age, 35 years' service or ill health and must have had a minimum of 20 years membership with a Western Canada Water constituent organization.

Al Reimer Operator Service Award

The Al Reimer Operator Service Award was established to acknowledge an operator member of the WCW who has provided distinguished service to the profession. The recipient will have provided faithful and meritorious service to in the field of public water and/or wastewater works. The nominee should be a current member of a constituent organization.

H.C. Lindsten Service Award

The H.C. Lindsten Service Award is presented annually to a member of the Association who has had many years of service, has held an Executive or committee chair position, and has given service and leadership to the Association worthy of recognition. The recipient must have served the Association or their constituent organization as an active volunteer, and must have given service and leadership worthy of recognition.

H.M. Bailey Meritorious Service Award

The H.M. Bailey Meritorious Service Award was established in 1959 to acknowledge long, faithful and meritorious service in the field of public water and/or wastewater works as exemplified by the late H.M. Bailey, a charter, and highly esteemed, member of the WCW. The nominee should be a member of a WCW constituent organization, with a minimum of 10 years' service in the industry.

WCW Exceptional Municipal Water/Wastewater Project Award

The Exceptional Project Award recognizes accomplishments of agencies/municipalities in the water/wastewater/stormwater industry. The community and a representative from the team of water professionals are recognized as part of this award.

WCW BOARD NOMINATIONS

The WCW Board of Directors typically meets three times during the year in person as well as online meetings as needed. If you are interested in serving on the Board of Directors submit your nomination online at *https://www.wcwwa.ca/page/boardnomination*.

Vice President

The Vice President assists the Board in supporting the Strategic Plan and serves on the Finance Committee. The Vice-President succeeds to the office of President-Elect, then President and Past President for a total term of four years. The nominee should have served on the Board of a constituent organization or a WCW committee.

More complete position descriptions are available from the WCW office. Send email to *aarisman@wcwwa.ca*.

Western Canada Water Environment Association

Call for Nominations – Deadline April 30

If you know anyone worthy of an award nomination or are interested in serving on the Board of Directors submit your nomination at *https://wcwea.org/index.php/about/nominations*.

AWARDS

Laboratory Analyst Excellence Award
The Board of Directors established this award in 1993 to recognize individuals for outstanding performance, professionalism, and contributions to the water quality analysis profession. Nominees must be a member of the Water Environment Federation and employed at an educational facility laboratory, industrial, commercial, or municipal laboratory which performs wastewater-related analysis, and must have direct analytical responsibilities.

Arthur Sidney Bedell Award
The Arthur Sidney Bedell Award was established to acknowledge extraordinary personal service to a Member Association. Nominees must be a member of the Water Environment Federation and demonstrate organizational leadership, administrative service, membership activity, stimulation of technical functions, or similar participation.

William D. Hatfield Award
The William D. Hatfield Award is presented to a wastewater treatment plant operator for outstanding performance and professionalism. Nominees must be a member of the Water Environment Federation and contributed to the dissemination of information concerning advancements in the field.

Burke Award
Recognizes a municipal or industrial wastewater facility for establishing and maintaining an active and effective safety program. This award was established in 1982 in honour of George W. Burke, Jr., for his many years of service to both the water environment field and WEF as staff manager of technical services. Mr. Burke was instrumental in developing WEF's annual safety survey and assisting in the production of several safety training aids and promotional packets.

BOARD NOMINATIONS

The WCWEA Board of Directors meets in person two times during the year – during the WCW Annual Conference and in January for planning, as well as online during the year. There are also opportunities to attend WEF education and training events.

Board members are expected to attend all Board meetings, assist the WCWEA networking and training events as well as participate on WCW PC* as representative for WCWEA.

Trustee (Saskatchewan)
Trustees take part in all actions of the Board including supporting the objectives of the Strategic Plan and act as liaison/coordinator with WCW PC*. The term is three years.

*WCW PC – Western Canada Water Provincial Council.
Each Provincial Council plans and coordinates training events for their province.

Call for Nominations – Deadline April 30

If you know anyone worthy of an award nomination or are interested in serving on the Board of Directors, please submit online at *http://www.wcsawwa.net/index.php/about-us/nomination*.

AWARDS

WCS AWWA Outstanding Service Award
The award recognizes those individual members who have provided valuable service and support for WCS AWWA programs and goals through their long standing WCS membership.

WCS AWWA Leader of Tomorrow Award
The award is given to an emerging leader who has demonstrated an active commitment to the Association and the water industry as a whole.

George Warren Fuller Award
The George Warren Fuller Award is presented annually to a member of the section for their distinguished service to the water supply field in commemoration of the sound engineering skill, brilliant diplomatic talent, and constructive leadership which characterized the life of George Warren Fuller. Nominee must be an Individual Member or a representative of an organization member of the AWWA.

Kenneth J. Miller Founders' Award
The award recognizes volunteers who have provided exemplary service to Water For People through project facilitation, fund raising, education and/or raising the awareness of Water For People activities.

BOARD NOMINATIONS

The WCS AWWA Board of Directors typically meets three times in person during the year – January/February, May and during the WCW Annual Conference, as well as conference calls during the year. There are also opportunities to attend AWWA education and training events outside of the section area.

Vice Chair
The Vice Chair assists the Chair and Chair-Elect in the performance of their duties and acts in the absence of the Chair and the Chair-Elect, together with such other duties as may be assigned by the Chair of the Board of Officers and Trustees and succeeds to the office of Chair-Elect at the conclusion of the year. The total term is four years.

The individual is expected to attend all Section meetings, assist the Membership and Education committee with local events and participate on the WCW PC* as representative for WCS AWWA.

Trustee (Saskatchewan)
The Section Trustees are elected positions and take part in all actions of the Board. The Trustee is expected to attend all Section meetings, assist the Membership and Education committee with local events and participate on the WCW PC* as representative for WCS AWWA. The term is three years.

*WCW PC – Western Canada Water Provincial Council. Each Provincial Council plans and coordinates training events for their province.

REIMAGINING WATER:

TURNING TREATED EFFLUENT INTO A SUSTAINABLE RESOURCE

As communities and industries across Alberta continue to balance growth with environmental responsibility, innovative approaches to water management are becoming increasingly important. Aquatera Utilities Inc. is exploring new opportunities to support industrial water needs while helping reduce demand on freshwater sources by reimagining treated municipal effluent as a valuable resource rather than waste.

Every day, wastewater treatment facilities clean and treat municipal wastewater to meet strict provincial and federal release standards before safely returning it to the environment. Aquatera is examining whether this treated water could serve another purpose by being safely reused for industrial applications, such as hydraulic fracturing operations.

Using treated municipal effluent as an alternative water source offers several potential benefits. One of the most significant advantages is reducing the amount of water withdrawn from rivers, lakes, and other freshwater systems. As water demand continues to grow and drought conditions and water restrictions become more common across Alberta, finding reliable and sustainable water sources is increasingly important for both communities and industry.

"Treated effluent represents an opportunity to think differently about water management," said Vaughn Bend, Chief Executive Officer of Aquatera Utilities Inc. "By exploring responsible reuse options, we can help protect freshwater sources while supporting industry and economic development. It is about finding solutions that benefit both the environment and the communities we serve."

Treated effluent already meets rigorous environmental and regulatory standards for release back into natural waterways. With additional regulatory approvals and oversight, this treated water may be suitable for reuse in certain industrial processes. By redirecting treated effluent for appropriate industrial use, communities can help protect freshwater ecosystems while supporting economic development and industrial activity.

This approach reflects a broader shift in how water utilities and industries view wastewater. Rather than seeing treated effluent solely as a by-product of wastewater treatment, it can be viewed as part of a circular water management strategy in which water is reused responsibly to maximize environmental and community benefits.

For industry, access to treated effluent can provide a reliable and consistent water source that supports operational needs while aligning with sustainability goals. For communities, it helps protect valuable freshwater supplies and supports long-term environmental stewardship.

While regulatory approvals and careful planning are essential before any reuse program can move forward, exploring effluent reuse represents an environmentally sustainable solution that supports responsible water management now and into the future.

As Aquatera continues to evaluate innovative solutions, the focus remains clear: protecting freshwater resources, supporting community sustainability, and ensuring reliable utility services for the communities and industries that depend on them.

AQUATERA
WATER EARTH INNOVATION

Supporting Reliable Water and Wastewater Services in Diamond Valley

High-quality water and wastewater services are essential to the health, safety and well-being of every community. In Diamond Valley, these systems support daily life, protecting public health, safeguarding the environment and ensuring residents and businesses receive consistent, high-quality service without interruption.

On January 1, 2026, Aquatera Utilities Inc. entered into a five-year operations and maintenance agreement with the Town of Diamond Valley to support the community's wastewater treatment facility, as well as its distribution and collection systems. The partnership is built on a shared focus of operational excellence, long-term sustainability, and the delivery of essential services residents depend on every day.

SUPPORTING ESSENTIAL SERVICES

Providing dependable water and wastewater services requires coordinated treatment, monitoring and maintenance processes designed to protect public health and support environmental sustainability.

Aquatera's role in Diamond Valley includes ongoing support for wastewater treatment operations, as well as collection and distribution infrastructure. This work focuses on maintaining system performance, meeting evolving regulatory requirements and ensuring long-term service reliability.

Through preventative maintenance, operational oversight and continuous system evaluation, the partnership helps protect local waterways while ensuring treated water returned to the environment meets strict provincial standards.

NAVIGATING INCREASING MUNICIPAL UTILITY CHALLENGES

While utilities work continuously to maintain dependable service, municipalities across Alberta and Canada are facing increasing pressure to maintain safe, uninterrupted water and wastewater operations while meeting evolving regulatory and environmental requirements. Ageing infrastructure, advancing treatment standards and workforce recruitment challenges are adding complexity to utility operations.

Many communities are balancing the need to modernize infrastructure with ensuring they have the expertise required to operate advanced treatment systems safely and efficiently.

For Diamond Valley, partnering with an experienced utility service provider helps address these challenges by providing technical expertise, operational support and long-term planning resources. This approach helps sustain stable operations today while preparing infrastructure to meet future community needs.

CLASS III WASTEWATER TREATMENT UPGRADE

The recent upgrade of Diamond Valley's wastewater treatment facility to a Class III system marks a major milestone, bringing increased capacity alongside higher operational and regulatory requirements. The upgrade included a SAGR system for ammonia-nitrogen removal, chemical injection and disk filters for phosphorous, UV disinfection for coliforms and a new river diffuser.

Class III facilities require advanced treatment processes, enhanced monitoring and highly trained operators with specialized technical expertise. This upgrade positions Diamond Valley to meet future growth demands while strengthening environmental protection and regulatory compliance.

"Operating a Class III facility requires a level of experience and technical knowledge that is essential for long-term system stability," said Adam Davey, chief administrative officer for the Town of Diamond Valley. "Partnering with Aquatera gives us access to that expertise while ensuring our systems are operated safely and responsibly."

THE PEOPLE BEHIND THE INFRASTRUCTURE

While infrastructure and technology are critical, it is the people behind the systems who make reliable service possible.

Wastewater operators and operations teams work behind the scenes monitoring processes, maintaining equipment and ensuring environmental standards are met. Their work is demanding, highly technical and essential to community health.

For Diamond Valley staff, the partnership has brought increased support and collaboration.

"Working alongside Aquatera has been a positive experience," said Mark Meredith, water and wastewater technician for the Town of Diamond Valley. "Our operators feel supported, not only through technical expertise, but through a company culture that values safety, training and the people doing the work."

This culture of collaboration is central to Aquatera's approach.

"Our operators are the foundation of everything we do," said Vaughn Bend, chief executive officer of Aquatera Utilities Inc. "When we invest in training, safety and operational support, it strengthens our systems and improves service for the communities we serve."

LOOKING AHEAD

As Diamond Valley continues to grow, maintaining resilient and reliable utility systems remains a priority. The partnership will focus on system reliability, regulatory compliance and proactive planning to support both current needs and future development.

Through collaboration, shared expertise and a commitment to continuous improvement, Aquatera and the Town of Diamond Valley are strengthening the essential services residents rely on every day. By investing in infrastructure, expertise and strong working relationships, Diamond Valley is well positioned for a safe, sustainable and resilient future.

WESTERN CANADA water

30 years, 30 moments

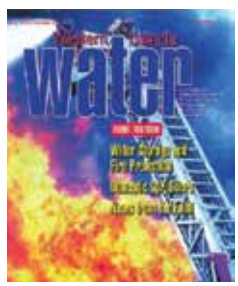
From the 'Bulletin' to the 'WCW' magazine... from concept to legacy... three decades of publication history

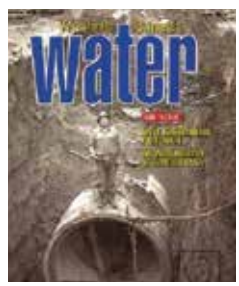
THE PUBLISHING LEGACY

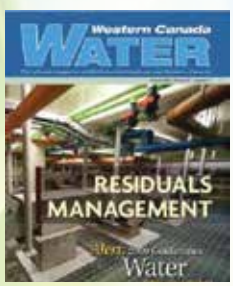
1. **Before the magazine, there was the *Bulletin* –** A quarterly publication documenting technical papers, conference reports, and industry debate.
2. **Proceedings in members' hands –** Conference papers were printed and distributed, preserving knowledge long before digital archives.
3. **Technical depth in black and white –** Early pages chronicled sewage lagoons, laboratory procedures, pump design, and major infrastructure projects.
4. **Publishing standards that shaped infrastructure –** In 1962, standardized manhole and catch basin drawings were printed – and adopted across three provinces.
5. **Recording the big ideas –** From groundwater depletion to the North American Water and Power Alliance, ambitious proposals found space in print.
6. **Debate in print –** Even the question of removing "sewage" from the organization's name unfolded in the pages.
7. **Production discipline emerges –** The 1962 Author's Breakfast formalized coordination between presenters and publication planning.
8. **Documented milestones –** A 50-year history and later anniversary retrospectives reinforced the importance of recording institutional memory.

A MAGAZINE IS BORN

9. **1996 brings a decisive shift –** The organization makes the move from a $15,000 in-house newsletter to a professionally published magazine.
10. **Bill Brant steps forward –** As President-Elect, Bill Brant volunteers to build a self-sustaining publication supported by advertising.
11. **From concept to reality –** Brant becomes founding Editor, shaping the magazine's voice from day one.
12. **An engineer and an editor –** A love of grammar, clarity, and technical accuracy defines the tone of the publication.
13. **Building from scratch –** A small Editorial Committee puts in long hours to establish a solid foundation.







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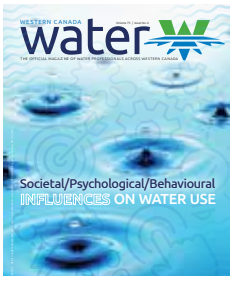

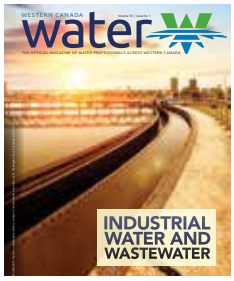

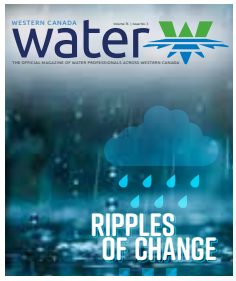

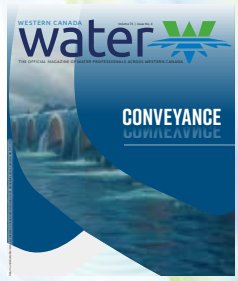

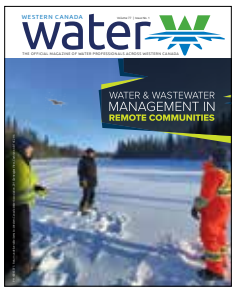

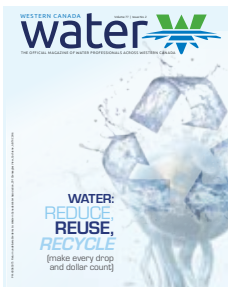

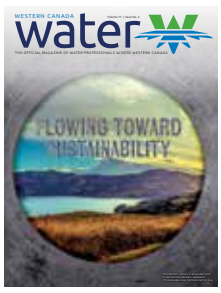

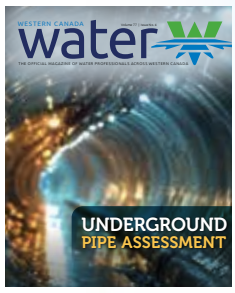

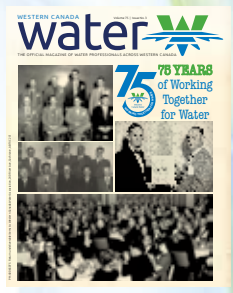

14. **Early turbulence –** Six managing editors in five years under the first publishing contract reflected a period of instability for the publication.
15. **A pivotal partnership –** Kelman & Associates brings stability, professionalism, and meaningful revenue to make *WCW* a publication staple.

RAISING THE STANDARD

16. **Resetting expectations –** Managing Editor Kevin Hill strengthens service and production quality.
17. **Fourteen transformative years –** Terry Ross elevates the magazine's editorial and design standards.
18. **Remembering Terry Ross and continuing the partnership –** Ross' passing in 2019 is followed by Reba Lewis' collaboration with the Editorial Committee.
19. **Nearly three decades of editorial stewardship and national recognition –** Bill Brant's leadership becomes a defining constant of the magazine. In 2023, he receives the inaugural Legacy Award at the Water's Next Awards, part of the Canadian Water Summit hosted by Water Canada, recognizing more than four decades in the Canadian water sector, including over 30 years with Western Canada Water and 27 as *WCW* editor. WCW later establishes the William H. Brant Article of the Year Award in his honour.

THE TEAM BEHIND THE PAGES

20. **Consistent voices at the table –** Long-time Editorial Committee contributors, including Andy Barr, Vicki Campbell, Brian Sibley, and Jolee Gillies shape the magazine's direction and its continuity.
21. **A committee that stays –** Decade-long commitments provide institutional memory and consistency. Under the leadership of Executive Director Audrey Arisman since 2000, the Editorial Committee gains crucial support in handling conference-related publication materials and coordinating Board other organizational contributors' content for each issue.
22. **Volunteer dedication –** Behind the scenes, the Editorial Committee shapes each issue through planning meetings, developing ideas, and actively seeking out water professionals, including follow-ups and outreach, to contribute their expertise on themed subject-matter content.
23. **An open invitation –** News from the Field, Working in Water, Young Professionals, and other member submissions remain central to the magazine's identity.
24. **Presidential voices in print –** In 2010, Edith Phillips, the first female president, addressed members through the pages, marking an important leadership milestone reflected in the publication.

RESILIENCE, EVOLUTION AND INFLUENCE

25. **Content evolves –** Features adapt over time as some retire, and others become tradition.
26. **From paper proofs to digital workflows –** Production transitions fully online as technology reshapes publishing.
27. **The conference that wasn't, but the magazine that is –** In 2020, COVID-19 forced the cancellation of the annual conference, but the magazine never missed an issue.
28. **Recognizing excellence –** Each year, the magazine profiles the Kelman & Associates Scholarship recipient, celebrating students entering the water sector.
29. **2021 – A modern redesign –** A refreshed layout and visual identity prepare the magazine for the future.
30. **75+ years of Western Canada Water as an organization, 30 years of *WCW* as a publication staple –** The Fall 2023 issue's 75-year retrospective underscored a publishing tradition that continues to inform, connect, and endure.

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EXHIBITION

Booth sales are now underway and nearly sold out.
Learn more: *www.wcwwa.ca/page/exhibition*

HOTEL INFORMATION

We encourage attendees to book within the official room block to support the Association, and take advantage of valuable networking opportunities with fellow participants staying at the conference hotels.
Booking within the block also helps us secure lower room rates for future events.
Please reserve your hotel room by August 14 to access the special conference rates. Most conference events will take place at the Delta Hotels by Marriott Regina in downtown Regina.
For full booking details, visit: *www.wcwwa.ca/page/accommodations*.

FRESH IDEAS POSTER CONTEST

Students and young professionals have the opportunity to showcase their research on water, stormwater, or wastewater projects at the Western Canada Water Annual Conference and Exhibition through the Fresh Ideas Poster Competition.
The winning presenter will receive airfare, accommodation, and a conference registration pass to attend the American Water Works Association Annual Conference & Exposition in June 2027.
For full contest details and registration, visit: *www.wcwwa.ca/page/postercontest*.

Special Events

Monday, September 14 3:00 P.M. - 7:00 P.M.	**Community Project**
Tuesday, September 15 4:00 P.M. - 8:00 P.M.	**Exhibition Reception** Join us for an evening in the Exhibition Hall.
8:00 P.M. - 10:00 P.M.	**WCS AWWA YP Pub** Join the Exhibition After Party, open to all conference delegates.
Wednesday, September 16 9:00 A.M. - 10:00 A.M.	**First Timers Reception**
Wednesday, September 16 10:00 A.M. - 1:30 P.M.	**Exhibition & Best of the West Taste Test** Our exhibition floor features some of the most knowledgeable suppliers in the industry.
Wednesday, September 16 4:30 P.M. - 6:00 P.M.	**WOW** Women of Water networking event will include light refreshments and a chance for women in the water industry to share experiences.
Thursday, September 17 8:00 A.M. - 9:00 A.M.	**Breakfast** Conference VIPs will be introduced.
Thursday, September 17 12:00 P.M. - 1:30 P.M.	**Lunch** Conference Plenary Session
Thursday, September 17 4:30 P.M. - 10:00 P.M.	**Celebration Gala** The Conference Celebration Gala will feature networking, dinner, and an 80s-themed party, along with conference presentations, awards, and the WCW Gavel transfer.
Friday, September 18 8:00 A.M. - 9:00 A.M.	**Closing Breakfast**

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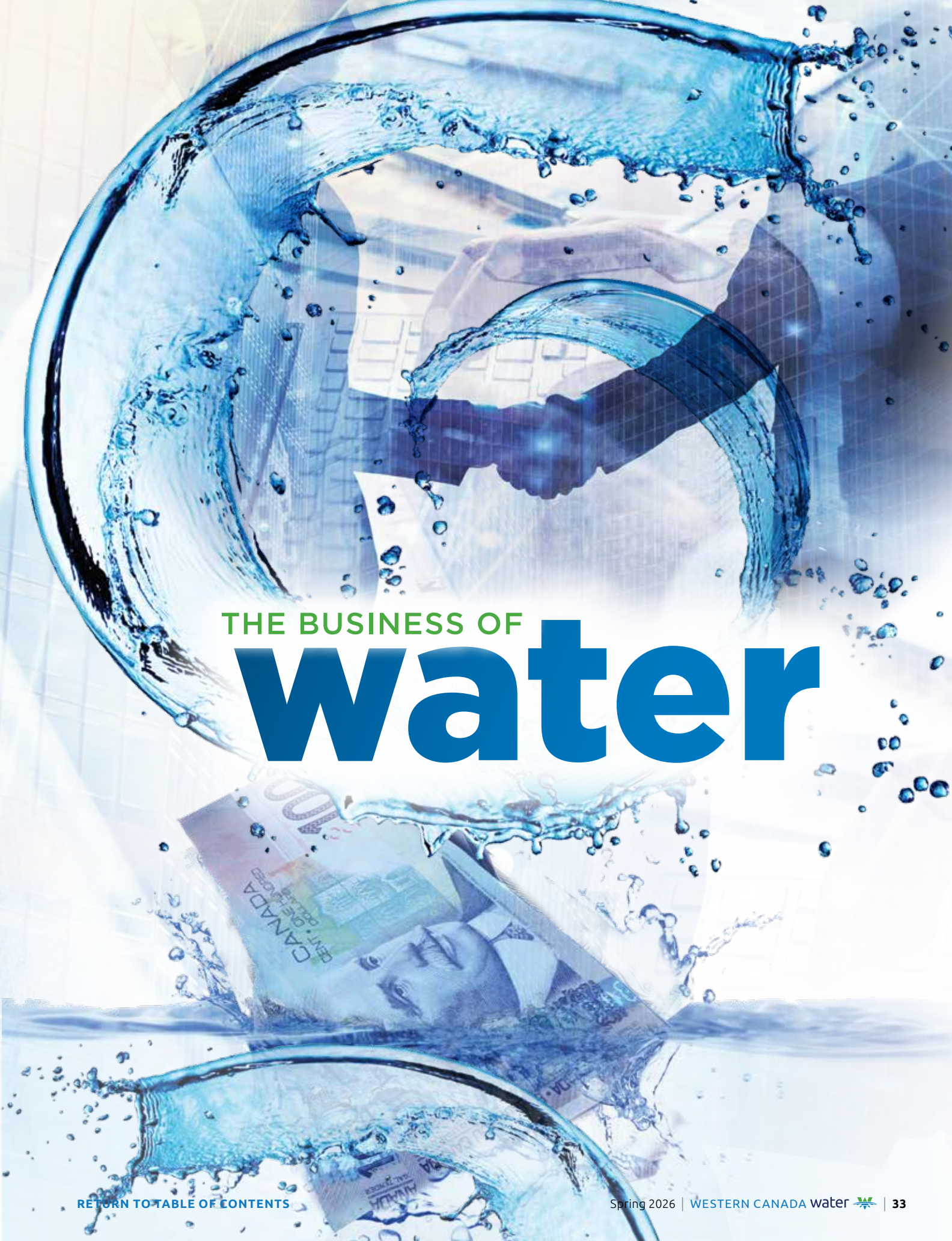


THE BUSINESS OF water

CONSIDERING THE BENEFITS OF A PRIVATE WATER UTILITY

By Ron Zink, Bluestem Utilities

Many essential services we rely on every day, such as natural gas and electricity, are often provided by private companies. In the water and wastewater industry, while some customers receive service from a private company, the public sector remains dominant. Both approaches offer benefits to customers. In this article, we delve deeper into private ownership.

INVESTING IN CRITICAL INFRASTRUCTURE

Across Canada, water and wastewater systems face a range of risks. Deteriorating infrastructure, escalating climate concerns, workforce shortages, and additional demand are putting strain on ageing systems that were not built

to handle today's challenges. Upgrading and repairing these systems is costly, and many municipalities lack the resources needed to address rising operations and maintenance costs.

Municipal governments typically finance infrastructure projects over 20 to 30 years, with interest rates often locked in for no more than 20 years. This timeline works well for equipment and machinery that wear out relatively quickly. However, underground pipes and major structures last much longer. Materials such as PVC and HDPE pipes can remain in service for 50 to 100 years, depending on soil conditions and ground stability. As a result, public utilities often pay off the cost of pipes and structures much faster than the assets wear out, leading to artificially higher rates.

In Canada, municipalities are also required to balance their budgets annually. This means faster repayment schedules must be covered by increasing revenue or using capital reserves. In practice, this can result in higher water and wastewater bills for customers, higher development charges for builders, or both. Municipalities must also fund all services within their boundaries, including roads, drainage, fire and police protection, parks, and social services, unlike private utilities, which do not face the same competing priorities. When municipalities are responsible for funding all infrastructure, budget constraints can lead to chronic underfunding. The City of Calgary is currently experiencing infrastructure challenges due to rapid population growth and an ageing water pipe network. Outside of development charges, the primary source of revenue for municipal infrastructure is property taxes, which in many jurisdictions are insufficient to cover the cost of replacing and repairing critical components of a city's water system.

Larger private-sector water and wastewater utilities often have more flexibility. Instead of borrowing money for each individual project, they can fund infrastructure investments using their overall financial resources through an approach known as balance sheet financing.

With balance sheet financing, companies spread the cost of an asset over its full useful life rather than recovering it within a shorter loan term. This allows private utilities to align amortization periods with the expected useful life of infrastructure, smoothing expenses over time and reducing short- and mid-term rate pressure on customers.

NEW DEVELOPMENTS

When existing water or wastewater systems are replaced or upgraded in established communities, there are already many customers using the service, allowing local governments to gradually increase water and wastewater bills to cover costs. Where more costly upgrades are required, increases may be more substantial, a levy may be required, or projects may be deferred until funding is secured.

The situation is very different for new developments that require stand-alone water or wastewater systems. In the early years, only a small number of homes or businesses are connected, and there may not be enough customers to cover day-to-day operating costs, let alone repay the loans required to build the infrastructure.

Since raising bills to very high levels is not realistic or affordable, municipalities have limited options. To balance their budgets, they must either:

- Set development charges high enough to finance infrastructure upfront, which can exacerbate housing affordability challenges and make projects uneconomic;
- Collect additional funds from the developer upfront to cover expected shortfalls; or,
- Use capital reserves until more customers are connected.

Private utilities have more flexibility in supporting new developments. They can set rates that make sense over the long term and absorb early-year losses. As development grows, these losses are gradually reduced and eventually eliminated, after which they can be recovered as growth continues. This approach is known as rate levelization. Over time, the utility can recover costs, along with a reasonable return, as the customer base expands and the system is fully built out.

SUPPORTING FUTURE DEMAND

To ensure infrastructure continues to meet community needs, some local governments

include additional charges in water and wastewater bills to fund capital reserves. This means customers pay more today so funds are available for future repair and replacement projects. In British Columbia, some private utilities are also required to follow this approach under specific regulatory guidelines. While well intentioned, this can result in current customers subsidizing infrastructure that has not yet been installed.

For example, if a municipality includes the full cost of current infrastructure in today's water bills and also charges extra to build a reserve for future replacements, customers may effectively pay twice for the same system. A similar issue arises when infrastructure costs are collected upfront through development charges, which are built into the price of new homes and can reduce housing affordability.

Most large private utilities operate under rules that prevent them from collecting money in advance for future infrastructure. They can recover costs only once an asset is in service. This requires the utility to be financially strong enough to fund upgrades and replacements when needed using its own resources. The benefit is that customers pay for infrastructure only when they are using it, rather than years or decades in advance.

OPERATIONAL EXPERTISE

Larger private-sector water and wastewater utilities draw on extensive organizational knowledge to address challenges. By employing engineers and operational experts in planning, design, construction, and operations, private utilities leverage skilled professionals to keep systems safe and efficient. Diverse ownership across multiple locations and technologies provides experience across a wide range of specialties. Organizational training keeps operators current on methodologies and regulations, and strong cybersecurity practices help guard against security breaches. In the event of severe weather, private utilities also have access to personnel, equipment, and supplies, with demonstrated success in restoring service after ice storms, floods, and other emergencies.

For private utilities operating in various regions across North America, annual community service initiatives help maintain strong local connections. For example, Bluestem Utility staff have donated time to local food banks, supported watershed clean-ups, and participated in other community events in the areas where they operate.

REGULATORY LIMITATIONS

Many advantages offered by private utilities depend on how rates are regulated. Most water utilities in British Columbia are regulated under Operating Margin Regulation. Under this model, initial infrastructure is typically paid for by the developer, and funds are set aside for future repairs and replacements. As a result, private water utilities in B.C. cannot fully use long-term financing approaches because capital funds must be available in advance from developers, customers, or both.

This limits financing options and reduces the ability to deliver advantages seen in other jurisdictions. However, the B.C. Office of the Water Comptroller has begun approving a rate-based utility approach. This shift, combined with allowing utilities to finance some or all capital costs of new developments, enables private water utilities to provide the full range of customer benefits discussed in this article. Unlike water utilities, wastewater utilities are not economically regulated in many Canadian jurisdictions, so these limitations may not apply.

CONCLUSION

Both the public and private sectors bring unique characteristics and advantages to utility infrastructure development. Determining which ownership model best serves customers must be assessed on a case-by-case basis. As communities face ageing infrastructure and rising costs, the priority remains providing safe, reliable water and wastewater services at affordable rates, regardless of who owns or operates the system.

HOW ST. ALBERT DELIVERED THE STURGEON HEIGHTS RESERVOIR ON TIME, AND UNDER BUDGET

Brian Brost, Manager of Utilities, City of St. Albert
Jason Kopan, General Manager, Water, ISL Engineering

WHY PROJECT DELIVERY MATTERS NOW

Across Canada, municipalities are confronting a familiar equation: ageing water assets, escalating costs, and tight budgets. In that context, *how* projects are delivered can be as decisive as *what* gets built. For the City of St. Albert, the renewal of the Sturgeon Heights Reservoir became a proving ground for a different approach, one that shifted the focus from conventional norms to best value, collaboration, and shared outcomes.

BACKGROUND: A SYSTEM AT A TURNING POINT

Historically, St. Albert relied on conventional delivery models and a riskaverse procurement mindset. Meanwhile, key assets were ageing beyond their design life and maintenance needs were accumulating – from storage cell upgrades and ventilation fixes to pump and valve replacements and structural rehabilitation. The stakes rose as costs climbed in the early 2020s and the City aimed to keep services dependable while respecting fiscal limits. The Sturgeon Heights Reservoir work had to proceed within a constrained "allin" municipal budget and remain sensitive to a mature residential setting near schools and community amenities.

THE PIVOT: FROM CONVENTIONAL DELIVERY TO HIGHLY COLLABORATIVE DELIVERY

By 2022, with design at 75%, estimates had surged amid market volatility, supply chain shocks, and labour pressures putting the City's all-in budget at risk. Rather than press forward to tender under a traditional DesignBidBuild (DBB) model and hope for the best, the team paused to evaluate delivery options and risk. Following a due diligence process that included a lengthy memo written by ISL outlining alternative delivery approaches (CMAR, Design-Build, Progressive Design Build) and risks, and legal and procurement reviews of the CCDC 30 contract – St. Albert elected to pivot to Integrated Project Delivery (IPD), launching a new path in September 2022 without wishing to compromise the established project schedule. This was a heavy lift considering the design was already progressed to 75% completion. The design progress to date was very advantageous as it allowed the team to hit the ground running and the Validation Phase was concluded by December 2022, providing early cost certainty.

BUILDING THE RIGHT TEAM, THE RIGHT WAY

St. Albert emphasized value-based selection for the general constructor selection, prioritizing fit, relevant reservoir construction experience, and the ability to work transparently in a collaborative model as priorities. ISL Engineering served as design consultant, and SureForm Contracting brought deep

selfperform capability in civil, concrete and process mechanical work – critical to constructability, schedule, and quality control. The City included the consultant in the general contractor selection process to keep the evaluation as objective and capability focused as possible. Magna IV Engineering and NEXT Architecture were also part of the design team. Vector Electric and Controls and LCR Mechanical were selected as subcontractors and all these parties signed the poly-party agreement (CCDC 30) and walked the talk on what shared risk and shared reward means.

HOW THE TEAM WORKED: CONDITIONS OF SATISFACTION, CBA, AND OPENBOOK DELIVERY

The project culture centered on shared Conditions of Satisfaction, a concise expression of what success meant for St. Albert and the entire project team across cost, schedule, operational efficiency, design quality, environmental resilience, commissioning, and the overall experience. With IPD's openbook model, risks and costs were fully transparent; discussions were candid; and decisions were anchored to "what's best for the project." Two tools stood out:

- **Choosing by advantages (CBA):** a disciplined method to weigh alternatives by their advantages relative to project goals – applied to items like façade treatments, generator placement, diffuser strategy, and site service connections.
- **Pull planning and the "Big Room":** co-location and last-planner methods accelerated coordination, shortened feedback loops, and reduced rework by getting "the doers" to shape a realistic, accountable plan.

This approach reframed risk as a variable to be managed early together, not priced late by one party. The team's ethos: true collaboration is not a cliché – it is an immensely powerful delivery tool.

DELIVERY OUTCOMES: SCOPE, SCHEDULE, BUDGET – AND VALUE ADDS

The pivot to IPD did more than stabilize the budget and address risk. With validation completed in late 2022, the team began earthworks in February 2023 while continuing certain design elements, an example of intelligently overlapping work once risk was understood and aligned. The project was commissioned in October 2024, and Phase 2 demolition and landscape restoration followed, with final landscaping completed in 2025.

Crucially, collaboration enabled value-added scope to be included in the project by leveraging efficiency gains elsewhere without exceeding the all-in target budget:

- **Optimized diffuser solution:** The team reexamined a costly off-the-shelf diffuser concept and delivered a custom, fit-for-purpose solution that met water quality intent at a fraction of the original price.
- **Site servicing and fill line strategy:** In response to market swings, constructability, risks and the mitigation

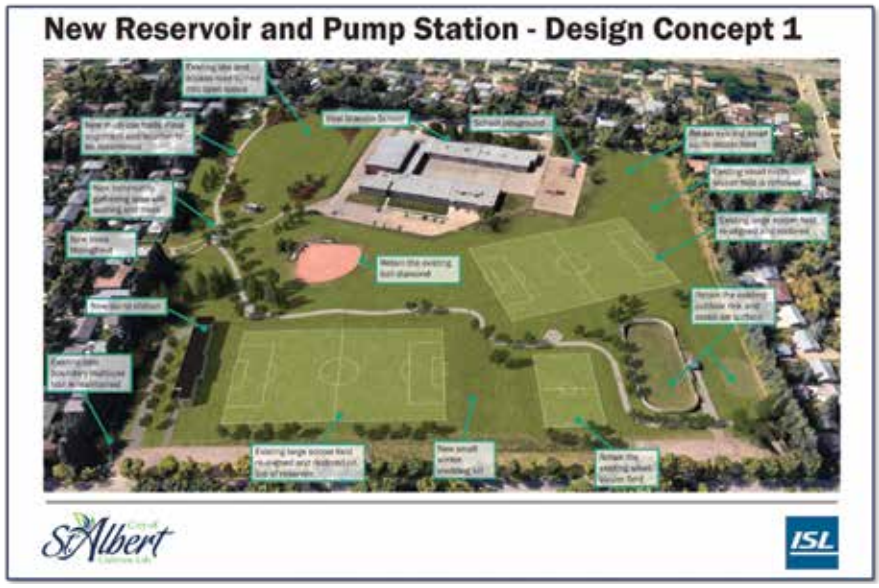
of such, the team improved redundancy and reduced future failure risk and sliplined existing pre-stressed concrete pipes to improve reliability and manage costs; the civil scope expanded intelligently to strengthen longterm operations and remove the risk of these pipes failing in the future.

- **Constructability wins:** From moving the generator outdoors to collaborative structural detailing for ease of concrete formwork systems, to early backfilling and an innovative hydrostatic testing approach, twin feeder mains to the reservoir, decisions improved maintainability, reduced rework, and supported commissioning and operations.

By the end of validation, the Base Target Cost (all-in) stood at approximately $35.4 million, supporting cost certainty while preserving the original construction schedule. The project ultimately finished on time and under budget, including additional scope because the team found savings and managed risk proactively through true shared risk/shared reward.

LESSONS FOR BETTER DELIVERY IN THE BUSINESS OF WATER

1. **Consider alternatives early.** Do not get stuck thinking "this is the way we have always done it." When risk, market volatility, or constructability pressures threaten outcomes, municipalities should actively compare methods and be ready to pivot.
2. **Select for value, not just price.** Capability, relevant experience, and team mindset influence risk more than any line item. Value-based consultant and contractor selection is a strategic investment.
3. **Define success together.** Conditions of Satisfaction keep client leaders, engineers, constructors, and operators aligned on what truly matters – cost, schedule, operations, and community outcomes.
4. **Use collaborative tools with intent.** CBA, pull planning, colocation, building information modelling integrated with virtual reality technology, and open-book practices shorten learning loops, reduce requests for information and change orders, and foster transparent decisions.
5. **Manage risk where it can best be influenced.** Early, shared risk management helps create cost certainty sooner and prevents the Owner for paying for risks that never materialize. Bring the folks on to the project team earlier so they can provide their expertise in a highly collaborative environment and work together to mitigate risks using conditions of satisfaction to guide decisions. Risk is best managed proactively during design by leveraging the necessary expertise to not only identify risks, but to evaluate them holistically as a team utilizing different perspectives. When possible, the risk can then be eliminated through design. If the risk cannot be eliminated, mitigation plans and funds can be put in place, and the risk is actively managed by the team. Often, risk is just passed down the line to the contractor after the design has been completed and this results in increased costs to the Owner.



The Sturgeon Heights Reservoir shows that when owners, including operators, consultants, and builders align around a shared definition of success and choose a delivery model that actually facilitates and rewards collaboration through defined processes and contractual requirements, the business of water project delivery improves. For St. Albert, IPD was not merely a contract form; it was a framework for timely decisions, disciplined transparency, and better outcomes for the community. Genuinely thinking outside the box requires bold action. Ask yourself, how is the mentality of "this is the way we have always done it" working for your municipality?

Acknowledgements: City of St. Albert; ISL Engineering; SureForm Contracting, Magna IV Engineering, NEXT Architecture, Vector Electric & Controls, LCR Mechanical.

NO METER, NO MONEY: THE BUSINESS CASE FOR MEASURING WATER

By Reba R. Lewis, Kelman & Associates

Among life's most essential utilities, water would likely be named king. How it's measured and priced, however, is far from the minds of the average citizenry. Unless you work in the water and wastewater industry, you probably spare little thought for the complex public utility that treats, distributes, collects, and cleans billions of litres of water each year. Like any enterprise delivering a product or service, that system depends on revenue to operate. Over the past several decades, water utilities in Canada and around the world have increasingly recognized that without accurate measurement, it becomes extremely difficult to manage supply, allocate costs fairly, encourage efficiency, and understand the true performance of water and wastewater systems. In this context, water meters function as the "cash registers" of water utilities, recording the product leaving the system, converting consumption into revenue, reducing unaccounted losses, and providing the financial data that underpins long-term planning.

Just as a retail business cannot survive if it does not know what it has sold, a water utility cannot operate sustainably if it does not know how much water it delivers or what it is being paid for it. The meter translates flow into measurable units, and measurable units into billable value. Without such a mechanism, utilities must rely on estimates and flat fees that do not clearly link cost, consumption, and revenue.

FLAT-RATE VS. METERED

Unlike flat-rate billing, where customers pay a fixed sum regardless of use, metered billing ties bills directly to measured volume. This is both a conservation strategy and a revenue strategy. Volume-based billing ensures that income reflects actual demand placed on the system. Data from Statistics Canada and Environment and Climate Change Canada show that municipalities with volume-based pricing experience significantly lower residential water use than unmetered communities with flat-rate systems. Lower consumption reduces strain on infrastructure and improves the predictability and integrity of utility finances by aligning charges with service delivery.

Households billed for actual consumption are more likely to adopt water-saving technologies such as low-flow fixtures. From a business perspective, this matters because demand management is often less expensive than expanding supply. When metering curbs excessive use, utilities can defer costly capital projects such as treatment plant expansions or new source development. The meter not only records revenue but also shapes future capital expenditures.

Accurate metering strengthens financial sustainability in direct ways. Water utilities recover operating and maintenance costs through user fees. If consumption is not measured precisely, utilities risk undercharging high-volume users or overcharging low-volume users, distorting revenue streams and undermining public trust. The "cash register" function of the meter ensures that every cubic metre delivered is accounted for and assigned value. This reduces cross-

subsidization between customer classes and supports rate structures that reflect actual service costs.

MALFUNCTIONING METERS, ACCOUNTING INACCURACIES

Metering, according to the AWWA's *M36 Water Audits and Loss Control Programs* manual, also plays a pivotal role in detecting non-revenue water (NRW), treated water that never generates income due to leaks, theft, malfunctioning meters, or accounting inaccuracies. For utilities, NRW is equivalent to inventory loss: product that has incurred production costs but produces no return. Advanced metering infrastructure helps utilities identify discrepancies between system input and billed consumption and isolate losses more quickly. By tightening the gap between production and billing, modern meters reinforce the financial discipline implied by the cash register metaphor.

Beyond billing and loss control, metering supplies operational intelligence. Understanding when and where water is consumed allows utilities to forecast peak demand, optimize pumping schedules, manage energy costs, and plan infrastructure upgrades. The data generated at each meter accumulates into system-wide insight. The cash register does more than tally transactions; it feeds strategic decision-making. Without it, utilities operate with incomplete financial and operational visibility.

Metering adoption across Canada varies by province, municipality, and community type. In Manitoba and Alberta, virtually all incorporated municipalities with municipal water systems employ residential water metering, though it is less common in First Nations communities where residents generally do not pay for water. Saskatchewan's municipal water utilities are generally thought to have similarly high rates of metering, though coverage may vary across smaller towns. By contrast, provinces such as British Columbia, Quebec, Newfoundland and Labrador, and Prince Edward Island have historically had lower residential metering penetration. These differences reflect historical policy choices, pricing philosophies, and varying approaches to financial transparency within municipal systems.

Rural and small communities often lag behind urban centres in metering adoption. For utilities in these areas, limited measurement can constrain revenue accuracy and obscure system performance. As infrastructure ages and regulatory expectations increase, the absence of comprehensive metering can become a structural financial vulnerability.

Despite regional disparities, the overall trend in Canada is toward expanded metering and modernization. Commercial and institutional users have long been metered. Increasingly, municipalities are extending similar precision to residential users. Smart metering systems that incorporate automated meter reading or advanced metering infrastructure reduce manual collection costs, eliminate estimated billing, and improve revenue reliability. For utilities, this represents an operational efficiency gain comparable to digitizing accounting systems in other industries.

While many Canadian utilities now employ automated meter reading to improve billing efficiency, full, advanced metering infrastructure that has the ability to generate interval-level consumption data remains less common. Where implemented, such systems provide utilities with regular usage profiles, which enhance leak detection and demand forecasting. Widespread use of these analytics, however, is still emerging in much of western Canada.

DAUNTING EXPENDITURES

Installation of water meters does require upfront capital, and system-wide projects can reach into the millions. For smaller municipalities, these expenditures can appear daunting. Yet long-term financial analysis consistently shows that metering investments generate returns through improved billing accuracy, reduced non-revenue water, operational efficiencies, and deferred capital expansion. In business terms, metering is a revenue protection and cost-avoidance strategy.

Pricing water based on measured consumption is widely regarded as one of the most effective demand management tools available. It strengthens the link between revenue and service provision, making utility finances more transparent and defensible. When every unit delivered is recorded and billed, utilities are better positioned to justify rate adjustments, secure financing, and demonstrate fiscal responsibility.

Water metering is equally central to wastewater management. Many municipalities calculate wastewater charges as a proportion of measured water use, meaning accurate metering directly influences wastewater revenue streams and treatment plant financing. Since wastewater infrastructure represents one of the largest capital investments in municipal portfolios, predictable revenue is essential. Meter data improves forecasts of inflows, supports infrastructure sizing decisions, and reduces financial uncertainty.

The broader trajectory of the sector is toward data-driven management. As digital technologies mature, water utilities are evolving from passive service providers into sophisticated infrastructure enterprises. Meter data feeds analytics platforms, supports real-time monitoring, and informs long-term capital planning. Modern meters do not simply record transactions; they generate the data backbone of the utility's business model.

In Canada, discussions about water policy increasingly acknowledge a fundamental truth: what is not measured cannot be effectively managed or financed. Comprehensive metering enhances efficiency, resilience, and fiscal sustainability. It clarifies the relationship between production costs and revenue generation and reduces invisible losses.

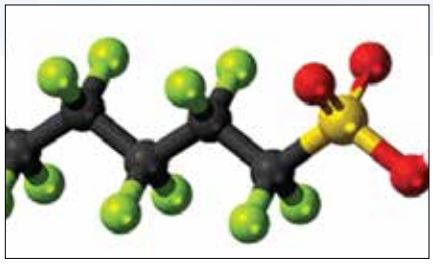
Water meters are more than technical devices attached to pipes. They are the point where water's physical flow intersects with financial reality. As Canada confronts ageing infrastructure, climate variability, and growing capital demands, the ability to measure accurately and bill reliably will only become more important. The metaphor holds firm. Water meters are the cash registers of water utilities, recording each transaction, safeguarding revenue, and sustaining the business foundation upon which safe and reliable water and wastewater services depend.

ASSESSMENT OF PFAS AND ENVIRONMENTAL CONTAMINANTS IN MUNICIPAL WASTEWATER: A CASE STUDY OF THE CITY OF SELKIRK

By Raven Sharma, Manager of Utilities, City of Selkirk

This study looks at the presence and behaviour of per- and polyfluoroalkyl substances (PFAS) and other environmental contaminants in the wastewater of the City of Selkirk. Both influent and effluent samples were examined for a wide range of substances, including pharmaceuticals, metals, trace elements, ions, and PFAS. The results reveal complex patterns of contaminant removal and transformation during conventional wastewater treatment, with important implications for human and environmental health.

Per- and polyfluoroalkyl substances (PFAS) are a class of persistent and bio-accumulative compounds that pose a growing concern in environmental science and public health. These compounds are resistant to degradation, making them particularly difficult to remove during conventional wastewater treatment. Wastewater treatment plants (WWTPs), therefore, serve as crucial control points for managing the environmental fate of PFAS and similar contaminants.



PFAS molecule

This study focuses on the City of Selkirk's WWTP and investigates the occurrence and behaviour of PFAS, pharmaceuticals, metals, and other trace elements. The goal is to evaluate the effectiveness of existing treatment processes and assess potential environmental risks posed by effluent discharge.

METHODS

Influent and effluent samples were collected from the Selkirk WWTP and analyzed for a comprehensive range of contaminants:

- **Target analytes:** 31 metals and trace elements, major ions, 11 pharmaceuticals, one nonylphenol derivative, and five PFAS compounds.
- **Sampling protocol:** Composite samples were collected at the 17th hour, allowing for appropriate residence time. All procedures adhered to proper personal protective equipment (PPE) guidelines and followed standard environmental

monitoring protocols to ensure data quality and comparability.

RESULTS

A diverse array of contaminants was detected in the effluent:

- **Pharmaceuticals:** 11 compounds were identified.
- **Industrial chemicals:** One nonylphenol derivative was present.
- **Metals and trace elements:** 31 different metals and trace elements were detected.
- **PFAS:** Five PFAS compounds were found, with PFPeA (perfluoropentanoic acid), PFOS (perfluorooctane sulfonate), and PFHxA (perfluorohexanoic acid) showing higher concentrations in the effluent than in the influent.

While many contaminants were reduced through treatment, demonstrating partial removal or degradation, some metals and trace elements increased in the effluent. This may result from chemical transformations, desorption from sludge, or partitioning during the treatment process.

Androstenedione, an estrogenic compound, was detected in the influent but absent in the effluent, indicating effective removal. This result is a positive indicator of treatment success for some endocrine-disrupting compounds.

Notably, PFAS concentrations in the effluent exceeded Health Canada's drinking water quality objectives but remained below thresholds established for aquatic life protection.

PFAS FINDINGS IN EFFLUENT

- **Detected compounds:** PFPeA, PFOS, PFHxA
- **Concentration observations:**
  - Effluent PFAS levels exceeded Health Canada's drinking water objectives
  - PFAS concentrations remained within aquatic life protection guidelines
- **Transformation evidence:** Higher concentrations of certain PFAS in effluent suggest chemical transformation or precursor conversion during treatment.

Regional Wastewater Treatment Plant

CONTAMINANT TRANSFORMATION AND PARTITIONING

- **Effective reductions:** Most contaminants were reduced in the effluent, suggesting satisfactory performance of current treatment systems.
- **Unexpected increases:** Elevated levels of certain metals and trace elements indicate possible transformations, partitioning effects, or release from solid phases during treatment.

CONCLUSION

This study highlights the urgent need for enhanced wastewater treatment technologies capable of addressing persistent contaminants like PFAS and certain metals. Although current systems effectively reduce many pollutants, the transformation and survival of others, particularly PFAS, pose ongoing risks.

NEXT STEPS FOR THE CITY OF SELKIRK

The city should expand its investigation by testing potable drinking water for PFAS, pharmaceuticals, industrial chemicals, and trace elements. This would help determine whether treated wastewater contributes to residual contamination in drinking supplies and guide decisions on upgrading treatment infrastructure.

LIMITATIONS OF CURRENT TREATMENT TECHNOLOGIES

Challenge	Details
Resistance to degradation	PFAS compounds remain persistent even after treatment
Incomplete removal	Some PFAS increase in concentration post-treatment
Limited efficiency of existing methods	Physical and chemical methods (e.g., filtration, coagulation) are insufficient
Advanced techniques required	Activated carbon or reverse osmosis may be necessary, but are costly and complex

WCS AWWA REPORT

The Western Canada Section of the American Water Works Association unites local water community professionals in providing safe and sustainable water through committed leadership, innovated technology, constant knowledge exchange and continuous education.

David Milliken
Chair, WCS AWWA

We are fresh on the heels of our annual strategic planning meeting that took place in Calgary on February 25 and 26. The continued focus for the year will be strengthening and promoting the YP Committee and development of the Water Utility Council.

As part of the section's support to Young Professionals (YP), we were proud to once again sponsor the Early Career Summit that was held on February 4 in several locations across western Canada. A full itinerary, including technical sessions as well as mentoring and networking opportunities was held. The YP community also has various networking events planned across Alberta, Saskatchewan and Manitoba so be on the lookout for them!

New for this year, the Western Canada Section is excited to join the Ontario Water Works Association (OWWA) along with the Atlantic Canda Section and British Columbia Section in hosting Next Wave 2026: Canada's Water Conference & Exhibition in Niagara Falls, ON from May 4-7. The conference, which is open to all Canadian AWWA members, is expected to attract over 1,000 delegates from across the water industry and more than 100 tradeshow exhibitors.

This will be an exciting opportunity for all members to learn from others in our industry nationwide.

Please continue to let us know if you have any questions, suggestions or comments on what you would like to see from your Section Board. I hope everyone has a great spring and a safe construction season.

David Milliken, P.Tech.
City of Regina
Chair, WCS AWWA

Call for Nominations

We are currently seeking nominations for 2026 Awards and the following Board nominations:

- Vice Chair
- Trustee (Saskatchewan)

Visit *https://www.wcsawwa.net/index.php/about-us/nomination* for full details on awards and board job descriptions.

Deadline: April 30

Scholarships

WCS has a robust Scholarship program for members and operators.

- One AWWA Operator Scholarship
- Diversity in Water Scholarship
- Legacy Member Bursary
- Merit Scholarship
- Member Grant
- Water Campaign Grant

Deadline: July 1

Save the Date

NextWave2026: Charting the Course for Canada's Water Future

Date: May 4-7, 2026
Location: Niagara Falls, Ontario

ACE26

Date: June 21-24, 2026
Location: Washington, D.C.

For information on membership, events, scholarships and photo contest, visit the WCS AWWA website at *wcsawwa.net*.

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WCWEA REPORT

The Western Canada Water Environment Association seeks to preserve and enhance the water environment through the professional growth of our members.

Western Canada Water Environment Association
wef Member Association

Pat Fisher
Chair, WCWEA

On January 21 and 22, 2026, our WCWEA Board met in Calgary for our annual strategic planning session. A couple of years ago, we decided to focus on launching activities that add value for our membership. Following the success of the Canadian Residuals and Biosolids Conference last October in Winnipeg, our Board is feeling energized and ambitious as we move into 2026.

The WCWEA Technical Committee has been organizing a speaker series in Calgary through late 2025 and early 2026. We are looking to turn this into a more regular webinar series featuring guest speakers.

Looking for something less technical? Join us for a screening of *Our Blue World*, hosted by our Technical Committee. *Our Blue World* is a documentary that explores humanity's relationship with water. The Board is planning screenings in Winnipeg, Calgary, and Edmonton.

Interested in something more formal that may include CEUs? Watch for details on an odour control workshop being organized by our Technical Committee.

For more timely updates, follow WCWEA on LinkedIn and be sure to turn on notifications.

Pat Fisher,
Town of Peace River
Chair, WCWEA

2026 Awards Call for Nominations

Arthur Sidney Bedell Award – Recognizes individuals for outstanding performance, professionalism and contributions to the water quality analysis profession.

William D. Hatfield Award – Recognizes operators of wastewater treatment plants for outstanding performance and professionalism.

Laboratory Analyst Excellence Award – Recognizes individuals for outstanding performance, professionalism and contributions to the water quality analysis profession.

Follow us on LinkedIn

WCWEA has a new Linkedin page – follow us for information on events and other happenings – @WCWEA.

Save the Date

WEFTEC

Date: September 26-30, 2026
Location: Ernest N. Morial Convention Center | New Orleans, LA

For information on events and membership, visit the WCWEA website at *www.wcwea.org*.

CWWA REPORT

CWWA is a non-profit national body representing the common interests of Canada's public sector municipal water and wastewater services and their private sector suppliers and partners.

Jeff O'Driscoll
CWWA Director

Advancing Canada's Water Sector: Reflections on the 2025 National Water and Wastewater Conference

The National Water and Wastewater Conference held this past November in Victoria, B.C., marked another strong year for Canada's municipal water community. More than 600 professionals, including many Western Canada members, gathered to exchange knowledge, strengthen partnerships, and explore emerging challenges across the sector.

The National Water and Wastewater Conference continues to distinguish itself with a comprehensive technical program that spans the full spectrum of municipal water and wastewater issues. From utility management and treatment technologies to climate resilience and biosolids innovation, the conference remains a central forum for Canada's water leaders. Post-conference survey results reaffirmed this value: attendees overwhelmingly agreed that the event delivered the right balance of networking and technical learning, with 90% indicating they plan to return.

This momentum sets the stage for the 2026 National Water and Wastewater Conference, taking place in Halifax, N.S., November 1-4, with a theme of resiliency and cyber security. The program will deepen national dialogue on critical infrastructure failures, explore readiness for federal housing and infrastructure initiatives, "Buy Canadian" requirements, and address priority topics such as water quality, utility security, wastewater treatment, biosolids management, energy efficiency, and public outreach.

Utilities and organizations are encouraged to allocate budget resources early to support staff attendance. With Halifax offering both a rich technical program and an exceptional host city experience, it's an ideal opportunity for professional development and team engagement.

Before planning your trip, visit the CWWA website for updates on committee activities and subscribe to the *e-Bulletin* or *The Water Haller* for ongoing national sector insights.

Wishing you a productive and enjoyable summer. Perhaps we'll connect again at the Next Wave Conference in Niagara Falls this June.

Jeff O'Driscoll,
CWWA Director

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SWWA REPORT

SWWA is dedicated to environmental stewardship, protection of public health, and advancement of water and wastewater professionals through training and educational opportunities.

Kirt Holowachuk
Vice President, SWWA

Well, we opened the door into 2026 wondering how 2025 went by so fast. SWWA had a very busy year, kicking off the spring with our inaugural SWWA Celebrating Water Event, held in Moose Jaw on March 19 and 20, featuring a one-day training session followed by a choice of a plant tour in either the water treatment or wastewater treatment field.

June 19 and 20 brought us to Warman for a training session followed by our annual golf tournament. The weather was perfect, the golf was above par, and the networking was outstanding.

November 4 through 7 saw us in Saskatoon for our annual Conference and AGM. The keynote speakers and presenters covered a vast array of topics, including treatment, safety, leadership, technology, emergency planning, and post-emergency recovery, to name just a few. The annual Women of Water event had record attendance this year. The sold-out tradeshow was bustling, and the Best in Saskatchewan Water Taste Test was judged by a panel of Water Security Agency specialists. Congratulations to Muscowpetung Saulteaux Nation for winning that prestigious title.

Members of our board also attended numerous events as delegates or trade show representatives, speaking with councils, administrators, government representatives, as well as high school and college students about the present and future state of our industry. The Board was also excited to welcome first-year engineering and fifth-semester water students from Sask Polytechnic to the opening day of the conference this year and awarded the water graduates an SWWA membership and 2026 conference registration.

2026 is shaping up to be just as busy a year, with our annual events and training opportunities expanding and adapting to the needs of our members.

At a board and organizational level, we continue our work on policy and strategic planning. We look forward to sustained collaboration with our partner boards and the private sector across Western Canada to continue advancing our members and the industry as a whole through training, networking, and promotion. Stay tuned for more exciting details and opportunities.

Kirt Holowachuk,
Vice President, SWWA

Save the Date

SWWA Celebrating Water Event, "Communicating with Intent"
Date: March 19 & 20, 2026
Location: Moose Jaw, SK

SWWA Golf Event
Date: June 12, 2026
Location: Aspen Links Warman, SK

SWWA Conference and AGM
Date: November 4-6, 2026
Location: Saskatoon, SK

AWWOA REPORT

AWWOA is dedicated to providing the essentials in education, networking, promotion and ongoing support that operators need to proudly supply Alberta Communities with safe drinking water and a protected environment.

Chris Huston
Interim WCW Rep.

51st Annual Operators Seminar Highlights

Thank you to everyone who spent a great week with us in the Town of Banff, learning new things, and connecting with old friends and peers. I am happy to share a few highlights from this year's Annual Operators Seminar.

The week kicked off with six pre-seminar workshops at the Banff Centre, where the fantastic view was the icing on the cake for two days of great presentations. Over 320 individuals joined us on these days, taking in the extra CEUs.

We had a great trade show once again, with 148 participating companies, hundreds of exhibitors, and many more attendees walking around the trade show floor. Annabelle Rayson, the 2022 Stockholm Junior Prize Winner, joined us on Wednesday morning to share her experiences as a young person studying and working in the water/wastewater industry. Our week's technical program concluded on Friday morning with Dawn Dierker of Advanced Municipal Solutions, who shared the essentials of supervision with attendees.

We also had a great couple of networking nights throughout the week, starting with Women of Water and Pub Night on Tuesday, and Casino Night on Wednesday. These events continue to be very well attended and supported. Thank you to our sponsors for their contributions.

- Women of Water: **Univar Solutions**
- Pub Night: **ACC Water Solutions, Inc.** and **Klearwater Equipment and Technologies**
- Casino Night: **Wolseley Canada with co-sponsors McWane Canada and Westlake Pipe**

You can visit *https://www.awwoa.ca* to view the results of the Executive Board election, the charitable donations update, and this year's award recipients.

2026 Golf Tournament

The Golf Committee has been hard at work planning for the upcoming Golf Tournament. I am pleased to share the AWWOA 9th Annual Golf Tournament will take place on Monday, June 8 with a morning shotgun start. Registration is now open!
Location: Black Bull Golf Resort – Pigeon Lake, AB
Registration fee: $120+ GST (member rate)
Includes cart, green frees, grab and go breakfast, and celebration BBQ with prizes.
Players can register in teams of two – MAX.
Visit *https://www.awwoa.ca* for more information and to register.

Save the Date

Edmonton Riverhawks Networking Event

Date: July 24, 2026
Location: RE/MAX Field – Edmonton, AB
Join us for a night of baseball and good fun.
The registration fee is $10+ GST with all funds going towards the Water School. Registration opens in spring.

Training

LEVEL II WATER TREATMENT CERTIFICATION PREPARATION – 1.5 CEUs
Date: April 7 & 8, 2026
Location: Edmonton

PUMPS & HYDRAULICS PRINCIPLES FOR OPERATORS – 1.2 CEUs
Date: April 7 & 8, 2026
Location: Calgary

EFFECTIVE OPERATION & MAINTENANCE OF WD & WWC SYSTEMS – 0.6 CEUs
Date: April 9, 2026
Location: Calgary

ADVANCES IN WATER METERS – 0.6 CEUs
Date: April 10, 2026
Location: Calgary

WCW MOURNS PASSING OF A STALWART

Regina, SK – We are saddened to learn of the passing of Rodger McDonald on February 17, 2026, at the age of 84 following a sudden illness.

Born in Weyburn, Rodger received his B.Eng. and M.Sc. in civil engineering from the University of Saskatchewan. He began his long and distinguished career as an environmental professional engineer with the provincial Departments of Health and Environment. In 1982, he founded the consulting engineering firm MR2-McDonald, to which he was passionately dedicated until selling the company. He continued consulting and fully retired only three years ago.

Rodger was internationally recognized and respected for his expertise in water treatment and wastewater systems. He was very active in Western Canada Water and its constituent organizations. He served as President of WCW in 1977–1978, then as western Canada Director of FACE (Federation of Associations on the Canadian Environment, forerunner of CWWA), becoming FACE President in 1993 and later CWWA Director and Treasurer. He was honoured with many awards, including the Lieutenant Governor of Saskatchewan's Meritorious Achievement Award for his contribution to consulting engineering. Other honours included the WCW Lindsten Award, AWWA Fuller Award, and WCS AWWA Outstanding Service Award. He was also a member of WCWEA's Select Society of Sanitary Sludge Shovellers (5S).

Rodger was an enthusiastic sportsman, playing basketball, hockey, and baseball in his youth, and golf and curling throughout his life. The Saskatchewan Roughriders had one of their longest-standing and most dedicated fans in Rodger. In retirement, he devoted more energy to Lakeview United Church, where he served for several years as Chair of the Operations Team.

Rodger is survived by Jackie, his beloved wife of 60 years; his children, Scott (Alessia), Joanne (Norm), and Ryan (Jennifer); his grandsons, Kieran and Kaelen; and two younger sisters.

Steinbach, MB – On February 5, SteinbachOnline reported that the Board of Directors of the Red-Seine-Rat (RSR) Wastewater Co-operative has awarded a $205 million contract to Aecon for the construction of a new regional wastewater treatment plant. The plant will serve the Co-op's member municipalities in southeastern Manitoba, which has experienced substantial growth in recent decades.

The facility will serve the RMs of DeSalaberry, Hanover, La Broquerie, Ritchot, and Taché, as well as the Town of Niverville, with a combined population of over 50,000. The wastewater treatment plant will be located adjacent to Niverville's existing sewage lagoon. The existing lagoons in the other communities will be used for peak flow equalization capacity to reduce the size of the 90 km of conveyance pipelines that will connect to the new plant.

The facility will use biological nutrient removal technology to improve the quality of effluent discharged to the Red River. Construction of the system is expected to commence in mid-2026, with completion in 2029. It will provide capacity for an additional 17,400 dwelling units in the future.

ADVERTISER PRODUCT & SERVICE CENTRE

Western Canada Water is made possible by the companies below that convey their important messages on our pages. We thank them for their support of WCW and its publication, and encourage you to contact them when making your purchasing decisions. To make it easier to contact these companies, we have included the page number of their advertisements, their phone numbers, and, where applicable, their websites.

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Associated Engineering

Announcing New Leadership in Water Practice

Colin Madden,
Manager, Urban Water

Colin Madden is the new Manager, Urban Water in Edmonton. Colin brings more than 30 years of experience to this new role. He has played a key role in the design and project management of water and wastewater treatment projects of all sizes. His strong technical understanding and ability to deliver complex assignments have made him a trusted advisor.

Jonathan Musser has been appointed interim Manager, Regional Water for BC. Based in Victoria, Jonathan has more than 15 years of experience as a Design Engineer and Project Manager. His experience focuses on the construction of water and wastewater treatment facilities. Jonathan brings a collaborative approach, and diverse experience to his new role.

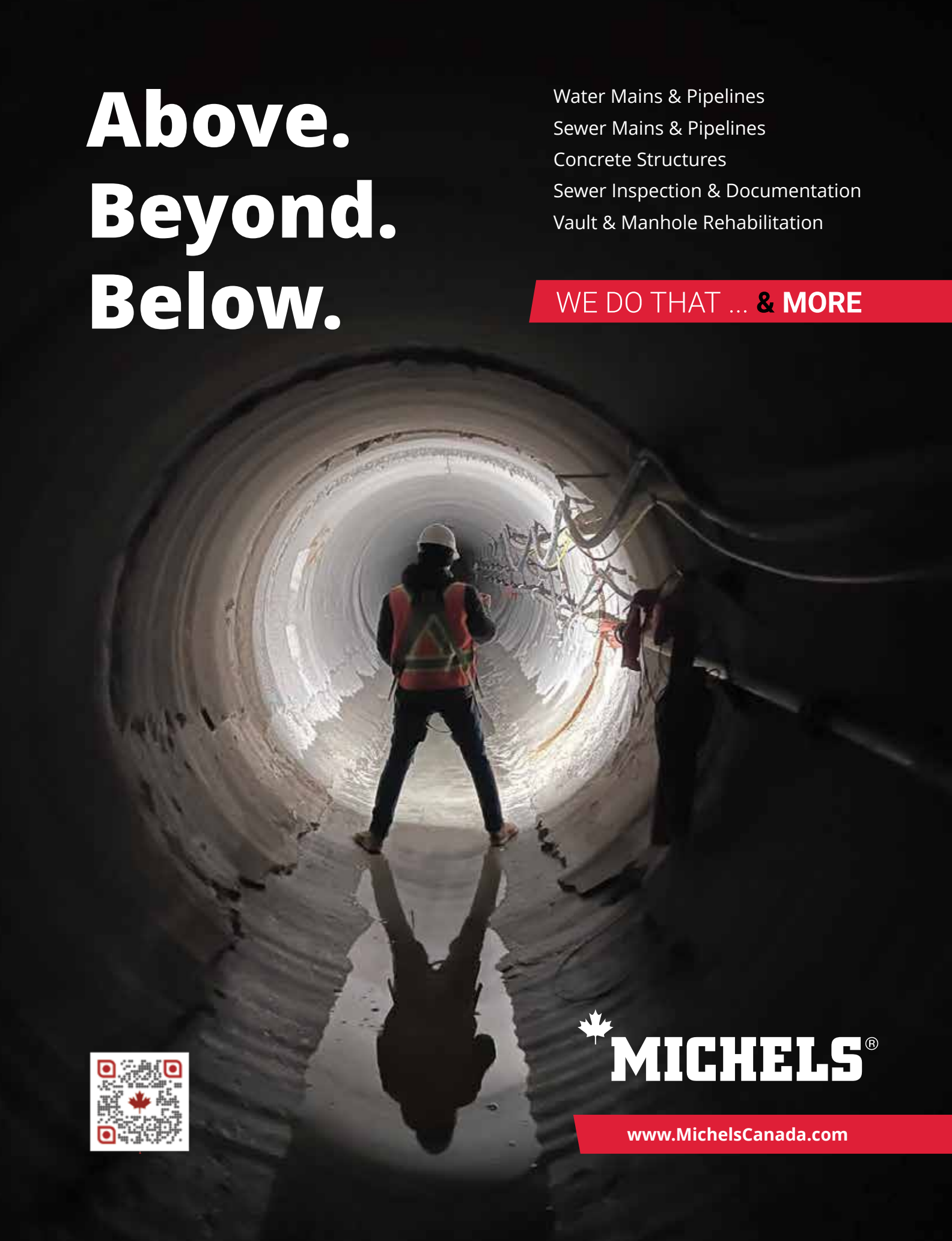
Jonathan Musser,
M.A.Sc., P.Eng.
Manager, Regional Water

John Irving, P.Eng.,
Division Manager, Water

John Irving is the new Division Manager, Water in Calgary. John has more than 20 years experience specializing in project delivery. He has a strong multi-discipline skillset and a thorough understanding of project delivery approaches. John's positivity and focus on clear and transparent communications and mutual support make him ideally suited for this role.

Carlie Pittman has been named interim Manager, Regional Water in Edmonton. Carlie has 14 years of experience specializing in planning, design and construction of water and wastewater infrastructure. She is recognized for her project management skills, energy, and practical, constructability-based decision-making.

Carlie Pittman, P.Eng.,
Manager, Regional Water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