MPWWA

Maritime Provinces Water & Wastewater

REPORT

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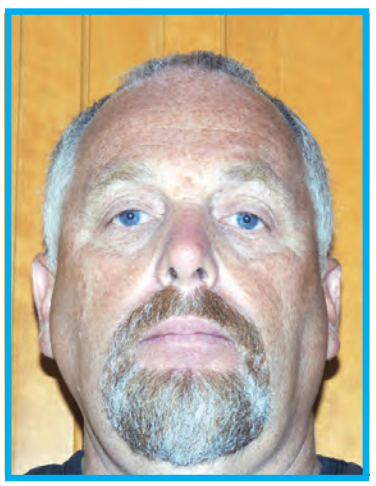

MESSAGE FROM THE CHAIR

BY JERRY VILLARD

By the time you get to read this, our 39th Annual Training Seminar, Building on the Best: Operators Supporting Growth, will be behind us. My hope is that everyone that attended enjoyed themselves and received value for their money. There were a large variety of workshops full of great information on a wide variety of subjects offered, as well as the opportunity to network.

I would like to thank all those who attended for your continuing support. Also, I extend an enormous thank you to Clara Shea for keeping things rolling and making sure everything got done. Troy Atkinson is serving as seminar chair for the first time and I have full confidence we will see another excellent result. Thanks to Rick Larlee for his help in the organizing of the equipment show.

Our chosen charity of proceeds from our silent auction was the Moncton Boys and Girls Club. Again, numerous items donated helping us have something for everyone. This year's auction coordinator, Andre van der Velden, along with Bill Cannon were responsible for putting this together. Thank you both for handling this part of the seminar.

And Thank you to all the rest of the board as well, for all your help before and during the seminar. Well done, again!

Hopefully everyone found something they will be able to use now or

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Health Canada sets new guideline for lead in drinking water

Latest in series of government actions to reduce Canadians' exposure to lead

Based on the latest science, Health Canada has updated the drinking water guideline to reduce the maximum acceptable concentration of lead in drinking water from 0.01 mg/L, set in 1992, to 0.005 mg/L.

Lead levels in Canadians have fallen dramatically over the past 30 years because of strong action to reduce exposure to lead, including limitations on lead use in:

- smelters, steel mills, refineries and mining operations;
- gasoline;
- paints, ceramics, glassware, kettles, corded window coverings, cosmetic products and pharmaceuticals; and
- a range of other natural health and consumer products, especially those intended for children.

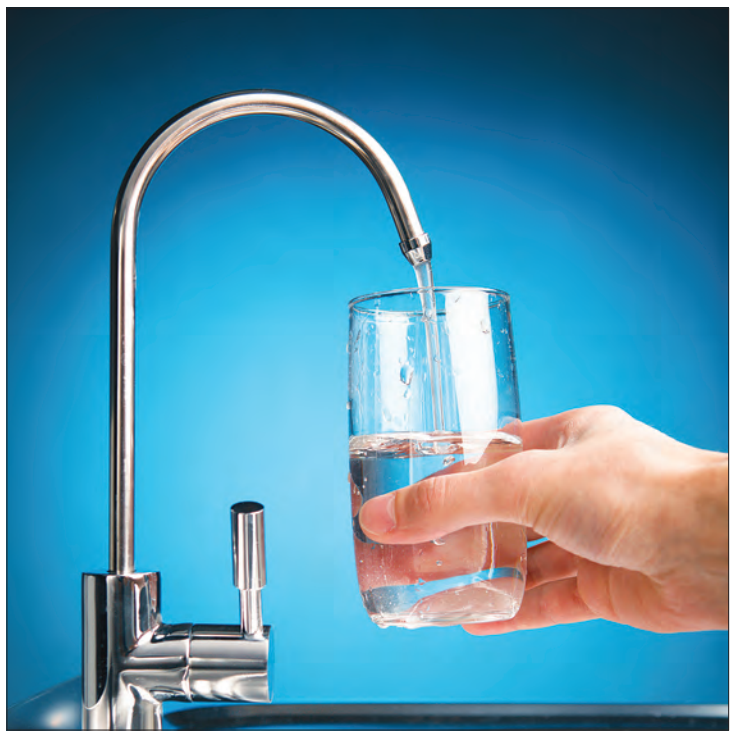
While lead levels have been significantly reduced, the metal can still be found in the world around us. Lead is usually found in drinking water after leaching from distribution and plumbing system parts. It was historically used in service lines (i.e., pipes connecting a home or business to a street's water main) and in plumbing fittings and solders.

Until 1975, lead was an acceptable material in pipes based on the National Plumbing Code of Canada, so it's more likely to be found in older homes and neighbourhoods. Since lead was regularly used in these plumbing system parts for many years, drinking water systems in Canada may still have some of these lead components in place today. As such, it's expected to take time before all jurisdictions can meet the new guideline for the maximum concentration of lead in drinking water.

The Canadian Water and Wastewater Association (CWWA) has voiced it's support for the reduction, but it characterizes the new levels as "aggressive" and can't be achieved overnight.

"There are significant challenges, mostly outside of municipal authority to address," the CWWA says in it's speaking notes. "So, this will require a combined effort from federal, provincial, territorial and municipal governments as well as individual property owners to achieve these targets."

The CWWA says its greatest concern is how quickly the new guidelines might be implemented in each province



and territory and how the timeframe might affect the public's confidence in their drinking water.

"We need all Canadians to understand nothing has changed overnight regarding the safety of their water. Rather, we have agreed upon even better targets. We need the public to understand safe drinking water leaves the treatment plant lead-free and is distributed through water mains down each street lead-free. Drinking water only comes into contact with lead when it reaches the service line from the water main to an individual property

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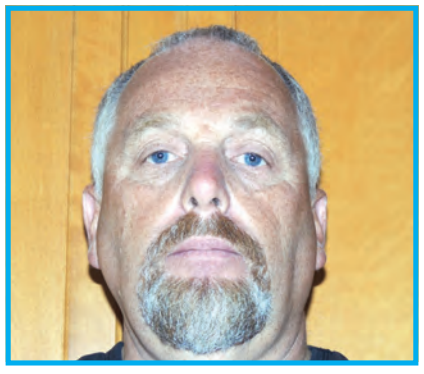

MESSAGE FROM THE CHAIR

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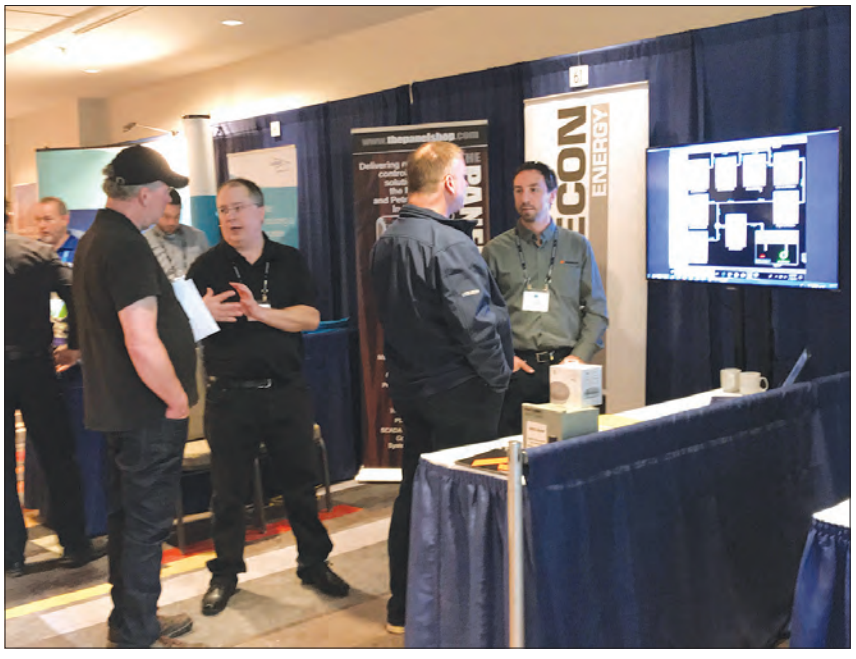
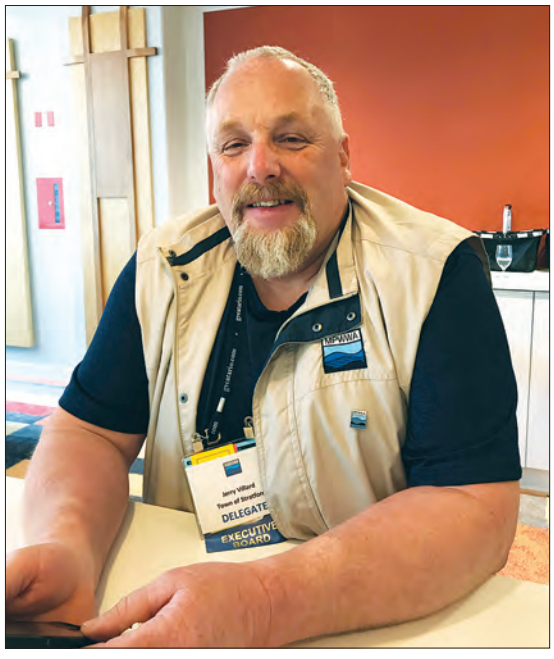
in the future. Use the contacts you have made during this seminar throughout the year. If you run into something you need information or guidance on, feel free to contact one of the board members and they will share it with the rest of us. If it isn't something they have dealt with before, then usually someone knows someone who has run into something similar and will get their contact information to you.

We'll have more on the seminar, charity auction and tradeshow in the July issue. So, get out there and show your employer it was worthwhile sending you by putting the new knowledge into practice in your workplace.



The MPWWA trade show is an important and popular component of the association's annual training seminar.



Jerry Villard was all smiles heading into the MPWWA's 2019 Annual Seminar.

Health Canada sets new lead guideline

Continued from page 1

and/or in the plumbing and fixtures within individual homes and buildings," the CWWA says.

This means the bulk of lead issues lie on or within private property, outside of the road allowance and municipal authority. Aside from the significant cost and disruption to replace lead service lines, individual property owners need to be engaged to cooperate with municipal utilities to replace lead service lines and to address any other plumbing within their building.

To assist the industry in communicating the new guidelines, the CWWA has prepared a fact sheet that provides general details about lead and the guidelines. More detail can be attained from Health Canada or the local public health authority.

Operators Without Borders sends team to Belize

Canadian charity sends professional water, wastewater operators around the world

Operators Without Borders (OWB), is a Canadian charity that dispatches volunteer professional water and wastewater operators to assist countries during times of crisis or for educational and mentoring relationships.

OWB recently assigned a team, at the request of Belize Water Services Limited (BWS), to interact with BWS staff and provide training and field evaluation of their country-wide water and wastewater systems.

The team consisted of five Canadians assigned various areas to review based on their backgrounds and education. Valerie Jenkinson (OWB founder), Ron Enns (safety training), Patrick Reeves (distribution/collection/construction), Dan Skidmore (wastewater collection and treatment) and Ian "Mac" McIlwham (water and wastewater treatment).

The project consisted of nine days of in-class and on-site practical training for management and front-line staff in the areas of confined space entry, utility work, trenching and shoring, WHMIS, chemical safety and handling. In conjunction, field visits and observations occurred over 10 days at several water pollution control plants, pumping stations, water treatment plants, well systems, distributions systems, and administrative areas.

The excerpts from their report below outline the results of the training and field evaluations, including areas where staff excelled, areas that require attention, and other general opportunities for improvement.

BWS is, in comparison to many Caribbean water and wastewater utilities, in a better financial condition. Resources and infrastructure are not lacking and, in general, are well maintained and modern. The majority of infrastructure was installed since 1980 with continual improvements and expansion throughout the country taking place. However, without consistent maintenance and asset replacement, there exists the potential for deterioration in service, particularly in the wastewater collection operations.

With a few exceptions, BWS produced a vibrant, respected, and leading image for the company via the representation of their employees, prominent infrastructure, and modern fleet.

Senior management and the union, in arranging and supporting the OWB project, reinforced BWS' commitment to the safety of its staff and the quality of its water for consumers. Its move towards decreasing its environmental impacts and its commitment to shareholders were all evident.

Although access to education and training in the field of water and wastewater is limited throughout the country, the staff have sought out opportunities for these services in the United States and other Caribbean countries, including the California State Operator courses. The degree of education and knowledge possessed by those in leadership roles was evident.

Continued future interaction with front-line staff for training and information exchanges with experienced staff, such as those provided by OWB, will benefit all parties. The 'train the trainer' session provided should allow training to continue with decreased participation from external parties.

Having interacted over 17 days in work, social, and home environments with various staff, it was evident most staff felt well treated, well respected, and enjoyed their career with BWS. Of note was the BWS-organized social events that included children and spouses, and how seamlessly staff interacted and contributed to the overall success and fun during these events.

Another impressive trait that was observed was staff's courteous, respectful nature towards the OWB volunteers, as well as their willingness to accept OWB's observations and to provide us with ideas we could use. Sometimes, with outside sources coming into an organization, it's easy to reject ideas. We found staff to be open and receptive.

A final observation that speaks to the nature and commitment of BWS staff as a family and not just co-workers putting in time to earn a pay cheque, was the kidney walk. There was an excellent commitment, not only from those who took part, but also from those who contributed funding, BWS staff, and trucks delivering water on route. The OWB volunteers wish to thank BWS for the opportunity to participate in this event and hope for a successful conclusion.

Priority Actions

• Form a lead team to review and identify action items under general themes and individual locations from the report. Document this process including assigning responsibility and timelines for action on these items.

• Review and communicate the report and the action plan with all staff. This exercise can't be simply seen as Canadian operators coming to make suggestions then leaving BWS to its own accord. All recommendations may not necessarily be appropriate, but an open, documented, and shared evaluation will re-enforce the existing strong commitment to safety and overall operational opportunities for improvement shown by both management and workers.

• Re-establish one sewage pumping station to an agreed upon level of service including a complete cleaning, inspection, and replacement of faulty equipment, posted procedures on floats, alarms, and control panels. Posted procedures on daily, weekly, monthly checks and maintenance activities. An evaluation of the hydraulics of the station. Secure the station and its contents such as electrical and water supplies. Once one is completed and evaluated for success, repeat with all stations then maintain. This activity would be easier to achieve under the guidance of an experienced operator such as Dan or Patrick or an equivalent who would solely focus on achieving the outcome for one station while leaving a blueprint of the process for all stations.

Boats in the harbour in Belize City, Belize. A team from Operators Without Borders recently traveled from Canada to work with Belize Water Services Limited to assist with training and education of that country's water and wastewater staff.

• Re-establish the lagoon system at San Pedro to its original design capacity and ensure it's capable and performing at a level that ensures it meets effluent regulatory requirements. This process will include mapping the facility, including liquid and sludge levels, cleaning out the cells to original capacity, figuring out and labelling all valves and chambers, conducting a trial with dosing of Alum to gauge the results versus the cost and labour of the dosing, installing stop logs into the distribution chamber, and developing operational procedures. This activity would benefit from working under the guidance of an experienced operator like Mac or equivalent to focus directly on the San Pedro system, but leaving a blueprint of the process to be repeated at Belmopan and Belize City.

• Focus some funding and efforts on the Seine Bright Water Facility. The immediate safety hazard of the deteriorated railing system and ladder to the upper reservoir tank must be addressed before it escalates to an accident. The work should include a power washing and or repainting of the facility to the standards of BWS as it resides on the main roadway into Placencia and is indicative of the reputation of BWS.

Future Activities

• Continue to press forward with interactions and initiatives with members of OWB to tap into the large resource pool of connections from the visiting members and their colleagues at work and from member organizations such as the Canadian Water and Wastewater Association and its five-member associations spread throughout Canada.

• Work with Valerie to explore future opportunities and possible funding initiatives directed toward immediate priorities.

• Consider an exchange visit to Durham Region and/or British Columbia to allow BWS staff to interact and observe the water and wastewater operations of the participants from OWB.

• After allowing significant time for evaluation and implementation of recommendations from the report, invite a member to return for a follow-up third party audit against the actions taken to resolve issues identified in the report.

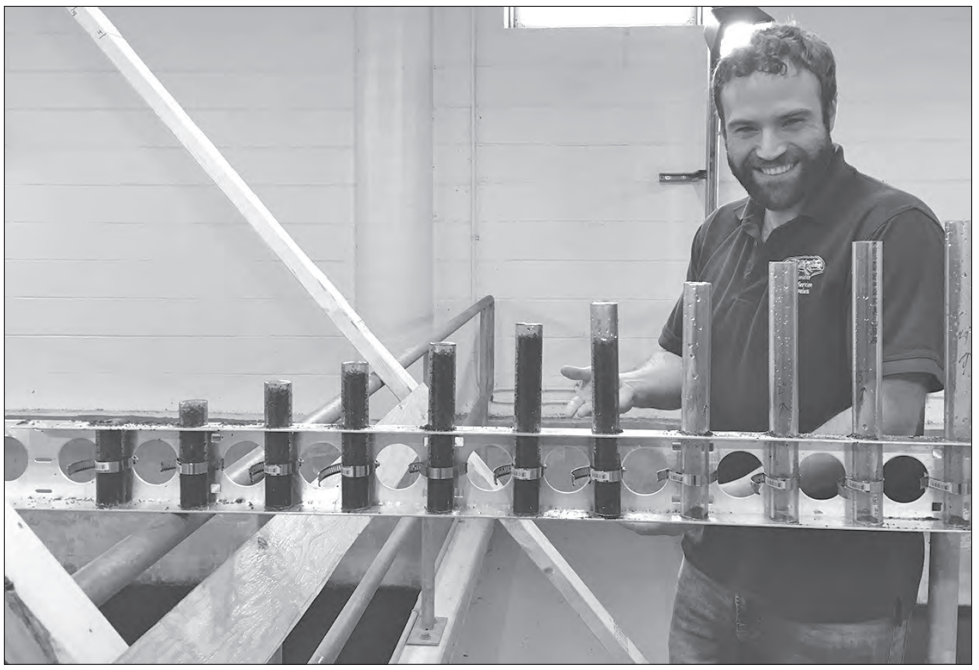
• Working with an experienced operator and trainer as lead, such as Ron or equivalent, continue to develop a strong training program leading to a pool of in-house training staff capable of delivering a variety of training packages on-site at the various locations of BWS.

• Continue the facility classification process for all water and wastewater systems to establish a benchmark for the plants' level of certification that can be used to drive training and staffing requirements. Although not regulatory, strive to use the concepts and the process of the requirements for operators to obtain the qualifications required to progress from Class I to Class IV operators. This process will give a common benchmark when dealing with other operators and facilities in the Caribbean and North America. Staff at the Doublerun lab should be addressed in a similar style as operational staff, but using the water quality analyst designation and requirements.

Reprinted from CWWA

Scott MacEachern loves a good challenge

Variety of tasks helps MacEachern stay engaged in his chosen profession



Scott MacEachern loves the variety his job offers. When he gets bored in the lab, he can venture out into the watershed or answer some service calls.

BY KEN PARTRIDGE

Name: Scott C. MacEachern
Title: Facility Operator IV

1. Where do you work?
Bridgewater, Nova Scotia

2. How long have you worked there?
Seven years.

3. When did you join MPWWA and what are the advantages of being a member?

I joined in 2012 when I was first hired in Bridgewater. The courses and the annual conference are the biggest advantages to being a member.

4. What's the biggest challenge in your job?

The biggest challenge would have to either be the irregular work hours that can interfere with home life, or dealing with the public when they are "super happy" with you and their water problems. But any job dealing with the public has these moments.

5. What's your favourite part of the job?

Even though I said it was one of the biggest challenges, my favorite part of my job is when I'm on call and something breaks. I get an adrenalin rush every time I get a new or weird call and love figuring out how something works, or how to make something work again, more accurately. I enjoy a challenge, so the weirder or more unique a problem, the more excited I become.

6. What's your least favourite part?

Repetition. As with any job, sometimes the day-to-day can become monotonous. Not a big a deal by any means, nearly any job has these moments. Just need to try a little harder those days to find something to take apart.

7. How did you first become involved in the industry?

After taking the Environmental Engineering Technology – Water Resources course at NSCC, I did consulting for a year and wanted to try water treatment. I was interested in Bridgewater particularly at the time because it's a small town where cross training between plant and distribution is commonplace. So, if I get tired of lab work, I can go do service orders or into the watershed. Having a wide variety of tasks and jobs in different areas keeps me excited and stops me from getting lazy or complacent.

8. What's the least understood part of your job? What else should the public know about what you do?

The least understood part, and the part the public likely doesn't realize, is how much each person in our department does. The person whose meter reading one day will be leak detecting then fixing a water leak the next day, then adjusting a variety of chemical dosages in the plant the next to ensure safe and potable drinking water for the town. There's only a handful of us, so each person is trained in everything across the board. That variety in tasks is what I love about my job.

9. What's something everyone knows about you?

I'm not a morning person, but being a night owl, I'll gladly work until four in the morning. I also do my best to lighten the mood and help everyone enjoy the day a little more, even if it's just going for a coffee break and buying them a coffee (only once a week or so though; I bought a house so I'm poor now).

10. What's something almost no one knows about you?

I tend to talk probably more than I should about my personal life, so I'm not sure what people may not know about me. I love to cook and am very competitive. I once knocked my mom over playing a board game and broke her chair. We now play spoons sitting on the floor (sorry mom, love you!). I also love growing plants and having recently bought my first house, I'm excited to start wetting my plants on a significantly larger scale.

People also may not know that I love to travel and did the running of the bulls in Pamplona, Spain with my best friend.

11. What's your proudest professional accomplishment?

How quickly I was able to get my certificates in Treatment and Distribution to class 3 each. Next goal is the Treatment Class 4 exam. Then I hope to get an opportunity to keep moving up to become supervisor one day.

12. What's your proudest personal accomplishment?

Buying my first home, or having a job that pays me well enough and provides time-off that I can travel and see the world on my vacations.

13. What's your best advice to a fellow industry member, or someone looking to join the industry?

Be patient, but not complacent, and touch absolutely everything you can. You'll only be confident doing something once you've handled and done it yourself.

Scott seems to be having a better time dressed up as Woody than his cat is having dressing up as Darth Vader.

MPWWA Maritime Provinces Water & Wastewater REPORT

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Water quality on reserves improving across Canada

The number of long-term drinking water advisories on public drinking water systems on reserves decreased from 105 in November 2015 to 60 as of February 27, 2019. In total, 80 long-term advisories have been lifted, 36 have been added, and one was deactivated. A drinking water advisory becomes long-term when it has been in place for more than a year.

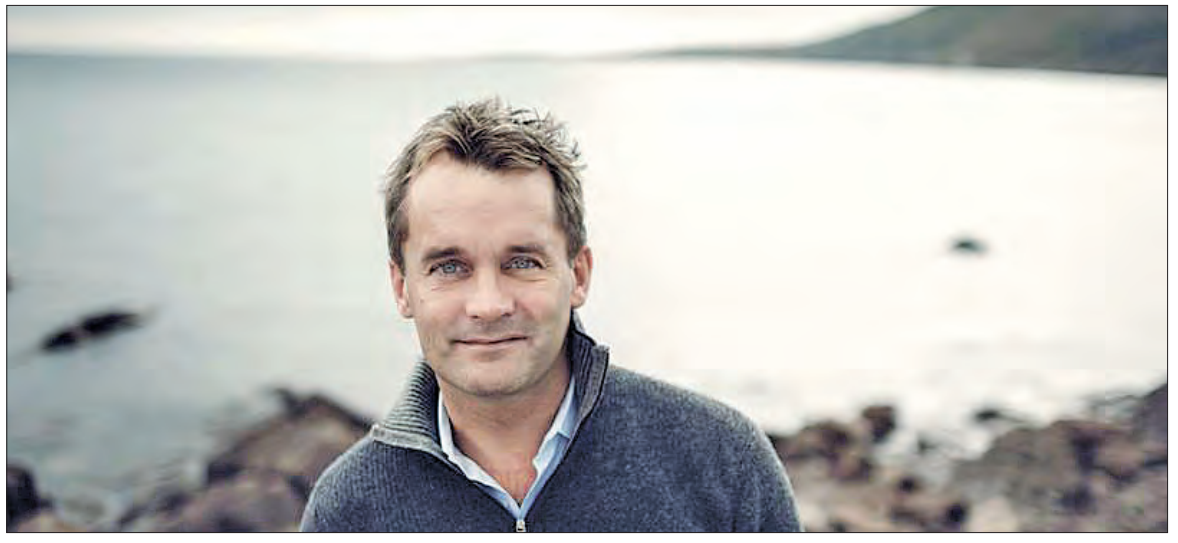
Since November 2015, 118 short-term drinking water advisories (lasting between two and 12 months) were lifted before becoming long-term.

In February 2019, two long-term drinking water advisories were lifted, as well as three short-term drinking water advisories at risk of becoming long-term, from public systems on reserves. No long-term drinking water advisories on public systems on reserves were added.

The two long-term advisories that were lifted were:

1. North Spirit Lake, in Ontario: The long-term drinking water advisory was lifted on Feb. 27 following repairs and upgrades to the community's water treatment and distribution system. Also, North Spirit Lake received operational support from Keewaytinook Okimakanak Water and Wastewater Operations Hub. The advisory had been in effect since Aug. 1, 2001.

2. Northwest Angle No. 37, in Ontario: The long-term drinking water advisory at Windigo Island was lifted on Feb. 20 following upgrades to treatment technology. The advisory had been in effect since Feb. 9, 2016. ISC and the First Nation continue to work in partnership to advance a long-term solution that will meet the safe drinking water needs of the community for the next 20 years.



Seamus O'Regan, federal minister of Indigenous Services.

The short-term drinking water advisories lifted before becoming long-term were:

1. Deer Lake First Nation, in Ontario: The short-term drinking water advisory from the Deer Lake Public Water System was lifted on Feb. 20 after a water main break was repaired. The advisory had been in effect since April 4, 2018. ISC funds the Keewaytinook Okimakanak Water and Wastewater Operations Hub, whose operational support to Deer Lake helped to lift the advisory.

2. Webequie First Nation, in Ontario: The short-term advisory from the Webequie Public Water System was lifted on Feb. 19 after repairs to the water mains were completed. The advisory had been in effect since Oct. 24, 2018. ISC funds the Matawa Water and Wastewater Hub, whose operational support to Webequie helped to lift the advisory.

3. Star Blanket Cree Nation, in Saskatchewan: The short-term drinking water advisory from the Wa-Pii Moos-Toosis No. 83A system was lifted on Feb. 7 following the installation of a new pipe. The initial advisory was set on April 19, 2018 and applied to the entire community of Wa-Pii Moos-Toosis. On May 15, 2018 the advisory was reduced in scope to 10 houses and two public buildings.

All this activity is related to the federal government's commitment to working in collaboration with First Nations to end all long-term advisories on public

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New consultations on guidelines for drinking water

BY CWWA

Health Canada is currently consulting on three proposed guidelines on drinking water quality – cadmium in drinking water, total coliforms, and natural organic matter.

A maximum acceptable concentration (MAC) of 0.005 mg/L (5 µg/L) is proposed for total cadmium in drinking water. According to the proposed guidance document the primary sources of cadmium are naturally (leaching from soil), as a result of human activities (as a by-product of refining or from its use in technological applications), or through leaching from some pipes and well components.

In terms of total coliforms, this consultation is different than most undertaken by Health Canada. Instead of proposing a revised guideline, this consultation is being used to determine if updates to the existing guideline are necessary.

The 2012 Guideline on Total Coliforms on Drinking Water established a maximum acceptable concentration (MAC) of total coliforms in water leaving a treatment plant and in non-disinfected groundwater leaving the well of none detectable per 100 mL. The guideline also states that total coliforms should be monitored in the distribution system because they're used to indicate changes in water quality. Detection of total coliforms from consecutive samples from the same site or from more than 10 per cent of the samples collected in a given sampling period should be investigated (Health Canada, 2012).

Health Canada reviewed the scientific literature related to total coliforms in 2017. Based on this review, a full update of this guideline technical document isn't required at this time, as science continues to support the MAC established in 2012.

Natural organic matter (NOM) is an extremely complex mixture of organic compounds and is found in all groundwater and surface waters. Although NOM has no direct impact on health, it affects the efficacy of drinking water treatment processes and consequently the safety of drinking water. NOM may also affect consumer satisfaction because it can contribute to undesirable colour, tastes, and odours in drinking water.

Health Canada completed its review of NOM in drinking water and the impact it can have on drinking water treatment processes. This guidance document reviews and assesses risks associated with the impact of NOM on drinking water treatment processes and the safety of drinking water. It is important to note that it doesn't establish a numerical limit on NOM.

Comments on all three consultation documents are due on May 21. CWWA's drinking water quality committee will be reviewing all three and submitting comments if needed.

For more information, visit canada.ca/en/health-canada/programs/consultation-cadmium-drinking-water.html regarding cadmium in drinking water; canada.ca/en/health-canada/programs/consultation-review-guideline-technical-document-total-coliforms-drinking-water.html regarding total coliforms; and canada.ca/en/health-canada/programs/consultation-organic-matter-drinking-water.html regarding organic matter.

Managing a multi-generational workforce

BY ANDY WALKER

When it comes to managing the workforce of the early 21st century, employers should have two key watchwords: adaptability and flexibility.

"Today's workforce is a mix of generations, all with different expectations about the nature of work and what they expect to get from a job," says Tim Carroll, a professor of business administration at the University of Prince Edward Island.

While having a multi-generational workforce is nothing new, he says the problem of managing and meeting expectations is a recent phenomenon. For example, the baby boomers (those born between 1946 and 1964) had essentially the same approach and expectation to paid work that their parents and grandparents had.

"They were expecting a job for life," he says. "They were loyal to their employer and their employer was loyal to them."

However, he says that trend began to change with Generation X, those born between 1965 and 1980. Carroll says that as layoffs and downsizing began to take hold, the expectations of a job for life began to disappear for those entering the workforce.

Carroll says this picked up steam when the millennials (born between 1981 and 1996) began to hit the workforce.

"They're less likely to put up with something they don't like," Carrol says. They don't show the same type of loyalty to an employer, but Carroll says it's important to note the expectations of employers are also changing.

> "It isn't uncommon today to have the three generations in the workforce and an employer has to deal with them each in a different way."
> — Tim Carroll, professor of business administration, University of Prince Edward Island.

"It isn't uncommon today to have the three generations in the workforce and an employer has to deal with them each in a different way," he says.

In fact, there's a fourth generation now coming on the scene known as post-millennials, those born in 1997 or after. Carroll says all of the research done on these new workers indicates "they are a different breed altogether. Fewer get a driver's license and they are less likely to drink or take drugs. We don't really have a lot of research yet on how they view the nature of work."

Joe Sherren has a similar message for employers. He is president of Gateway Leadership, a management consulting and leadership firm based in P.E.I.

"Millennials have a different way of approaching work," he says. "Millennials have been led to believe they're special and everything they say, do, or think is brilliant, so everyone should listen to them and their opinions. Unfortunately, this is simply not true."

He says the best way to motivate millennials is to create what he calls a collaborative culture. He says they have been brought up in an educational system that stresses teamwork and they require a challenge.

"Social media and networking are a way of life for them and companies are advised to find creative ways to make it work for their business rather than try to ban it," he says.

He suggests scrapping the idea of a regular performance review, saying it's better to give coaching and direction on an ongoing basis.

When it comes to baby boomers, he suggests such approaches as job sharing, self-funded leaves, phased-in retirements, shorter workweeks, and part-time or consulting work.

"The older worker is seven per cent less likely to be absent or need personal time," he says. "They don't fear change, but rather discrimination."

Sherman notes health isn't determined by age, but rather by the lifestyle of a person. He says older workers are intrinsically motivated to perform rather than compete since they're less interest in climbing the corporate ladder.

He cautions against assuming business management techniques that worked in the past will work in the future.

"The world is changing at a rapid pace and only managers who understand what those changes mean will be poised to prosper under the new rules. To succeed tomorrow, we must let go of what has made us successful up until today."

Public input sought on Water Act draft regulations

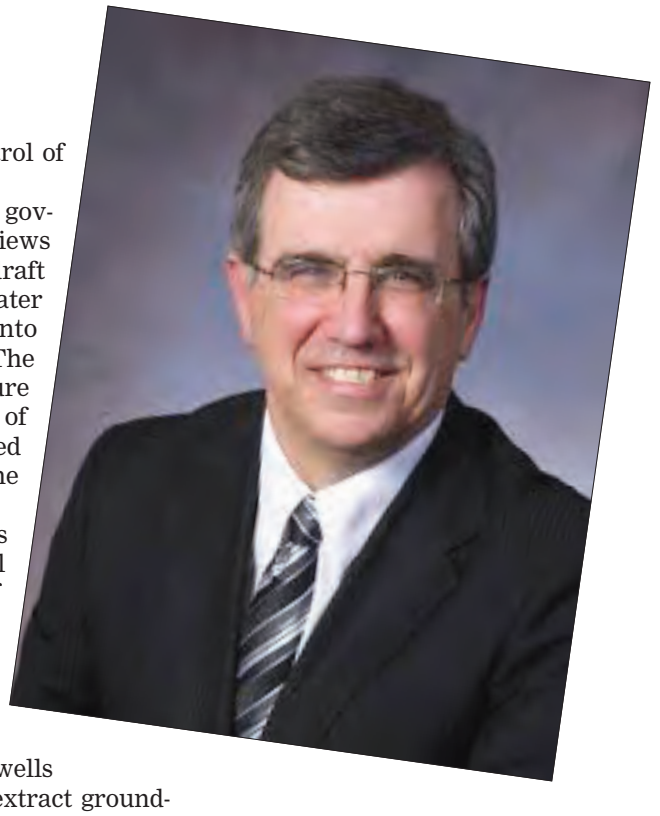
Islanders have been invited to provide their comments on new draft regulations under the Water Act.

Communities, Land and Environment Minister Richard Brown has tabled the draft regulations on well construction, water supply, and wastewater treatment before the Standing Committee on Communities, Land and Environment. To view the draft regulations and provide input, visit princeedwardisland.ca/en/information/communities-land-and-environment/water-act. Draft regulations on water withdrawal will be tabled later and will address the control of water extraction.

"It's important for government to hear the views of Islanders on the draft regulations under the Water Act before they come into effect," Brown says. "The regulations will help ensure the quality and quantity of our water are protected and enhanced under the Water Act."

The Water Act was passed in the provincial legislature in the fall of 2017. Before the act can be proclaimed, the regulations must be adopted.

The well construction regulations focus on construction of wells rather than their use to extract groundwater. The purpose of the water supply and wastewater treatment regulations is to outline the approval process for the establishment or modification of water and wastewater systems and to establish minimum standards for their operation.



Richard Brown, minister, P.E.I. Communities, Land and Environment.

Upcoming educational opportunities from ACWWA

1. NOVA SCOTIA

— Water Distribution, LEVEL I & II - Halifax, NS
2019/03/26 - 2019/03/29
Non Member Price: $1121.25| Member Price: $1029.25

— Wastewater Treatment, LEVEL I & II - Halifax, NS
2019/05/28 - 2019/05/31
Non Member Price: $1121.25 Member Price: $1029.25

— Water Treatment, LEVEL I & II - Halifax, NS
2019/09/24 - 2019/09/27
Non Member Price: $1121.25 Member Price: $1029.25

— Check Valves and Air Relief Valves - Halifax, NS
2019/10/09 - 2019/10/09
Non Member Price: $181.13 Member Price: $169.63

— Wastewater Collection, LEVEL I & II - Halifax, NS
2019/11/19 - 2019/11/22
Non Member Price: $1121.25 Member Price: $1029.25

2. NEW BRUNSWICK

— Water Treatment, LEVEL I & II - Moncton, NB
2019/04/02 - 2019/04/05
Non Member Price: $1121.25 Member Price: $1029.25

— Wastewater Collection, LEVEL I & II - Moncton, NB
2019/05/06 - 2019/05/09
Non Member Price: $1121.25 Member Price: $1029.25

— Water Distribution, LEVEL I & II - Moncton, NB
2019/10/21 - 2019/10/24
Non Member Price: $1121.25 Member Price: $1029.25

— Wastewater Treatment, LEVEL I & II - Moncton, NB
2019/11/04 - 2019/11/07
Non Member Price: $1121.25
Member Price: $1029.25

3. PRINCE EDWARD ISLAND

— Basic Laboratory Procedures for Water and Wastewater Operators - Summerside, PE
2019/05/06 - 2019/05/06
Non Member Price: $316.25 Member Price: $287.50

— Lift Stations and Forcemains - Charlottetown, PE
2019/05/27 - 2019/05/27
Non Member Price: $343.85 Member Price: $322.00

— Waterbourne Disease - Charlottetown, PE
2019/10/15 - 2019/10/15
Non Member Price: $343.85 Member Price: $322.00

4. NEWFOUNDLAND

— Watermain System Disinfection and Safeguarding - St. John's, NL
2019/04/17 - 2019/04/17
Non Member Price: $362.25 Member Price: $339.25

— Automatic Diaphragm Valves - St. John's, NL
2019/10/15 - 2019/10/15
Non Member Price: $362.25 Member Price: $339.25

— Automatic Diaphragm Valves - Gander, NL
2019/10/16 - 2019/10/16
Non Member Price: $362.25 Member Price: $339.25

— Check Valves and Air Relief Valves - Corner Brook, NL
2019/10/17 - 2019/10/17
Non Member Price: $181.13 Member Price: $169.63

— Pressure Management to Reduce Non-Revenue Water (Water Loss) and Pipe Bursts - Corner Brook, NL
2019/10/17 - 2019/10/17
Non Member Price: $181.13 Member Price: $169.63

Upcoming NSCC Course

Nova Scotia Community College offers a variety of courses that may be of interest to those looking to upgrade their skills. Further information can be found on the NSCC website.

1. Plumbing - Cross Connection Control Recertification Course
Trades and Technology
Cost: $600
Credential: Non Credit
Delivery Options: In Person
Locations: Akerley Campus

American Water Works Association (AWWA) cross connection control testers must be re-certified every five years. This course provides the opportunity to update cross connection control knowledge and skills that will prepare students to write the required examination for recertification. Topics include new regulations, new test procedures, and practical testing.

Pre-requisite: GENL 7104
Schedule
Campus: Akerley
Class#: 5758
Dates: April 25-26, 2019
Details: Thursday and Friday; 8 a.m. to 4 p.m.

Student must have their own Plumbing Code Book, Safety Glasses, and CSA work boots.

MPWWA training for 2019

BY JEFF ROGERS

The Maritime Provinces Water and Wastewater Association has scheduled the following training sessions for 2019 so far. Other training is planned for Moncton in the spring and fall, but not all the information has been finalized yet. So, stay tuned.

The MPWWA is committed to the continuous improvement of the operation of water and wastewater treatment plants throughout the Maritimes. Through the delivery of regular hands-on workshops and seminars, the association has enabled operators to upgrade their knowledge and has provided them with the opportunity to receive proper training, especially those in smaller Maritime centres. This training provides the operators the tools they need to better understand the design, construction, and management of these facilities.

This year the MPWWA is expanding its training opportunities and has added new courses to the calendar. These include:

- Hydraulics
- Arc Flash and Electrical Safety Awareness
- Condition Assessments/Preventative Maintenance on equipment
- Unidirectional Flushing: Planning and Executing
- Lab Skills
- Water Distribution Core
- Water Treatment Core
- Motor Controls and VFDs
- Operational Math
- Water Meters

Training starts in May with the following courses:

Stellarton Area/New Glasgow
May 1st - Wastewater Treatment
May 2nd - Wastewater Collection
June 24th - Water Treatment
June 25th - Water Distribution
June 26th - Operational Math

Cape Breton
May 14th - Wastewater Treatment
May 15th - Wastewater Collection
May 16th - Pump Operation and Maintenance

Be sure to check out mpwwa.ca on a regular basis to obtain the most up-to-date information regarding workshop dates and times.

NOTE: *Have an idea for a workshop? The MPWWA training committee wants to hear from you. Forward your idea to Training Coordinator Jeff Rogers at jrogers@quispamsis.ca.*

MPWWR WATER BRIEFS

Dalhousie study on lead in drinking water not ready for release

BY AMANDA JESS

Nova Scotia Environment recently commissioned Dalhousie University to do a study on drinking water lead concentrations using the new Health Canada guideline.

On March 8, Health Canada reduced the allowable concentration of lead from 0.01 mg/L to 0.005 mg/L. They also introduced new testing protocols, one of which was used in the Dalhousie study.

An emailed statement from Nova Scotia Environment said they contracted Dalhousie while Health Canada was considering the change "to help [them] gather better data on lead in drinking water in Nova Scotia."

"The study focused on areas where there are still lead pipes in the municipal infrastructure and homes that likely have lead pipes," the statement said, adding that seven municipalities participated.

The study took place between May and September 2018, according to an Atlantic Canada Water and Wastewater Association conference presentation. The final report is not yet available.

The new lead guideline is now being enforced, the statement from the department says, and exceedances must be reported. When asked for an interview regarding the new guideline, a communications advisor instead provided information via email.

How does the MPWWA choose the charity it honours at each annual seminar?

The selection of the charity to benefit from the charity auction is tasked to the seminar chair. When the idea of the auction was floated in 2009, to be brought into reality in 2010, the board of directors decided the money should go to a charity in the area the seminar was held and should be a non-mainstream charity. In other words, a charity that doesn't routinely see a lot of attention. The seminar chair selects anywhere from two to four charities that fit the criteria and presents their selections at a board meeting with a brief description of each one. The chair can then either indicate their selection or a vote may be held by the board to determine the choice. The charity is then informed, with a request it have a representative present at the opening of the seminar to describe what the charity does, and at the end of the seminar to receive the cheque. If the charity has any form of media that can be posted around the seminar area or auction room, it's more than welcome to do so.

What is the Top Ops competition?

Essentially Top Ops is a competition between three-member teams to answer water and wastewater-related questions posed to them by a mediator. Each team is given an opportunity to answer the question, with points being awarded for correct answers. The competition goes through several rounds and the winner is determined by the team accumulating the most points. This competition takes place in numerous regions, which each produces a regional representative that's eligible to participate at the American Water Works Association (AWWA) Annual Seminar to determine an overall champion. If you're interested in further information, check out these links:

events.awwa.org/competitions/top-ops-rules.aspx
txwater.org/Website/awwa_ace_competitions_top_ops_rules.pdf

More detailed pollution prevention reporting being considered

Environment Canada has circulated two documents for discussion among the Work Group on Substances.

The first discusses ways of tracking the success of pollution prevention programs. The NPRI currently requires facilities to report their pollution prevention (P2) information at the facility level. However, P2 activities often apply to individual substances.

As the data currently exists, it is nearly impossible to link the reported P2 activity to a specific substance, unless a facility provides the name of that substance in a comment field. It's difficult for data users to analyze and understand the impacts of P2 activities on releases of substances from the facility.

ECCC is exploring how the reporting system could collect more specific pollution prevention information, when it's targeting specific substances. The early engagement document doesn't identify how this information would be collected, but it would certainly add extra steps to reporting.

CWWA submitted comments supporting the overall concept of expanding the reporting on pollution prevention activities, but is encouraging Environment Canada to make this reporting easy and intuitive, to ensure it doesn't add to the already significant burden.

Understanding the risks to Canada's drinking water

BY KEVIN QUIGLEY

March 22 marked World Water Day, an acknowledgement of the importance of safe, clean drinking water. This year, the United Nations has concluded there's an international water crisis and the principal failing is one of governance.

Our freshwater systems are under strain from threats of aging infrastructure, climate change causing floods and droughts, cyberattacks, transboundary conflicts with the U.S., contamination due to hydraulic fracturing (fracking), and the sale of water to foreign markets.

On top of that, more than 300,000 people who live in Indigenous communities do so under long-term boil-water orders, something the federal government has committed to correcting by 2021.

Many of these risks are qualitatively different and require different approaches to address them. Over the past two years, my colleagues and I have studied the Canadian water sector with an eye to better understanding its risks.

We concluded there's merit in distinguishing between the types of risks.

The first category includes infrastructure risks that can result in wasted water and water contamination.

In our national survey of Canadian water service providers, aging infrastructure, such as pipelines and water treatment plants, ranked as their top risk — and by a good measure.

According to the 2016 Federation of Canadian Municipalities Infrastructure Report, the drinking water and wastewater infrastructure that is in poor condition in Canada would cost $51 billion to replace.

The solutions to the deficit include access to funding, technology, improved supply-and-demand models and better coordination across jurisdictions.

Our second category includes uncertain threats such as climate change, cyber-security, and malevolent actors, such as insider threats and terrorists. However, we don't have enough reliable information to predict the likelihood of these events.

We also underestimate the interconnected nature of water infrastructure. For example, a failure in the water supply will have an immediate impact on the health sector and the economy.

In order to improve our understanding of the risks, we need to continue to support research so we can understand them better. We also need to allow those in the water sector and researchers to exchange information and learn from each other.

The third category covers the deeply held, conflicting values and beliefs about our water supply, including how it should be used and protected.

Managing these types of risks often leads to precautionary approaches, which are expensive because they often seek consensus among different groups, which slows progress and constrains innovation. These approaches also lack clear indicators of who is paying the price for failing to advance new policies, and how we can provide evidence that people will accept before moving ahead with new policies.

In our study, we concluded that a risk profile for the water sector is not simply a list. We need to be careful to distinguish and categorize these risks based on the knowledge we have about them. This will allow us to commit the right types of resources to the right problems at the right time.

Kevin Quigley is a collaborator on CWWA's project to assess the Resilience of Canadian Water Systems. This is an excerpt of his article for the CWWA.

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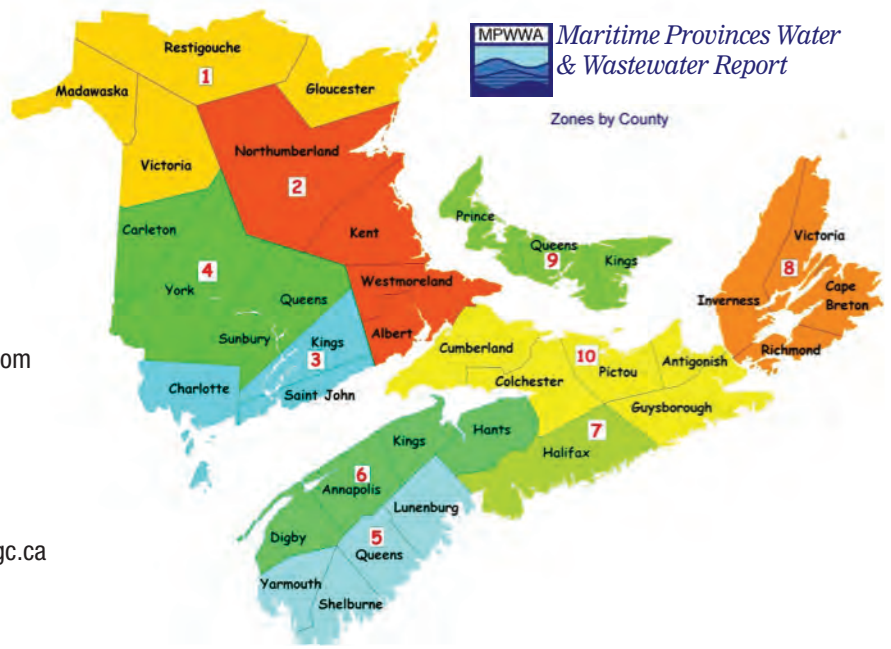

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Water quality on reserves improving across Canada

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systems on reserves by March 2021. This commitment was made in 2016, with$1.8 billion set aside in that year's budget toward water and wastewater infrastructure over five years. Budget 2017 committed an additional $49.1 million over three years towards improving access to safe drinking water. A further $172.6 million over three years was included in Budget 2018 to accelerate progress on lifting drinking water advisories and ensure more infrastructure projects were completed prior to 2021. Budget 2018 also provided support for repairs to high risk water systems, recruitment, training and retention initiatives, and the establishment of innovative First Nations-led service delivery models.

Of the projects underway to address the remaining 60 long-term drinking water advisories:

- 31 are in the construction phase
- 21 are in the design phase
- Eight are in the feasibility stage to determine infrastructure needs.

It's projected at least 20 additional long-term drinking water advisories will be lifted by the end of 2019.

Across the country, 505 projects are either underway or have been completed:

- 394 projects for repairs, upgrades, or new builds of water treatment plants and other water and wastewater infrastructure
- 51 feasibility studies to determine infrastructure needs for the long-term
- 60 supporting projects, such as water operator training to build capacity within First Nations communities.

Newfoundland MP Seamus O'Regan, federal minister of Indigenous Services, says he's confident the hundreds of projects underway and completed will mean successfully meeting the federal commitment by 2021.

"More progress was made in the last month with partners on our government's commitment to lifting all long-term drinking water advisories on public systems on reserve," O'Regan says. "The lifting of 80 long-term drinking water advisories demonstrates how dedicated funds over five years can support First Nations in their planning for the long-term and make the infrastructure investments needed to build lasting change."