MPWWA

Maritime Provinces Water & Wastewater

REPORT

Vol. 11 No. 2 $3 October 2003 Permit No. 1468421

MPWWR BRIEFS

Stratford, P.E.I. hauls away lagoon sludge

Truckloads of sludge are being removed from the lagoon at Stratford's wastewater treatment plant after a sodium nitrate solution failed to eliminate a foul odour. Approximately 150,000 gallons of sludge will be hauled away from the lagoon.The removal could cost more than $10,000.

Odour is common in the summer months due to low oxygen levels. Aside from the sodium nitrate solution, extra aeration pipes were installed.

The town has also received a permit from the P.E.I. Department of Environment to lower the water level in order to build more oxygen to dissolve accumulated sludge at the bottom of the water.

Sewage collection system contract signed

A contract between Halifax Regional Municipality and Dexter Construction to design and build the sewage collection system for the Harbour Solutions Project was officially signed on August 15.

Regional Council's Harbour Solutions Advisory Committee approved the final agreement. It was signed by Mayor Peter Kelly, on behalf of Regional Council, and Kurt Jacobs and Hugh Smith, on behalf of Dexter Construction and Municipal Enterprises.

The final contract price will be no more than $115.7 million, plus taxes and inflation. Construction is expected to start in late summer or early fall.

The Harbour Solutions Committee has met to review progress in talks with Dexter. It was authorized by Regional Council last month to review, and eventually approve, the draft agreement between HRM and Dexter.

HRM staff made recommendations to Regional Council in September regarding the sewage treatment plants and future phases of the project.

Atlantic certification courses schedule released

The Atlantic Canada Water Works Association will be putting on a number of certification courses throughout Atlantic Canada. These courses will prepare the student to write the ABC qualification exam in either Level I or Level II. The student must have passed the Level I exam before writing Level II. To qualify to write the exam, an application must be submitted to the designated person at their provincial Department of Environment.

Qualification requires a satisfactory combination of formal education and work experience. For more information and provincial schedules, and current Department of Environment representatives in Atlantic Canada, visit www.canfish.com/awwa, or call Clara Batten, office administrator at (902) 827-2391.

Moncton system showcased in Norway

A Moncton sewage commission official addressed the first international conference on biosolids in Norway in June. Ron J. LeBlanc, president of the board of directors, was invited to address the conference and outline the commission's efforts with dealing with biosolids/sludge that is eliminated from wastewater, before clean water is discharged into the Petticodiac River. Years ago, the commission took the initiative to develop products for use in agriculture and landscaping projects such as soil reclamation in topsoil farms and now as compost material, and began marketing the new resource.

Major infrastructure project planned for New Maryland

The Village of New Maryland is partnering with the federal and provincial governments under the Canada – New Brunswick Infrastructure Program to upgrade its sewage system. The total investment under this program will be $8.8 million, with each of the three funding partners contributing a third of this amount.

Work to be undertaken involves the creation of a sewage collection system and the replacement of nine separate sewage treatment facilities with a single modern treatment plant. Among the subdivisions benefiting from the upgrade are Sunrise Estates, Peterson Trailer Park, Cedar Acres Court,

Cont'd on pg. 16

Photo by Noreen Heighton

John Brewer, owner of Anne's Windy Poplars in Cavendish, shows his newly installed well cap to Paula Cole. The cap will prevent vermin from entering his well.

Eliminating the fear of contaminated water

By Noreen Heighton
Contributing Writer

It only takes one person drinking from one contaminated well to destroy a multi-million dollar tourism industry. That's the fear of the 200 operators in the Cavendish Area Tourist Association (CATA) on Prince Edward Island.

The residents, businesses and 20,000 summer visitors in the Cavendish Resort Municipality on P.E.I.'s north shore drink ground water that is pumped from individual wells, vulnerable to contamination from septic systems, vermin and neighbouring farms.

The need to eliminate this fear prompted three levels of government to provide more than $22,000 for the CATA Water Quality Conservation Project, conducted throughout the summer of 2003. The project is one of the priorities outlined in the Cavendish Area Sustainable Tourism Plan completed in 2002.

The funding allowed CATA to hire Stephanie Mossman as project administrator and Paula Cole as field officer. They communicated with nearly 600 residents and business operators to provide water testing education and conduct site surveys. People were taught how to take a sample of drinking water and where to send it for testing. The survey gathered information about the type, size and age of septic systems and location and depth of wells.

Cole says she was surprised to learn that some people didn't know where their well was located or that their cinder block sewage system didn't meet municipal regulations. Some were also unaware that mice and ear-wigs can get into wells. Although the project team had no authority to enforce recommendations for the removal of old septic systems or installing well caps, Mossman says that call backs indicated most people implemented the changes necessary to ensure the safety of their water. She adds that results of well tests went directly to the well owners, not back to her, so she can't say how many had safe water.

Some did not. Tests on the the well at the P.E.I. Visitor's Information Centre in Cavendish detected choliform bacteria in early July. According to Greg Shaw, technical officer for P.E.I. National Park, a protective ultraviolet light installed in the well to kill bacteria failed. People were warned not to drink the water, the well was chlorinated and flushed out, and within days the water was safe again.

Sandi Lowther, Marketing and Product Development Officer for CATA, says that kind of awareness is the most

Cont'd on pg. 4

Industry ponders small systems risk profile

By Line Goguen-Hughes
MPWWR

New regulations for water utilities in Nova Scotia have some people wondering how far is far enough when it comes to risk management.

The provincial regulations, determined by the Department of Environment, were presented to all water utilities in Nova Scotia in December 2002.

"They are the most far-reaching regulations we've seen for quite some time," says Carl Yates, general manager of the Halifax Regional Water Commission (HRWC). "A good part of it is Walkerton fallout. A lot of discussion about regulations has taken place across Canada, so we've seen a lot of provinces invoke new regulations. Ontario led the way, but a lot of provinces are following in that same vein."

Nova Scotia's probably leading the pack in Atlantic Canada right now in terms of regulations, says Yates.

The first step all utilities in Nova Scotia had to take was to reapply for operating permits by January 2003, in order to standardize all provincial information for a massive database.

Now, all utilities must conduct assessments to confirm and verify if present systems comply with the detail outlined by the new regulations. Assessments must be carried out by a professional engineer, and results submitted to the Department of Environment by March 31, 2004. The HRWC has hired CBCL Consulting to go ahead with its assessments.

Yates explains that utilities that aren't complying with the regulations must hand in a report outlining what they plan to do to bring their system up-to-speed.

Once what needs to be done is established, the work must be com-

Cont'd on pg. 2

New regulations for water utilities bring up risk profile issues in N.S.

Cont'd from pg.1

pleted by March 2008.

"Everything must be compliant, so if you have to make any capital investments, you only have five years to do it," says Yates.

Several issues are addressed in the new regulations. For instance, they have standardized the level of giardia parasite removal at filtration plants, as well as the level of virus removal. There are stricter requirements for backwashing of water too. Also in terms of new regulations, there are stricter certification requirements for treatment plant operators.

Yates says he expects some systems will be close to meeting regulations, and some won't be close at all. But what concerns him most is what to do with the small systems, he says.

"Though the new regulations are fair for larger systems, from a risk management point of view, I struggle to say that the benefit is there for smaller systems. This is a challenge which will be troubling for utilities in Nova Scotia, and in most respects for all provinces in Canada."

He explains that there is no real definition for small systems. Some people in the industry have said that if it services less than 10,000 people, it is small. Yates himself suggests that a small system services a population of less than 1,000 people.

The smallest systems are particularly sensitive to these new regulations because of the lack of economies of scale, says Yates. When it comes time to make the capital investments required to make the systems comply with the regulations, the rate base is small.

Unless there is an external funding mechanism to help pay for the upgrades, the cost is going to bear on the ratepayer.

"In some cases, they could see water rates that would double as a result of these regulations," he says. "So it's significant for small systems. In some cases, some of these small communities may already have a filtration plant, but it's been designed as a neat little packaged plant, in order to be as economical as possible. But the new regulations are saying that you need at least two filters. In some cases, the packaged plant with one filter will have no room to expand in the footprint in the building. So the community will have to build a mirror image of what they already have. That can be extremely expensive on a small system."

New provincial regulations could indirectly cause an increase in water costs for consumers from small communities, even though their water quality at home won't change significantly.

What is really troubling is that the benefit may not be there, says Yates.

"That, in my opinion, is what is missing in these regulations: The cost benefit for the small systems. So in some cases, I will have to go in to my customers who have excellent water, with no problems, and tell them that because of the new regulations, I have to build them an additional filter. Then they're going to look me straight in the eye and ask me if they're going to see a significant increase in their water quality, and I will stare back and say: 'No, but I'm going to charge you twice as much.' That's real tough for us to get across to our customers."

He says he wonders whether little systems should have the same risk profile as larger systems. The difference is as minute as going up to a 99.99 per cent safety factor from a 99.9 per cent safety factor. However, he says if that is the way it must be, he hopes someone will come up with an external funding program.

Future unclear for former JAG projects

Group initially established to find solution to Sydney Tar Ponds problem

By Brent McCombs
Contributing Writer

As the offices of the Joint Action Group in Sydney prepare to close, team members and volunteers are still waiting to see what comes next, and who's going to take up the slack.

Established in 1996, the Joint Action Group (JAG) is a community driven process with the goal of remediating one of Canada's most toxic sites — the Muggah Creek Watershed. Initially established to find a solution to the Sydney Tar Ponds, JAG evolved and broadened its mandate to include the former Coke Ovens site, the Tar Ponds, and impacts of the municipal landfill — all part of the Muggah Creek Watershed area.

Comprised of local residents, business people, government representatives and youth, JAG has worked to present a unified voice, melding the individual interests of all those involved for the greater good of the community.

So why is JAG closing its doors? According to JAG chair Dan Fraser, the memorandum of understanding (MOU) signed in September 1998 was for a five year period, and that period is now complete. Although the MOU contained a provision allowing for their mandate to be extended, the government has decided that something new is needed.

"As far as JAG goes, they did an excellent job in a difficult process," says Kelly Cowper, senior communications advisor with Environment Canada. "Now they have provided the community's recommendation. The project is now moving to a new phase. Government is listening to what the community said about what they want for engagement, and are going to respond to that."

Garth Bangay, regional director general for Environment Canada has been working with JAG since its inception. He says that following JAG's submission of the Community Recommendation Report, the project has changed enormously.

"Once a decision is made about approaches and technologies, we will then enter an environmental assessment phase. That can take 18 to 24 months. During this period, there is a clearly stipulated series of steps about how to engage the people of Sydney. The kind of intense analysis that JAG has had to conduct over the last years is not really needed, and would be redundant to the process. Assuming we get through that process and move on, then it becomes essentially a construction process. While it will require a level of engagement with the community, it's nowhere near what we've had."

So what will become of JAG and the data and material is has created?

"All written material will be archived, and we are working with the Cape Breton Regional Municipality to host the JAG Web site on their server so that info will be available to interested people," says Fraser.

"I absolutely want JAG to continue. The successes that took place under JAG have been great. Look at the community and how JAG has become empowered; it is a shame that this organization will disappear."

- Dan Fraser

Furniture and all other office materials from the JAG offices will be put in storage, and any new group established to replace JAG will have access to it, he says.

As for members of JAG, such as volunteers, Fraser says they're still waiting to find out what government has in mind for the period after September 18th.

Bangay says that his office's intention "has always been that we are looking for a seamless transition, and will want to bring forward a plan outlining the next stages of the plan before the termination of the MOU. We are still pushing towards that, it's the objective we stated in June, and we're still on plan. JAG is a wonderful forum for accountability. And we as members of government are part of the group, and the group tends to hold us accountable."

For Fraser, overseeing the end of JAG is difficult. He has strong personal opinions on the issue.

"I absolutely want JAG to continue. The successes that took place under JAG have been great. Look at the community and how JAG has become empowered; it is a shame that this organization will disappear. On a monthly basis, senior government officials came to our town and discussed issues, and then moved forward with motions to make things happen."

Fraser worries that the community will lose this level of engagement and access.

"When senior government officials come, staff in those organizations move things along a lot faster than would otherwise be possible," says Fraser. "It's made a big difference here, and we're going to lose all that."

Easing drinking water fears on P.E.I.

cont'd from pg. 1

important result of the water conservation project. She says 179 businesses had their wells tested and analysis will continue next season, adding that owners now say the project should encompass the whole island.

Paula Cole agrees.

"People need to know what they're drinking," she says, even though they might be suspicious of why their water is being tested.

"It was important to let them know that this wasn't being done because there was a problem. It was being done to prevent a problem," she says.

It seems that people are taking prevention seriously. Garth Reid, an employee of Toombs Plumbing and Heating in Cavendish, says he's installed quite a few well caps and has also chlorinated wells and installed ultra violet lights this summer.

Left: Garth Reid drains the pump of a cottage owner's well in Cavendish. Reid says area residents are making their drinking water safe by installing well head caps and seals.

Right: Stephanie Mossman, right, and Carole MacMillan in the New Glasgow Inn reviewing water testing information.

MPWWA Maritime Provinces Water & Wastewater REPORT

Customer # 02292955 Acct. # 0229295599

Editorial & Production Services Provided by:
Transcontinental Media Business Publications
Publisher: Catherine Moxsom
Editors: Line Goguen-Hughes, Ken Partridge, Claudia White
Editorial e-mail: lhughes@hfxnews.ca
Project Sales Coordinator: Maurice Rees
Sales Executives: Naster Tracz, Peter Coleman
Sales Assistant: Nora Melanson
Sales e-mail: MPWWR@hfxnews.ca
Subscriptions: 4 issues - $10 plus taxes. (NS, NB, Nfld - $11.50); (PEI & Rest of Canada - $10.70); (Outside Canada - $16.05).

Maritime Provinces Water & Wastewater Report is published quarterly by *Transcontinental Media Inc.* Mail Product Sales Agreement #275247.

Mailed under Canada Post Publications Mail Sales Agreement No. 1468421

Maritime Provinces Water & Wastewater Report
11 Thornhill Drive, Dartmouth, NS B3B 1R9
PHONE: (902) 468-8027, FAX: (902) 468-2425

Conference will address the need to protect water resources

By Melanie Furlong
Contributing Writer

The Atlantic Canadian Water Works Association (ACWWA) will be holding its 56th annual general meeting and conference in Saint John's, NL. on Oct. 5 to 7.

The ACWWA is a section of the American Water Works Association (AWWA) that includes all of North America and has more than 60,000 members.

With about 500 members in Atlantic Canada, ACWWA chairman Richard Stephenson says the section has one of the most active membership in all of the AWWA.

At the St. John's conference this year he expects upwards of 250 delegates from water utilities, consulting engineering firms, equipment and technology supply firms, academic institutions and government regulatory bodies to attend the conference.

This year's conference theme is Water Protection: 24-7, reflecting the ACWWA's mission to support governments and industry in the protection and provision of safe drinking water.

Gerri King, conference chair, explains that the theme was chosen because whether you're an operator in a small system, a manager, a consulting engineer or a director, everybody has to protect water 24 hours a day, seven days a week, forever.

"Once water has been distributed, you can't get it back," King says. "You can't recall water. It's a really important job wherever you're coming from."

The wake-up call from Walkerton, Ont. has affected every ACWWA conference since, says Stephenson.

"Every province and water utility has gone back to improve regulations and standards," he says.

To further improve members' knowledge, the conference will offer two full days of technical and policy presentations by leading authorities in their field. As well, the conference will give members a chance to compare notes and find out how things are being done in different areas.

"Once water has been distributed, you can't get it back. You can't recall water."

- Gerri King

Among the highlights at this year's conference, keynote speaker, Patrick Newland, director of water supply to the City of Toronto, will talk about water protection from watershed to the tap.

As well, one of the technical sessions at the conference will be a presentation by Martin Gravel, vice-president for water treatment at CH2M Hill. St. John's Windsor Lake water treatment plant has been designed by Newfoundland Design Associates who are associated with the international water treatment design firm CH2M Hill. Gravel will be speaking about the technology used in the plant's design.

King says that this new system is a first for Newfoundland and that it will be exciting to have that started.

As well, CH2M Hill's George Powell, will also be chairing a round-table committee entitled Human Activity and Watershed Protection.

Representatives of all four provinces will be part of the discussion. King says that other issues to be discussed include the accuracy of water treatment equipment readings and how to manage municipal infrastructures during and after a flood like the one in Badger, NL. this year.

AWWA representative Raymond Miller will also come from California to attend the conference.

Other plans for the conference involve having some fun. A Newfoundland kitchen party is scheduled for Tuesday night, with a performance by Spirit of Newfoundland. A companion's program has been set up and a 'dine around' with committee members is organized for Monday night.

For more information regarding the conference and annual general meeting, please visit the ACWWA Web site: www.acwwa.ns.ca.

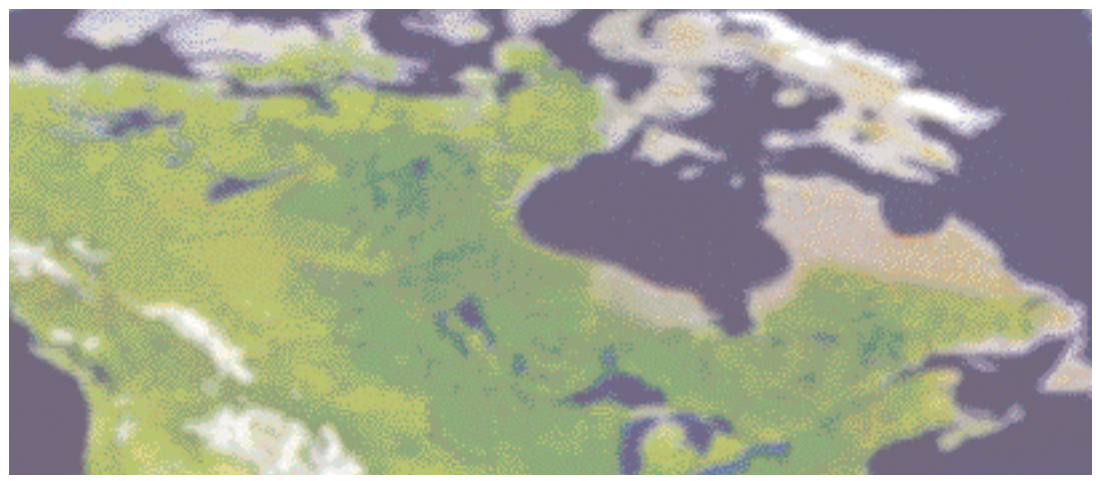
Photo by Claudia White

New developments happening in water and wastewater occupational standards

The Canadian Council for Human Resources in the Environment Industry (CCHREI) is developing Canada's first national occupational standards for water & wastewater operators.

Funded by Human Resources Development Canada (HRDC), CCHREI began focus testing in September with operators to ensure the skills and knowledge statements accurately reflect those that are required by water and wastewater operators.

In the wake of the tragedies in Walkerton, North Battleford and other similar incidents, the need to ensure the skills and knowledge of water & wastewater operators has never been more critical.



"The National Occupational Standards will be an invaluable tool for the development of job specifications, training curricula and certification criteria for water and wastewater professionals," says Gerald Samuel of Opertech Consulting, and former manager of Operator Certification and Training Programs at Alberta Environment.

The implementation of the water and wastewater standards is expected to facilitate reciprocity between provinces, aid in recruitment, the development of curricula and support self-evaluation and assessment for professional development opportunities. In addition, facility managers and all Canadians can be assured that the treatment, collection, and distribution facilities across the country are staffed by qualified and competent personnel.

CCHREI conducted focus groups throughout September in Toronto, Halifax, Calgary, and Vancouver. These discussions dealt with a comprehensive series of statements outlining the necessary competencies for performance in four functional areas: water treatment, water distribution, wastewater treatment, and wastewater collection.

CCHREI, established in 1992 as part of Canada's sector council initiative, has developed a solid reputation in the field of human resource management over the past decade.

CCHREI is headquartered in Calgary and has a regional office located in Sydney, N.S. Projects include, skill needs analysis, occupational standards development, environmental practitioner certification and program delivery ranging from the administration of an internship program, to the development of multimedia career awareness products for the environment industry.

Saint-Louis-de-Kent will upgrade its wastewater treatment

The Village of Saint-Louis-de-Kent will increase the reliability of wastewater treatment in the community, thanks to a $1,128,055 project under the Canada – New Brunswick Infrastructure Program.

The project involves upgrading the existing wastewater treatment facility and extending the wastewater collection system to 20 homes.

The announcement was made by Miramichi MP Charles Hubbard, Rose May Poirier, Minister responsible for the Office of Human Resources, and Arnold Vautour, Mayor of Saint-Louis-de-Kent.

"The Government of Canada is pleased to be a partner in this significant and essential investment into Saint-Louis- de-Kent's wastewater treatment infrastructure," said Hubbard.

"The infrastructure upgrades will help ensure the health and safety of the local environment and area residents."

"The provincial government is pleased to partner with the federal government and the Village of Saint-Louis-de-Kent to improve the municipality's wastewater treatment services," said Poirier. "This project falls in line with the Infrastructure Program's priority, which is to invest in 'green' infrastructure such as water and wastewater projects."

"The infrastructure project will help us make the necessary improvements to our wastewater treatment system, which has been diminishing over the years," said Arnold Vautour, Mayor of Saint-Louis de-Kent.

"This partnership agreement between the federal, provincial and municipal governments is adding to the efforts undertaken by our municipality to improve the health of our beautiful river."

To date, 62 infrastructure projects have been approved and announced through the Canada-New Brunswick Infrastructure Program.

The $163-million, six-year Canada – New Brunswick Infrastructure Program is administered federally by ACOA, and provincially by the Department of the Environment and Local Government, in conjunction with the Regional Development Corporation. Each of the three funding partners contributes one third of the eligible costs of approved projects.

New Brunswick

Environmental Industries Association

Supplement to the October 2003 issue of The Nova Scotia Business Journal.

NBEIA

NBEIA

New Product Showcase

The multi-bottle transportable refrigerated sampler

Advanced control and active cooling — on battery power

Isco's new Avalanche is a multi-bottle, sequential / composite water sampler featuring Isco's revolutionary transportable refrigeration system and an advanced, multi-function controller. Its unique design provides easy transport, quick setup, and on-site cooling — without reliance on ice or utility power. An optional Mobility Kit with pneumatic tires lets you wheel Avalanche even over rough terrain to remote sampling sites.

Avalanche is ideal for stormwater, TMDL, pretreatment compliance and other mobile sampling applications requiring accurate sample preservation, versatile control and flexible, reliable data handling.

In the field, Avalanche delivers 48 hours or more of refrigeration from a 12-volt deep cycle battery, which mounts conveniently on the wheeled cart. Its power-saving system begins cooling when the first sample is drawn. Avalanche can wait patiently for days or weeks to collect event-triggered samples, dial out an alarm / notification on its optional modem, and then preserve the samples until they are retrieved. Avalanche also runs on either 115 or 230 VAC.

The Avalanche controller offers all of the control, expansion and data management options available with Isco's 6712 Samplers, including:

- Plug-in flow measurement modules eliminate the need for a separate flowmeter.
- Direct-connect rain gauge and SDI-12 connection to multi-parameter sondes enable comprehensive runoff and non-point-source monitoring.

- High-capacity data logging and Isco's Flowlink Software provide the tools for sophisticated analysis and reports.

For more information, contact Avensys (Formerly Nortech GSI Inc.) at 1131 Derry Road East, Mississauga, Ontario, L5T 1P3; www.avensys.ca; phone 1-250-753-8053; fax 1-250-753-8054.

EnviroRanger improves efficiency

Located in Victoria, B.C., the Capital Regional District (CRD) includes 13 municipalities serving a population of 342,000. The District's Environmental Services division is responsible for the remediation of surface waters, sewer maintenance and wastewater treatment. The group manages facilities at about 100 sites.

In 2001, CRD began a major upgrade of the level measurement equipment in the pumping stations and trunk sewers. The old, existing analog instruments had limited capabilities. They lost accuracy in converting to digital format and communicating with the remote telemetry unit (RTU). They used a proprietary format. This configuration did not offer accurate, repeatable data and had limited scope.

Proposals from five suppliers were evaluated by Peter Breen, Electronics Technologist, and his team. They looked first for accuracy, functionality and wealth of data. A distributor for Siemens Milltronics, Thomas Mackay and Son Ltd, recommended the EnviroRanger ultrasonic system. It was tops in the comparison with an accuracy of +/-0.25 per cent, no analog drift or A/D conversion losses and the best price-performance ratio.

EnviroRanger offers monitoring and control in one package and has a built-in RTU. Five relays control any combination of pumps, gates and alarms. It provides accurate level monitoring and effectively monitors flow in flumes, weirs and open channels. It integrates easily with SCADA, DCS or PLC to provide remote monitoring of all parameters — level, pump control functions, pump status and more, using Modbus protocol. It offers report by exception and data logging for trend analysis. EnviroRanger also features patented Sonic Intelligence® signal processing for superior reliability.

CRD chose the DC-powered version to allow for simplified battery back up. EnviroRanger can operate on back-up battery power as low as 12 volts.

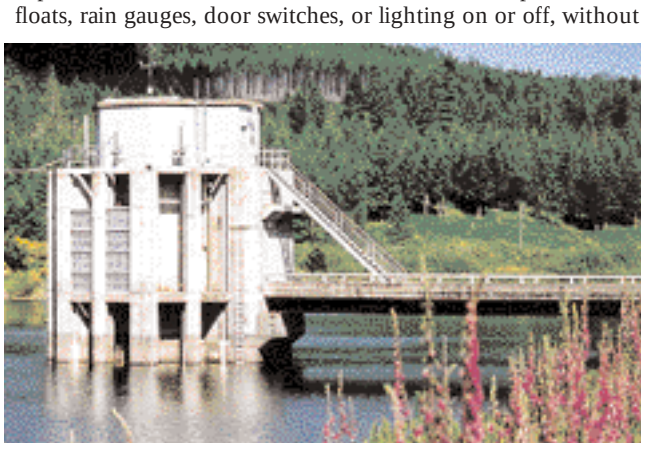
At 10 pumping stations and 19 trunk sewers, CRD installed a total of 40 EnviroRangers. Level data from the flumes is collected continuously on a real-time basis over radio modems by the SCADA system to calculate flow. EnviroRanger offers dual point monitoring and, at the flume sites, CRD added the expandable I/O cards to monitor more discrete inputs such as floats, rain gauges, door switches, or lighting on or off, without the expense of an additional RTU.

Many of the sensors are mounted in narrow wet wells or flumes. Echomax® transducers solved this problem because their narrow beam angle avoids interference from walls or obstructions. For ranges up to eight metres (26 ft), they used Echomax XRS-5 and, for deeper wells, they chose XPS-15 transducers with a range of 15 metres (50 ft).

Because EnviroRanger has a built-in RTU, CRD avoided the cost of 19 external RTUs, saving more than C$100,000.

Efficiency has been improved with more complete, accurate, reliable data now available through direct digital access, with no analog outputs or analog-to-digital conversions required. It is a complete solution from one vendor. The Modbus protocol has greatly simplified trouble-shooting and integration.

"We are very pleased with EnviroRanger and the technical support we received," says Peter Breen. "It's not only the good performance and logistics, but also the good factory liaison and training that reduced our learning curve. This enhanced our abilities and saved us time in installation, commissioning and maintenance. This is of great value to us and no other vendors have matched this level of service."



The Sooke Reservoir is an integral element of Victoria's Capital Regional District water system.

HALIFAX INTERNATIONAL AIRPORT

HIAA
Water Line Upgrade

Airport upgrades will meet greater demands

By Brent McCombs
Contributing Writer

The Halifax International Airport Authority (HIAA) has spent the last year upgrading the water infrastructure to meet increased water flow demands and improve fire-fighting capabilities at the region's largest airport.

Larry Butler, manager of planning and engineering for the HIAA says that the ultimate goal for the project was to "provide adequate fire flows to tenants and to correct the fluctuating water flows within the terminal building."

This had to be done because the previous infrastructure was strained under the airport's growth, and could no longer meet current or future demands. The previous system was constructed in 1986 when the old Halifax County developed the Aerotech Industrial Park.

But over past few years HIAA has been thinking about how to go about upgrading their current system, and at the same time, the Halifax Regional Municipality has been undertaking their own assessment of the Aerotech facility to determine the adequacy of its system and its ability to meet airport requirements. Butler says that both studies came together after HIAA consulted with HRM.

"We reached an agreement on what would be required for future development at the Halifax International Airport," says Butler.

Even before the studies were complete, the HIAA was expanding their air-side accessible land available for lease to tenants. This was done by extending taxi-way A and providing services for 11 hangar lots.

"The only problem with this particular subdivision," says Butler, "as with all our other lots on the site, was that HRM was only able to provide about 2,500 U.S. gallons of water per minute for fire protection under the existing system. These water volumes are not adequate for hangar developments, therefore without improvements, tenants would have to construct their own reservoirs and install their own water distribution system that can provide 4,000 to 5,000 U.S. gallons per minute."

At this time, HIAA established their own fire protection water flow requirements for the air terminal building, thereby determining that it would be in the order of 4,500 US gallons per minute. The HIAA addressed this in Phase 1 of the project, which began last fall.

Photos by Brent McCombs

Above: The heart of the new fire-flow equipment at CHC Helicopter Corporation.

Inset: Foam-fire suppression nozzle inside CHC hangar. part of the fire-fighting installation made possible by the recent upgrades at HIAA.

Phase 1 of the project included the installation of a 16-inch Hyprotec water main connected to the HRM main where it crosses Highway 102, and extending it along Pratt-Whitney drive, and on to Barnes Drive, to connect the water distribution system for the Taxi-way A subdivision. This provided adequate fire protection for any hangar development in the new subdivision.

Butler says that the timing of these upgrades was critical to attracting new business to the airport.

"At the same time as the upgrades, our first tenant, CHC Helicopters International, was constructing a hangar in this area, so this upgrade gave them adequate fire protection, meaning they wouldn't have to incur the costs of constructing their own reservoir and fire protection system."

Barry Clouter, manager of Business Development for CHC Helicopters, says he is very pleased with the upgrades.

"We needed to upgrade the fire detection and suppression capabilities in our hangar, and HIAA really stepped up to the plate. I can't say enough for how they've worked with CHC," says Clouter.

"Because of the size of their buildings and the nature of their business, maintaining aircraft, housing aircraft and working on aircraft while there is fuel aboard the aircraft, these tenants need these higher than normal volumes of water to be prepared to extinguish those types of fires," he says.

The second phase of the project proceeded in spring of 2003. Upgrades under Phase 2 were the extension of the 16 inch main along Bell Boulevard to the existing HIAA water reservoir, the completion of the loop from the airport's reservoir to the north end of the terminal building, and replacement of existing old water lines around the main terminal building. Upgrades also included replacement of the old water line along Barnes drive and replacing existing services along those lines — all new hydrants and service lines.

With a total cost of $3.3 million, securing financial support for this project was critical. Funding for the project was split between the Atlantic Canada Opportunities Agency (ACOA), the Province of Nova Scotia, HRM and the HIAA. Butler says that HIAA met with officials from the province, ACOA and HRM and promoted the project as one which will encourage economic development at the airport. ACOA subsequently approved $900,000 to be put towards providing services that would promote development and also upgrading the fire protection flows to existing hangars, which would allow prospective tenants to reduce their costs. Both the province and HRM provided funding of $500,000 each, with the HIAA covering the cost of the remaining $1.4 million.

And this investment is already paying dividends. It is doing so, says Butler, "by promoting economic development at the airport and reducing costs for companies planning to start up business at the airport, like CHC and other companies that we're negotiating with on some of the airside lots. Some existing tenants are investigating the possibility of rather than upgrading present fire protection facilities, planning to attach to new upgrade lines that we installed."

Photo courtesy CHC Helicopters

The water line upgrades at the airport allowed the airport's first tenants, CHC Helicopter Corporation, to have adequate fire protection. This meant they didn't have to incur the costs of constructing their own reservoir and fire protection system. (Above) CHC Helicopter Corporation's S-61 Helicopter.

HALIFAX INTERNATIONAL AIRPORT

HIAA Water Line Upgrade

Contractors go with the flow

By Brent McCombs
Contributing Writer

CBCL and A.C.L. Construction Limited are the two major contractors for the recent water flow upgrades at the Halifax International Air-port.

Jonathan Fullarton, an engineer with CBCL says that CBCL is proud to be the engineering consultant to the Halifax International Airport Authority (HIAA). He says that the recent work on the water flow upgrades were developed as the result of a report that CBCL wrote for HRM regarding fire flow capabilities.

"We found some deficiencies in what the current system could provide to the air terminal building," says Fullarton, "So CBCL developed a plan to increase water flow to the airport facilities, and started the project last fall with Phase 1, and this spring with Phase 2."

With more than 800 metres of the work being completed on the air side of operations, Fullarton says that security was a major concern at all times.

"The real trick was replacing the services without cutting off the water to the terminal building or tenants," he says. To accomplish this, much of the work had to be conducted at night, and during the air-side operations, night operations meant security on site at all times.

Fullarton says that CBCL is entrenched in water distribution network in Nova Scotia, and sees the recent work as "extension of services we provide. HIAA is an excellent client and we like to stay involved."

A.C.L. Construction Limited is a heavy construction company based in Lower Sackville, N.S.

They have been working in various areas of construction in Nova Scotia and New Brunswick over the last seven years including subdivisions, water and sewer, blasting, earthwork, and site servicing.

A few of A.C.L.'s larger projects over the past few years include HIAA Pyritic Slate Treatment plant, Glen Arbour Golf Course, Tantallon Superstore, and the Lakeshore Park Subdivision.

A.C.L. focuses its work on municipalities, private developers, and general contractors.

Last year A.C.L. was the winning bidder on both phases of the HIAA waterline replacement. A.C.L. was responsible for laying the new waterline and making the connections to the existing lines in various areas of Halifax International Air-port.

During both phases the project employed 15 employees on site, including secen heavy equipment operators, six laborers, and two foremen. Both phases were completed on time and no major difficulties were encountered.

Photo courtesy CBCL

A 16-inch high-flow water pipe is installed along Bell Boulevard in the spring. Upgrades under Phase 2 were the extension of the main along Bell Boulevard to the existing HIAA water reservoir, the completion of the loop from the airport's reservoir to the north end of the terminal building, and replacement of existing old water lines around the main terminal building. Upgrades also included replacement of the old water line along Barnes drive and replacing existing services along those lines — all new hydrants and service lines.

Photo by Brent McCombs

Government announces parameters for infrastructure funds

The broad parameters for the $3 billion infrastructure funds announced in Budget 2003 were outlined on July 22.

"Taken together with past infrastructure initiatives, this $3 billion brings the Government of Canada's investment in infrastructure projects since 1994 to $12 billion," said Allan Rock, Minister of Industry and Minister responsible for Infra-structure.

"Now, we are moving forward on our ten year commitment to infrastructure by laying out the broad direction for future project funding."

He said the government's approach will ensure that infrastructure investments benefit and respond to the needs of all Canadians, in both urban and rural communities.

"The Government of Canada continues to provide leadership on national priority projects and to pursue partnerships with all levels of government to respond to Canada's infrastructure needs. These investments represent a key component of the Government of Canada's sustained support for Canadian communities."

Of the Budget 2003 allocation, $2 billion will top-up the existing Canada Strategic Infrastructure Fund.

Investments will be strategically targeted to help promote sustainable growth and competitive communities by ensuring that investments reflect Government of Canada objectives on climate change, urban development, clean water, trade and innovation. The fund will continue to target large-scale projects, with key Government of Canada priorities guiding project eligibility.

The Canada Strategic Infrastructure Fund will support projects in areas such as:

- water quality and access;
- trade corridors;
- broadband connectivity;
-sustainable urban growth;
- northern infrastructure

A maximum of 10 per cent, or $200 million, of the Canada Strategic Infrastructure Fund has been set aside for national priority projects. These are projects of national importance that require the Government of Canada to take a leadership role.

"Access to safe water, ensuring infrastructure improves our trading position, supporting sustainable urban development and achieving infrastructure goals in the north are all priorities that will directly benefit Cana-dians," stated Rock. "As well, expanding broadband networks in Canada will help to ensure that Canadians who live and work in rural and remote communities have access to services such as distance learning and tele health and can seize more business opportunities."

Under the new parameters, 20 per cent of the Canada Strategic Infrastructure Fund will be targeted toward projects that benefit communities of less than 250,000 people. And, in order to better respond to the particular infrastructure needs of the north, a northern infrastructure category will be developed and included under this fund for the benefit of the territories.

In addition to the $2 billion top-up of the Canada Strategic Infrastructure Fund, Rock announced that the remaining $1 billion will be directed toward a grassroots municipal-rural infrastructure fund. This program will include a First Nations component and be similar in nature to current federal-provincial infrastructure agreements. Under this program, a maximum of 20 per cent of the funds will be targeted toward projects that benefit communities of over 250,000 people.

Further details on the parameters of the municipal-rural fund and the announcement of the national projects will follow in the weeks to come.

Allan Rock, Minister of Industry and Minister responsible for Infrastructure.

Saint John, N.B. to receive more funding for waste plant

The City of Saint John will receive additional funding for municipal wastewater services through the injection of a $1.5 million investment under the Canada – New Brunswick Infrastructure Program.

The project, which was originally approved for $3.5 million, was amended to bring the total project cost to $5 million. This project will permit the wastewater from future phases of the North End Collection System to be directed to the Millidgeville Wastewater Treatment Plant.

"Investing in municipal infrastructure is an important building block for economic and community growth," said New Brunswick Premier Bernard Lord at the announcement on August 25. "The Millidgeville project is a good example of the significant role the Canada-New Brunswick Infrastructure Program plays in securing the health of our communities. I am pleased to see that the green focus of the infrastructure program continues to improve our environment for future generations."

"The Canada-New Brunswick Infrastructure Program provides an important tool to help all levels of government identify and address the important infrastructure needs of New Brunswickers," said Andy Savoy, MP for Tobique-Mactaquac. "The Government of Canada, through ACOA, is pleased to support this important infrastructure project for the City of Saint John, because we recognize that the strength of a community's infrastructure is critically important to economic growth."

The announcement is great news for the citizens of Saint John, as well as for the environment, said Mayor Shirley McAlary.

"This will help us make a tremendous stride toward greatly reducing the amount of untreated wastewater we return to our waterways," she said. "The expansion of the Millidgeville Wastewater Treatment Plant, now nearing completion, gives us the capacity to treat 100 per cent of the wastewater generated in our North End / Millidgeville area, which we will do once all other infrastructure work is completed."

The City of Saint John has done considerable work to prepare for the expansion of the treatment plant, and more is planned, she added.

"I am thrilled that the federal and provincial levels of government are continuing to support our work toward a more environmentally aware and ecologically-friendly community."

The Canada-New Brunswick Infrastructure Program provides up to two thirds of the eligible costs of community infrastructure projects. Participating communities provide the remaining one-third of project costs, making the program a unique partnership between all three levels of government with infrastructure investments of more than $163 million in New Brunswick over six years.

In New Brunswick, ACOA is responsible for the implementation of the Canada-New Brunswick Infrastructure Program federally, while the Department of the Environment and local government, in conjunction with the Regional Development Corporation, are the provincial jurisdictions responsible for the implementation of the agreement. Each of the three levels of government will contribute one third of the eligible costs of the projects.

Rexton will extend services

The Village of Rexton is partnering with the federal and provincial governments under the Canada – New Brunswick Infrastructure Program to upgrade its wastewater system. The total investment under this program will be $209,997, with each of the three funding partners contributing a third of the amount.

Work to be undertaken in-cludes the installation of about 600 metres of sanitary sewer on Maple Drive, including the addition of a submersible pumping station. This will result in 14 new wastewater connections.

"The Government of Canada plays a major role as enabler and catalyst to strengthen partnerships required to deliver a 21st Century Infrastructure Program agenda as its first priority," said Dominic LeBlanc, MP for Beauséjour-Petitcodiac.

"Today's announcement was a top priority for the municipality of Rexton and I am proud to have been part of the partnering process to make this project a reality."

"We are investing in the future of communities by giving local governments the resources they need to become sustainable. Investing in infrastructure is vital to the development of New Brunswick," said Claude Williams, MLA for Kent-South. "This is a good example of what we can achieve when the three levels of government work together."

Williams spoke on behalf of both the Hon. Premier Bernard Lord, Minister Responsible for the Regional Development Corporation and the Hon. Brenda Fowlie, Minister of the Environment and Local Government.

"We are investing in the future of communities by giving local governments the resources they need to become sustainable. Investing in infrastructure is vital to the development of New Brunswick."

- Claude Williams

"Today's infrastructure announcement is certainly good news for the people of Rexton," said Mayor of Rexton Raymond Murphy. "It allows the village to complete the sewerage system within the village boundaries at 33 cents per dollar, a feat which would be nearly impossible if the Village had to pay the total cost. I am extremely pleased that, in co-operation with the federal and provincial governments, this project has been made possible. My sincere appreciation to all parties involved."

This announcement brings the total announced projects to 67, for a total funding of over $106 million.

In New Brunswick, ACOA is responsible for the implementation of the program federally, while the Department of the Environment and Local Government, in conjunction with the Regional Development Corporation, are the responsible provincial jurisdictions.

Testing water quality

Technician Lorraine Marshall and Trudy Paul, a science student, take some water samples for the Unama'ki Institute of Natural Resources. The institute works with Environment Canada on sampling water projects throughout Cape Breton.

MPWWR BRIEFS

Cont'd from pg. 1

Centennial Heights, Highland Acres, Castle Acres, Springwater Place and properties located along Route #101.

Five N.B. communities to benefit from $2.1 million

Six water and wastewater infrastructure projects totalling $2,147,856 were announced under the Canada-New Brunswick Infrastructure Program.

The federal and provincial governments are investing almost $1,432,000 in the six projects, with five partnering municipalities paying the remaining $716,000. The approved projects include the upgrading of wastewater treatment facilities in Blacks Harbour and St. George, a water line replacement and wastewater cleaning facility in Caraquet, an artificial wetland in Dieppe, and the upgrading of a wastewater line in Riverview.

The infrastructure projects promote safe drinking water, effective wastewater management, safer communities, and sound environmental practices that will benefit businesses, families and tourism in the province.

N.S. government improves environmental protection

Nova Scotians can expect to see better management and protection of the environment based on a plan released in June 27 by then-Environment and Labour Minister Ron Russell.

The document "Towards a Sustainable Environment," focuses on collaborative approaches to environmental management, integration across provincial departments and improved delivery of environmental programs. It emphasizes that responsibility for the environment is shared by citizens, governments and business. The plan also outlines government's current success in delivering environmental programs and identifies several new initiatives that will be implemented over the next five years.

Some of the other new commitments in the plan include expanding air and water monitoring programs, adding five new nature reserves and two new wilderness areas to the protected areas network within the next year, and establishing a Forest Code of Practice.

Brookfield plant now meeting strict standards

Officials with the Island Waste Management Corporation say their compost plant in Brookfield is now producing and selling top quality compost, despite a rough start to the year. The plant was having so much trouble in April it had to divert 10 per cent of the compostable material to another site.

The compost in the Brookfield facility was not breaking down quickly enough. After making some changes at the compost factory, Cleve Myers says the $10-million facility is breaking down everything from steak bones to cereal boxes.

The compost now meets the standards set by the Canadian Food Inspection Agency and the Canadian Ministers of the Environment. It also means the compost can be used anywhere. However, ADI, the company running the plant, is still looking for markets for the compost.

High-tech Zenon system on its way out

The local solid waste commission is preparing for the day it shuts down its state-of-the-art system. The commission accepted recommendations to start designing a surge pond to hold excess leachate and to study two pipeline options to Saint John. The commission must decide what to do with the leachate from the landfill.

The Zenon system the landfill uses to purify the leachate is not working out. Leachate is the liquid that begins as rain falling in an open, garbage-filled cell then percolates down, becomes contaminated and is collected in pipes. Many landfills, such as the ones in Moncton and Fredericton, simply pump theirs through pipes into municipal sewage treatment plants.

But when Crane Mountain opened, the commission of the day went a different route. The Zenon system they installed uses a membrane to filter the leachate and produce water that's nearly clean enough to drink.

The system's problems are that the operating costs are far higher than expected and that it does not have the capacity to treat the volumes of leachate that Crane Mountain produces. Only about half the leachate is treated on site.