



Maritime Provinces Water & Wastewater REPORT

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NOTE FROM THE CHAIR

Rob Hamilton
Chairperson of the MPWWA

Well another summer (and hopefully everyone had a chance to have some time off to enjoy) is quickly turning to fall and there is a nip in the morning air. It's that time of the year when construction and other projects are in the process of wrapping up and we are all eyeing what winter might bring us. The MPWWA is getting its fall training courses in order and in the very near future you should be receiving a mail out with a list of workshops that we are offering. Our training coordinator Tim Henman is trying to put together a diversified selection of topics that will draw the interest of all disciplines of our industry (water treatment, wastewater treatment, collection & distribution). We rely on you, our membership, to give us an idea of what topics that you'd like to have as training workshops, so if there is something that you would like to see in a workshop, don't hesitate in contacting Tim or any one of the Board of Directors. If it is something that we can't get onto the fall workshop schedule, then we can likely put in on the spring agenda.

We are also in the preparation stages for our Annual Conference and Training Seminar being held in Charlottetown, Prince Edward Island at the Delta Prince Edward running from April 19-22, 2015. In the last edition of the MPWWR we issued a "Call for Presentation" for the workshops at this conference and Conference Chair Jerry Villard is busy getting all of the details in order. The conference's theme is "We're Good & You Know it - Confidence in Facilities and Operations". The Suppliers Tradeshow, as always, will be one of the highlights of the event and more especially so this time around, as the newly renovated PEI Convention Center has the capability of a set up for 100 booths. Keep checking our website for more information and online registration for the Training Seminar.

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Eastern Passage wastewater treatment plant upgrade



Evan Beaton, process technician, at the Eastern Passage Wastewater Treatment Facility, works in the onsite laboratory. In the foreground are four beakers showing wastewater at various stages: influent, primary clarifier effluent, mixed liquor and final effluent. (Photo: Kathy Johnson)

BY KATHY JOHNSON

There were smiles all around at a ceremony and tour on Sept. 5 recognizing the \$64-million treatment upgrade and expansion of the Eastern Passage Wastewater Treatment Facility.

Completed last December, the project provides for an expansion in capacity to accommodate projected

population growth in the serviceable boundary areas over the next 20 years, as well as an upgrade in the treatment level from primary to secondary, consistent with national performance standards

"The Eastern Passage Wastewater Treatment Facility is the largest capital project Halifax Water has implemented since the 2007 merger," said board chair Collen Purcell. "This milestone represents a sig-

nificant step in our long term plan to close the wastewater and stormwater infrastructure deficit."

Constructed over the course of two years around the existing treatment plant, the project came in \$500,000 under budget, and has an operating performance that exceeds expectations and regulatory requirements.

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New effluent line upgrade for 5th Canadian Division Support Base Gagetown

■ BY KATHY JOHNSON

Construction is projected to wrap up this fall on the installation of new effluent line infrastructure to service 5th Canadian Division Support Base Gagetown.

Work began on the \$2.4 million project in August 2013, and entailed the removal of the 50-year-old effluent line infrastructure and the installation of approximately 1.6 km of a 600 mm diameter concrete effluent pipe. The project also included the installation of manholes, a new diffuser in the Saint John

River and remediation of nearby residential properties affected by the construction, Base Gagetown spokesman Captain James Donovan said in an email.

"The new effluent line will have positive environmental effects for the Saint John River," Donovan noted. "The new diffuser will improve effluent mixing when discharged into the river, (thereby) enhancing our ability to meet the Canadian Council of Ministers of the Environment's Freshwater Aquatic Life Guidelines and the Federal Discharge Guidelines for Wastewater at the Point of Discharge."

Donovan said the project, which is being done by

Saint John, New Brunswick-based TerraEX, is scheduled for successful completion this fall.

Upgrades are on-going at the Wastewater Treatment Plant (WWTP) at 5th Canadian Division Support Base Gagetown. Recently completed upgrades include electrical, primary tanks and aeration tanks. Secondary tank upgrades are currently being de-

signed and could be implemented in 2015.

The Base Gagetown WWTP services the Town of Oromocto (with the exception of a portion of Oromocto West which is serviced by a small treatment plant), Oromocto First Nation and Base Gagetown, for a total population of 9,200 people.

Deer Lake Power penstocks to be replaced

■ BY CORY HURLEY

The penstocks at Deer Lake Power are finally being replaced.

Some of the wooden structures that bring water down from the upper Grand River to the powerhouse on Deer Lake (Newfoundland & Labrador) have been replaced over the years, and maintenance and repairs have been an ongoing project for the subsidiary of Kruger Inc., the owner of Corner Brook Pulp and Paper. However, some have been in place since the station was built in the 1920s.

New piping began arriving from Texas at the Corner Brook Port Friday, (Aug. 15) and will continue to be off-loaded today (Aug. 16). It will be trucked to Deer Lake where the extensive replacement project will begin. Jackie Chow, the port manager and chief executive officer, said it is the first of three shipments of pipes the port is expected to receive.

For years, the aging structures have been a con-

cern for residents and Deer Lake municipal representatives. Leaks and breaks have created issues with things such as winter maintenance.

Replacing the penstocks is one of the capital upgrades mentioned by Daniel Archambault, the executive vice-president of Kruger's industrial products division, with help of the \$110-million government loan announced in February.

Several large leaks were repaired in 2012, and inspections have continued.

There is a tendency for the structures held together with large clamps and bolts to leak depending on weather conditions and water pressure. In 2005, the replacement of one of the penstocks was said to have been part of an eight-year replacement project.

It had been in the works for two years at that time, and one steel penstock per year was expected to replace the old wooden structures.

Western Star



Pipes destined for Deer Lake Power to replace the penstocks were off-loaded at the Corner Brook Port on Aug. 15. (Photo: Cory Hurley/ Western Star)

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MPWWR PROFILE: *Allan Nisbet*

Every issue the MPWWR shines a spotlight on a MPWWA member making a difference in the industry. Allan Nisbet is the focus of our October issue.

■ BY ANDY WALKER

The past four years have felt like a whirlwind for Allan Nisbet.

The Hunter River, Prince Edward Island resident is a private water and sewer contractor who currently works with utilities in North Rustico, Borden-Carleton and Morell. Nisbet was involved in upgrades to the sewer system in Borden-Carleton in 2009 and 2010 that saw a separation of the sanitary and storm sewer systems and upgrades to the sewer system.

No sooner was that completed, then North Rustico began a major project of its own—the development of a fourth well site and the connection of seven homes in the Riverside Drive area and looping the system. Nisbet says both projects involved numerous meetings but he feels it is vital to have the operator involved in the planning process.

That is in addition to the routine maintenance that must be performed on the system—jobs like flushing lines, taking water samples, repairing fire hydrants and doing general troubleshooting. Nisbet feels fortunate to have “top notch” people assisting him in all three communities – Lenny

Blacquiere in North Rustico, Randall Parkman in Morell and Dennis Bernard in Borden-Carleton.

The contractor says the three men live in their respective communities and they are especially invaluable after hours. “Usually, I am able to talk them through a problem.”

Nisbet started out his working career as a plumber and, believe it or not, up until a few years ago he actually balanced the work with the three municipalities with running a plumbing business. But when his wife, Mary, had cancer Nisbet decided he could only have one career as he helped nurse her back to health.

Even though it can be a challenge to take training, the contractor has attained Level Two in wastewater operation, wastewater collection and water distribution. Nisbet tries to attend as many Maritime Provinces Water & Wastewater Association events as he can, especially when they are held in PEI. “It is great resource and a chance to network.”

Nisbet says his training as a plumber has helped him invaluablely in his current position especially when it comes to troubleshooting. He got his first wastewater operating licence back in 1988. In addition to

being operator for the three systems, the contractor has also been asked to solve problems from time to time for other water and sewer systems in the province.

Nisbet’s busy schedule leaves him little time for hobbies. While he had a membership this summer at Glasgow Hills Golf Course in the picturesque community of New Glasgow, he admits, “I only got out a couple of times—it is one of my favourite places because it is so beautiful.”

Nisbet is known by what he drives and acknowledges a preference for older Dodge cars. “I have a couple right now—they are all I ever drive.”

He and Mary have no children. The contractor is especially looking forward to next year when the couple plans to travel to Florida—“the first vacation we have had in I can’t remember when.”

As for the future, Nisbet hopes the next few years will present an opportunity to begin to think about slowing down. The 53-year-old began working as a plumber’s helper in his teens and looks forward to his retirement a few years down the road.



Allan Nisbet

Stratford sewage project goes \$400,000 over budget

■ BY DAVE STEWART

[Stratford, PEI]— Reducing the stink from Stratford’s sewage lagoon cost about \$400,000 more than the (Prince Edward Island) town thought it would.

Council approved a budget increase at its regular public monthly meeting Wednesday (Aug. 13) to cover the cost overruns, from \$1.5 million to \$1.9 million.

Council awarded the tender for the wastewater treatment plant upgrade screening facility to the lowest bidder, WM&M for \$368,562 (HST included) and to increase the budget to \$1.9 million. It covers the entire cost of the Blue Frog installation and the screening device.

The screening device came in more expensive

than originally thought, partly due to the inclusion of a bypass pipe to better handle flows during extreme weather events.

The screening process involves the removal of large non-biodegradable and floating solids that frequently enter a wastewater works, such as rags, papers, tins, containers and wood.

Stratford Mayor David Dunphy said the \$1.5-million figure was an estimate.

“When we approved our capital budget six months ago we allocated in our budget \$1.5 million and that was before any tenders had gone out,” Dunphy said. “We were just in the stages of coming up with the engineering and what it would look like.”

The town’s lagoon didn’t have a screening device before the blue frog system was installed. The

\$1.5-million estimate also didn’t include the HST cost.

The Blue Frog devices float on the lagoon’s surface and help break down organic material. The devices were installed by C&M Aquatic Management Group.

The idea behind the program was to, once and for all, solve the problem with the smell from the lagoon.

Each of the big blue units is tethered to the shore and floats on the wastewater, bobbing on the surface like a buoy as bubbles churn up from below. There is a total of 19 Blue Frogs in the lagoon, each acting as a small containment units that help break down material away from the lagoon’s surface to help reduce the smell. They use electric motors that

turn propellers and move wastewater horizontally to aerate the lagoon.

The units also keep sludge from building up.

Dunphy said like any project the actual cost of the work doesn’t always match the estimates. As for the screening device, the mayor said while it contributed to drive up the figure he’s glad they have it.

“We felt we should have this screening device to catch garbage so it doesn’t get processed.”

The town would still like to find a long-term solution to the lagoon. Options include building a treatment plant or piping the sewage over to Charlottetown’s plant but either idea is likely to cost well into the millions. Those options are still a few years off yet.

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The greater Sydney wastewater collector project was recently completed. The \$15.3-million project directs sewage outfalls for treatment. (Photo: Greg McNeil/Cape Breton Post)

CBRM wastewater plant construction complete

■ BY STAFF - THE CAPE BRETON POST

[Sydney, NS]— Landscaping is the only task to complete (Aug. 19) to conclude a \$15.3-million sewage collector project that spans three sites across the Cape Breton Regional Municipality.

The greater Sydney (Nova Scotia) wastewater collector project included Kings Road, MacLeod Street in Whitney Pier and Lingan Road to Pine Tree Park.

"We are doing a bit of stormwater separation in some areas, but as far as the collector piping in the ground and everything sent to Battery Point, that is all in place," said Ron Delaney, the CBRM's wastewater operations manager.

"There were 14 raw sewer outfalls from roughly Row Street in Sydney River and stretching along the harbour between that point to MacLeod Street in South Bar.

"We've collected all those now and they are going off to Battery Point for treatment."

Over nine kilometres of piping was installed as part of the project, which began in 2011 on Lingan Road.

The tendered work saw Municipal Ready Mix, Northern Contracting and Riverside Developments complete various phases.

"We ran a bit longer because of the terrible winter last year. Even last fall, it stopped us from doing a lot of the remediation work in different areas," said Delaney.

A wet spring that included snowstorms in May also meant asphalt plants opened late, he noted.

Delaney said they are now waiting on some drawings for potential stormwater separation on some streets in Sydney.

"We do those at the very tail end just in case we run into other issues on the project itself," he said. "Funding would then be diverted to the main project rather than the things we'd like to see done at the end of it."

It's the same logic for landscaping that will be done at the site across from Wentworth Park.

"We didn't really have much for landscaping until we got finished. Now we are doing a drawing shortly and will hopefully have the crews back in there to put topsoil and seed, pathways, a couple of benches and some parking."

The next targeted area as the CBRM tries to meet federal wastewater guidelines will be a \$57-million project on the other side of Sydney harbour, covering Westmount, Coxheath and Sydney River.

"We don't know if we are going with one treatment or two on that side. That will all come out of pre-design."

Funding applications have been submitted and they are just waiting for the green light, he said.

"The municipality has approved its portion. As far as I know, the feds are on board. We are still waiting on the province."

Similar work across the municipality must also be completed as part of federal wastewater guidelines.

The CBRM is required to build wastewater treatment plants by 2021 at an estimated cost of \$425 million.

"It would be nice to have these projects rolling out a lot better and the funding available long term," he said.

"We could be rolling these all out the door, which could be great for the economy, great for the environment, great for everyone."

Canadian student wins 2014 Stockholm Junior Water Prize

Hayley Todesco from Canada received the 2014 Stockholm Junior Water Prize Sept. 3 for inventing a method that uses sand filters to treat oil contaminated water and recover water for reuse. H.R.H. Crown Princess Victoria of Sweden presented the prize at an award ceremony during the World Water Week in Stockholm.

The winning entry is a new application of an old water treatment technology that dates back to 1804. Sand filters have traditionally been used to treat drinking water, but instead Hayley Todesco used slow sand filters on contaminated water in oil sands tailing ponds. The method proved to treat wastewater at a faster rate than typical processes, as the sand filters grow bacteria that effectively break down toxic waste.

"This year's winning project addresses a neglected but pressing environmental issue. The entry displays genuine outside the box thinking. Hundreds of hours of self-driven effort achieved a project that excelled in all judging criteria," said the Jury in its citation.

"By happy coincidence the topic is on the cutting edge of the water-energy nexus. Tailings from tar sands pose a serious and growing environmental problem. Slow sand filters may date back to the 19th century, but the winner proved them applicable to 21st century problems," the Jury concluded.

"I am shocked but so grateful. I got the idea of using sand filters from a pen pal in Namibia two years ago, and started testing them on wastewater in a tank at home. Now I have just started studying to become a microbiologist and I hope to spend a great deal of time in the lab to continue developing the method," said Hayley upon winning the prize.

(The Stockholm Junior Water Prize competition is open to young people between the age of 15 and 20 who have conducted water-related projects at local, regional, national or global levels on topics of environmental, scientific, social and/or technological importance. The aim of the competition is to increase awareness, interest and knowledge of water and the environment.)

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RFQ closed; new source 'will result in significant savings' for Saint John drinking water project

■ BY KATHY JOHNSON

The first stage of the two-stage selection process to find a P3 partner to construct a new 75 million litre per day, drinking water treatment plant and distribution system for Saint John, New Brunswick is almost completed.

The Request for Qualifications (RFQ) documents for bidders interested in the City's Safe Clean Drinking Water project were released in July and closed on Sept. 11. The first stage in the procurement process, the purpose of the RFQ is to pre-qualify three bidders who will then respond to an RFP (Request for Proposals), expected to be called later this year.

"The RFQ tells industry that we're on schedule, we've done our homework, examined our system and needs closely, and have taken the necessary steps to move to procurement," Mayor Mel Norton explained in a press release.

Six consortiums made submissions. They are: Fundy Clean Water Group; Port City Water Solutions; Robertson & Latimer Clean Water Partnership; Port City Water Partners; Saint John Waterworks Partners, and Port City Water Partnership.

Through the RFQ process a shortlist of three proponents will be selected, they will then be invited to prepare detailed proposals pursuant to the RFP. "The Preferred Proponent will be the Proponent whose response to the RFP is technically and financially compliant and provides the lowest net cost to the City," states the RFQ documents.

Under the proposed private-public partnership (P3) arrangement, most project risks (including design, construction, financing, operations and maintenance) will be transferred to a private partner, who will bear responsibility for any cost overruns and delays.

The City currently supplies surface water (from lakes) to its system users. Last year, the City began testing for groundwater (underground wells or aquifers) on both the east and west sides of the St. John River in an effort to reduce project costs, as ground water costs less to treat. They hit liquid gold in June from the west side well field, with indications that

there is enough water to supply groundwater to the west side, which can be treated at the Spruce Lake Treatment Plant. If final tests indicate there is enough groundwater, it will eliminate the need for some of the distribution and storage upgrades that would have been required to supply east side water to the west side.

"This development will result in significant savings for the project," states the press release. Pricewaterhouse Coopers (PwC) has refreshed the Business Case based on this information and the project shows value for money.

"From the beginning of this project, the City has been committed to finding ways to deliver quality water and water service that is affordable for rate-payers," said project manager Dean Price. "This latest development demonstrates our commitment."

With an anticipated price tag of \$230 million, the Saint John Safe Clean Drinking Water project will be one of the largest projects of its type in Canada. On Nov. 22, 2013, the federal and provincial governments and PPP Canada announced a combined investment of up to \$114.6 million to the project. Ottawa announced a non-repayable P3 Canada Fund contribution of up to \$57.3 million. New Brunswick also provided an up to \$57.3 million contribution through the Regional Development Corporation.

According to the tentative schedule for stage two (RFP) of the selection process, technical and financial proposals will be received in the spring and summer of 2015, with execution of the project agreement slated for next fall. The new water system is expected to be operational by 2018.

Well drilling equipment was set up at test sites on the west side of the St. John River this summer. Tests indicate there may be adequate water sources to supply the west side of the city. That could result in significant savings for the Saint John Drinking Water project. (Photo: Contributed)



Parrsboro receives \$35,000 for sewage study

■ BY ANDREW WAGSTAFF

[Parrsboro, NS]— The provincial (Nova Scotia) government is coming through with half of the money needed for Parrsboro's wastewater treatment pre-design study.

Municipal Affairs Minister Mark Furey announced the \$35,000 commitment (in late July) as one of 10 high-priority municipal infrastructure projects receiving support from the Provincial Capital Assis-

tance Program.

"Water supply, sewage disposal and solid waste projects can place significant cost burdens on municipal governments and their residents," said Furey. "This funding can help ease that burden, meaning needed capital improvements can be completed sooner."

Funding under the program is limited and ranked according to specific criteria. Projects that eliminate serious environmental health problems get priority.

The Municipality of Cumberland County will receive \$116,800 (half of the \$233,600 total) in funding for a water boosting station on Trider Road in Macan.

Parrsboro Mayor Lois Smith was thrilled to receive the news, and said it will be a big help as the town moves toward having sewage treatment in place by 2020.

"It will take a fair amount of time to decide what we need here in size and capacity," she said. "Hav-

ing some assistance with the funding means we can move forward a little bit faster."

The town would have been moving forward with the study with or without provincial assistance, but will make good use of this funding, according to CAO Ray Hickey.

"It's big," he said. "Obviously it's very important, and the next step towards building a sewage treatment plant, which will be costly."

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Birchy Brook to get water connection with Flat Bay West

■ BY GARY KEAN

The people who live in Birchy Brook (Newfoundland & Labrador) are getting their wish and will be connected to the water well that services Flat Bay West a kilometre away.

That news was confirmed by Municipal and Inter-governmental Affairs Minister Dan Crummell during provincial cabinet meetings in Corner Brook Thursday (Aug. 21).

The 15 homes in Birchy Brook have been without water for the past couple of weeks. They had bought a new pump for the community well in Birchy Brook, but the well has caved in and it has become too difficult to draw water from.

Flat Bay West, which is administered by the same committee as Birchy Brook, was recently given

\$150,000 to upgrade its well. The residents of Birchy Brook want to connect to that well and met with Crummell earlier this week to see if additional funding could be provided to connect them to the water system in Flat Bay West.

Crummell said Thursday he has notified the folks of Birchy Brook that a plan is in place to make the permanent connection they need. His department later confirmed that the cost of the project will be require another \$125,000, to be cost-shared with the community paying 10 per cent and the province covering the remaining 90 per cent.

Crummell had no details of when the work would be done, saying that has been left with the community to work out with the contractor hired to carry out the upgrading of the Flat Bay West well.

Western Star

Modern facility for Windsor

A modern wastewater treatment facility will be constructed in Windsor, Nova Scotia.

The facility will treat wastewater from nearly half of the households in the town that's home to 4,095 residents, eliminating the raw sewage flow into the Minas Basin.

The total collection increase will be an estimated 877,000 cubic metres per year. The facility should have the capacity to treat wastewater from surrounding Hants County, if required.

The project includes treatment lagoons, piping, pumping stations, mechanical equipment and a

modern screening system.

The upgrades ensure that the facility meets current federal and provincial regulations and accommodates future growth of the community.

Support for the wastewater treatment facility was announced Aug. 14. The federal government contributed \$592,241 through the Building Canada Fund. Combined with its 2009 investment of \$2,177,700 the federal total is \$2,769,941.

Nova Scotia invested \$3,753,942 through Municipal Affairs and the Town of Windsor contributed \$3,537,669.



Harold Legge poses for a photo next to the water well in Birchy Brook, Flat Bay, Newfoundland & Labrador that had to be abandoned due to it caving in. (Photo: © Frank Gale/Western Star)

Editor's Note: On Oct. 1, people in the Birchy Brook area were connected to the well that services Flat Bay West.

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Infrastructure improvements for several NB communities

A total of seven New Brunswick communities will see upgrades and improvements to their wastewater collection and treatment systems.

The improvements for: Fundy Bay, Gillies, Greensborough, Harvey Lake, Havelock, Roachville and Sainte-Marie-de-Kent were announced July 25.

Work will span over several years and will range from upgrading, improving or building new wastewater treatment facilities and systems. In some areas additional households will also be connected to the local treatment system.

Capital for the projects will be provided through the federal Gas Tax Fund.

"Our government is proud to invest in infrastructure projects that respond to the evolving needs of local residents. We understand the importance of providing communities with new and novel ways to modernize their wastewater infrastructure and

protect our environment," said Atlantic Canada Opportunities Agency Minister Rob Moore.

A total of seven New Brunswick communities will see upgrades and improvements to their wastewater collection and treatment systems through the federal Gas Tax Fund. The communities are: Fundy Bay, Gillies, Greensborough, Harvey Lake, Havelock, Roachville and Sainte-Marie-de-Kent. Making the announcement July 25 were, from left: Fredericton MP Keith Ashfield; Atlantic Canada Opportunities Agency Minister Rob Moore, NB Transportation and Infrastructure Minister Claude Williams and Albert MLA Wayne Steeves. (Photo: Communications New Brunswick)



Charlottetown awards tender for wellfield development

Island Coastal Services Ltd has been awarded a \$2.3 million tender for the next stage of construction for the Miltonvale Wellfield Development in Charlottetown, Prince Edward Island.

The contract includes the installation of piping, a control building structure and access roads. When the project—which will carry a total price tag of close to \$15 million—comes on stream in 2015, it will provide a third well field for the city.

Charlottetown now relies on the Winter River-

Tracadie Bay watershed (located on its western boundary) and, during a dry period in 2012, several small streams dried up. That has led Environment Minister Janice Sherry to issue an order capping water extraction at 35 per cent of stream flow.

"The city is pleased to be able to continue on with this important project," said Mayor Clifford Lee. "This new wellfield development will allow us to better balance our water extraction across

multiple wellfields to become a more sustainable water supplier for the city, which is our ultimate goal for this project."


In July the City's Water and Sewer Utility Committee Chair said the drilling of all of the production wells for the Miltonvale wellfield was complete. Councillor Edward Rice said in addition to the work by Island Coastal, the next steps would include further testing of the new wells.

Funding for this project has been provided by

the Canada-PEI Building Canada Fund.


"This is work that has to be done to provide for the current and future water supply needs for Charlottetown," Rice added. "In addition to addressing our water supply needs, we're creating jobs through the life of this project which we estimate will be completed in 2016."

The work for the current tender was expected to begin in July and wrap up in December.




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Water metering a worthwhile investment: Staeben

■ BY CORY HURLEY

A new water treatment system in Corner Brook (Newfoundland & Labrador) must come with a change in attitude toward consumption, says Deputy Mayor Bernd Staeben.

"I used to do it ... how many times did we stick the hose into a big pile of snow in the middle of April?" he said. "Those days are going to be over."

With a new \$50 million water treatment system in place, and an annual operating cost budgeted as \$1.3 million, the conservation of water has become more important than ever for the City of Corner Brook.

Carl Yates, general manager of Halifax Water, was in the city Thursday (Sept. 11) to speak at a Coastal Matters series at Grenfell Campus, Memorial University of Newfoundland — an ACAP Humber Arm initiative, which was partnered with the City of Corner Brook on this occasion. The city co-funded the expenses — taxpayers contributed \$750 — to have Yates also speak with city staff. He also got a tour of the new water treatment plant.

Yates' presentation focused on water loss control and methods used in Halifax, N.S.

Halifax is a fully metered municipality.

Every litre of water that comes from the plant has a cost. Thus, it has to be managed cost efficiently and maintained long-term, according to Staeben.

Metering was implemented in Corner Brook as a pilot project, voluntarily, for 110 homeowners



Carl Yates, general manager of Halifax Water, spoke at a Coastal Matters presentation in Corner Brook, Newfoundland & Labrador on Sept. 11. (Photo: © Cory Hurley/Western Star)

in 2009. It has since ended. Council passed a motion in June that all new construction or any major renovation will require the installation of a water

meter at a cost of \$350.

"Metering is a hot button subject," said Staeben. People who pay for their water think about conservation in a different way, according to the deputy mayor.

"That's the mindset we have to get for the community," he said, adding it may take years for people to embrace the change.

Staeben said the end result would be a "worthwhile cost and investment" for council.

Metering a municipality is no easy process, says Steve May, director of operational services. Halifax has 80,000 meters in its system. The system also includes data monitoring and billing.

Like every municipality leakage and breaks are a problem in Corner Brook, confirmed May. It is accompanied with issues such as water outages, boil orders and road work.

Although the city has been trying to reduce leakages and breaks, the new system provides a structure to help prevent it. He said input from Yates, with his experience and expertise, was invaluable.

Meanwhile, Yates said Corner Brook is in the same situation Halifax was in the 1990s — realizing they needed to become stewards of water as they build a new and more expensive treatment system.

"It is a long-term journey, and people have to realize it will not happen overnight," he said.

Part of his advice to the city was metering is the ideal setup.

"If you can measure it, you can manage it," Yates said.

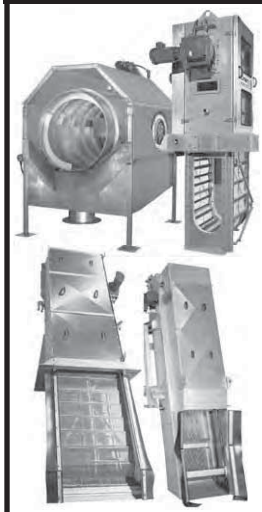
It is not just residential meters, but industrial and commercial, as well as master meters throughout the system. He said Corner Brook has a lot of natural metered zones, and they can build on that.

With the instillation of metering, he said there will be an overall decline in usage by 25 per cent.

"It ensures equitable and fair treatment across the whole customer base," he said.

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Glavine requests review of reports of high arsenic levels in Greenwood well water

■ BY NANCY KELLY

Provincial (Nova Scotia) Health and Wellness Minister Leo Glavine has asked Dr. Lynda Earle, the regional medical officer for the Annapolis Valley, to conduct a review into concerns about higher than acceptable levels of arsenic detected in well water in Greenwood's Planesview II subdivision over the past few weeks (September).

"Her work with the Department of the Environment and Department of Health and Wellness will be the first steps in putting in place a plan to look at short and long-term measures to deal with high arsenic levels in the water," explained Glavine, whose constituency includes the affected area.

While arsenic is a fairly commonly occurring natural element in Nova Scotia, Glavine said this fact "does not lessen the role of (government) departments to have a full investigation of the extent of the problem."

Arsenic is a natural element found widely in the earth's crust. According to information obtained on the Nova Scotia Department of Environment website, short-term exposure, over days or weeks, to high

levels of arsenic in drinking water can result in nausea, diarrhea, and muscle pain. Long-term exposure, over years or decades, has been linked to certain types of cancer.

Given Greenwood's population density, Glavine said the most obvious corrective solution would be to extend the Greenwood's municipal water system to the affected neighbourhoods.

"But extending water systems can take time and I want to ensure that we do what we can to mitigate costs to citizens," said Glavine, who said a public meeting is being planned for early October to provide an update to the community.

Glavine has spoken with Dr. Robert Strang, the province's chief medical officer, about the presence of high levels of arsenic detected for the first time in this pocket of homes in Greenwood.

"Because it is a fairly common issue in Nova Scotia, Dr. Strang recommends regular water testing. If high levels of arsenic are detected he suggests installing a water purification system or bringing in drinking water."

The Spectator



Crews work to install a new sewage pumping station at the North End of Granville Street in Summerside, Prince Edward Island. The new station is expected to be completed by early November and will increase capacity for that part of the city. (Photo: Colin MacLean/Journal Pioneer)

Summerside upgrading North Granville Street sewer system

■ BY COLIN MACLEAN

[Summerside, PEI] – More people = more poop; it's a reality every city has to deal with.

With that in mind, the (Prince Edward Island) City of Summerside is upgrading its sewage pump station at the north end of Granville Street.

Anyone who's travelled through the lights at Granville Street and the All Weather Highway recently has probably noticed the adjacent work, which started late last week (end of July).

The new pumping station is being constructed adjacent to the old one, built in 1995. It is designed to be three times larger than the older system, which has been operating at capacity.

That need for more capacity, coupled with the age of the pumping station, meant it was time to get the work done, said Tony Gallant, municipal engineer with the city of Summerside.

Gallant added that he doesn't expect there to be much disruption in traffic to accommodate the work.

The whole project is costing the city about \$1.5 million.

The work is complex; it will be at least early November before the old system is switched off and the new one turned on.

There are 11 sewage pumping stations around Summerside that help wastewater reach the processing facility on MacKenzie Drive.

Journal Pioneer

MPWWA Maritime Provinces Water & Wastewater REPORT

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Magic Valley wants municipal source for clearer water

■ BY STAFF —THE NEW GLASGOW NEWS

[Greenhill, NS] – The place wasn't packed, but the screams and laughter of youth having fun could be heard Tuesday (Aug. 19) at Magic Valley Fun Park as a busload of people from Mulgrave enjoyed the water and rides of the (Greenhill, Nova Scotia) amusement park.

The water, though, in some of the areas they splashed in was a bit murky.

"Yesterday it was crystal clear," said an employee to a woman who was visiting.

It's a frustration owner Bill MacNeil has had for a long time and one he's hoping can be cleared up. He's requested that the Municipality of Pictou County extend their water line to his business, so he can use the treated water instead of relying on the well water which he said is high in iron and manganese. The water he uses now grows algae quickly as does water from other wells in the area.

He said it would be only a short distance for the municipality to extend the line and it could mean the long-term survival of his business, which was started back in 1971.

"We need good water," he said "...It's almost a necessity."

Treating the water they have is expensive and it's money he believes could be better spent upgrading the park to attract new visitors.

"We started an expansion and we've bought a number of items we can use," he said. "I'm looking at it, is it worth it or should I just close it up and sell the place off piece by piece?"

He said the weather hasn't been ideal this year and their numbers haven't been great. He said tourism isn't what it used to be in the earlier years of his business.

"There's a lack of bus tours like there used to be. That was a big thing."

Coun. David Parker said during Monday's (Aug. 18) committee of the whole meeting that the county is willing to talk about the situation if Magic Valley will contribute to the cost of the project.

He said another business in the same area made a similar request and offered to do some of the work to a line extension.

"If he is willing to put some money up front, we would be willing to talk," Parker said.

County CAO Brian Cullen said for a water line to successfully service the theme park, a booster station would be needed for adequate water pressure.

Council agreed to wait to hear from the park's owner before discussing the issue any further.

MacNeil said he doesn't believe he should have to pay for the line to be extended. His son, however, said he was willing to do the excavation work for running the line to the business.

Cumberland Co. accepts increase cost to Maccan water extension

■ BY DAVE MATHIESON

[Wallace, NS] – Due to continued renovations to the municipal building in Upper Nappan, (Nova Scotia) Cumberland County's bi-weekly meeting of council was held in Wallace on Wednesday (Sept. 17).

One item on the agenda was the increase cost in construction of a water line in Maccan.

The line is to run under the CN Rail line in Maccan, from the east side of highway 302, to the west side, reaching Station Street and Riverside Drive.

CN has agreed to directional horizontal drilling under the tracks but have changed their standards, saying they will no longer allow the water pipe to pass under their track unless a casing surrounds it.

The original cost was estimated to be close to \$60,000 but is now estimated at \$187,717.

Agreements regarding the crossing were put into writing but not signed.

Warden Hunter suggested that maybe the County should bring CN to court but it was pointed out to him that CN doesn't negotiate but is more than happy to litigate.

Installing the water line is expected to take seven days but could be done in as little as three or four days, which would bring the cost down substantially.

Councillor John Kellegrew says the cost of the entire project was estimated to be \$2 million, but is currently at \$1.1 million, far under the original estimate.

Council approved a motion allowing the work to go ahead. The only other option is to cap the line before it crosses the track to the homes on Station Street and Riverside Drive.

Council also approved \$50,000 to extend the new water line to four homes along Mines Road.

During the meeting it was pointed out that, "It was discovered that between the preliminary and detailed designs, four homes were removed from the service area due to their elevations."

The owners of the four homes have since signed waivers saying they will accept the water service at a lower than standard pressure if the line is extended. The extension is about 300 metres.

There was also a request for the Municipality to sell a small parcel of land, about the size of a school bus, for \$1 to the water utility so they can build a booster station to provide better water pressure for the residence of Trider Road, which is in Maccan, just at the border with Nappan.

Council passed the motion...

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Cause for concern?

■ BY BONNIE LEARNING

The drinking water quality in Happy Valley-Goose Bay (Labrador) has been in question by residents for many years.

This past January, *The Labradorian* reported on a case of discoloured water at the home of Carol Best.

"When I got up, I saw that the facecloth changed from white to this brown (colour), with this big brown spot where the water had been running," said Best this past January, who had left her taps running one night to prevent a freeze up of the pipes.

"I was grossed out."

That article prompted Dr. Merline Fonkwe — a research scientist with the Labrador Institute, Memorial University of Newfoundland (MUN) who specializes in geochemistry applied to mineral deposits and environmental monitoring — to recently undertake a comprehensive, year-long study to determine if there is, indeed, any cause for concern with regards to the quality of drinking water in Happy Valley-Goose Bay.

Fonkwe and her collaborators — Dr. A. Sarker, Dr. Van Biesen and Dr. R. Schiff — obtained a research grant from the Harris Centre of MUN in March to undertake the study, and just started her evaluation of the local water sources and tap drinking water.

"We will be sampling throughout the year," said Fonkwe. "With different samples being taken in the fall, winter, spring and summer. This way, we can see if there is variations with the chemical compositions of the water, depending on the season and the operational parameters of the water treatment plant."

She notes the study will have two main components.

"The first component is to analyze the water — samples of the water from the well source before it goes to the treatment plant; just after it leaves the treatment plant; analysis of the water from the reservoir; and samples again as it flows through the distribution pipes, at different houses and different distances, to see if there are chemical changes to the water as it goes through the water distribution system.

"The second part is a resident survey questionnaire, which will measure residents' perspectives about the town drinking water, measure attitudes towards it, and get an understanding of the community concerns about their drinking water."

Fonkwe is hoping residents of the community will take the time to fill out a confidential, 10-minute on-line survey, which can be found at <http://fluidsurveys.com/surveys/hru/hv-gb-drinking-water>.

Fonkwe pointed out the survey will close on Oct. 31, at which point, the chemical analysis of the first batch of water samples is planned.

Happy Valley-Goose Bay Mayor Jamie Snook said the Town was more than happy to lend their support to Fonkwe and her team in their research.

"As a council, we hear a lot of comments about water quality so when an opportunity presented itself to have new research completed, we all saw that as a positive decision for everyone concerned," he said.

"The results from the survey component of the re-



Dr. Merline Fonkwe is conducting tests on the water supply in Happy Valley-Goose Bay, Labrador. She is asking residents for their help by completing a quick on-line survey as part of her research. (Photo: Submitted to The Labradorian)

search will also prove to be an excellent form of public input. We encourage people in all areas of town to participate, and in the meantime we continue to work closely with the Government of Newfoundland and Labrador to ensure a safe supply of drinking water."

Fonkwe said in addition to the support from the town and Harris Centre of MUN, she is also grateful for the support of her colleagues at the Labrador Institute of MUN in Happy Valley-Goose Bay, as well as the NunatuKavut Community Council and the Govern-

ment of Newfoundland and Labrador.

"At the end of the study, we will share the findings with the town and the residents," she said.

"We hope this research will help in sustainable management strategies of the water treatment system, not only for the prevention of public health hazards, but also for the improvement of the communication leading to amelioration of public perceptions and attitudes towards the quality of our tap water."

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Berwick fire department getting new dry hydrant ponds

■ BY NANCY KELLY

The Berwick and District Volunteer Fire Department will improve service to outlying (Nova Scotia) communities with the upcoming addition of three new dry hydrant ponds.

A dry hydrant is a non-pressurized pipe system installed next to a body of water. It provides easy access to an ample supply of water to fill tanker trucks in an emergency and is particularly helpful in a rural environment like that which is served by the Berwick fire department.

Berwick's new hydrants, which will be installed at locations on the North Mountain, are being funded through a partnership between the Berwick and District Fire Commission and the County of Kings.

"The fire commission and the county are working hand-in-hand" on the expansion reported Berwick Fire Chief Laurie Saunders (in early September).

The new locations

include Brow Mountain Road at Long Point Road; Russia Road at Spicer Road and Armstrong Road at the Fundy shore.

Saunders said the department has plans to install a pond hydrant on Prospect Road south of Berwick in the near future.

"Once we get that one, our coverage will be pretty well complete," he said, noting dry hydrants "help communities outside of town."

Register/Advertiser



Berwick's fire department is getting three new dry hydrants at ponds on the north mountain in order to improve service to Berwick's outlying communities. (Photo: © Nancy Kelly/Register/Advertiser)

Storm sewer line work to benefit Grove Street rehabilitation

■ BY FRANK GALE

A storm sewer line is expected to be installed this fall to accommodate future work on the rehabilitation of Grove Street in Stephenville (Newfoundland & Labrador).

At its regular meeting last week (mid-August), the town's council awarded a contract in the amount of \$609,066.56 to Boyd and Bungay Construction Limited to carry out the first phase of the work.

Mayor Tom O'Brien said this phase won't involve the actual rehabilitation of Grove Street, but rather the running of a new storm sewer line that will extend from near the intersection of West and Queen streets up to the end of Princess Avenue.

The line will cross Queen Street and run between West Street and Holland Drive, then cross Prince Rupert Drive and up Princess Avenue.


O'Brien said this storm sewer line is needed to handle the runoff on Grove Street. He said the second phase



An excavator operator with Boyd & Bungay Construction Ltd. digs near Prince Rupert Drive in Stephenville, Newfoundland & Labrador Sept. 24 for the laying of storm sewer pipe. Another employee works at starting a generator to provide power for tools used in laying the pipes. It's all part of the first phase of Grove Street Reconstruction. (Photo: Frank Gale/Western Star)

will eventually involve a full rehabilitation of Grove Street, including new water and sewer lines, storm sewer, curb and gutter, along with paving and sidewalks.

Western Star

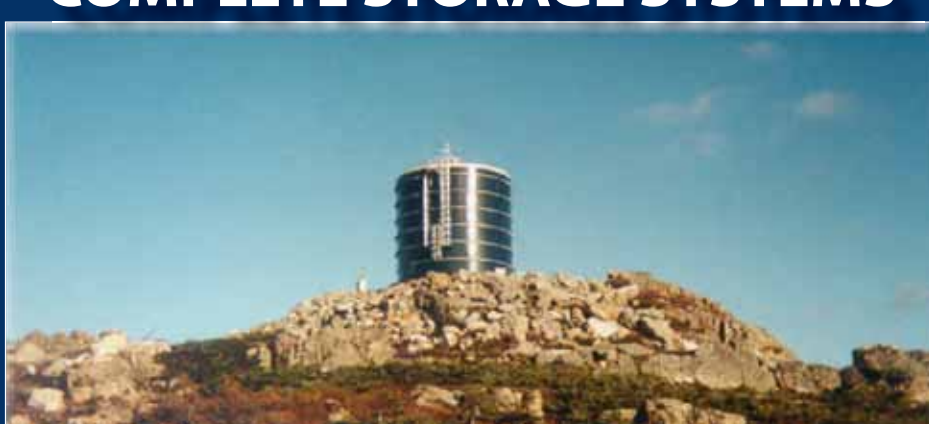





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Changes to Halifax Water governance await further study

■ BY RUTH DAVENPORT

The debate about changing the governance model of the Halifax Regional Water Commission coalesced around two clichés: if it ain't broke, don't fix it; and hope for the best, but plan for the worst.

Coun. Steve Craig tabled the motion Tuesday (Sept. 9), based on a staff report, to make regional council the sole shareholder of the water commis-

sion, giving it direct oversight and authority on certain specific elements such as business plans, new service areas, and salaries, among others.

However, several veteran councillors – many of whom have served on the water commission's board – opposed the recommendations, saying there was no need to add another layer of bureaucracy to a body that's functioning just fine under its current governance structure.

"To me, this report

is confirmation of what the water commission is doing right now," said Coun. Barry Dalrymple. "There's hardly anything here I can find as a recommendation that's not already being done at Halifax Water."

Coun. Wayne Mason, however, said council should take the opportunity to improve its oversight proactively, rather than waiting until after something goes awry.

"Everything's going great right now with the peo-

ple we have, at this moment in time," he said. "But if any of the bad things that...we could all contemplate happened, we don't have any of these things lined up to deal with them."

Council voted to defer two recommendations to the executive standing committee for further discussion, in cooperation with Halifax Water managers. A third recommendation, to investigate opportunities for shared services, was approved.

Metro Halifax

Call for Presentations for 35th Annual Training Seminar

The Maritime Provinces Water & Wastewater Association will be accepting submissions for workshop presentations for the MPWWA Annual Training Seminar in Charlottetown. Effective and relevant training helps us continue to protect public health and the environment in the communities we serve.

The theme for our 35th Annual Training Seminar is "We're Good & You Know It – Confidence in Facilities and Operations". MPWWA will be accepting abstract submissions for all topics related to water and wastewater that meet with the theme. Presentations shall be 1 hour in length - approximately 45 minutes for the core presentation and 15 minutes to

accommodate questions from the delegates.

We are accepting abstracts until the program is full. The deadline for abstracts to be submitted is October 30, 2014. Abstracts may be submitted electronically for consideration, along with your contact information to:

Rob Hamilton, Chairman, MPWWA
 Email: rob.hamilton@saintjohn.ca
 Phone: (506) 649-7928
 Fax: (506) 658-2813
 Mailing Address:
 City of Saint John
 PO Box 1971
 Saint John, NB E2L 4L1
 Attn: Rob Hamilton



Even the hydrants are happy in Montague, Prince Edward Island. Artist Chelsey Johnston was hired by the town this summer to paint the community hydrants. Everyone watched for a Mountie, or even Santa Claus, to pop up along the roadways. The Dalmatian dog hydrant is located on the Queen's Road. (Photo: © Steve Sharratt/The Guardian)

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NL invests in water and sewer projects

In the last three months Newfoundland & Labrador has invested in capital works water and wastewater projects.

In July it partnered with the Town of Campbellton to provide \$400,000 in cost-shared funding for a water

storage tank.

The province also invested:

- \$80,000 in the Town of Baine Harbour to drill a new well and upgrade service connections that will enhance drinking water for residents

- \$749,000 in the Town of Burin to improve chlorination in the drinking water

- \$950,000 in St. Alban's for the replacement of waterlines and the rehabilitation of the sewer lift station

- \$200,000 in Harbour Breton for upgrades to the storm drainage system and asphalt along Main Road North

- \$56,000 to Hermitage-Sandyville (from Budget 2013) for the completion of an advanced drinking water unit

- Nearly \$2.8 million in the Town of Portugal Cove-St. Phillips that includes: water servicing on Skinners Road and water and sewer servicing for Drover Heights, Indian Meal Line and Franklyn Place

In August the province invested:

- \$790,000 to complete a water distribution system analysis and finalize necessary upgrades to the water system in the Town of Bonavista

- \$97,000 to upgrade the pump control system and leak detection system in the Town of Elliston

- \$1,675,000 in the Town of Grand Falls-Windsor for water and sewer and \$200,000 for water treatment plant upgrades

- \$229,000 in additional funding will be invested for the completion of a sewer system treatment project in Buchans Junction

- \$2.7 million in multi-year capital works funding for the Town of Pasadena that will be used for the purchase of a water treatment monitoring system, upgrades to the town depot, street reconstruction, lift station upgrades, the replacement of lagoon compressors and other projects

- \$247,000 for upgrades to the sewage treatment system in the Town of Spaniard's Bay;

- \$422,000 for water and sewer upgrades to Wilsonville Avenue in the Town of Clarke's Beach.

In September NL invested:

- \$1.3 million for water and sewer upgrades and paving on LeMarchant Street in Carbonear and an additional \$326,000 for lift station upgrades on Pike's Lane

- \$439,000 for water and sewer and road improvements on Gully Path Road in the Town of Victoria and an additional \$142,000 for a water main extension on Gulf Avenue.

- \$500,000 in the Town of Carmanville for a water and sewer system;

- \$440,000 in the Town of New-Wes-Valley for water main upgrades which includes \$40,000 for a study related to a new water treatment plant;

- \$375,000 in the Town of Gander Bay South for the installation of an advanced drinking water unit; and

- \$314,000 in the Town of Centerville-Wareham-Trinity for the finalization of a wastewater lift station retrofit and the paving of the main road in Wareham.

- \$3.1 million in multi-year capital works funding for the replacement of the water system, replacement of the Castle Hill water storage tank and repairs to the wave wall in the Town of Placentia;

- \$425,000 for water system upgrades in the Town of Riverhead;

- \$400,000 for the replacement of water lines in the Town of St. Bride's;

- \$328,000 for water and sewer system upgrades as well as for the completion of the water and sewer project on Main Street in the Town of Whitbourne.

And in Corner Brook:


- \$3 million for storm sewer system upgrades to Bliss Street, East Valley Road, Fairview Avenue, MacPherson Avenue, West Valley Road, Woodbine, Brookfield Avenue, Confederation Drive, Gilbert Street and Raymond Heights;

- \$1.68 million in water system upgrades for Georgetown Road;

- \$635,000 for sanitary sewer system upgrades to Burke's Road and Georgetown Road, as well as, lift station upgrades.

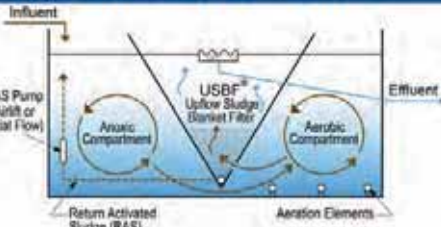


There are 50 to 60 households who do not have water and sewer in the far end of Bonavista, Newfoundland & Labrador. A group of concerned citizens who want water and sewer service recently stood in their neighbourhood, at the corner of route 235 and Birchy Place. There are plans to have a meeting between the residents and town to discuss future options for the area. (Photo: © Jonathan Parsons/The Packet)




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NOTE FROM THE CHAIR

Rob Hamilton
Chairperson of the MPWWA

Continued from Page 1

As you read this "Note from the Chair", I encourage you to also read the articles in this edition of the MPWWR as they can give you an idea of what other municipalities and provinces are dealing with regarding the water & wastewater industries. Some issues are not always isolated to one specific locale! Problems encountered and solutions discovered may be useful to you as an operator or your municipality as a whole.

In closing, I would like to offer congratulations on behalf of myself and all of the Board of Directors to the recipients of the two \$1000 educational bursaries awarded for 2014, Tyler Dillman and Daniel Campbell, both from Nova Scotia. Good job Gentlemen... continue your hard work!!

Rob Hamilton
Chairperson of the MPWWA

System upgraded

The wastewater treatment system in Allardville, New Brunswick has been upgraded.

The existing wastewater treatment system, an old lagoon at capacity, was converted into a polishing pond and a new, adjacent lagoon was constructed. The collection system was extended 800 metres on Route 134 (south of the community) to accommodate 25 additional connections, and 970 metres on Route 160 (west of the community) to accommodate 28 additional users.

Funding of more than \$3.3 million for the project came from the federal Gas Tax Fund allocation.

"The completion of upgrades to Allardville's wastewater treatment system is the successful conclusion of work by many volunteers in our community as well as the financial support from different levels of government," said Éric Gauvin the president of the advisory committee for the Local Service District of Allardville. "We are very proud."



Philip Winter, supervisor of the Eastern Passage Wastewater Treatment Facility (left) and Ian Guppy P.Eng, PMP, Manager of Wastewater Treatment Facility Infrastructure Engineering for Halifax Water, pause for a photo during a tour of the recently upgraded and expanded Eastern Passage Wastewater Treatment Facility. In the background are the two clarification units and the aeration unit. (Photo: Kathy Johnson)



The design/build project contractor for the Eastern Passage Wastewater Treatment Facility was Maple Reinders Constructors Ltd. of Mississauga Ontario and Maxim 2000 Construction Inc. based in Dartmouth, Nova Scotia. (Photo: Maple Reinders Maxim Joint Venture)

Eastern Passage wastewater treatment plant upgrade

Continued from Page 1

"We're pretty happy with it," said Halifax Water's Manager of Wastewater Treatment Facility Infrastructure Engineering Ian Guppy, P.Eng, PMP during a tour of the 2.6-hectare site.

The state of the art secondary level treatment facility is both highly automated and energy efficient, with projections that \$7.7 million in energy cost savings will be realized over the design life of the facility

(25 years). The plant utilizes a conventional activated sludge process with a biological process capacity for a 75,000 cubic meter peak hourly flow rate, and a 120,000 cubic metre peak hydraulic flow capacity.

A three-stage biofilter is in place for odour control, creating a virtually odour free environment from the headworks through to the UV and outfall buildings. The effluent runs clear into Halifax harbour, and is no longer an attraction for seagulls, Guppy noted.

Backup power generators are also on site. The

engineer said it was a smooth transition from the original treatment facility to the new one. The original primary clarifier is about the only section of the original facility that is still in place. It now serves as surplus tankage.

The design/build project contractor was Maple Reinders Constructors Ltd. and Maxim 2000 Construction Inc. (Maple Reinders Maxim Joint Venture-MMJV). Based in Mississauga Ontario, Reinders Constructors Ltd. specializes in water and waste-

water treatment construction. Maxim 2000 Construction Inc. is a well known and respected general contractor based in Dartmouth, N.S. The main sub-contractors on the project were Aquatech, Longueil, Que., and Metric Electric of Caledon, Ont. The project engineer was Dillon Consulting.

The Eastern Passage Wastewater Treatment Facility services the communities of Cole Harbour and Eastern Passage, with the capacity to service a population equivalent of 50,000.

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