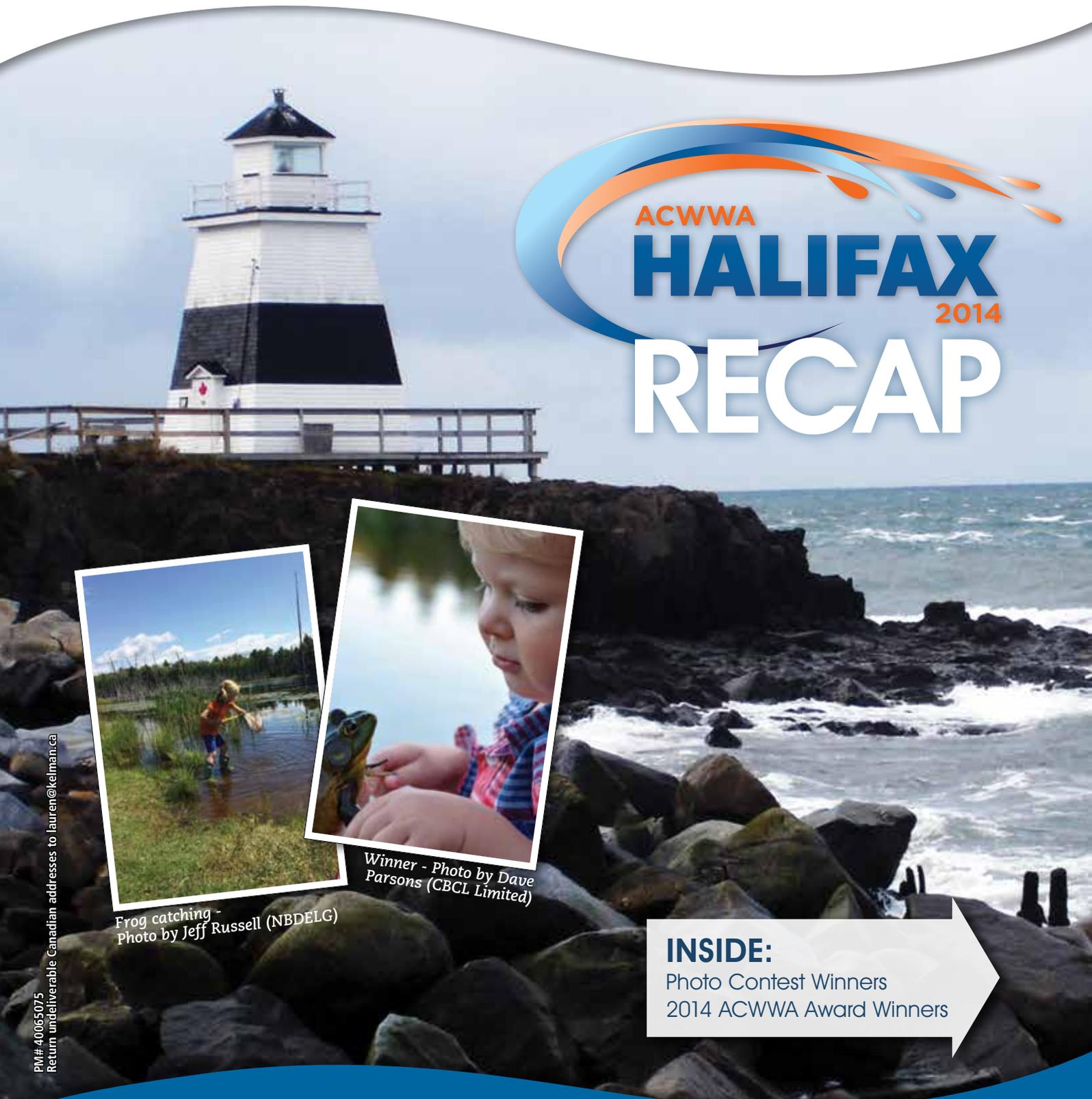


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ACWWA HALIFAX 2014 RECAP



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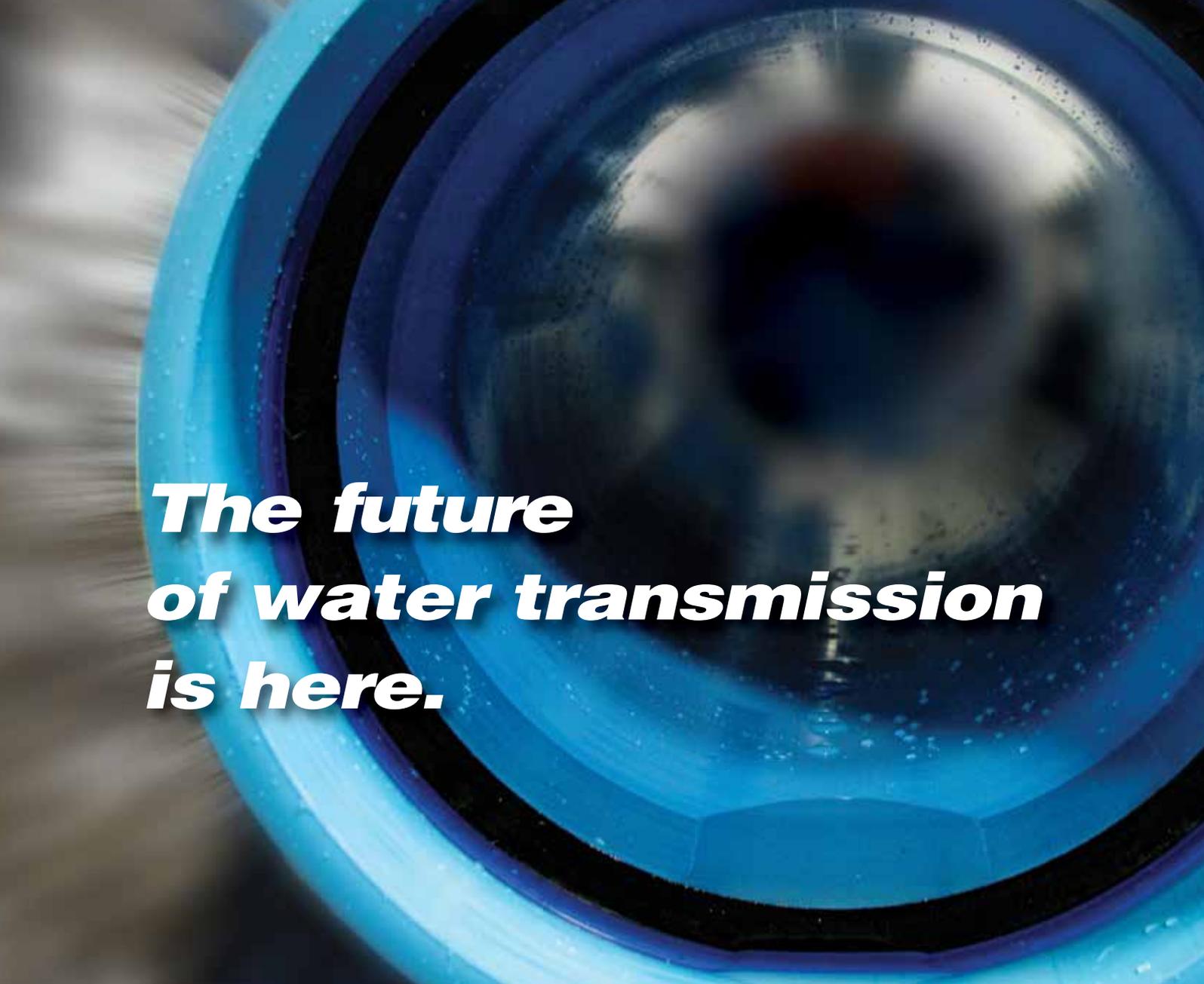
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GO with THE FLOW

WINTER 2014



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New challenges; new opportunities

As I write this, we are fast approaching the end of 2014, and as you read this, I am sure your thoughts have turned to your goals and objectives for 2015. It is always good to reflect upon the year that was, and look forward to all of the new challenges and opportunities forthcoming as the calendar turns.

Welcome to the Winter 2014 edition of *Go With the Flow*, ACWWA's magazine, published quarterly for the benefit of our members. I want to acknowledge the fine work our outgoing Magazine Committee Chair, Ramona Doyle, has done in leading the production of what I think is a quality product. I know our new Magazine Committee Chair, Lindsay Wilcott, has already hit the ground running in her new role, and has in fact lead the production of the last couple of issues. Putting together this publication is no small task, and we certainly appreciate the work that Lindsay puts forth to ensure our magazine continues to be a value-added benefit of your ACWWA membership.

Many of you hopefully had the opportunity to attend our recent Annual Conference in Halifax, Nova Scotia, this past October. Our sincere thanks and congratulations to the conference organizing committee, led by Conference Co-Chairs John Eisnor and Rob Gillis, for producing a successful, high-quality conference. The technical program, special events, tradeshow, and networking opportunities made for an excellent event. I thought the entire program was very well organized, and the committee members I met could not have been more friendly and helpful.

"Your ACWWA Board is structured in a way that allows for the engagement of new Board and Committee members, while allowing for continuity to ensure that the strategic focus of the organization carries forward."

Anyone who has served on a conference organizing committee will appreciate how much work is required by the committee members to ensure a positive conference experience for all who attend. We very much appreciate all of the work the Halifax organizing committee did. Thanks to all of our sponsors, partners in the ABEA, and to all of you for supporting another successful ACWWA Annual Conference.

I had the pleasure of meeting next year's Conference Chair, Jason Phillips, in Halifax, and look forward to seeing the product of his committee's hard work next October in St. John's, Newfoundland. It is not too early to start thinking of planning to attend next year, and I encourage you to check the ACWWA website early in the new year for further information about the 2015 ACWWA Annual Conference.

Part of a good governance structure in any successful organization is the opportunity for renewal, and for new ideas to be heard. Your ACWWA Board is structured in a way that allows for the engagement of new Board and Committee members, while allowing for continuity to ensure that the strategic focus of the organization carries forward.

I would like to welcome our outgoing Conference Co-Chairs, John Eisnor and Rob Gillis, to their new roles on the ACWWA Board. John will serve as First Vice-Chair over the next year, while Rob has accepted the challenge of serving as our new Secretary-Treasurer. I would also like to welcome our new AWWA Director, Jamie Hannam, Mike Chaulk as the Second Vice-Chair of the ACWWA Board, Ian Thompson as the new ABEA Director, and Kendall Mason as the new Communications Director. Along with new Committee Chairs Lindsay Wilcott (Magazine), and Brad McIlwain (Young Professionals), your ACWWA Board is ready to continue the hard work of those who came before us, and I look forward to working with our Board on your behalf over the next year.

I would like thank all of our outgoing Directors and Committee Chairs for their commitment and service to our Association. Thank you all.

I would also like to pay special tribute to our outgoing Secretary-Treasurer, Willard D'Eon. Willard has now completed an outstanding term of many years of service to ACWWA. His expertise, thoughtful advice, calm demeanour, and good humour have added incredible value to the work of the Association. Willard has

earned a well-deserved rest from the day-to-day business of the Board, and he surely will be missed. Thank you, Willard, for all of your work, and for being such a steady, positive influence on the business of our Association.

As you read this, we will have already conducted our annual Strategic Planning Session, scheduled for November 27. This meeting of Board members and Committee chairs is an opportunity for the Board to spend some time focusing on the strategic direction of ACWWA over the coming year. This year's session will focus on ensuring ACWWA's strategic plan is in alignment with AWWA's new strategic plan, while recognizing and respecting the fact that we are a 'joint association.'

"I wish everyone a safe and happy holiday season, and hope you have a chance to rest, renew, and spend some time with those close to you."

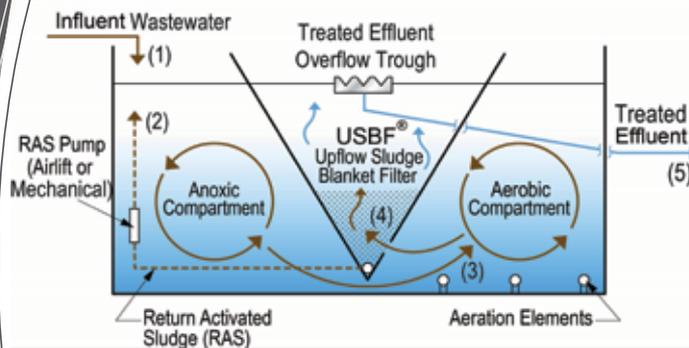
That is, ACWWA is a Section of the American Water Works Association, and a Member Association of the Water Environment Federation. I will report on the highlights of this year's strategic planning session in the next issue of *Go With the Flow*.

In closing, I wish everyone a safe and happy holiday season, and hope you have a chance to rest, renew, and spend some time with those close to you. I am excited about the

challenges, and opportunities, we will face together in 2015. ACWWA is your Association, and I encourage you to contact me at scott.grasman@fredericton.ca should you have any questions or concerns. As always, our Executive Director, Clara Shea, is a great source of information for our members, and is happy to help you. She can be reached at contact@acwwa.ca.

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Winter greetings

Welcome to the Winter 2014 edition of ACWWA's *Go With the Flow*.

As your AWWA Director, I have had a great opportunity this fall to participate in a variety of informative and productive meetings. In early October, Scott Grasman and I represented ACWWA at the Region 1 Regional Meeting of Section Officers (RMSO) in Canandaigua, New York. Meeting with our peers from AWWA sections in northeastern North America, and AWWA staff, provided a great exchange on effective programs for section conferences, philanthropy, education, and relationships with AWWA. This information will be valuable as we update our strategic plan later this year.

At our successful ACWWA Annual Conference in Halifax, I had the privilege of hosting Jim Chafee, AWWA Past president and his wife Jan. Jim participated in all conference events and provided excellent first-hand input on activities at AWWA. In addition, at the AGM Jim provided valuable insight into AWWA *Value of Water* and *Total Water Solutions* initiatives.

In our discussions, Jim noted how impressed he was with ACWWA including our very professional and technically strong conference (good work John and Rob); support for AWWA 2020; active Water For People committee and significant generosity of our members; and the strength of our education program.

In late October, I attended my first meeting of the AWWA Canadian Affairs Committee (CAC). The group

has a mandate to coordinate activities and issues of common interest to Canadian AWWA sections. The CAC in conjunction with CWWA have completed a national survey to gain a better understanding of the opportunities and barriers in Canada towards helping local governments, First Nations, and utilities ensure adequate funding is in place to operate, maintain, upgrade, and replace water and wastewater infrastructure.

With the AWWA ACE coming up in Anaheim, California on June 7-10, 2015, the CAC will once again be hosting the ever-popular *Canadian Water Forum* on the Tuesday night. If you plan to be at ACE, get your water forum tickets early from the ACWWA office. If you need more reasons to get to Anaheim, remember that ACE brings water professionals together annually. It is the smartest, most cost-effective way to get answers to increasing challenges facing water professionals, acquire technical training, and experience the latest in water technology and network with the very best minds in the water community. Please visit the ACE 15 website at www.awwa.org/conferences-education/conferences/annual-conference.aspx.

My goal is to continue to enhance the benefits for our members from the broad range of services available at both the ACWWA and AWWA level. Please send me your comments or questions by email to jamie.hannam@halifaxwater.ca.

Work safe and enjoy the winter weather! ☺

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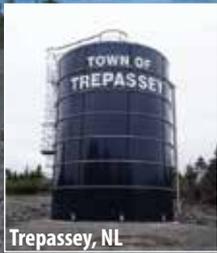
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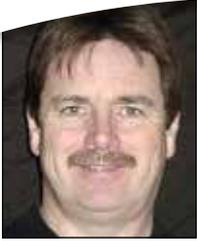


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The 'Value of Water' remains important to all of us

This article was something I found on the Value of Water website (thevalueofwater.org) and thought would make for good reading for my report this month, instead of the usual. No matter where we live, the 'Value of Water' is extremely important, and WEF and other organizations believe it is important to let the public know just how important conservation is and why water costs what it does. Hope you enjoy.

Managing water demand

A combination of price and non-price strategies for water reduction will likely become more common in years to come.

Water treatment dealers have always played a role in 'thought leadership.' They have been advisers and experts and have provided solutions regarding a number of water and water treatment related issues. However, due to the growing number of droughts affecting the U.S. and other parts of North America as well as efforts by struggling water utilities and public officials to deal with water shortages, their role as what we often refer to as 'thought leaders' is likely to expand considerably in years to come.

This is especially true when it comes to water demand management. The goal of a water demand management strategy is to reduce water consumption for the long term. However, what distinguishes a water demand management program from other water conservation or water efficiency efforts is usually in how this is accomplished – often by adjusting the price we pay for water.

One key part of a water demand management system is what government entities and water utility organizations often call 'cost-reflective pricing.' As most water treatment dealers know, the cost of water in the U.S. and in many other areas of the world does not reflect the true costs

for utility companies to treat the water, store it, and deliver it. Typically, these added costs are absorbed by taxpayers. With cost-reflective pricing, each individual water user pays for water based more closely on the true cost of how much he or she actually uses.

However, water demand management strategies are often considered 'hot potatoes' because of their political implications.* Politicians simply do not want to consider implementing them. For example, in the state of New Mexico, water users were offered tax rebates to remove lawns and landscape vegetation. While the program met with some success, the state did not believe it went far enough in reducing water consumption or meeting the growing water challenges the state was facing. After great hesitation, state officials thought they had no choice but to accept a likely uproar from citizens and possible political repercussions and raise water rates somewhat significantly, especially in key population hubs such as Albuquerque.**

While many of the state's residents understood why the rate increases were necessary, it is safe to say few in the state were happy about the higher costs and a significant segment of the population thought they were unnecessary. This is the challenge other communities may face if they employ water demand management strategies. Because of this, the big

question public officials must grapple with and water treatment thought leaders must understand is whether a water demand strategy is the best option to reduce water consumption.

Does it work?

Because it is such a difficult strategy to embrace, studies in recent years have examined the pros and cons of a water demand management program. One study, completed in 2007 by the Pioneer Institute, a nonpartisan public policy think-tank based in Massachusetts, came to the conclusion that these strategies do work and encouraged public officials to take a market-based or cost-reflective approach when it comes to pricing water.

The analysis found that, on average, a 10% increase in the price of water can be expected to diminish water demand in the urban residential sector by about 3 to 4%. It also found that a non-price approach — for instance, encouraging customers to conserve water by installing low-flow restroom and bathroom fixtures — produces less significant results than expected. The researchers concluded this was likely because some users of low-flow toilets, for example, flushed twice and users of low-flow showerheads took longer showers, eliminating or minimizing the potential benefits of these products.

They also found that a price-based approach is easier to enforce and

overall much more cost effective than a non-price approach. With a non-price strategy, utility companies are often put into a role of policing water regulations and administering tax rebates when residents and commercial facilities install water-reducing fixtures. Further, when non-price strategies are implemented and are successful — meaning residents and businesses have installed low-flow and no-flow restroom fixtures and do reduce water consumption — total revenues decrease, making it harder for utility companies to meet some of their operating expenses.

Other options

While this and other studies indicate that a water demand/cost-reflective program can reduce water consumption, they also indicate that, along with being politically difficult, such a program can produce unexpected burdens on some water users more than others. For instance, a high-income family will likely be less affected by increases in water rates even if it uses more water than a low-income family of the same size. Additionally, some industries such as car washes, laundries, and manufacturers that require the use of large volumes of water may be more negatively affected by higher water rates than others (even if they are allowed special pricing), especially if they cannot pass on these charges to their customers.

In addition, the Pioneer Institute study pointed out that when the cost of water is increased, it encourages water users — both consumers and businesses — to find their own ways to reduce water consumption instead of taking steps based simply on tax rebates or regulations.

An example of this we have found in the restroom fixture manufacturing industry is what occurs when a commercial facility conducts a water audit to see exactly where water is being used or misused in a facility

and where use can be curtailed. It is often after such an audit that facility managers begin fixing leaks and replacing older toilets and urinals, for instance, with newer technologies that meet or exceed current federal government water reduction regulations or, in the case of urinals, use no water at all.**

While they did not solve all water-related problems in New Mexico, tax rebates as well as regulations for consumers to transfer to water-reducing technologies did meet with some success. Some drought-impacted states have also realized significant water use reductions by implementing non-price strategies. For instance, one of the key reasons Phoenix and other parts of Arizona have reduced water consumption so significantly in the past decade is the requirement that, in some cities, all government facilities must install waterless urinal systems. The Pioneer Institute study acknowledged that the results of such non-price water saving strategies can vary widely, producing “zero to very significant results.”

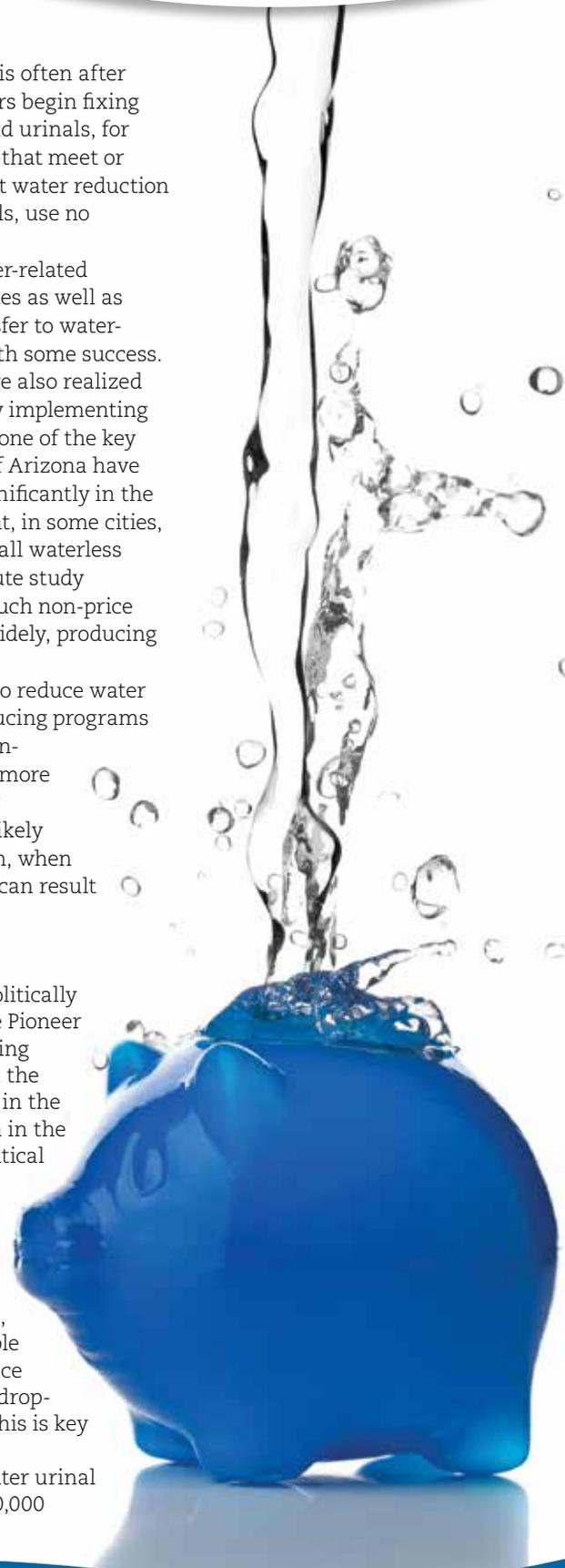
Because of the increasing need to reduce water use one way or another, water-reducing programs that incorporate both price and non-price strategies will likely become more common in years to come in many parts of the country. And, we are likely to see that a combination approach, when implemented fairly and equitably, can result in significant water savings. 

Notes:

* “Raising water prices can be politically very difficult,” according to the Pioneer Institute study. “As a result, using non-price techniques has been the overwhelming technique used in the U.S.” However, as we have seen in the state of New Mexico, some political officials are reconsidering this approach.

** The city of Albuquerque draws its water from underground aquifers recharged by the nearby Rio Grande. In 1993, it was found that the water table had dropped about 160 feet since 1960 and that water levels are dropping about two feet per year. This is key to the city’s water concerns.

*** It is estimated that each no-water urinal system can save as much as 40,000 gallons of water per year.





CWWA's new conference and event strategy – One, Annual, National Event

The Canadian Water and Wastewater Association (CWWA) is excited to announce a new event strategy for their national-level water and wastewater events. No longer will we run multiple conferences and workshops, each focused on a separate field of our joint industry (water or wastewater, or efficiency or security, or climate, etc.) and each on a different biennial schedule. Commencing in 2015, the CWWA will facilitate ONE, ANNUAL, national conference, bringing all disciplines and delegates under one roof.

Running national-level events is not only a critical revenue generator for CWWA, but it is a major part of who we are as an association – meeting our primary goals to educate our members, facilitate national-level dialogue, and contribute to better

“By making this an annual event, it is hoped that it will be locked in to your calendars as a national annual event to attend.”

national legislation. CWWA has a long history of coordinating national conferences, workshops, and other events for our own members and in conjunction with other national associations.

Traditionally, CWWA has hosted a National Drinking Water Conference every other year in conjunction with Health Canada and the Federal-Provincial-Territorial Committee on Drinking Water. On the alternate years we hosted a Canadian Wastewater Management Conference, and during the last two years hosted in collaboration with the Canadian Association for Water Quality (CAWQ). In addition, the Canadian Energy and Water Efficiency Conference with the Canadian Municipal Water Efficiency Network (CMWEN) were held every other year in addition to annual or semi-annual workshops for many of the other CWWA committees. This translates to two or more CWWA hosted events each year in addition to our annual signature event, the *Window on Ottawa*.

Attendance has been stagnant or diminishing over the last few years, making our events financially unviable, as well as a lot of work for staff. The need for a review of our approach to conferences was identified and the CWWA Board initiated the review of our events toward developing a new and more viable events strategy.

I am pleased to announce that at our spring Board meeting, the

CWWA Board of Directors approved a new strategy. Starting in 2015, **CWWA will host a ‘One, Annual, National Conference’** that will encourage multiple topic streams for water, wastewater, efficiency, energy, climate change, and any other topic that interests our members. By making this an annual event, it is hoped that it will be locked in to your calendars as a national annual event to attend with the objective for the delegates to learn and share with colleagues from across the country.

For those who work only in water or wastewater, we will have a full program to satisfy each; but many of our members work in both areas, including many more connected fields. It is hoped that combining disciplines from our many separated current events will make this annual event more attractive and more valuable to the utility leaders across Canada. We also hope that combining disciplines will create an environment for cross-pollination of ideas and greater synergies than can be accomplished in isolated events.

Mark your calendars for the first CWWA Annual National Event set for October 25–28, 2015 in beautiful Whistler, British Columbia. Details on the program and venue will be announced soon. Should any other information be required on CWWA activities or initiatives, please do not hesitate to contact me directly at roland.richard@nb.sympatico.ca or visit the CWWA website at www.cwwa.ca. 

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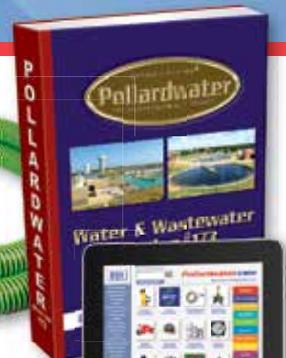
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Rick Larlee is the Water Treatment Plant(s) Supervisor for the City of Fredericton, Engineering and Operations, Water & Sewer Division.



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3. When I'm not working...
I'm reading, camping, biking, walking, swimming – I like to be doing.

4. The accomplishment I'm most proud of is...
On the work side, being nominated and recognized by my peers in the water industry.

5. If you could go on a road trip with any one person (living or dead), who would it be and where would you go?
My wife Kim, to Europe.

6. What is your philosophy on life? Treat others as you would like to be treated.

7. Toughest thing about your job?
Discipline.

8. When you were a kid, what did you want to be when you grew up?
Carpenter, plumber, and electrician. I planned to have a trailer full of tools and do both new construction and repair work.

9. Last book you read?
The Walking Drum, by Louis L'Amour.

10. What music did you listen to this morning?
'Don't Forget Me When I'm Gone'...`80s music.

11. What was the best gift you ever received? In December 1997, a few days before Christmas I held our miracle babies, twins Danielle and Derrick.

12. What's the most useless thing you ever purchased?
Christmas light bulb tester.

13. Not many people know that... I won the chance to work and continue training at the McDonald Douglas Aerospace Corp. facilities in Saint Louis, Missouri for the summer at the completion of my college education.

14. What is your greatest luxury? Air conditioning.

15. What's your favourite famous quote?
"The way a team plays as a whole determines its success. You may have the greatest bunch of individual stars in the world, but if they don't play together, the club won't be worth a dime."
- Babe Ruth.

16. Describe your perfect day. Spending time with my family making new discoveries.

17. What three objects would you rescue from your burning house?
Passport and other identifying info, and family photos.

18. What Section would you most like to visit, and why?
Texas – their size and location would attract plenty of new technology to their trade shows.

19. Who is the most influential person in your life?
My father. My father and mother provided a stable home life and modelled honesty, respect for self and others, and a great work ethic.

20. What is your ideal vehicle?
Chev club cab 4 x 4 with a diesel. On the sports side, a Corvette. 🏎️

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Welcome to our new ACWWA members (as of November 2014):

Name	Company	Membership
Andrea Miller	LuminUltra Technologies Ltd.	AWWA
Dave Parsons	CBCL Limited	AWWA
Brett Wallace	Stantec	AWWA
Melissa Fraser		AWWA
Michelle Newell	Municipality of the County of Colchester	AWWA
Krista Taverner	NS Community College	AWWA
Aileen Woodman	NS Power	AWWA
Arthur Austin	Ville De Tracadie	AWWA
Jamie Boudreau	Tri-County Regional School Board	AWWA
J. Quigley	Omnitech Inc.	WEF
Robert Seguin	Halifax Water	WEF
Lewis Stewart	Halifax Water	WEF
Mayur Milan		WEF
Kripa Singh	UNB	WEF
Tabe De Vries		WEF
Jean-Charles Finnigan		WEF
Jeremy Stewart	Halifax Water	WEF

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2014 ACWWA Annual Conference highlights

By John Eisnor and Rob Gillis, 2014 Annual Conference Co-Chairs

The 67th ACWWA Annual Conference was held October 19 to 22, 2014 at the Halifax Marriott Harbourfront in Halifax, NS. The conference theme was the Value of ALL Water.

The conference kicked off on Sunday with a beautiful day for golf at the Lost Creek Golf Club in Beaverbank. The non-golfers had the opportunity to tour the Eastern Passage Waste Water Treatment Facility and the N-Viro Biosolids Facility. The Sunday evening Meet and Greet was well attended with delegates having the opportunity to catch up with friends and colleagues.

At the Monday morning Opening General Session, Halifax Mayor Mike Savage and MLA Alan Rowe

brought greetings from the city and the province. AWWA Past President James Chaffee and WEF Past President Sandra Ralston brought greetings from their Associations. Congratulations go to Dr. Marg Walsh, the recipient of the Ira P. MacNab Award, Willard D'Eon, the recipient of the Bedell Award, and Jamie Hannam, the recipient of the George Warren Fuller Award. In his keynote address, Dr. Robert Fournier highlighted the global water crisis that the world may be facing in the years to come. It highlighted the important role that the water and wastewater professional will play to mitigate these issues.

This year the Technical Program offered a record number of technical

presentations. A total of 46 papers were presented on a variety of water and wastewater topics. As well this year, two technical demonstrations were added to the program. Based on feedback, it is hoped that more of this type of session can be incorporated into future conferences.

This year marked the 10th anniversary of the Top Ops Competition (the first one was held in Halifax in 2005). A captivated audience was on hand to watch Fredericton win the water competition and Halifax Water win the wastewater competition.

Once again Monday night, the ABEA hosted their hospitality event at Murphy's The Cable Wharf. About 150 brave souls faced the cold and enjoyed

Companions program



TattleTours stop at Alexander Keith's



Vineyard tour at Grand Pre Wines



a cruise around Halifax Harbour while the landlubbers remained onshore, anxiously awaiting the return of their seafaring friends so that the festivities could begin in earnest. This event has become the social highlight of the conference and a big thank-you goes out to the ABEA for making this happen.

The Best of the Best Tap Water Taste Test Contest was held first thing Tuesday morning. After intense analysis, the panel of judges decided that out of 17 samples, Halifax Water's J.D. Kline Water Supply Plant had the best-tasting water. The event was also covered on CBC Radio, with the winners announced live on air.

One of the big changes this year was moving the ABEA Tradeshow to Tuesday

morning. The feedback from suppliers and delegates regarding this change has been positive. The tradeshow was well attended with consistent traffic throughout the morning.

Tuesday finished off with the Down East Feast and the music of The Mellotones, who kept the dance floor full until their last song. As well, it was announced that \$18,000 was raised for Water For People during the conference.

The other big change this year was expanding the conference into Wednesday morning. Although feedback was mixed on this change, the conference committee felt it was successful and is something future conference committees should

continue to consider as part of their conference planning. Congratulations to all the recipients of awards at the breakfast on Wednesday.

We would like to acknowledge the hard work that our conference committee put in over the past year. Their hard work ensured that the conference went off without a hitch. We would like to acknowledge all the many volunteers who donated their time during the conference to help make the conference a success.

Finally we would like to acknowledge our sponsors, whose financial support allowed us to offer a first-rate conference.

We look forward to seeing everyone in St. John's in 2015! ☺



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Water For People conference proceedings

By Matt Follett, B.Eng., M.A.Sc., Engineer-in-Training (SNC-Lavalin Inc.)

This year the Atlantic Canada Committee of Water For People continued with the great fundraising events of past ACWWA Annual Conferences. This year more than \$19,000 was raised for Water For People.

These donations from corporate sponsors, individual donors, associations, and generous utilities have gone a long way to making Atlantic Canada stand out as a tremendous donor among AWWA sections. A special thanks goes out to the ABEA (donated \$7,500), the City of Moncton (donated \$5,000), Town of New Glasgow (donated \$2,500), CBCL (donated \$1,000), and all silent auction donors. A total breakdown of funds raised are listed below:

ABEA	\$7,500
City of Moncton	\$5,000
Town of New Glasgow	\$2,500
CBCL	\$1,000
Silent Auction	\$1,310
50/50	\$845
Fun Run	\$775
Down East Feast:	
1st Served Table (McLennan Sales)	\$350
2nd Served Table (Clow/Rick Beniot)	\$200
3rd Served Table (Sansom Equipment/Chris Hughie)	\$150
Meet and Greet Photobooth	\$80
Lanyard Donation (Greatario)	\$241
Total:	\$19,951

The funds raised for Water For People fuel essential water and sanitation coverage through the award-winning and unique program initiatives provided by Water For People. Water For People's program is currently extending throughout Africa, India, and Latin America. Our efforts in 2013 were used primarily in Guatemala. Within the Guatemala program, WFP increased water and sanitation coverage in four target municipalities: Santa Cruz del Quiché, San Bartolomé Jocotenango, San Antonio Ilotenago, and San Andrés Sajcabajá. In addition to these target municipalities, WFP continues to explore market-based sanitation solutions, including the development of sanitation solutions that can be built and implemented at a lower cost than current options.

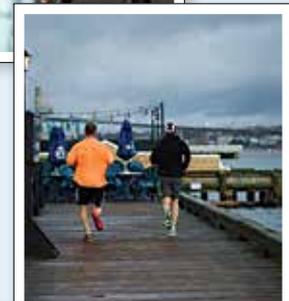
Thanks to everyone who donated money, items for the silent auction, and who participated in our events.

In celebration of World Water Day, the Atlantic Canada chapter of Water For People will be hosting the annual Well Tapped event on Friday, March 20, 2015. Please mark this date off in your calendar and we will look forward to celebrating World Water Day with you all.

To become more involved or to find out more information about Water For People events and initiatives, please contact Atlantic Canada's Chair of Water For People, Matt Follett, at Matthew.Follett@snclavalin.com. ☺



Water For People – Canada
De L'eau Pour Tous – Canada
ATLANTIC CANADA COMMITTEE





2014 ACWWA awards citations



The following awards were presented at the 2014 ACWWA Conference in Halifax, to recognize the contributions of some of our best and brightest colleagues, and their excellence and significant achievements in the field of water and wastewater collection, treatment, and distribution.

Congratulations to all our award recipients for 2014!

WEF Burke Award

The Burke Award was established in 1982 in honour of George W. Burke, Jr., who was instrumental in developing WEF's annual safety survey and assisting in the production of safety aids and promotional packets.

The award is meant to recognize a municipal or industrial wastewater facility for establishing and maintaining an active and effective safety program. The Burke award was awarded at an ACWWA conference for the first time last year.

This year, we are very pleased to recognize the Battery Point Wastewater Treatment Plant, of the Cape Breton Regional Municipality.



The Battery Point Safety Program is designed to reduce operator exposure to harmful substances and hazardous situations by using engineered controls and Safety equipment.

Ongoing training for the operations staff is a critical component to maintain awareness of potential substances of concern and to ensure the proper protocols are exercised.

Established SOPs and contingency plans fall hand in hand with the safety program. Proper and consistent operation of plant equipment has reduced the number of near misses and incidents.

Standard Operating Procedures also cover the care and maintenance of safety equipment like gas detectors and chemical exposure equipment. For example, having proper records of day-to-day bump tests and calibrations are critical for troubleshooting and ensuring the equipment is in proper working order and ready for use. No operators enter the plant without a portable gas detector.

Daily toolbox meetings before every shift between Operations staff and management are an integral component. This gives the operator an opportunity to come forward with safety concerns on a regular basis.

Some of the key parts of the program include:

- Morning safety talks.
- Circle checks of all vehicles.
- Bump testing gas detectors before every use.
- Providing proper PPE to employees.
- Filling out incident reports for every incident.
- Filling out quarterly safety reports on different sites (management included).
- Safety permits for every dangerous task, like confined space entry.

They also maintain a safety matrix that notifies management of any employees about to expire on specific training.

Silent Hero Awards

The best treatment facilities and water distribution and wastewater collection systems are only as good as the people behind the scenes who operate and maintain water infrastructure on a daily basis. Our water and wastewater operators are applied thinkers and problem solvers, who are skilled in the intricacies of their facilities and networks, and are vigilant for changes that could result in serious problems. They take their commitment to public health and the environment seriously.

The Silent Hero Award is presented annually by ACWWA to recognize outstanding contributions of water and wastewater operators in each of the four Atlantic Canada provinces.

Nova Scotia 2014 Silent Hero Award: Mr. Lewis Stewart



Lewis Stewart started his professional career in process mechanics as a Power Marine Engineer on the Great Lakes ships out of Ontario. His specialty on board was propulsion and pumps. Lewis had a keen sense for mechanical hydraulics and excelled in this capacity. The skills from his days on the lakes integrated well with his work on Halifax's collection system.

2014 ACWWA awards citations



From 1987 to 2007, Lewis was a pumping Station Service Person for HRM. Then in 2007, after the merger between the Halifax Regional Municipality and the Halifax Regional Water Commission, he assumed the role of a Works Supervisor with Halifax Water, where he is responsible for a 15-person crew that operates and maintains the pump stations and CSOs in Halifax Water's West region.

Lewis's problem-solving abilities, resourcefulness, and technical skills are equal only to the passion he brings to work each day. Lewis takes tremendous personal pride in the work he does and it is indicated by the many accomplishments Lewis has had in his career. Given Lewis's computer savvy, it would be remiss to not give at least some credit for his success to one of the many computer gadgets he operates to keep a close eye on Halifax Waters Collection System at all times, no matter where he is!

When Lewis is not at work or working remotely from home, he

can likely be found with his wife Cheryl on the dance floor at a black tie event showing off the moves he has learned as a trained classical dancer. Like Lewis's professional life, his skill set away from the office is equally diverse, for he not only dances to the music but also creates it in his sound studio that sits not too far from his well-equipped home workshop that turns out all sorts or wooden masterpieces. It is rare to find someone as passionate about work and life as Mr. Stewart and he is very deserving of this honour.

New Brunswick 2014 Silent Hero Award: Mr. Rob Hamilton



Rob Hamilton is the Lab Manager for Saint John Water, and has worked for the City of Saint John for 30 years.

During that time, he has worked in the environmental laboratory supporting both the water and wastewater facilities. To further his study in this specialized field, he successfully attained certification in Water Treatment Systems Operator Level 2, Water Distribution Systems Operator Level 1, and Wastewater Treatment Systems Operator Level 3.

Rob provides technical support for the water maintenance crews by collecting and analyzing various water samples at the respective facilities. He has helped tremendously in the setup, training, and maintenance of the data management system while continuing to deal with ongoing customer service issues. With the recent commencement of the Safe Clean Drinking Water project, he has stepped up to support all of the extra testing, experimentation, and required research.



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Rob volunteers much of his time to the water and wastewater industry here in Atlantic Canada, in addition to putting in volunteer hours with Saint John Water. He can always be counted on whenever new projects arise or help is needed for anything. Rob's patient and detail-oriented character lends itself well to the work that he does for Saint John Water. He is very proud of our industry, and we are proud of him.

**Newfoundland & Labrador
2014 Silent Hero Award:**

Mr. Gerald Noseworthy

Gerald Noseworthy is the Town Foreman for the Town of Pouch Cove, in Newfoundland. He has worked with the Town for the past 37 years, and has been responsible for their municipal drinking water system. He demonstrates ingenuity, proficiency, dedication, and professionalism in all aspects of his position.

Congratulations, Mr. Noseworthy, on this well deserved honour.

**Prince Edward Island 2014 Silent
Hero Award: Mr. Matt Duffy**



Matt has been the Town of Cornwall's Manager of Utility and Public Works since July 2010. When hired, he was the Town's first and only Utility Manager.

Matt has a Class III Water Distribution certificate, Class III

Wastewater Collection certificate, Class II Wastewater Treatment Certificate, and Class I Water Treatment certificate. Equally important, Matt is committed to having his staff attain all of the required certifications.

Matt has proven to be a strong motivator and mentor for his staff, never asking anyone to do something he would not do himself.

Matt has led the way in recent upgrades to Cornwall's water reservoir, installation of the first water booster station, lagoon upgrades, and has been relentless in his pursuit of more and better equipment for his department.

In addition to his commitment to the Town of Cornwall, Matt is also the operator for the Mt. Stewart Utility, one of the first utilities in this area using Solar Bee technology.

Cornwall is fortunate that Matt and his family were looking to come home to PEI at the same time they were looking for a motivated individual to take leadership of their growing Utility. His training and experience with Halifax Water and the Department of National Defense made him a leading candidate for their position.

Following a strong interview and glowing references ("if I could rehire one guy, it would be Matt Duffy") the town was confident they had the right individual for our organization.

Volunteer Recognition Award

This award is presented annually to recognize outstanding contributions by an individual or a group of individual volunteers to ACWWA programs and/or the water industry throughout Atlantic Canada.

**The 2014 Volunteer Recognition
Award: Ms. Julie Stokes**



In 2011, Julie Stokes became Technical Papers Chair for ACWWA. Over the past three years, she has made significant contribution in ensuring our conference technical program continues to thrive and grow.

Her hard work and dedication to ACWWA has resulted in the development and launch of our online technical paper submission system, making it easier for both authors and our review committee members to submit and review abstracts for our annual conference.

Julie has also worked to make positive advancements in our technical program planning, logistics, and delivery including more structured approaches to how we access and request copyright and author biographies, and defined evaluation/award processes for our *Fresh Ideas Award* program.

With Julie's leadership over the last few years, our technical program has evolved into a well defined, organized, and smoothly delivered arm of our annual conference. As well Julie is always there ready to provide a helping hand during the conference. Her contributions as a volunteer to our association are very much appreciated, and have ensured that our members can always count on a high-rate technical program at our conference.

2014 ACWWA awards citations



Young Professional of the Year Award

The Young Professional of the Year Award recognizes a Young Professional within the Atlantic Canada Water & Wastewater

Association for outstanding contributions to the water and wastewater industry, and to the ACWWA Young Professionals' committee.

YPs are generally considered

to be members or prospective members age 35 and under, or those new to the water industry. This includes those working for utilities, regulatory agencies, consulting firms, or academic institutions. Young Professionals represent a dynamic and energetic group of members of our association.

The Young Professional Award for 2014 is presented to Mr. Greg McCann



Greg McCann became the Chair of the ACWWA YP Committee in 2012. Throughout his term as Chair, Greg worked to strengthen ACWWA by recruiting new members, engaging Young Professionals through regular e-newsletter updates, and organizing YP technical tours and networking opportunities. Additionally, he served on the organizing committee for the 2013 ACWWA Conference in Fredericton, and coordinated all YP conference events.

Greg is a Professional Engineer, and is a Water & Sewer Engineer for the City of Fredericton. For most of the past two years, Greg has been working with the City of Fredericton's Improvement and Innovation Group as a Process Facilitator, where he has lead several high-level improvement projects that have realized significant financial savings to the City Corporation.

Greg has also pursued running at a high-performance level. He ran his first marathon this past spring, and

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finished with a time that qualified him for the 2015 Boston Marathon.

Greg embodies what is best about all of ACWWA's Young Professionals, and has proven himself to be an able, capable leader.

Project of the Year – Engineering Award/Environmental Awards

The Project of the Year Awards are presented by ACWWA to a municipality or utility and their consultant to recognize outstanding projects in Atlantic Canada that demonstrate innovation and state-of-the-art technology in water or wastewater projects.

For the Small Utility (< 5,000 customers) category, the Project of the Year Award is presented to the Municipality of the County of Inverness and Strait Engineering Limited for the project, 'Port Hood Sequencing Batch Reactor Sewage Treatment Plant.'

The rural coastal community of Port Hood, N.S., with a population of around 1,300 people, like many other small Nova Scotia communities has aging municipal infrastructure.

In 2011, the wastewater collection system was extended to the adjoining community of Harbourview.

Phase 2 of the project was for the replacement of the Port Hood Sewage Treatment Plant, which was originally built in 1971 with major upgrades in 1996. The design flow was for 225,000 US gpd with peak flows as high as 450,000 US gpd.

After several options for treatment technologies and site selection were considered and costs compared, the strategy chosen was to use the Sequencing Batch Reactor (SBR) technology on the site adjacent to the existing sewage treatment plant.

The plant configuration included

an upstream concrete headworks structure featuring a channel grinder and flow monitoring equipment.

Wastewater is introduced into a Surge Anoxic Mix or SAM tank, where solids and floatables are captured, wastewater gets conditioned, and anaerobic sludge digestion takes place.

For greater flexibility and ability to treat varying quantities and qualities of sewage, the two trains are interconnected and able to run independently or together.

After the SAM tank, the wastewater gets treated in the SBR via an aerated equalization/batch tank and SBR Reactor tank. Treated effluent is decanted through a solids excluding fixed wall decanter, which is mounted on each reactor tank end wall. This end wall is a common wall with the basement wall of the control building.

Effluent piping from each SBR reactor tank discharges into an in-floor channel and is directed through an ultraviolet disinfection system prior to being piped to the former sewage treatment plant outfall.

The facility makes use of state of the art SCADA to monitor the process and allow for remote monitoring and control.

Operation of the plant was commissioned in the spring of 2013 and has been treating the community wastewater and meeting the regulatory discharge criteria.

Congratulations to the Regional Municipality of Inverness County for Project of the Year – Small Systems.

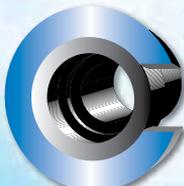
For the Large Utility category (> 25,000 customers), the Project of the Year Award is presented to the City of Moncton and RV Anderson Ltd., Moncton, NB office for the project, 'City of Moncton Tower Road Dam and 2nd Reservoir.'



R.V. Anderson Associates Limited was commissioned in 2008 by the City of Moncton to undertake the design and provide construction services for the Tower Road Dam and Reservoir located in Turtle Creek, NB.

A pre-design report determined the physical size of the dam, the construction materials, the spillway design capacity and reservoir storage volume, environmental considerations given the 240 ha of new headpond, construction estimates, and a review of project delivery methods.

Based on the pre-design, the design of the main dam was completed. The dam structure was constructed of homogeneous sections of compacted impervious clay till with quarried rock on the upstream and downstream faces. The dam measures 20 m in height and extends 1.5 km along Tower Road. In addition to the earthen dam, other structural components of the dam include: a 4 m diameter – 180 m long concrete utility access tunnel with a submerged intake; a concrete spillway measuring approximately 170 m long and 32 m wide which is designed for a 390m³/sec overflow capacity whose components include an approach slab, stilling basin, ogee, and a parabolic spillway section; and finally a bridge section whose piers were designed to allow future installation of radial gates for additional water storage. The entire project was tendered



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2014 ACWWA awards citations

into two separate contracts (dam construction and reservoir clearing) where eligible contractors went through a rigorous pre-qualification process.

The new reservoir will provide approximately 16,000,000 m³ of raw water storage and provides reliability and security for a continuous supply of water to the Moncton Water Treatment Plant. The project has incorporated design allowances for a future pumping station and forcemain from the Tower Road Dam directly to the Moncton WTP.

This project has been registered with the Province of New Brunswick under the Environmental Impact Assessment Regulation and has received the Minister of Environment's Determination that the undertaking may proceed pursuant to Regulation 87-83 under the Clean Environment Act. The project also received Federal Canadian Environmental Assessment Agency (CEAA) approval and received Federal and Provincial funding.

Construction commenced in the spring of 2011 and was substantially complete in December 2013. The dam construction project was awarded for \$32.4M, and the clearing contract was awarded for \$2.25M (HST included).

Congratulations to the City of Moncton and R.V. Anderson Associates for achieving the award for Project of the Year – Large Systems.

Please note that nomination forms are available for the 2015 ACWWA Awards, and we encourage you to nominate your colleagues for next year!

Timothy Bachiu, M.Sc., P.Geo – AECOM wins 2014 ACWWA Fresh Ideas competition



In 2010, ACWWA introduced the Fresh Ideas competition as part of its Annual Conference Technical Program. Fresh Ideas participants are required to be first-time Young Professional participants at the ACWWA section conference presenting a water-related topic. The top presentation selected from the group of qualifying presenters is given the opportunity to compete in the Fresh Ideas poster competition at the AWWA Annual Conference and Exposition (ACE).

Congratulations to this year's winner, Timothy Bachiu! His winning presentation, 'Watershed Studies in Halifax Regional Municipality to Support Development Planning,' can be viewed at acwwa.ca.

Congratulations to all!



See you next year in St. John's, Newfoundland!

Nomination forms are available for the 2015 ACWWA Awards, and we encourage you to nominate your colleagues for next year.



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Achieving limit of technology phosphorous removal with UF membranes

By Jeff Peeters, P.Eng., GE Water & Process Technologies, Oakville, ON and Geoff Totten, B.Sc., GE Water & Process Technologies, Oakville, ON

Municipalities and industries that discharge treated wastewater to the environment are facing more and more stringent restrictions for effluent phosphorus concentration. Several jurisdictions in North America have imposed total phosphorous (TP) discharge limits of < 0.1 mg/L with others considering limits as low as < 0.05 mg/L. Driving forces for such stringent requirements include mass loading restrictions to receiving water bodies and strict water reuse criteria.

Some degree of phosphorus removal from wastewater is achieved in conventional biological treatment processes through biological assimilation – incorporation of phosphorous as an essential element in biomass. To remove additional phosphorous in excess of that which is removed via biological assimilation, municipal sewage treatment facilities have widely applied chemical precipitation with the addition of metal salts. More recently, enhanced biological phosphorous removal (EBPR) processes that promote luxury phosphorous uptake by phosphorous accumulating organisms have received significant attention as an alternative to chemical precipitation due to the potential for chemical savings.

Since the effluent phosphorus concentration from a wastewater treatment plant is significantly influenced by the effluent total suspended solids (TSS) content, solids-free effluent is required to achieve effluent TP objectives of < 0.05 mg/L. Conventional clarification and filtration processes are limited in their ability to reliably sustain such low effluent TSS concentrations. Membrane

ultrafiltration (UF), either in a membrane bioreactor (MBR) or tertiary filtration configuration, has proven to be reliable to produce solids-free effluent and has thus become popular for applications with stringent effluent phosphorous requirements.

Phosphorous removal with MBR

The MBR process can be configured to remove phosphorous by chemical phosphorous removal, enhanced biological phosphorous removal, or a combination of the two. Since in an MBR process the solids retention time and hydraulic retention time are decoupled, the technology allows maximum flexibility in biological process selection for the designer. Current practice is for designers to optimize the biological process design for an MBR based on the wastewater characteristics and specific treatment objectives. In cases where enhanced biological phosphorous removal is not preferred, for instance for plants with anaerobic digestion, MBR systems can be designed for chemical phosphorous removal and be assured of complete retention of the suspended solids by the membrane filtration system. Table 1 provides a selection of GE's MBR experience with stringent phosphorous removal requirements.

Phosphorous removal with UF tertiary filtration

In some circumstances, it is preferred to add a tertiary unit operation to polish phosphorous from existing secondary treatment rather than modifying the secondary process to an MBR. In these cases, the application of UF membranes in combination with chemical addition has been demonstrated

Table 1: MBR phosphorous removal references

Plant	Location	Phosphorous Removal Method	Commissioned	Capacity, Average Day Flow (MLD)	TP Discharge Requirement/ Objective (mg/L)
Port McNicoll	Ontario, Canada	Chemical removal EBPR +	2001	2.4	< 0.25
Cauley Creek	Georgia, USA	Chemical removal	2002	19	< 0.1
Cookville WWTP	Nova Scotia, Canada	Chemical removal EBPR +	2006	0.35	< 0.2
Broad Run	Virginia, USA	Chemical removal	2007	42	< 0.1
London Oxford Pollution Control Plant	Ontario, Canada	Chemical removal	2008	13.6	< 0.65
Spokane County	Washington, USA	Chemical removal	2011	32.2	< 0.05

“There is a trend in a number of jurisdictions in North America toward lower discharge phosphorous concentrations from wastewater treatment plants.”

Table 2: Tertiary filtration phosphorous removal references

Plant	Location	Commissioned	Capacity, Average Day Flow (MLD)	TP Discharge Requirement/Objective (mg/L)
Ashland	Oregon, USA	2003	15	< 0.06
F. Wayne Hill	Georgia, USA	2006	189	< 0.07
Keswick	Ontario	2013	18	< 0.05
Innisfil (pilot)	Ontario	2009	N/A	< 0.024

to achieve limit of technology effluent phosphorous concentrations. As with an MBR, the advantage of UF tertiary filtration is the absolute retention of all particulate matter and small plant footprint versus alternative tertiary treatment processes. Since the treatment mechanism with UF filtration is particle size exclusion, extremely low phosphorous removal can be achieved with the addition of metal salts only and without the need for other costly specialty chemicals (e.g., polymers). A selection of GE’s tertiary filtration experience with stringent phosphorous removal requirements is summarized in Table 2.

Summary

There is a trend in a number of jurisdictions in North America toward lower discharge phosphorous concentrations from wastewater treatment plants. UF membrane technology, applied in either an MBR or tertiary filtration configuration, has been demonstrated, at pilot and full scale, to reliably achieve the most stringent TP discharge requirements. For many plants that need to achieve TP limits somewhere between 0.015 and 0.2 mg/L, membrane technology is often the best solution. 

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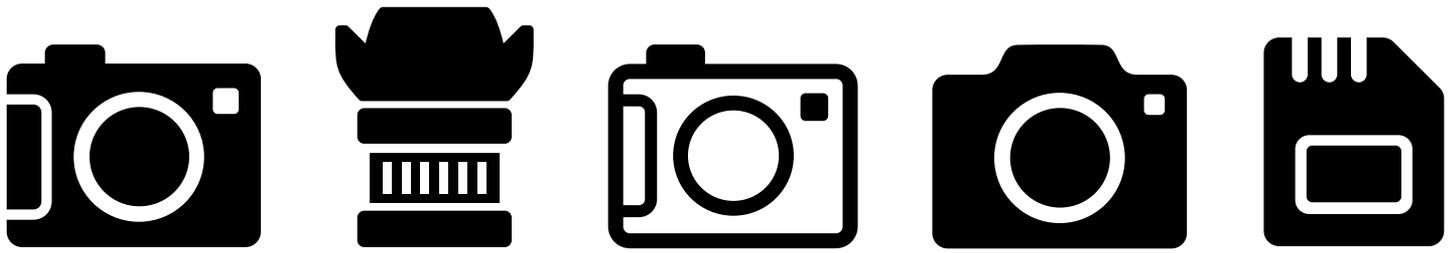
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ACWWA photo contest winners

Congratulations on the following winning photo entries from our members!

Winner



Submitted by Dave Parsons (CBCL Limited)

Early bird winner

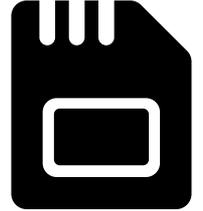
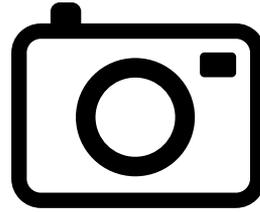
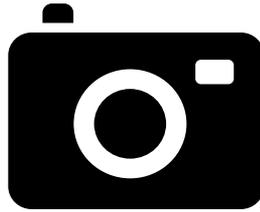
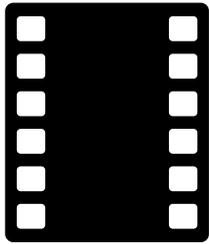
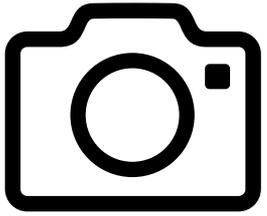


Submitted by Graham Gagnon (Dalhousie University)

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(DENVER) – Attendee registration is now open for the American Water Works Association's 2015 Annual Conference & Exposition (ACE15). The event, which will be co-hosted with the AWWA California/Nevada Section, will be held June 7–10, 2015 in Anaheim, California. AWWA is the world's largest water utility organization, and ACE15 is expected to draw more than 12,000 global water professionals to address major water sector issues.

To concentrate on the growing needs of attendees, there will be expanded sessions on Total Water Solutions™ and a new Smaller Utilities Day. ACE15's exposition will showcase more than 450 exhibitors with expanded learning opportunities on the show floor along with the annual Pipe-Tapping Contest, Top Ops Competition, Meter Madness, the People's Choice, and 'Best of the Best' Water Taste Tests.

The professional program at ACE15 will deliver 105 unique sessions with more than

1,000 expert presenters covering timely topics such as 'Big Data' management, potable reuse, emergency preparedness, emerging contaminants, infrastructure replacement and renewal, innovation and adaptation, integrated asset management, public-private partnerships, sustainable infrastructure, urban water management and water shortage/droughts. The full conference program will be released in January 2015.

Super-saver rates for ACE15 are available through March 27, 2015. Special quantity discounts are available for select groups; utilities, operators, and professors who register five or more attendees will receive one free attendee registration. To register for the conference or to book hotel accommodations, visit ACE15's webpage (www.awwa.org/conferences-education/conferences/annual-conference.aspx). Individuals interested in learning more can also follow ACE15 on Twitter, Facebook, and LinkedIn.

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For more information, go to www.cwwa.ca/water2015_e.asp.

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