MPWWA

Maritime Provinces Water & Wastewater

REPORT

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NOTE FROM THE CHAIR

The MPWWA is committed to the improved operation of water and wastewater treatment plants through the better understanding of the design, construction and management of these facilities.

Through the provision of regular "hands on" workshops and seminars, the association has enabled operators to upgrade their knowledge and has provided operators, especially those in smaller Maritime centres, with the opportunity to receive proper training.

The MPWWA encourages and facilitates an interchange of ideas between operators, professional and consultant engineers, contractors and other wastewater associations. In effect, the MPWWA provides an open forum for Atlantic Canada and has improved communications among operators, provincial governments, industry and wastewater consultants across Newfoundland, New Brunswick, Nova Scotia and Prince Edward Island.

What training opportunities are on the way? We have our 28th annual training seminar planned for April 20 to 23. At the event, we will be touching on several new technologies and introducing some of the latest equipment that is being used in the treatment of water and wastewater.

In the coming months, there are also the following workshops lined up:

- Electrical workshops at PEI's Holland College, Module #1 (May 5 to 6) and Module #2 (May 7 to 8).
- Fire hydrant and valves workshops this spring, date and place TBA.

MPWWA's training committee will hold a meeting shortly after the April conference to plan the workshops for the coming year. Have an idea? Send it our way. Go to www.mpwwa.ca and press the "Contact Us" link or forward your idea to your local zone rep.

On occasion a workshop is put together on short notice and mailouts cannot be done. So it's wise to check the website on a regular basis to obtain the most up-to-date workshop information.

We look forward to receiving your input and seeing you at our next training event.

Jody Comeau
Chair of the MPWWA

MPWWR In the News

• ADI, headquartered in Fredericton, NB, has been named one of Canada's 50 Best Managed Companies for 2007. Established in 1993, Canada's 50 Best Managed Companies is the country's leading business awards program, recognizing excellence in Canadian-owned and managed companies with revenues over $10 million. 50 Best Managed winner ADI is a worldwide provider of environmental technologies. This architectural and engineering firm has achieved solid revenue growth with its exporting business leading the way. This success has garnered ADI such accolades as the Canadian Manufacturers and Exporters' Export Achievement Award and the Canadian Innovation Award.

• Amherst, NS, has its sights set on a major summer reconstruction project on South Albion Street from Costin Drive to Robert Angus Drive including replacing both sanitary and storm sewers and repaving roughly half a kilometre of the street. Water and gas lines along the street will not be impacted by the project – the first major paving project on South Albion Street since the former Cumberland Mall opened in 1973. It's also the biggest road project since East Victoria Street was reconstructed in 1986.

• In mid-February, Trenton council passed a series of resolutions, one of which involved having the Town of Trenton, NS, forward an application for the Pump Station Upgrade Project at the East River Environmental Control Centre under the Building Canada Fund. The project is set to begin in the 2008-2009 fiscal year at a cost of $2 million to be cost-shared between the towns of Trenton, New Glasgow, Stellarton, Westville and the Municipality of Pictou County.

Photo courtesy of HRM

Mayor Peter Kelly (left) thanks project manager Ted Tam and project director Brad Anguish for their hard work.

Harbour Solutions Project marks milestone

February 11th was a day for the history books as the state-of-the-art Halifax wastewater treatment facility (WWTF) was officially opened. It was a day eagerly anticipated by the Harbour Solutions Project team and residents of Halifax Regional Municipality.

The Halifax facility, located on Upper Water Street, is the first of three new advanced-primary treatment WWTFs to be completed as part of the Harbour Solutions Project and has been operating since mid-November 2007. The overall budget for the Harbour Solutions Project is $333 million. The federal government has contributed $60 million and the Province of Nova Scotia is contributing $30 million over a 15-year period, as well as approximately $2 million in required land.

On the official opening day of the Halifax WWTF, Mayor Peter Kelly, Peter MacKay (Minister of National Defence and the Atlantic Canada Opportunities Agency), Jamie Muir (Minister of Service Nova Scotia and Municipal Relations), and Craig Walkington (chair of the former Halifax Community Liaison Committee) toured the new facility. They later joined invited guests at HMCS Scotian for a formal ceremony and unveiling of the building plaque.

"This new treatment plant demonstrates the Government of Canada's commitment to green initiatives that promote environmental sustainability," said MacKay, speaking on behalf of Lawrence Cannon, Minister of Transport, Infrastructure and Communities. "By improving the water quality of Halifax Harbour, this infrastructure investment will positively impact tourism and recreation, and enhance the quality of life for residents."

Major construction on the Harbour Solutions Project has been underway since November 2003. Over the last four and a half years, project crews requested patience from residents as they installed necessary infrastructure, some of which required road closures or diversions.

The Harbour Solutions team says it's happy to report that significant improvements in harbour water quality have already been observed. Further improvements will be realized with the soon-to-be-completed Dartmouth and Herring Cove wastewater treatment facilities. The Dartmouth facility is expected to be operational in the spring or summer, with the Herring Cove facility following at the end of 2008.

The steadily improving state of the harbour can be especially seen on the waterfront. Already noticeable is an improvement in the aesthetic enjoyment of a quiet stroll along Halifax's historic waterfront, a popular destination for residents and visitors.

"This is certainly a major milestone in the history of the regional municipality," says Mayor Kelly. "The project has been talked about for decades and has finally come to fruition."

Photo courtesy of HRM

Significant improvements in harbour water quality have been observed.

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MPWWA Profile:

Every issue, the MPWWR shines a spotlight on an MPWWA member making a difference in the industry. Plant operator Steven Cross is the focus of our April profile.

Steven Cross has never felt a stronger sense of belonging.

The 24-year-old plant operator at the Lake Major Water Treatment Plant says "I just seemed to fit in well with everyone right from the start."

A native of Berwick, Nova Scotia, Cross studied environmental technology at Holland College in Prince Edward Island before being hired at the Dartmouth facility two years ago.

"I have been fascinated by this field since I was a teenager," he says. "And I felt it was important for me to find a career that was involved with the well-being of the general public.

"We do vital work. Our profession has come a long way in the province over the last decade and we are seeing the results of those efforts now."

Cross says that his young age has never been a factor for his peers.

"The guys here took me in as one of their own right away," he smiles. "They never gave me the gears about being a rookie or a kid."

Cross says his biggest challenge, like many others in his profession, has actually been staying up-to-date with training and new technologies. His hope is to continue to develop his professional skills.

"I have my level one certification," he says, "and I am waiting on the results of my level two certification now. Ideally, I want to attain my levels three and four sooner than later. And I would also like to become more involved with the Maritime Provinces Water and Wastewater Association. I have been a member for a couple of years now and feel like there is more that I can contribute."

Cross believes that his future lies here in Nova Scotia.

"A lot of my friends have moved out West," he says, "but they would all jump at the chance to move back here. Along with family, there is something special about the lifestyle here on the East Coast that just cannot be found elsewhere."

Cross has another good reason to stay close to home. His fiancée Krystal is studying education at Acadia University right now and they plan to get married this July.

In the meantime, Cross is happy to be committed to his career.

"The site has become like a second home to me," he says. "We have a great crew here and everyone brings a certain kind of expertise to the equation. This is the kind of operation that requires a total team effort – everyone has a job to do to make it work."

Photo courtesy of Service Nova Scotia and Municipal Relations

The Cape Sable Island funding announcement was attended by: Chris d'Entremont, Nova Scotia Minister of Health; Louise Halliday, warden of the municipality of the District of Barrington; Gerald Keddy, Parliamentary Secretary to the Minister of the Atlantic Canada Opportunities Agency.

$4.2 million in funding for Cape Sable Island treatment plant

By Carla Allen and Transcontinental Staff

Less than two months ago, the Municipality of Barrington appeared to be getting nowhere with its demands that pollution concerns around the Cape Sable Island Causeway be addressed.

However, on March 31, the government announced $4.2 million in funding for the design and construction of a new water collection and treatment system for the communities of Newellton, Centreville and North East Point.

The announcement was made by Gerald Keddy, Parliamentary Secretary to the Minister of the Atlantic Canada Opportunities Agency on behalf of Lawrence Cannon, Minister of Transport, Infrastructure and Communities, and by Chris d'Entremont, Nova Scotia Minister of Health. Funding has been made possible through the Communities Component of the Building Canada Plan.

"This project is a tangible result of the partnerships between our government and communities," said d'Entremont. "By investing in projects like this, we are making an investment in a prosperous and greener future for Nova Scotia."

Over the last five years, Barrington council communicated with almost every federal and provincial department expressing concern over fecal coli forms that have raised the pollution level near the Causeway Beach and in East Bay. The level was high enough to close the area to clammers several times in the past few years.

"This has been on the table since January 12, 1998, and, for myself, since the year 2000 when I came on council," said Louise Halliday, warden of the municipality of the District of Barrington. "It's been something that's been discussed and pursued ever since then so it's good to get this news."

The $4.2-million investment consists of a $2.1-million contribution each from the Government of Canada and the Province of Nova Scotia. The Municipality of Barrington will also be directing $2.1 million towards the project.

The project will mean approximately 375 households and 14 businesses will no longer depend on aging on-site sewage disposal systems. The new system will lessen the impact wastewater has had on ground and surface water as well as the surrounding ocean.

Council will be meeting to discuss details regarding construction of the facility and warden Halliday said she hopes the project can get underway soon.

— The Coast Guard, Transcontinental Media

Drinking water set to Canadian Standards

New guidelines took effect on April 1 that will ensure Nova Scotia's drinking water meets the highest standards.

The guidelines call for increased levels of chlorination and filtering and assessments that make sure water systems are protected from contaminants.

A Drinking Water Strategy, developed in 2002, brings Nova Scotia standards in line with others across the country.

"Public health is our primary concern, and these guidelines will be an important part of our overall system," said Mark Parent, Minister of Environment and Labour. "All of the province's public drinking water supplies are treated and tested regularly to ensure the health of the public is protected."

Drinking-water suppliers were charged with evaluating systems and implementing changes to meet the new standards when the strategy was launched in 2002. Supplies found to be at highest risk were tested twice weekly and treated with extra chlorine.

Parent applauded suppliers who have met the guidelines.

"Several municipal suppliers have had to stretch their resources and undertake significant work to meet the new standards," he said. "I congratulate them on their achievements."

Tatamagouche welcomes modern treatment plant

By Sherry Martell

The Tatamagouche water system is now officially on line. Back in mid January initial system tests were done and Mike Chaulk, an engineer with CBCL Limited, said people would notice an immediate difference in water quality but it would take some time for material accumulated in the system during the past 30 years to be flushed out completely.

"They have by far, the most high-tech water technology available and it is one-of-a-kind in Canada," said Chaulk. "Other systems pale in comparison."

The system uses ultra filtration followed in series by nano filtration to remove contaminants at a molecular level. It is a chemical-free treatment process but a small quantity of chlorine is added as required by Department of Environment and Labour water standards. The water is so pure it has to be remineralized following the treatment process, a similar process used by commercial water bottling plants.

Chaulk has been involved with the project for about five years, at first working on an early stage pilot project, then continuing throughout the planning, design, and construction phases.

"There is definitely a sense of pride there because after following a project for so long it kind of feels like your baby," he said.

The system provides water to about 250 households in the village along with a hospital, two schools, two long-term care facilities for seniors and a fire department.

"I think it is wonderful, certainly for the people in Tatamagouche," said Bruce Purchase, acting CAO for the County of Colchester. "With this water utility, the quality of water will be greatly improved."

The project's cost was about $2.5 million. The Municipal Rural Infrastructure Fund, involving both federal and provincial government departments, contributed about $1.5 million and the Municipality of the County of Colchester was responsible for the balance.

– The Truro Daily News, Transcontinental Media

Balsor, Eaglecrest water service extension project gets green light

By Kirk Starratt

The magic number of interested residents has signed on and a proposed municipal water service extension to help residents in the vicinity of the Balsor and Eaglecrest subdivisions will proceed. Residents in the area have been plagued with poor water quality and quantity.

Ken Belfountain, who played an integral role in lobbying his fellow residents to support the service extension, said, as a resident of Balsor, he's quite pleased the petitioning process was successful and the required 40 per cent of affected residents signed on before the January 10th deadline.

He said a number of neighbours worked hard on this and rallied through the neighbourhood at the last minute to get residents to submit their forms to procure the required percentage of support.

"Lots of residents were sympathetic, even if they weren't affected personally by quality and quantity problems," said Belfountain.

Although the affected subdivisions are within the county, they lie south of Kentville. Once the infrastructure is built, it will be turned over to the Kentville Water Commission to operate and maintain. Kings County Engineering and Public Works director Richard Lloyd expects the project will be completed by the end of 2008.

Lloyd said no petitions in favour were received from Ward Avenue. Therefore, it was decided to reduce the scope of the project in order to optimize the cost to other residents in Balsor and Eaglecrest.

In terms of project funding, he said: the county is providing $821,000; the province is providing $425,000 under the Provincial Capital Assistance Program (PCAP); $71,000 is coming from the federal-provincial Municipal Rural Infrastructure Fund; there's also a residential funding component of $1,146,000 for an estimated total project cost of $2,463,000.

Councillor Chris Parker, who represents the area, asked Lloyd if the county would be asking the province for more funding in the next budget year, but Lloyd said there was no council direction for that. Warden Fred Whalen pointed out that the $400,000-plus PCAP contribution was the most funding ever given under the program (representing 10 per cent of the 2007-2008 provincial PCAP budget).

Kings South MLA David Morse agreed it was an enormous contribution from the modest PCAP budget and said it represented about eight times what he was expecting on a constituency basis. He was very pleased the warden made it clear early on that the county would be in for one-third of the project through federal gas tax funding; residents of the affected area appreciated that support.

The county is willing to finance the residents' share over 10 years and the county carries the capital cost of running the infrastructure past the homes until such time those property owners choose to subscribe, if they didn't choose to do so from the outset.

– The Kentville Advertiser, Transcontinental Media

Photo Contributed

The Municipality of the District of Chester is the first in the province to purchase the Altinex dewatering truck. The truck pumps the septic system and separates the liquids from the solids, returning the liquid portion to the septic system.

Chester opts for environmentally friendly septage technology

Residents in the Municipality of the District of Chester will benefit both economically and environmentally because of technology that was unveiled on February 7.

The municipality is the first in the province to purchase the Altinex dewatering truck that will reduce the dependence on septage lagoons, lower transportation costs, and create economic opportunities for local residents.

"I would like to congratulate the Municipality of the District of Chester for seizing the opportunity to invest in the Altinex dewatering truck," said Mark Parent, Minister of Environment and Labour. "I look forward to the liquid waste industry following Chester's lead to improve its septage handling technology."

The truck pumps the septic system and separates the liquids from the solids. The liquid portion is then put back into the septic system, thereby, reducing the threat of septic system failure. The solid portion may be composted and used in landscaping, land reclamation, silviculture and the creation of biofuels.

Septic pumpers using the Altinex dewatering truck technology will make fewer trips to and from discharge locations because the truck can handle 10 times more septage than the current trucks. This will result in savings of about 80 per cent on fuel annually, and a reduction in carbon dioxide emissions.

Developed in Norway, the Altinex truck required re-fitting for use on North American chassis and bodies. Lunenburg-based company ABCO Industries Ltd. made the adaptations for this technology to be operational in Nova Scotia.

"We are proud to be the first municipality in the province to employ this new technology," said Allen Webber, Warden of the Municipality of the District of Chester. "With financial assistance from the Government's Septage Treatment Facility Assistance Program, we have been able to make this investment."

The government's four-year, $2.75-million Septage Treatment Facility Assistance Program offers assistance to septage lagoon operators to upgrade facilities or construct replacement facilities, and technology to meet new guidelines for improved environmental handling of septage materials.

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Photo Contributed

The Beresford investment announcement was made on January 22 by: Roland Haché, Minister of Environment; Raoul Charest, Mayor of Beresford; Greg Thompson, Minister of Veterans Affairs and Regional Minister for New Brunswick.

Beresford municipal water and wastewater services extended

Some Beresford families are benefiting from an extension of municipal water and wastewater services thanks to two investments totaling more than $700,000 from the Canada-New Brunswick Municipal Rural Infrastructure Fund (MRIF).

"After a long wait and much effort, the town of Beresford is very proud to now offer water and sewage services to the residents of Bel-Air Street and Jacques Cartier South," said Raoul Charest, mayor of Beresford. "As well, the town expresses its deep appreciation to the various levels of government for their contributions."

The investment announcement was made on January 22 by: Mayor Charest; Greg Thompson, Minister of Veterans Affairs and Regional Minister for New Brunswick; Roland Haché, Minister of Environment.

"Our investment of over $234,000 to extend the municipal water and wastewater services is an investment in modern infrastructure to help Beresford families sustain a strong and healthy community," said Minister Thompson on behalf of Peter MacKay, Minister of National Defence and Minister of the Atlantic Canada Opportunities Agency (ACOA).

Haché added that the Province of New Brunswick is proud to be a partner in these two important municipal water and wastewater projects.

"Investing in important infrastructure projects will improve the quality of life for the residents of Beresford which will help us work toward our goal of self-sufficiency," he said.

The MRIF investments are made through two projects in separate residential areas of Beresford. Through them, 16 households on Jacques Cartier Street have already been connected to municipal services and seven more households on Bel-Air Street, which currently have wells with poor water quality and rely on individual septic systems, will also be connected to municipal water and wastewater services.

The Government of Canada (through ACOA), the Government of New Brunswick and the Town of Beresford are each contributing one third – or $234,226 – towards the costs of these projects. The Jacques Cartier Street project totals $564,771 ($188,257 each) and the Bel-Air Street project totals $137,907 ($45,969 each).

Environment and Labour wants public input on water strategy

Nova Scotians will have an opportunity to give input on the way Nova Scotia's water resources are managed at 14 public workshops throughout the province.

The workshops will lead to the development of a Nova Scotian strategy for managing water resources, today and in the future. The first workshop was held on April 1 in Oxford, Cumberland County.

"Protecting the environment is one of government's five priorities for the new Nova Scotia," said Mark Parent, Minister of Environment and Labour. "We're working with Nova Scotians to develop a water management strategy that supports sustainable prosperity and healthy communities."

Developing a strategy will help the province better monitor and manage water resources. Knowing more about the province's water resources will help protect the health of people and the environment. It will also assist in planning for emergencies, preparing for future climate change effects, and maximizing water's economic potential.

Nova Scotia's water resources include rivers, lakes, coastal waters, wetlands and groundwater.

Developing a water resources management strategy is one of 21 goals in the Environmental Goals and Sustainable Prosperity Act, aimed at making Nova Scotia one of the cleanest and most sustainable environments in the world by 2020.

Environment and Labour is leading a multi-departmental government committee to coordinate the development of the water resources management strategy in consultation with the public and many community groups. The committee includes representatives from the departments of: Environment and Labour; Health Promotion and Protection; Natural Resources; Agriculture; Service Nova Scotia and Municipal Relations; Economic Development; Fisheries and Aquaculture; Energy; Aboriginal Affairs; Tourism, Culture, and Heritage; Transportation and Infrastructure Renewal. The Utilities and Review Board and Environment Canada are also represented.

Nova Scotians can offer input at the public workshops to be held across the province. A schedule of the workshops will appear in print advertising and is online at www.gov.ns.ca/enla/water

A discussion paper entitled "Towards a Water Resources Management Strategy for Nova Scotia", outlines some issues and concerns to consider in developing a water management strategy. The discussion paper can be viewed on the Environment and Labour website, at any regional office, and at all public libraries. Comment on the discussion paper may be made by writing to waterstrategy@gov.ns.ca or by sending in the feedback form included in the paper.

Water Strategy Public Workshops:

The remaining public workshops on developing a water resources management strategy for the province will be held from 6:30 p.m. to 9 p.m. at the following times and locations:

- Yarmouth on Tuesday, April 15, Fire Hall, 221 Pleasant Street
- Annapolis Royal on Wednesday, April 16, Fire Hall, 5 Saint Anthony Street
- Kentville on Thursday, April 17, Fire Hall, 416 Main Street
- Stellarton on Monday, April 28, Museum of Industry, 147 North Foord Street
- Antigonish on Tuesday, April 29, Keating Millennium Centre, Saint Francis Xavier University
- Mabou on Wednesday, April 30, Mabou Community Hall
- Sydney on Thursday, May 1, Delta Sydney, 300 Esplanade
- Sheet Harbour on Monday, May 12, location TBA
- Lower Sackville on Tuesday, May 13, location TBA
- Cole Harbour on Wednesday, May 14, location TBA
- Halifax on Thursday, May 15, location TBA

Big news for Campbellton

A $250,000 investment from the Canada-New Brunswick Municipal Rural Infrastructure Fund (MRIF) will help Campbellton enhance its municipal water treatment.

The investment announcement was made on February 21 by: Mayor Mark Ramsay; Greg Thompson, Minister of Veterans Affairs; Roland Haché, Minister of the Environment.

"The Government of Canada is working in partnership to improve the quality of life of residents through important local infrastructure projects such as this one," said Minister Thompson, on behalf of Peter MacKay, Minister of National Defence and Minister of the Atlantic Canada Opportunities Agency (ACOA). "Our investment of more than $80,000 in modern water infrastructure will benefit thousands of families and help Campbellton remain a strong and healthy community."

Haché added that the Province of New Brunswick is proud to be a partner in this important municipal water treatment project.

The MRIF investment is for the installation of an underground power line to the city's water treatment plant. The power line will allow the municipality to operate a new ultraviolet disinfection system and 3,500 households will benefit from improved water treatment services.

The Government of Canada (through ACOA), the Government of New Brunswick and the City of Campbellton will each contribute one third – or $83,333 – towards the costs of this project.

Increased water rates causing frustration in Stewiacke

By Matt Taylor

The first rate hike took place on December 14, 2007. The second took place on April 1, 2008. Another is planned for April 2009.

Water rates in Stewiacke have gone up and will continue to rise – and how that affects customers depends a great deal on their individual setup and consumption rate.

"The water utility is in a deficit position," explained Sheldon Dorey, chief administrative officer for the Town of Stewiacke. "Making allowance for upgrades to the pipes and capital work has been necessary."

The deficit sits at approximately $70,000 and the town is in need of a new water tower. Also, according to Dorey, this year's new environmental restrictions and a decrease in consumer consumption translates into less revenue for the utility. Newer, more efficient appliances require less water volume, but the utility still has to pay the same amount on money they have borrowed to improve infrastructure.

Stewiacke resident Cathy Norris considers the rate hike to be excessive, or at least poorly explained.

"I think it's a bit much," said Norris during an interview at her home. "That amount of an increase is a little substantial. If you're considering a person on a fixed income, where is that going to come from? Probably out of their food money."

Norris and Dorey agree that properties not currently on a water meter pose a unique problem. Unmetered properties are currently charged a flat rate based on 13,000 gallons of usage per quarter year.

"If you've got a single person then most definitely they are going to feel the brunt because they aren't going to be using 13,000 gallons of water, but they're getting charged the same as a family of six," said Dorey. "When a meter gets installed, if they use 2,000 gallons of water, then that's what they'll be charged for."

He says getting all residents hooked up to a metered system has been a priority.

– *The Truro Daily News, Transcontinental Media*

Water main break causes havoc in Windsor

By Jennifer Hoegg

A split pipe sent water gushing down King and Gerrish Streets in Windsor on January 22. After the 4:30 p.m. break, properties between Grey and Corbett Streets, including the town offices, were without water for roughly six hours.

Town Public Works crews tackled the problem in the evening's cold, blowing snow and freezing rain. Water was restored to the street just after 10 p.m. and business resumed in the town building the next day.

Windsor CAO Louis Coutinho praised the workers' effort, saying "they're a remarkable crew. I'm very proud of them. To get through the frost, replace the pipe and close up the hole again – that's pretty fast."

Director of Public Works Don Beattie says crews are accustomed to working in harsh conditions.

"They're doing well," he says. "They've gotten used to it over the years. The numbers have been a bit severe, but other than that it's pretty much business as usual."

Despite the dramatic break, Beattie said the high rate of water main breaks experienced in December has not continued, with only a few leaks here and there.

Coutinho says that the slew of water main breaks this winter has been an indication of the town's aging infrastructure.

– *The Hants Journal, Transcontinental Media*

Photo courtesy of Service Nova Scotia and Municipal Relations

The $3.1-million investment announcement was attended by: Hebert J. Delorey, warden of the Municipality of the County of Antigonish; Peter MacKay, Minister of National Defence and the Atlantic Canada Opportunities Agency; Angus MacIsaac, Nova Scotia Minister of Economic Development; Kathleen Chisholm, mayor of the Town of Antigonish; Russell Boucher, councillor for Havre Boucher.

Building Canada funding flows to Havre Boucher and Antigonish

Havre Boucher and Antigonish have a lot to look forward to. They will soon have access to better drinking water and wastewater treatment. A shared investment by the Government of Canada and the Government of Nova Scotia under the Communities Component of the Building Canada plan is making this possible.

The $3.1 million investment, which will be shared between the two communities, was made on March 27 by Peter MacKay, Minister of National Defence and Minister of the Atlantic Canada Opportunities Agency, on behalf of Lawrence Cannon, Minister of Transport, Infrastructure and Communities, and by Angus MacIsaac, Nova Scotia Minister of Economic Development.

"Through these investments, the Government of Canada is demonstrating its commitment to building stronger and more vibrant communities throughout Nova Scotia and across Canada," said Minister MacKay.

Under the Communities Component of the Building Canada fund, the federal, provincial and municipal governments expect to invest over $100 million in infrastructure projects in smaller Nova Scotia communities for the next six years.

The Government of Canada, the Province of Nova Scotia and the Municipality of Antigonish are each contributing $1,435,000 to design and build a new water treatment facility and expand the wastewater collection system in Havre Boucher. The project will mean approximately 75 households currently using aging, malfunctioning on-site sewage systems will have their wastewater collected and treated at the new plant. Another 115 households currently connected to the collection system will also have their wastewater treated at the new plant. The total eligible costs are $4.3 million.

The Government of Canada, the Province of Nova Scotia and the Town of Antigonish are also each contributing $153,000 to install water meters for 1,100 water utility customers currently on a flat rate system. The metering system will

ensure a fair and equitable means of measuring actual water use as well as provide the town with a true picture of the amount of water treated and distributed. The total project costs are $459,000.

Canadians over-confident in country's supply of fresh water

Canada may be on the brink of a fresh water crisis and unless Canadians start taking notice, our economy will suffer. That's the conclusion of a leading water expert following the release of a new poll commissioned by Unilever, RBC and the Canadian Partnership Initiative of the UN Water for Life Decade.

The poll shows that a significant majority of Canadians (80 per cent) are "confident" that Canada has enough fresh water to meet the country's long-term needs. Further, two-thirds disagree that Canada has a fresh water shortage problem at all.

The research findings contrast sharply with increased warnings from Canadian NGOs and a report from Environment Canada that asserts Canada faces numerous threats to its valuable, fresh water resources.

"Water scarcity has already constrained economic growth in parts of Western Canada and low lake levels have caused a reduction in shipping loads and reduced water availability for clean hydro-electric power on the Great Lakes," says Bob Sandford, chair, Canadian Partnership Initiative of the UN Water for Life Decade, a co-sponsor of the Unilever RBC Poll on Water Perceptions. "With climate change, water quality and availability in parts of Canada will further deteriorate. Our economy will be seriously impaired by the effects of climate change."

In fact, the health of our economy is directly linked to the availability of fresh water. Environment Canada estimates that water contributes $7.5 to $23 billion annually to Canada's national economy.

While respondents to the poll acknowledged their belief in the importance of water, they also have confidence in Canada's ability to meet its long-term needs, a finding that Sandford terms "a real disconnect with reality."

He says: "We are seeing more and more incidences of water shortages, infrastructure problems, do-not-water advisories and drier summers. Canadians don't seem to appreciate that our long-term supply of fresh water is at risk."

"Unilever Canada is very concerned about the challenges facing Canada's water supply," says John Coyne, vice-president, legal and corporate affairs for Unilever Canada. "We are looking globally at ways to reduce our water footprint both in our operations, the supply chain and consumer use of our products."

"RBC has taken a special interest in these water issues because they are both a threat to the health of people around the world and to economic development here in Canada," says Shari Austin, vice-president, corporate citizenship, RBC. "As a financial institution, we're concerned about the implications of water shortages for Canada's prosperity and economic future."

Sandford says it's vital to change our attitude toward water and implement conservation techniques in our everyday lives.

"Everyone has an important role to play from NGOs to governments to corporate Canada to individual Canadians," he says.

Canadians on Water Use…

• Poll: About 70% of Canadians agree that if a price is not placed on water, people will waste it. Yet over 90 per cent of Canadians believe that access to water is a human right and should be free, not be bought and sold like any other commodity.

• Reality: Water can be treated as both a human right and as an economic good. The average Canadian household pays $33.18 per month and uses about 26,500 litres of water in the home. Canadians pay approximately one quarter of European water prices. As our population grows, we have to consider the higher pricing of water after our basic needs are met.

Canadians on Climate Change…

• Poll: Only 10% of Canadians identified global warming and climate change in a list of options as being a threat to Canada's supply of fresh water and 77% of Canadians could not identify any adverse changes to their water supply.

• Reality: Climate change will have significant negative environmental impacts on Canada's fresh water. As an example, only one per cent of the total water resources on Earth is available for human use. Almost 68.7% of the world's fresh water is frozen in ice caps and glaciers. Rising temperatures have had a direct impact on the Earth's sea level and, in turn, reduced the amount of available fresh water.

• Poll: 28% of Canadians identified mass removal of water to the United States in a list of options as the number one threat to Canada's supply of fresh water.

• Reality: This belief is incorrect. The greatest threat to Canada's supply of fresh water is our belief in its absolute abundance which is being challenged by heavy use, rapid growth and by climate change and global warming-induced drought.

Key Findings Based on Regional and Gender Splits…

- Regionally, Canadians living in Saskatchewan and Manitoba were most likely to be confident in Canada's long-term supply of fresh water (88%), followed closely by British Columbians (86%), Albertans (86%), Ontarians (83%) and Maritimers (82%), while Quebeckers were the least likely to be confident (68%).
- 97% of residents in Saskatchewan and Manitoba, or well above the national average, are confident in Canada's fresh water supply. In fact, residents living in Saskatchewan and Manitoba (68%) are less likely than the rest of Canada (76% average) to believe that climate change will impact Canada's supply of fresh water.
- Older Canadians (84%) are more likely than middle aged (79%) or younger Canadians (77%) to be confident that Canada has enough fresh water to meet our long-term needs.
- Overall, Canadians are moderately split on whether fresh water is at least moderately protected by various laws and regulations. More than half of all Quebeckers believe that Canada's fresh water is not very well protected by laws and regulations.
- The majority of Canadians (90%) living in Quebec and Atlantic Canada believe that climate change will have a negative impact on Canada's supply of fresh clean water.
- Virtually all Canadians believe that corporations should play an active role in protecting Canada's fresh water.
- Men (86%) are more likely than women (75%) to be "confident" that Canada in general has enough fresh water to meet our long-term needs.

** About the Survey: These are some of the results of an Ipsos Reid poll conducted online with a sample of 2,309 adult Canadians. The survey was conducted from January 25 to January 30, 2008. The results are considered accurate to within +/- 2.0% 19 times out of 20, of what the results would have been had the entire adult population in Canada been polled. The data were weighted according to census data to mirror the demographic composition of Canada.*

Concerns shared at St. Andrews watershed meeting

Farmers, environmentalists and residents gathered in early March to discuss their concerns and sacrifices in relation to protecting the St. Andrews watershed – a watershed which feeds the town of Stewiacke its water.

Organizers were hoping to clear up any concerns residents living in the protected watershed might have about a new pilot program operating in the area. The Nova Scotia Environmental Farm Plan is an effort to helps farmers find ways to keep the water flowing from the watershed clean. The service is free and completely voluntary but since it was introduced there has been confusion circulating in the community, said program co-ordinator Tom van Oirschot.

"One of the ladies I was talking to sold her horses because she was told by a neighbour she couldn't have them in the watershed anymore," said van Oirschot.

That is completely untrue, he said, as agriculture has an important part to play in the conservation of the area and the two interests are not mutually exclusive.

The program encourages farmers to have an environmental impact study done on their operations in order to find out where they could use some improvement; it even helps point out what they are doing right.

"No farmer out there wants to have a negative effect on the environment," said Bruce Roberts of Kelco Consulting Ltd. which is overseeing the project.

Many of the recommendations made by the study are common sense. Some recommendations include filling in abandoned wells to prevent potential contamination or fencing off waterways from livestock. Roberts says things like this take little effort but can make a big difference.

Farmers are being told "here are the regulations for water quality, so what can we do to make sure you meet those standards," said van Oirschot. If residents in the St. Andrews area can be encouraged to have good quality water at their own houses, that's going to improve the water that goes down stream into the town of Stewiacke and the surrounding area.

Charlie Milner grows blueberries on land he owns in the St. Andrews watershed. He attended the meeting hoping to find out how the environmental farm plan would affect his operation. He's worried about what his options would be if he's suddenly told not to spray for pests anymore.

"The environmentalists are now pretty strong – maybe that's good, maybe that's bad. Hopefully it's for the better in the long run," he said.

The Environmental Farm Plan is part of a larger pilot project established by the Nova Scotia Federation of Agriculture late last year, with a portion of the $511,000 from Agriculture and Agri-Food Canada.

– The Truro Daily News, Transcontinental Media

Real-time monitoring: Key efficiency factor for HRWC

By Martin Jetté

The Halifax Regional Water Commission (HRWC), which is responsible for supplying drinking water to roughly 325,000 people in the Halifax region, treats approximately 30 million gallons of water daily. The HRWC is a leader in water loss control and has participated in two recent American Water Works Association Research Foundation projects.

This expertise results from the utility's efforts in recent years to improve its way of doing things. In 1999, the HRWC set about to align its management methods with the best practices recommended by the International Water Association (IWA), a global network of water professionals covering all facets of the water cycle. Consequently, HRWC carried out an in-depth review of its information technology needs which led to the development of a five-year plan for improving its IT systems.

The first observation made by management was that the information used by the organization was divided among several completely independent data silos. Consequently, the people in charge did not have easy access to the information they needed to carry out their tasks. As a result, producing reports was needlessly difficult; creating graphs and tables required collecting data from several different systems that were not interconnected. This took a lot of time and sometimes could not be done at all, particularly when the data stretched over long periods of time (such as a full year).

These problems meant that such things as generating night flow analysis reports were problematic. Night flow analyses are carried out for each of the district metered areas monitored in the HRWC system; at night, water demand is at its lowest and flow rate and leaks are most easily measured or detected. Preparing these reports required assembling data from different HRWC facilities, and had to be performed manually, on paper.

Photo Contributed

A treatment plant operator monitors the process screens.

Data Centralization

To improve its operational efficiency and cost-effectiveness, the HRWC wanted to create a single data warehouse containing both production and distribution data which it could use to quickly obtain the information it needed for its activities. With this goal in mind, HRWC's operations and engineering staff suggested a proven information management solution that could extract the data needed and provide the information required in real time to any employee requesting it (such as personnel responsible for detecting leaks). The HRWC chose OSIsoft's PI system.

"We were looking for a product that could help us achieve our objectives, based on International Water Association practices, and that met the criteria specified in our 2000 study on IT practices," said HRWC's technical supervisor Graham MacDonald. "We chose the PI system because of its capacity for producing meaningful graphics, data archiving capability, connectivity with our SAP system, and ability to provide value-added data in general."

The system was installed in 2002. Only one day's work by the OSIsoft integrator was needed for the system to start providing data to staff. HRWC specialists programmed a driver beforehand to transfer proprietary data from the organization's legacy systems to the new PI system. Another day was required to train employees on the new system so that they could take advantage of all its functions.

"In the process, instrumentation problems that we had never noticed before were pointed out to us immediately," said the technical supervisor.

Immediate Benefits

Today, the night flow analysis reports are posted on HRWC's Intranet, where everyone can peruse the data gathered during the previous night. Any malfunction is tagged with a special colour code. Owing to this feature and the fact that large numbers of employees now have access to these reports — compared to only a few previously — missing a major leak has become virtually impossible. All in all, the HRWC estimates that it is saving $600,000 a year because of better water loss management. A significant part of this is due to the new IT system, explains Graham MacDonald.

The addition of a performance management system infrastructure has also allowed an in-house application, the Water Loss Calculator, to be developed. This enables the HRWC to calculate the volume of water or losses experienced under normal flow conditions in specific circumstances, such as flushing. This Microsoft Excel-based program uses the Datalink spreadsheet add-in, which serves as a gateway between Excel and PI, to gather and analyze information and generate spreadsheet-format reports.

Furthermore, public utilities are required to meet strict government standards on contact time, or the time chlorine is in contact with water. Contact time depends on such things as water temperature and pH. By having access to real-time data on these parameters, the HRWC no longer has to rely on the old tables it used to carry out these analyses. This saves time, improves the accuracy of calculations and ensures a safer water distribution system in terms of water quality and public health. Data on these conditions is archived which facilitates any subsequent checks required by the authorities.

HRWC management believes that the initiative it undertook in 1999 to change its practices has provided more than substantial benefits. HRWC does not plan on resting on its laurels and has several other projects in the works. For example, instruments have been installed at a dozen of its major water customer facilities, so it can detect leaks in its own underground infrastructures using the new performance management system which it can eventually access through the Internet. In this way, the HRWC hopes its clients can achieve significant savings while saving water and protecting the environment in the process.

For HRWC management, the sound practices adopted for the new millennium and the changes to its information management systems are a way of maintaining and even enhancing its leadership in water leakage detection and water treatment.

– Martin Jetté is the general manager for OSIsoft in Montreal.

Product Spotlight: Omegasonics ultrasonic tanks

Photo Contributed

The tanks utilize specialized environmentally friendly but effective cleaning solutions, heat, water, and ultrasonic sound waves for cleaning.

By Bruce Boyers

Worldwide, power grids are more fragile than ever. In many areas, unexpected outages happen often enough that they are taken for granted, and whole industries have sprung up to assure continuous power in emergencies. It's not an enviable position: power as well as other utilities such as gas and water, responsible to entire populations, must remain operational.

Many such utilities utilize hydro and gas-powered turbines, composed of hundreds of small parts. Often, the reliability of those small parts can mean the difference between operational and non-operational. So that these parts remain reliable, utility companies plan periodic turbine shutdowns so that they can be disassembled and inspected, and parts can either be thoroughly cleaned or, where needed, replaced.

Omegasonics ultrasonic tanks offer a way to clean those parts quickly and effectively. The tanks utilize specialized environmentally friendly but effective cleaning solutions, heat, water, and ultrasonic sound waves for cleaning. Users have not only found the method to be more cost-effective in terms of labour and time, they've also found it to do a more effective job of cleaning, due to cavitations within the liquid reaching areas unable to be cleaned by human hands or other devices.

For power and utility companies, reliable provision of service is the number one priority. Smooth equipment operation is a vital ingredient for that reliability. Ultrasonic parts cleaning cost-effectively provides peace-of-mind that the many components that make up intricate equipment such as turbines will be clean and will function properly.

For more information, check out: www.omegasonics.com

Lyons Brook and Harbourview: *Improved water and wastewater treatment on way*

Residents of the Nova Scotia communities of Lyons Brook and Harbourview will benefit from improved drinking water and wastewater treatment with a shared investment by the Government of Canada and the Government of Nova Scotia. These communities are the first to receive funding under the Communities Component of the Building Canada plan.

The $7.6-million investment , which will be shared between the two communities, was made on March 25 by Peter MacKay, Minister of National Defense and Minister of the Atlantic Canada Opportunities Agency, on behalf of Lawrence Cannon, Minister of Transport, Infrastructure and Communities, and by Rodney MacDonald, Premier of Nova Scotia.

"These projects, announced under our Building Canada plan, reflect our commitment to improving infrastructure and providing a cleaner environment," said MacKay.

Premier MacDonald added that building a strong, healthy province starts at the community level and "it is through our continued partnerships that we are able to build for our families now and for the years to come."

Under the Communities Component of the Building Canada Fund, the federal, provincial and municipal governments anticipate investing $111 million in infrastructure projects in smaller, communities across Nova Scotia, between now and 2014.

Lyons Brook is receiving $2.1 million each from the Government of Canada, the Province of Nova Scotia and Municipality of Pictou to design and build a wastewater collection system, and to decommission an old treatment plant in nearby Scotsburn. About 250 households with aging septic tanks will have wastewater collected and sent to the Town of Pictou's treatment plant, which is under construction. The total eligible project costs are $6.2 million.

The Government of Canada, the Province of Nova Scotia and the Municipality of Inverness are also each contributing $1.7 million to design and construct an extension of the Port Hood water and wastewater systems to the neighboring community of Harbourview. About 70 households will have sewage transported to an upgraded facility and will be added to the Port Hood drinking water system. The total eligible project costs are $5.2 million.

"We are pleased to see the continued support and investment in infrastructure at the community level from both the federal and provincial governments," said Robert Wrye, president of the Union of Nova Scotia Municipalities.

Photo courtesy of Service Nova Scotia and Municipal Relations

The $7.6-million investment announcement on March 25 was attended by: Duart MacAulay warden of the Municipality of the County of Inverness; Rodney MacDonald, Premier of Nova Scotia; Peter MacKay, Minister of National Defense and the Atlantic Canada Opportunities Agency; Allister MacDonald, warden of the Municipality of the County of Pictou.

Borden-Carleton receives funding for sanitary sewer/storm sewer study

The governments of Canada and Prince Edward Island have announced an investment in municipal infrastructure planning for the community of Borden-Carleton.

Through the Capacity Building Fund, a component of the Canada-PEI Gas Tax Fund Agreement, the investment will help the community of Borden-Carleton with a sanitary sewer and storm sewer study.

The Community of Borden-Carleton has received $16,666 from the Gas Tax Fund towards a $25,000 Combined Sanitary Sewer and Storm Sewer Separation Study project. A large portion of the community has a combination sanitary sewer and storm sewer system. This combined system is inhibiting the community from proceeding with upgrades to the sewage treatment system. This project will study the current collection system and determine the appropriate method of proceeding with any rehabilitation along with cost projections for any such upgrades.

The study should establish a clear direction for the process of the sanitary sewer, which when completed, will allow growth within the community for Borden-Carleton and the extension of the sewer collection system for residences.

"Our community identified this project to provide the community with a planning tool," said John Bernard, chairperson for Borden-Carleton. "The study should establish a clear direction for the process of the sanitary sewer, which when completed, will allow growth within the community for Borden-Carleton and the extension of the sewer collection system for residences."

The Government of Canada is pleased to support infrastructure improvements such as this through the Gas Tax Fund, said MP Gerald Keddy, Parliamentary Secretary for the Atlantic Canada Opportunities Agency on behalf of Lawrence Cannon, Minister of Transport, Infrastructure and Communities.

"By investing in a sanitary sewer and storm sewer separation study, the community of Borden-Carleton is moving toward building a strong, sustainable community, which our government encourages," he said.

Carolyn Bertram, Minister of Communities, Cultural Affairs and Labour, added that the Government of Prince Edward Island recognizes the challenges faced by many Island communities, including the need for clean, safe drinking water, and modern, efficient wastewater systems.

"We are taking action to meet those challenges and assist municipalities in finding feasible solutions," she said.

The Capacity Building Fund is an important component of the Gas Tax Fund as it helps municipalities in establishing long-term sustainability by developing and implementing projects such as the creation of integrated community sustainability plans, land use assessment, employee resource development and feasibility studies for municipality-wide services.

The Gas Tax Fund is available to local governments for environmentally sustainable projects that lead to the reduction of greenhouse gas emissions, cleaner air or cleaner water. The Gas Tax Fund agreement is administered in Prince Edward Island by the PEI Department of Communities, Cultural Affairs and Labour. Representatives from the Federation of PEI Municipalities preside as members on the management committee.

Through its unprecedented $33-billion Building Canada infrastructure plan, the Government of Canada is working alongside the Province of PEI to provide long-term, stable and predictable funding including the Gas Tax Fund to help meet infrastructure needs across Canada. Building Canada supports a stronger, safer and better country.

Photo courtesy of Communications New Brunswick

The announcement was made by: Mary Schryer, Social Development Minister; Peter Wiggins, acting mayor of Sussex Corner; Rob Moore, Fundy Royal MP.

Sussex Corner water and wastewater services set to receive major overhaul

Investments totalling almost $100,000 from the Canada-New Brunswick Municipal Rural Infrastructure Fund (MRIF) are helping to make water and wastewater upgrades a reality for Sussex Corner.

"We would like to extend our thanks to both levels of government for the infrastructure funding for water and sewer upgrades within the Village of Sussex Corner," said acting mayor Peter Wiggins. "This funding will certainly strengthen our village and help it to maintain a healthy and clean environment for citizens and visitors. Federal, provincial and municipal co-operation is key for the Village of Sussex Corner."

The investment announcement was made on January 23 by: Acting mayor Wiggins; Rob Moore, Member of Parliament for Fundy Royal; Mary Schryer, provincial Minister of Social Development.

"Our government's investment of over $32,000 for improvements to Sussex Corner's water and wastewater services is an investment in a safer community," said MP Moore on behalf of Peter MacKay, Minister of National Defence and Minister of the Atlantic Canada Opportunities Agency (ACOA).

The MRIF investments will be made through two separate projects in Sussex Corner that will benefit 523 families through increased water pressure, improved water quality and higher quality wastewater treatment. The improvements will also prevent untreated wastewater from entering nearby Trout Creek.

The Government of Canada (through ACOA), the Government of New Brunswick and the Village of Sussex Corner will each contribute one third – or $32,593 – towards the eligible costs of the projects. The wastewater pumping station upgrade project will total $22,485 (or $7,495 each); while water system improvements will total $75,303 (or $25,101 each).

Charlottetown gets funding to explore new water sources

By Andy Walker

The birthplace of confederation is taking steps to ensure it is able to provide a steady water supply for the 21st century.

Charlottetown currently depends on the Winter River watershed just outside its boundaries as its major water supply. However, the watershed is approaching its capacity to support the growing city and another groundwater source must be identified to avoid a future water shortage.

The city has received $169,588 from the Gas Tax Fund to help identify a potential new site. The total cost of the project has been pegged at $254,370.

"Public infrastructure that ensures we can draw clean water from our kitchen taps, is fundamental for communities," said Gerald Keddy, Parliamentary Secretary to the Minister of the Atlantic Canada Opportunities Agency (ACOA).

Meanwhile, Community and Cultural Affairs Minister Carolyn Bertram said water supply and demand are key elements to municipal growth, and added that the funding will provide long-term benefits to present and future residents of the city.

"We are in the process of planning for the future sustainability of our water supply," said Mayor Clifford Lee. "This contribution by the federal and provincial governments will play a significant role in allowing the City of Charlottetown to move forward in this major project by identifying the source of our future water needs."

The mayor said he is hopeful a long range plan can be presented to city council by the end of the year. He described the study as a top priority for the city of approximately 32,000 people saying it is a vital component to ensuring future residential and commercial growth.

"We want to make sure we have a safe and secure water supply for our residents for the next 50 to 100 years," the mayor said.

Government monitoring nitrate levels in Annapolis Valley water

Testing of 150 drinking water wells in Annapolis Valley over the past six years shows there has been no significant change in nitrate levels in the groundwater supplying those wells.

The Department of Environment and Labour has monitored groundwater in the area annually since 2002.

Water in 22 per cent of the wells tested in 2007 exceeded the federal guideline for nitrate levels, but the levels have not significantly changed since monitoring began.

"The Environmental Goals and Sustainable Prosperity Act commits the province to developing a strategy to manage water resources," said Brooke Taylor, acting Minister of Environment and Labour. "That work is underway and will help to address water issues in a comprehensive way."

The testing was done in an area of concentrated agricultural activity where nitrate levels are historically high. These test results would not be typical of many areas of Nova Scotia.

Nitrate is a common groundwater contaminant originating primarily from fertilizers, manure, plant residues and sewage. Ingesting water with high levels of nitrate over a long period can be harmful to infants.

Well owners with high nitrate levels should treat drinking water or use alternative sources. The department informs well owners of test results and steps they can take to ensure clean and safe drinking water.

The Department of Environment and Labour is assessing nitrate levels in groundwater, in consultation with the department of Agriculture, and Health Promotion and Protection.

The Department of Agriculture is working with farmers to develop environmental farm plans and nutrient management plans which may reduce nitrate levels in groundwater. Monitoring of the wells will continue and results will be reviewed.

For results of the nitrate monitoring, visit www.gov.ns.ca/enla/water/groundwater/nitrate.asp

Photo Contributed

The Paquetville announcement was attended by: Denis Landry, Minister of Transportation; Greg Thompson, Minister of Veterans Affairs; André Gozzo, Mayor of Paquetville; Hédard Albert, Minister of Wellness, Culture and Sport.

Paquetville looks forward to better wastewater treatment

Residents of Paquetville will soon benefit from an upgraded wastewater system thanks to an investment of almost $700,000 from the Canada-New Brunswick Municipal Rural Infrastructure Fund (MRIF).

"We are pleased to have been able to establish a partnership with the federal and provincial governments to make major improvements to municipal wastewater treatment," said André Gozzo, mayor of Paquetville.

The announcement was made on January 21 by: Mayor Gozzo; Greg Thompson, Minister of Veterans Affairs, on behalf of Peter MacKay, Minister of National Defence and Minister of the Atlantic Canada Opportunities Agency (ACOA); Denis Landry, Minister of Transportation.

"The Government of Canada is working with its partners to get things done for the people of Paquetville," said Minister Thompson. "Our investment of more than $233,000 to upgrade Paquetville's wastewater treatment system will improve the quality of life in Paquetville and encourage residential and commercial growth in the village."

The project involves increasing the capacity of the existing wastewater treatment system and the decommissioning of the existing and overloaded treatment lagoon. Eighteen new households will be connected to the municipal wastewater treatment facility and 150 families will benefit from higher quality wastewater treatment as a result of the undertaking.

The Government of Canada (through ACOA), the Government of New Brunswick and the Village of Paquetville will each contribute one third – or $233,051 – towards the eligible costs of the project.

Photography by Peter Barss of West Dublin

The Cookville Membrane Bioreactor Wastewater Treatment Plant meets one of the highest standards ever established for municipal wastewater treatment in Nova Scotia.

Innovative treatment plant wins Lieutenant-Governor's Award

In the spring of 2004, Pierre Breau, director of Engineering and Works for Lunenburg County, had a problem.

The hamlet of Cookville, at Exit 12 on Highway 103, just outside Bridgewater, was the site of one of the fastest growing commercial developments in Atlantic Canada. The area had no sewage system to handle rapid commercial and residential growth. Hooking into the Town of Bridgewater's sewage treatment plant proved impractical.

Concern for the nearby LaHave River meant the Nova Scotia Department of Environment would require a new treatment plant to meet one of the highest standards ever established for municipal wastewater treatment in Nova Scotia.

The standards would be so stringent and far-reaching that, in most respects, the treated water from the Cookville treatment plant would be comparable to that from a drinking water treatment plant.

So Breau turned to Dartmouth-based Terrain Group, an engineering, planning, and surveying company specializing in, among other things, municipal infrastructure. Terrain selected an innovative Canadian technology that cleans water by drawing it through a membrane filled with microscopic pores. The tiny holes are just big enough to let water molecules pass through, but small enough to exclude suspended solids and bacteria.

In honour of this outstanding infrastructure accomplishment, on March 4, Lieutenant-Governor of Nova Scotia Mayann E. Francis honoured Terrain Group and its partners in the Cookville Membrane Bioreactor Wastewater Treatment Plant with the 2008 Lieutenant-Governor's Award for Excellence in Engineering. After a year in operation, the Cookville plant consistently meets or exceeds all the criteria set forth in its environmental permit.

Before the design and construction of the plant, Terrain hired Loucks Oceanology of Halifax to study the LaHave River's capacity to absorb nutrients. The study found that water discharged from the Cookville plant would have to be extremely low in nitrogen and phosphorus to prevent algae blooms in the river. Untreated sewage contains high concentrations of those elements.

"The LaHave River is a valued and important water system," said Stephen Wallace, president of Terrain Group. "All the participants in this project took the responsibility to protect the river very seriously."

In addition to Terrain and Loucks, ADI Group of Halifax carried out process, structural and electrical engineering for the plant.

"The team that completed this project set a new standard for wastewater treatment in Atlantic Canada," said Wallace. "I'm proud of the fact that cleaned water discharged from the Cookville plant is generally as clean as the river itself."

The Cookville plant uses a deceptively simple process. At the heart of the facility is a frame holding thousands of tubes, each about two metres long and the diameter of cooked spaghetti. A slight vacuum applied to the end of each tube draws water through tiny pores in the sides of the tubes, while blocking unwanted material. The modular plant can be expanded in phased stages to meet future growth requirements in the area.

Wallace believes membrane systems like the one at Cookville could find widespread use in new developments and isolated communities throughout Atlantic Canada, as concern for the environment brings ever more stringent quality standards. The membrane technology can be applied to both water supply and wastewater treatment systems.

Terrain Group is already using the technology to provide wastewater treatment for a resort community under construction outside Louisbourg, Cape Breton.

Annapolis Royal proposes water rate increases

By Carolyn Sloan

With substantial capital expenditures in the forecast, the Annapolis Royal Water Utility came before the Nova Scotia Utility and Review Board to seek approval for proposed water rate increases over the next three years.

On February 27, Annapolis Royal CAO Amery Boyer explained to board chairman Murray Doehler that the town had slated a long list of capital projects over the next 30 years, including more than 16 that were high priority and a major water and sewer project currently underway on Champlain Drive.

She noted that the town's operating fund could no longer support the water utility and that the town was concerned about compounding debt given the amount of borrowing required over the next few years.

Given the new debt the town will acquire, including $140,000 this past March and another $275,000 to finance a balloon payment, the utility is proposing an increase of 47 per cent for residential customers in 2008-2009, and an additional three per cent increase in 2009-2010 and again in 2010-2011. The utility has also proposed an average increase for other metered services of between 37 and 63 per cent the first year, between three to four per cent in year two, and two to three per cent in year three. Based on a review of the proposed increases and presentations at the hearing, the board will be considering whether or not to approve the new rates.

Subdivisions Speak Out

Wayne Currie, representing the Branch Water Pipe Line organization, was granted formal standing at the hearing and opposed the rate increases based on the quality of service being provided to Alden Hubley Drive subdivision residents.

The Branch Line organization represents 15 paying members of the water utility who live outside the town's water system. The residents are billed as a group by the town and receive their water through a two-inch line, that is then split into two additional lines to service the houses in the subdivision.

Currie explained to the board that the water pressure for these houses was less than that of other houses serviced by the town, noting that there were no individual water meters to the houses in the subdivision. While the town plans to install meters at the two-inch lines leading into both the Alden Hubley Drive and Hillside Drive subdivisions, at present, the rates they pay are not based on a measurement of actual consumption.

"As long as the service provided to the Branch Water Pipe Line members is inferior to that provided to other users of the Town of Annapolis Water System, the Branch Line members object to paying the same rate as those users," said Currie.

He proposed that the rate increase to the Branch Line be set at an amount equal to the average increase for other users of the service, and that once the level of service is brought up to par and individual houses are metered, the rate be set accordingly.

CAO Amery Boyer responded to the presentation, noting that even with the new rate, the subdivision residents would still be paying less than 50 per cent of what town residents would pay.

Following Currie's presentation, Eugene Hay spoke on behalf of the residents of Hillside Drive, who are also similarly opposed to the rate increases. He explained that while the subdivision purchases water from the town, the infrastructure used to provide this service to households – including a central manifold system in the subdivision's centre – is owned and maintained by the residents of Hillside Drive who are responsible for the associated maintenance costs.

"This is a unique situation for which residents receive no consideration or compensation from the water utility," said Hay. "By paying the same as town residents and bearing the responsibility for maintenance costs of our own infrastructure, a cost which town residents are not responsible for, we feel we are being unfairly burdened."

He also noted that in 2005 when this issue was raised with the town, elected officials indicated that they would be willing to work with residents of the subdivision to help resolve these problems, and yet, there has been no communication from the town since that time.

Both service user representatives noted their opposition to proposed rates based on the extent of the hike which would mean an increase of 107 per cent for the residents of Alden Hubley Drive and Hillside Drive subdivisions.

"As residents of this province, we understand that providing clean and safe drinking water is expensive," said Hay. "However, we feel that the rate of increase being proposed is beyond any increase that we as taxpayers have seen granted to other services such as land taxes, electricity, and fuel. Bear in mind that there are families on fixed income and retirees who will find this proposed increase more than they can pay."

Historic Gardens Speak Out

Also making a presentation at the hearing was Ian Davidson, chair of the Historic Gardens' board of directors, who expressed concerns on behalf of the board and staff regarding the effect of the proposed water rate increases on the non-profit organization.

Given the organization's level of consumption, it was calculated that if the proposed rates were approved its total water expense would increase from $7001.39 in 2007 to $11,744.79 in 2008, with a total increase of 81.02 per cent over three years.

As a non-profit organization struggling to keep afloat, the proposed rate increases would make things very difficult for Historic Gardens, said Davidson.

CAO Boyer told the board that the town was aware of these special circumstances at Historic Gardens, noting that part of the problem was that the organization was paying for a better quality of water than they needed to water their plants. She added that the town would have to work to find a solution.

– Annapolis County Spectator, Transcontinental Media

New mandatory training for septic professionals

Nova Scotia continues to be a leader in protecting the environment, becoming the first province in Canada to offer a mandatory training course for septic professionals.

"Septic professionals in Nova Scotia have an important role to play in helping to protect our environment," said Mark Parent, Minister of Environment and Labour. "This course will help them gain valuable knowledge about our regulations and how they can help preserve and manage our water resources."

Septic professionals who take the course will learn about safety procedures for handling and transporting liquid waste, equipment use, emergency-spill response and measures that will improve public and environmental health.

Government required all septic tank professionals to be certified in April 2007 when the On-Site Sewage Disposal Systems Regulations took effect. They must take this training course within their first year of certification.

One professional's experience...

By Dave Mathieson

Colin Sears, owner and operator of Tuxedo Septic Cleaning, can't ever picture going back to the way it was.

Sears, who recently returned from a mandatory training course for septic professionals in Truro, says the program puts everybody in the industry on the same playing field.

"It makes us look more professional," he says. "We are required to have a decent truck and gear that is suitable for traveling on public roads."

The new standards have also made it easier to do business.

"Your neighbour would say do this, the next person would say do that, but with the regulations right in front of you now, you know exactly what you're allowed to do and what you're not allowed to do," says Sears.

He adds that he doesn't mind having to be re-certified every year because the industry is rapidly changing for the better.

– *The Amherst Daily News, Transcontinental Media*

Photo courtesy of Department of Communities, Cultural Affairs and Labour

The Miltonvale Park funding announcement was attended by: Stu MacFadyen, deputy mayor of Charlottetown; Gerald Keddy, Parliamentary Secretary for the Atlantic Canada Opportunities Agency; Richard Brown, PEI Minister of Development and Technology; Doug Currie, PEI Minister of Health.

Miltonvale Park receives help for feasibility study

On March 14, the governments of Canada and Prince Edward Island announced an investment in municipal infrastructure planning for the municipality of Miltonvale Park.

Through the Capacity Building Fund, a component of the Canada-PEI Gas Tax Fund Agreement, the investment will help the municipality of Miltonvale Park develop options for wastewater and water servicing.

The municipality has received $60,000 from the Gas Tax Fund towards a Wastewater and Water Servicing Feasibility Study project.

"Safe drinking water and wastewater is a priority for the Government of Canada," said MP Gerald Keddy, Parliamentary Secretary for the Atlantic Canada Opportunities Agency, on behalf of Lawrence Cannon, Minister of Transport, Infrastructure and Communities. "The funding for a Wastewater and Water Servicing Feasibility Study in the municipality of Miltonvale Park is aligned with the type of investments our government is making through the Building Canada $33-billion infrastructure plan."

Carolyn Bertram, Minister of Communities, Cultural Affairs and Labour, said the Capacity Building Fund is a wonderful initiative focused on assisting municipalities in long-term planning and establishing sustainability.

"This funding will help establish municipal infrastructure and I look forward to continuing to find long-term, stable funding solutions for municipalities," she said.

Don Aitken, chairperson for the Municipality of Miltonvale Park, added he would like to thank the provincial and federal governments for these funds on behalf of the community council and residents.

"We are currently embarking on the review of our official plan and the information obtained from this study will be invaluable in this process. We believe that this project will enhance the community both today and for years to come."

The Gas Tax Fund is available to local governments for environmentally sustainable projects that lead to the reduction of greenhouse gas emissions, cleaner air or cleaner water. The Gas Tax Fund agreement is administered in Prince Edward Island by the PEI Department of Communities, Cultural Affairs and Labour.

Windsor, West Hants explore sewer options

By Nadine Armstrong

They are trying to get their stuff together. The Town of Windsor and the Municipality of West Hants are another stab at sharing sewage treatment infrastructure. After having examined what appeared to be all the possibilities, the town presented a third option during a recent joint council session.

Public Works director Don Beatty told council that the town has looked into a lagoon treatment system, and the numbers reported back were the most cost-efficient – not only for the town, but possibly for the municipality as well.

Rather than have Windsor pump its waste to Falmouth, an option already deemed impractical and expensive, Falmouth could send its sewage across the river to Windsor.

Windsor CAO Louis Coutinho said, "in essence, the Windsor option is very economical. Also, it's a sustainable project in that operating costs are much lower and fairer to tax payers. For some years, we've been looking at a sewage treatment plant and always thought a joint one would be most economical. But when our consultant looked at the Falmouth option, it was the most expensive with very high capital and operational costs."

Cost Comparison

The Windsor to Falmouth option would cost $4 million for the town to construct and an additional $5 million for the municipality, with operational costs well over $400,000 each.

Coutinho said the Windsor solution would still cost the town about $4 million, but West Hants only $1 million, with a shared infrastructure cost of under $400,000.

"All they would have to do is build the infrastructure to pump it out," he said. "Basically the largest flow is in Windsor; it doesn't make sense to go from large to small."

After more than a year of examining the possibilities, the numbers presented that evening came as a surprise to West Hants.

"I'm shocked by the numbers I just heard," Falmouth-area Councillor Rick Gaudet said. The municipality showed a strong interest in learning more, which was good news for the town.

"It looks like, somehow, the West Hants council missed some of the facts," Couthino said. "And there is an interest now."

The municipality has already received some infrastructure money from the province and have a stricter time-line for completion of a system, considering growth in the Falmouth area.

"Right now we're just looking at phase I, and trying to do this in baby steps," Councillor Shirley Pineo said of the West Hants sewer treatment project. "But I also want what is most affordable for the people of Falmouth."

Condensed Timeline

The town's original time line could be condensed, Mayor Anna Allen said, if there is a partnership in place.

"If we partner with West Hants, it may not take the five years we planned. And if it saves money for the taxpayers in the long run, why wouldn't we?"

Coutinho also pointed out that the lagoon system is not only more cost-efficient, but considerably more environmentally friendly.

"It is important that we recognize that, right now, we're polluting the Avon River, and that has to stop. And at the end of the day, we have to consider how this is going to affect our taxpayers, and do what is best for them economically."

He said "what we need is a good neighbour agreement. But it has to be fair to everyone. The province is only going to want to build one treatment plant and consider the best project."

The CAOs of Windsor and West Hants met again in March to revisit the plan.

– *The Hants Journal, Transcontinental Media*

Photo courtesy of Department of Communities, Cultural Affairs and Labour

Gerald Keddy (Parliamentary Secretary for the Atlantic Canada Opportunities Agency), Doug Currie (PEI Minister of Health), and Stu MacFadyen (deputy mayor of Charlottetown) discuss improvements to Charlottetown's wastewater utilities.

Financial boost helps Charlottetown upgrade its wastewater utilities

Charlottetown will benefit from improvements to the city's wastewater utilities thanks to a combined investment from the Government of Canada, the Province of Prince Edward Island, and the City of Charlottetown.

The announcement was made on March 14 by: Gerald Keddy, Parliamentary Secretary to the Minister of the Atlantic Canada Opportunities Agency (ACOA); Richard Brown, Minister of Development and Technology; Stu MacFayden, Deputy Mayor of Charlottetown.

Funding worth more than $650,000 will improve the city's wastewater utilities through the installation of ventilation and odour control systems at the Charlottetown Wastewater Treatment Plant and upgrades to the Brighton Road and Beach Grove Road lift stations. This funding is being made possible through the Canada-Prince Edward Island Municipal Rural Infrastructure Fund (MRIF).

The MRIF is administered by the PEI Department of Communities, Cultural Affairs and Labour, and ACOA through the Canada-PEI Infrastructure Secretariat. Project costs are being shared on a one-third basis between the federal, provincial and municipal governments.

"The Government of Canada is pleased to invest in strategic infrastructure projects that keep our cities vibrant and strong," said MP Keddy.

Minister Brown added that water and wastewater treatment are important behind-the-scenes services that keep the province healthy, clean and comfortable.

"Infrastructure is the foundation of our quality of life, our economic progress, and our environmental sustainability," says Brown. "The projects we are announcing will ensure that modern infrastructure is in place not only for residents of Charlottetown, but for our provincial Sludge Remediation Initiative."

During the past two years, the City of Charlottetown Wastewater Treatment Plant upgraded its wastewater treatment capabilities and implemented Charlottetown's portion of the Provincial Sludge Management Strategy, including septage receiving, dewatering, sludge pasteurization and ultraviolet disinfection. The MRIF funding will support a thorough analysis of the current system as well as the design, building and installation of the required ventilation and odour control systems. A request for proposals will soon be issued by the city and work will begin immediately.

"With this financial assistance, the city will now promptly address the ventilation system and the resultant odour problem that has occurred in the area and significantly improve the air quality in the neighbourhood," said Charlottetown mayor Clifford Lee. "The funding will also allow the city to complete upgrades to the electrical and piping systems within these two lift stations and help alleviate the shutdowns that have taken place in the past. We appreciate the support from the federal and provincial governments to complete these projects."

Work will also soon begin to modernize the aging Brighton Road and Beach Grove Road lift stations which service approximately 630 properties. In order to ensure reliable service, the mechanical systems, piping, valves and partial electrical systems of the stations will be upgraded and replaced.

NEW WATERFORD WTP

Photo courtesy of Dillon Consulting Ltd.

The new water treatment plant is scheduled to come on line in late April and will provide improved drinking water to approximately 3,500 homes.

New water for New Waterford: Before and after like night and day

By Robert Bay

New Waterford and area residents will soon be drinking cleaner, better tap water, thanks to a brand-new, $11-million water treatment plant.

The new plant is scheduled to come on line in late April and will provide water that meets or exceeds the Guidelines for Canadian Drinking Water Quality to approximately 3,500 homes, serving nearly 10,000 consumers.

"This new water treatment plant was needed to replace the existing pumping station which only chlorinated the water," says Greg Penney, operations manager for the Cape Breton Regional Municipality Water Utility.

The old pumping station was not in compliance with the provincial water strategy the government finalized in September 2005.

Construction on the New Waterford plant began in January of last year. As of late last month, the plant was 95 per cent complete and was starting to be commissioned.

Joneljim Concrete Construction (1994) Ltd. has been the project's general contractor, with Lynk Electrical installing the dissolved air flotation (DAF) tanks and Strescon supplying the concrete.

Pre-cast concrete was used in the construction of the plant.

"One of the advantages of this form of concrete is that we were able to get the structure up very quickly. says Andrew Levatte of Strescon. "While the builders were working on tanks and underground services, we were working on structure in our factory."

Gary Peach, technical manager of Joneljim, says residents will benefit greatly from this state-of-the-art plant and notice an amazing difference in the quality of their water.

"When the new treatment plant came on line in Glace Bay where I live, looking at what came out of the taps — the difference was night and day," says Peach. "So, comparing it to the Glace Bay experience, they should be excited."

Fast Facts:

- The Cape Breton Regional Municipality Water Utility is a large operation, running eight water plants throughout the area.
- Since the province announced the new water strategy, the utility has been busy securing funds, building and upgrading facilities.
- CBRM secured $50-million in funding by 2004 to proceed with the construction of three new water plants and the upgrading of others. In addition to the New Waterford plant, a new plant for the Louisbourg area came on line in late 2007 and the municipality will begin construction of a plant in North Sydney shortly.

Construction photos courtesy of Dillon Consulting Ltd.

Smooth sailing during plant construction

By Robert Bay

There have been no major waves during the construction of the state-of-the-art water treatment plant in New Waterford.

"Since construction began in January 2007, progress has been fairly steady," says Greg Penney, operations manager for the Cape Breton Regional Municipality Water Utility. "We haven't faced any major challenges."

Technical manager Gary Peach of Joneljim Concrete Construction (1994) Ltd., general contractor for the project, described the work as "smooth sailing", adding that the location, on Daley Road adjacent to the old plant, was an excellent choice.

Advantages of Pre-Cast Concrete

The pre-cast concrete construction, provided by Strescon, helped to accelerate production of the project. The walls and the double-T roof of the building were made in pre-cast concrete with the underground water tanks and the facility's floor cast in place. It only took two weeks to install the building.

Speed of construction is only one of the many benefits associated with pre-cast concrete, says Strescon's Andrew Levatte.

"It also provides a superior quality of product and the durability to stand up to a very harsh environment," he says.

A water treatment plant can provide a very challenging environment because of the caustic chemicals used and the level of heat that is emitted during the treatment process.

The "tight control" which pre-cast concrete allows — computer-monitored chemical mixing and a controlled curing environment — makes it more capable of handling the demands of the plant's environment.

"Special chemicals and a low alkali mix are needed for a treatment plant," says Levatte. "We use an additive that protects the reinforcing steel."

Benefits of Dissolved Air Flotation

The process which will purify the 1.5-million gallons of water New Waterford and area residents consume daily is a method known as dissolved air flotation (DAF). Lynk Electrical, which installed the DAF tanks in the facility, says it will serve to continuously remove colour and organics, providing a high standard of chlorination and fluoride.

Dave Howley of Lynk Electrical says the DAF process works a bit like what happens when you open a bottle of beer.

"The bubbles on the bottom want to escape to the atmosphere," Howley says. "We force air into the system to encourage this. When these bubbles move upward, they bring impurities which are later removed, leaving purer water."

Joys of Consistency

The high-quality water created by the new plant will also be delivered to homes with greater consistency, according to Terry Boutilier of Dillon Consulting Ltd., the consulting engineering firm for the project.

"We revised the pumping system, installing variable speed drives on the pumps, which will allow us to better control pressures in the system," Boutilier says. This stabilized pressure will be felt all the way to the taps.

Boutilier adds that, in addition to better water, the plant should provide good value for years to come.

"We managed to balance the operations and maintenance components of the project to provide the best long-term building we could. The operational costs will definitely be more consistent."

SOUTH QUEENS WTP

Photos courtesy of Region of Queens Municipality, Engineering and Works

The municipality was there from start to finish guiding the creation of the plant. Its crews carried out the excavation work, the supporting piping work, and added the fill — essentially laying the groundwork for the project.

Liverpool and Brooklyn toast to clear, clean water

By Robert Bay

By the time you read this, Liverpool and Brooklyn residents will be enjoying crystal clear tap water. A $7.21-million water treatment plant came on line this month.

The new plant, built by 3-C's Contracting, will provide improved water to more than 1,000 households currently connected to the municipal water supply, as well as extend the municipal water system to over 100 more households.

Brad Rowter, Region of Queens Municipality director of engineering and works, says the 18-month project was relatively seamless.

"Work progressed quite well," he says. "Actually, progress went remarkably well. We had few, if any, issues."

The new plant will not only provide better drinking water quality but improve the water's aesthetic appeal.

"Historically we've had turbid water," Rowter explains. "It's discoloured, and even though it's perfectly safe, there is a perception that, because it's coloured, it's not clean." This improved system will change all this.

As an additional benefit, the nearby fish processing plant will see its need for clear water met.

"The large fish processing plant here is our biggest customer," Rowter says, "and it has to be very careful — it can't afford to have discoloured water — so the company will be pleased."

The project, originally priced at $6.75-million, was funded by the three levels of government as part of the Canada-Nova Scotia Municipal Rural Infrastructure Fund operated by the Atlantic Canada Opportunities Agency. The federal and provincial governments contributed $4.5-million combined, with the municipality making up the rest.

An early design pegged the facility's total cost at more than $9-million, beyond the municipality's budget, but with careful examination of the construction process, it managed to work the budget down to $6.75-million. The final cost was $7.21 million.

The municipality's works department was heavily involved in the construction which helped to keep costs down. In January, Rowter told The Advance that, despite the cost overrun "it still gives us a tremendous value for that money" because it is far less of a cost than if the entire project had been turned over to a contractor.

At that time, Mayor John Leefe praised the municipality's public works department, saying it demonstrates how fortunate residents are in the Region of Queens to have an engineering and works department that can undertake such a large civil engineering project and successfully manage it.

SOUTH QUEENS WTP

Photos courtesy of Region of Queens Municipality, Engineering and Works

The new plant, built by 3-C's General Contracting, will provide improved water to more than 1,000 households currently connected to the municipal water supply, as well as extend the municipal water system to over 100 more households.

There . . . every step of the way: *Municipality played active role in project*

By Robert Bay

Construction on the South Queens plant began in September 2006. Builders spent last month commissioning the plant, producing and testing water in the final stages before bringing it on line.

The municipality played a very active role in the project process. It was there every step of the way providing funding, guidance and labour. In fact, the engineering and works department did most of the heavy lifting in the early stages.

"We do things a little different around here. We carry out our own civic work. We use our own excavators, and other equipment, much like a construction company," says Brad Rowter, Region of Queens Municipality director of engineering and works. "We do our own sewer installations, our own roads, and so on. So, for this water improvement project, the general contractor really did the work from the foundation up. We did the excavation work, the supporting piping, and a lot of fill."

Construction went relatively smoothly. The one snag the project did encounter was overcome without much difficulty. Rowter explains that the site was pretty well fixed, based on the hydrology and the horizontal plains, but it had some unsuitable soil due to its flatness and water saturation.

To remedy this problem, the municipality put its fleet of construction vehicles to work moving earth.

"We had to remove a lot of unsuitable soil," Rowter says.

Workers replaced the unsuitable soil with new, clean fill, and then set to work reshaping the earth, or at least their corner of it.

"We ended up constructing a raised area or hill for the concrete reservoir tank," Rowter says.

Once the groundwork was laid, the municipality brought in 3-C's General Contracting who built the plant, the tanks, the mechanical, and the electrical.

Over the 10 and a half months that 3-C's spent on the project, the company experienced no difficulties.

"Everything went pretty much as planned," says Ivan Crnogorac, company president.

SHELBURNE WTP

Photos Contributed

Many companies worked long and hard to help make the Shelburne water improvement project a reality.

Major water project near completion

By Stephen Clare

Residents of Shelburne will soon have cleaner drinking water with construction upgrades to the town's water treatment plant expected to be completed next month.

"This has been a long time coming," says the town's mayor P.G. Comeau. "It's been nearly seven years since the project was first announced. Residents here have been wonderfully patient about the entire process."

The quiet community on Nova Scotia's South Shore has long been ailed by discoloured drinking water, often requiring residents to abide by strict boiling orders.

Upgrades to the plant have been ongoing since 2001, when initial studies determined the water's quality was the poorest in the province. The renovations were originally announced as part of a $195-million joint venture undertaken through the Canada-Nova Scotia Infrastructure Program.

Halifax-based CBCL Limited has been involved with the project since its inception, overseeing the actual installation of the water treatment process. Established in 1952, CBCL provides professional consulting services in a number of disciplines — municipal, civil, environmental, structural, mechanical, electrical, industrial, instrumentation and controls, and landscape architecture. The company's municipal engineering staff have worked with municipalities across the province in all aspects of wastewater collection and pumping systems, including: pre-design servicing studies; inflow and infiltration studies; wastewater collection system condition assessments; pipe material selection analyses; pre-design, detailed design and construction related activities.

CBCL has been busy installing a dissolved air flotation (DAF) system for the plant.

Continued on page 18

Fast Facts: Town of Shelburne

- Shelburne is located two and a half hours from Halifax Stanfield International Airport, one hour and 15 minutes from Yarmouth airport and ferries, and two and a half hours from the Digby Ferry to New Brunswick.
- The town offers breathtaking scenery ranging from glistening lakes and oceans to miles of green forest.
- Waterfront activities include boating, walking tours, museums, dining and more.
- Shelburne is steeped in Loyalist history. It is home to one of the most active reenactment associations in Canada and to six museums.
- Nearby, there are great birding spots, geocache sites, lighthouses and beaches.
- The town is know for its annual Lobster Festival, Whirligig & Weathervane Festival, Founders' Days and historical reenactments.
- Its region of Southwestern Nova Scotia is considered to be one of the most cost-effective places in North America to base a business. The tax rate is very favourable, the workforce is strong, and there is an abundance of support resources for new and existing businesses.
- Numerous wooden buildings inhabit Shelburne, with many located in its "historic district".
- The architecture in the town's historic district spans 1783 to 1900 offering an array of architectural styles.
- Shelburne boasts the third largest natural harbour in the world.
- The town is a short drive away from such quaint communities as: Cape Negro, Lockeport, Cape Sable Island, Birchtown, Clarks Harbour, Shag Harbour and Barrington.

SHELBURNE WTP

Near completion

Continued from page 17

"DAF is a water treatment process that clarifies wastewaters by removing suspended matter such as oil or solids," says Aaron Baillie, a CBCL engineer working on the Shelburne project. "This is achieved by dissolving air in the water or wastewater under pressure and then releasing the air at atmospheric pressure in a flotation tank or basin. The released air forms tiny bubbles which adhere to the suspended matter causing this matter to float to the surface of the water where it may then be removed by a skimming device."

Dissolved air flotation is also widely used in treating the industrial wastewater effluents from oil refineries, petrochemical and chemical plants, natural gas processing plants and similar industrial facilities.

CBCL is also adding a lagoon system to the plant.

"Lagoons are pond-like bodies of water or basins designed to receive, hold, and treat wastewater for a predetermined period of time," says Baillie. "In the lagoon, wastewater is treated through a combination of physical, biological, and chemical processes."

He adds that lagoons like the one being installed in Shelburne must be individually designed to fit a specific site and use.

"Designs are based on factors such as type of soil, amount of land area available, and climate," says Baillie. "Other important design considerations include the amount and type of wastewater to be treated and the level of treatment required by regulations. Wastewater leaving a lagoon may require additional treatment to remove disease-causing organisms or nutrients before it can be returned to the environment."

Photos Contributed

Construction on Shelburne's WTP is expected to be complete by next month. The quiet community on Nova Scotia's South Shore has long been ailed by discoloured drinking water, often requiring residents to abide by strict boiling orders. The new improved system will offer higher quality and quantities of potable water to the 250 households in the area.

SHELBURNE WTP

A long wait — but worthwhile

By Stephen Clare

Shelburne's mayor P.G Comeau can't believe the day has almost arrived.

"Folks here have been waiting on clean water for as long as I can remember," he says. "I can't believe the plant will soon be finished."

The $277,641 project was designed to bring a more effective flotation system into the existing treatment process. The addition will improve the system by offering higher quality and quantities of potable water to the 250 households in the area. The federal and provincial funding was augmented by the Town of Shelburne itself, which funded the balance of the project costs.

"It was very encouraging to see the cooperative effort of the three levels of government make this project happen," says Comeau.

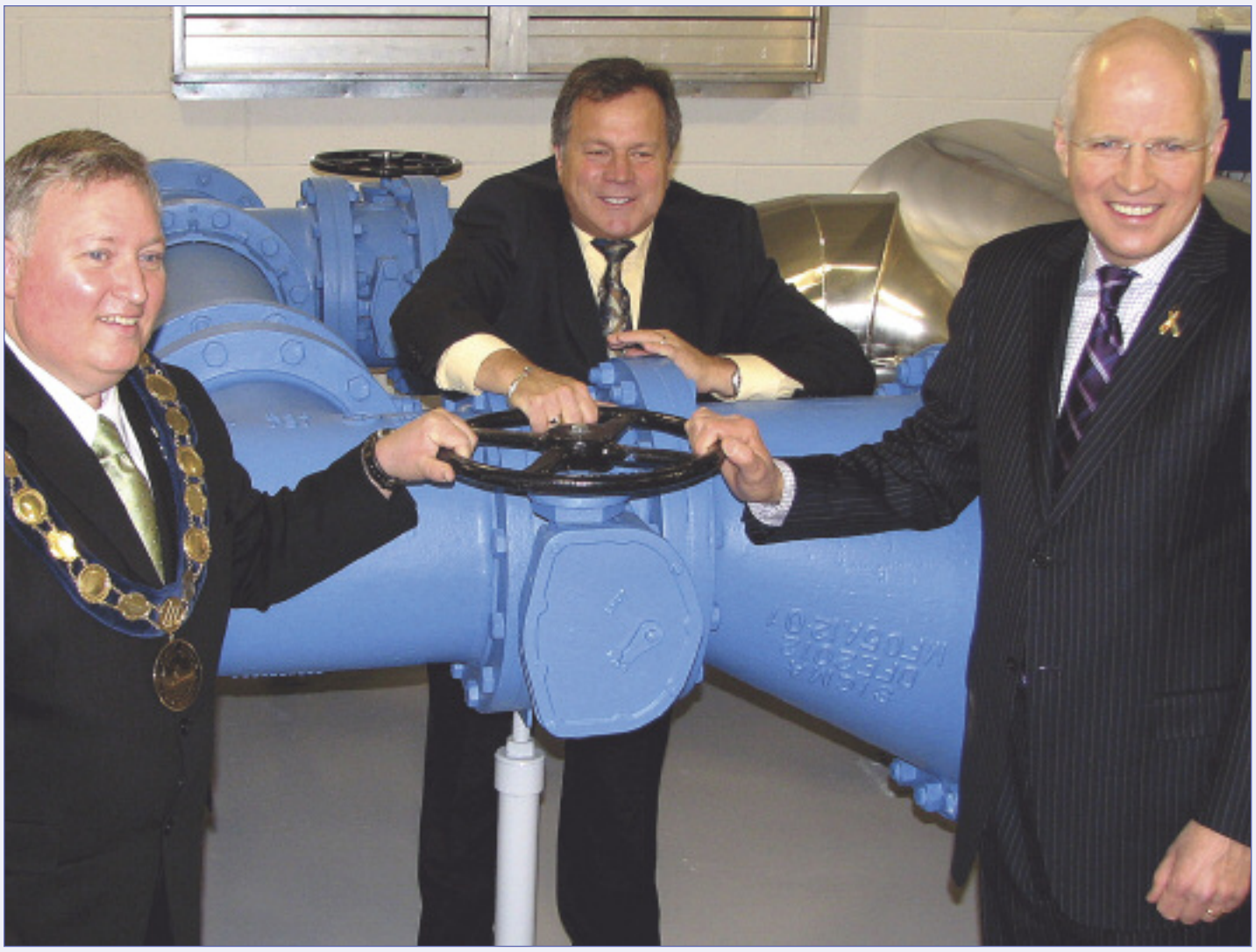
Within a couple of years of the funding announcement, the municipality had a variety of options from which to choose to resolve the issue of its discoloured, pungent smelling water.

"We were looking for the most efficient and cost effective way to deal with the issue," says Comeau. "We asked ourselves: 'Should we completely overhaul the system and start from scratch? Or should we fine tune the existing system?' In the end, we decided to meet in the middle."

Upon recommendation, the municipality opted for a dissolved air flotation (DAF) system to treat the water. CBCL Limited of Halifax, which was involved with the design and installation of the system as well as the new lagoon, has been super to work with, says the mayor. "They walked us through every step of the process."

ACL Construction of Bedford won the tender as general contractor for the construction and renovations of the building itself. Work on the structure got underway this past September and is nearly complete.

"The plant looks fantastic," says Comeau. "All the companies involved did a magnificent job getting this thing up and running and we are all very grateful that they were willing and able to work through some challenging weather conditions."



Photos Contributed

Federal and provincial officials joined representatives from St. Andrews to officially open the town's new plant. From left: St. Andrews mayor John Craig, Fisheries Minister Rick Doucet, and Veterans Affairs Minister Greg Thompson.

Three levels of government officially open new St. Andrews plant

On March 17, federal and provincial officials joined representatives from St. Andrews, New Brunswick, to officially open the town's new water treatment plant. The ultraviolet treatment facility has been operational for several months and is already working to provide a higher quality and more secure water supply for municipal residents and businesses.

"Our investment of more than $1 million is providing better, safer water for St. Andrews, and has strengthened the infrastructure needed to ensure the long- term prosperity of this community," said Minister Thompson on behalf of Peter MacKay, Minister of National Defence and Minister of the Atlantic Canada Opportunities Agency (ACOA).

Upgrades to the water treatment facility also included the replacement of old chlorine equipment and security fencing. The project, funded under the Canada-New Brunswick Infrastructure Program, is part of a $3.45-million undertaking, which also involved repairs to the Chamcook Lake dam, renovations to the existing concrete reservoir and replacement of old cast iron water mains.

"With the support of our federal and provincial counterparts, the citizens of St. Andrews are now guaranteed safe and reliable drinking water well into the future," said mayor John D. Craig of the Town of St. Andrews.

The Government of Canada, the Province of New Brunswick and the Town of St. Andrews each contributed $1.15 million toward the total eligible costs of the project.