September 2006

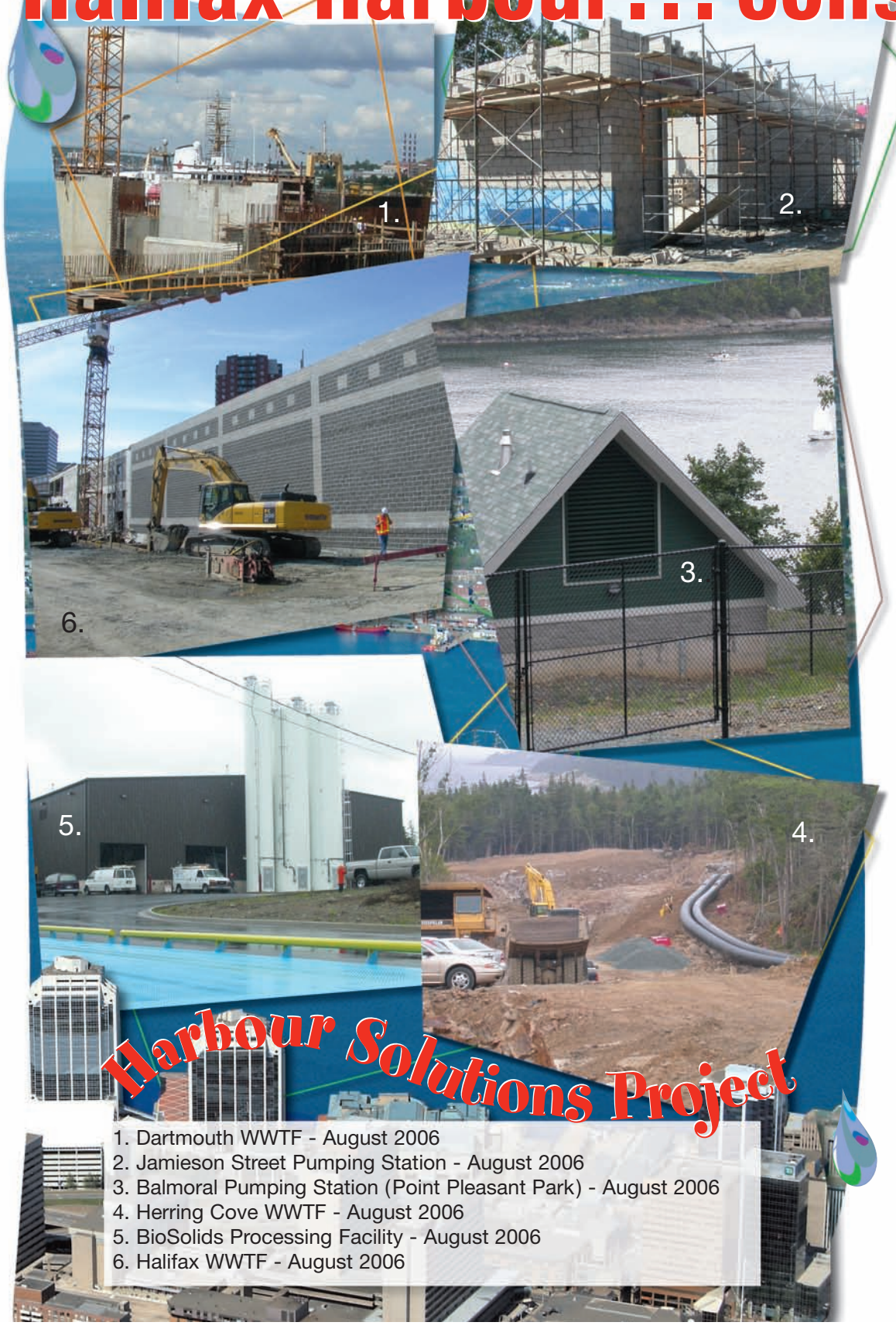
Naturally GREEN

SPECIAL EDITION

Big Harbour, Bright Future . . .

● Halifax Harbour Solutions Project ● Pollution Prevention ● HRM's Environmental Stewardship Award

Halifax Harbour . . . construction update



1. Dartmouth WWTF - August 2006
2. Jamieson Street Pumping Station - August 2006
3. Balmoral Pumping Station (Point Pleasant Park) - August 2006
4. Herring Cove WWTF - August 2006
5. BioSolids Processing Facility - August 2006
6. Halifax WWTF - August 2006

Construction activity on the Harbour Solutions Project is now underway on all 3 fronts. Construction continues in Halifax & Dartmouth. In Herring Cove major construction on the wastewater treatment facility (WWTF) has been underway since spring.

In Halifax, the sewage collection system (SCS) is almost complete. Beginning this fall/winter, work will get underway making final connections of the new and existing SCS components (piping, pumping stations, downtown tunnel, combined sewer overflow chambers and related infrastructure) to the Halifax facility. These connections will allow for pre-commissioning (systems testing) of the Halifax WWTF.

At the time of publication, the Halifax WWTF was close to being roof-tight and installation of internal treatment systems (mechanical and electrical) is continuing.

The Halifax WWTF is scheduled to go into operation in spring 2007.

In Dartmouth, SCS work is on-going from north Dartmouth to just south of the Woodside ferry terminal. Work will continue throughout 2006 and into 2007.

Extensive structural work continues at the Dartmouth WWTF along with related mechanical and electrical systems. The Dartmouth WWTF is scheduled to be operational in the summer/fall of 2007.

In Herring Cove, the gated access driveway has been roughed in and crews continue to excavate the WWTF site. The Herring Cove WWTF is scheduled to be operational in the summer/fall of 2008.

The third and final component of the Harbour Solutions Project is the BioSolids Processing Facility (BPF) located in Aerotech Park. The BPF is roof-tight and mechanical & electrical system installation continues. The BioSolids Processing Facility is scheduled to be complete when the Halifax wastewater treatment facility is operational in the spring of 2007.

For more information on HRM's environmental initiatives such as the Harbour Solutions Project, Pollution Prevention Program, composting & recycling and Pesticide By-Law, check your HRM Stewardship Calendar, visit *www.halifax.ca* and follow the Naturally Green links, or call 490–4000.

Halifax Harbour Solutions Project

www.halifax.ca

Your Harbour ...IN SUMMER 2008

With the Harbour Solutions Project, comes greatly improved water quality in your harbour. But wastewater treatment facilities are designed to treat human waste only. We are all responsible for protecting the water quality in our lakes, streams and harbour. By not dumping hazardous products, leftover medicines, paints, fats, oils & grease etc... down our sinks, toilets and storm drains, we can all do our part for the environment. Whether at home or work, proper disposal is the answer.

Are you doing your part?

Halifax Harbour Solutions Project

Wastewater Treatment (WWTF) Facilities

1. Dartmouth WWTF
2. Halifax WWTF
3. Herring Cove WWTF
4. Mill Cove WWTF
5. Eastern Passage WWTF

*HRM currently operates 11 other WWTFs

Illustration: Grant Longard 2006

HALIFAX REGIONAL MUNICIPALITY

Naturally GREEN

NO DUMPING DRAINS TO OCEAN

Please don't pollute. Remember,Only Rain in the Storm Drain

HRM Call Centre (902) 490–4000 TTY/ TDD Hearing Impaired 490–6645, 1-800-835–6428 ● Email: 'contactHRM@halifax.ca' ● www.halifax.ca

THE MAP ON THE ADJACENT PAGE SHOWS INTENDED WATER USES UNDER THE WATER QUALITY OBJECTIVES FOR HALIFAX HARBOUR. THESE OBJECTIVES WERE SET BY THE HALIFAX HARBOUR TASK FORCE (HHTF) THROUGH AN EXTENSIVE PUBLIC CONSULTATION PROCESS.

The map (preceding page) shows a variety of activities that will make our harbour a fun and safe place to once again enjoy.

So when will the harbour be safe to enjoy these activities?

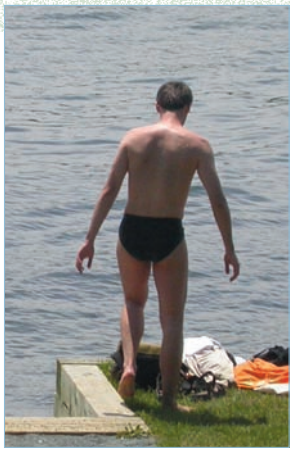
The main issue affecting things such as swimming is faecal coliform bacteria. The swimming guideline limit is 200 bacteria per 100 ml. Levels in the harbour are commonly in the 1000's at present. Levels are highest in the inner harbour/narrows and Northwest Arm, lower in Bedford Basin and the outer harbour. Most of the inner harbour would presently not be safe for swimming at any time. Bedford Basin and the outer harbour is not safe for swimming at times.

The Harbour Solutions Project will use ultraviolet light to disinfect the treated wastewater before it's released into the harbour. Harbour modelling shows that faecal coliform levels, except right at the wastewater treatment facility (WWTF) outfalls, will be below the swimming guideline limit after the 3 new advanced-primary WWTF's are operating except right at the wastewater treatment facility outfalls. The Halifax and Dartmouth facilities will produce the greatest benefit in the Harbour and Bedford Basin. The Herring Cove facility will have the greatest effect on the area around Herring Cove.

Oceanographers confirm that the harbour water will become much cleaner as soon as wastewater treatment is in place. The entire harbour can turn over (harbour water is exchanged with offshore water) within 2 days under the right conditions of wind and tide. The Halifax facility is scheduled for commissioning in spring 2007, Dartmouth in summer /fall 2007, and Herring Cove in summer /fall 2008.

Once the Halifax & Dartmouth facilities are operating, water quality will improve significantly within a month, so swimming in Northwest Arm, the Bedford Basin and Black Rock Beach should be possible by 2008. Other direct and indirect contact recreation such as wind surfing, paddling, sailing and boating will be much safer as bacteria levels are reduced.

Habitat for marine life will also improve as the harbour water becomes cleaner. Mussel harvesting is currently closed in all of Halifax Harbour due to contamination. After wastewater treatment, it may be possible for the Department of Fisheries & Oceans to re-open some of the mussel harvesting areas around the harbour.



Along with low bacteria levels, wastewater treatment will greatly reduce suspended solids and remove floatable materials. Therefore, harbour water will be much clearer and aesthetics (appearance and odour) will be greatly improved along the shorelines. Locations of present outfalls along the Halifax and Dartmouth waterfronts, and spots such as Chain Rock in Point Pleasant Park on the Northwest Arm, will no longer discharge into the harbour.

Older sewage collection systems such as those in peninsular Halifax and Downtown Dartmouth were built to carry both sanitary sewage and storm water run off (combined sewers). Some of these combined sewers have now been separated in Halifax and Dartmouth thereby helping to reduce the volume of flow the new wastewater facilities will have to treat.

Even with the environmental enhancements these recently separated systems provide, during heavy rain events when flow volumes are above 4 times the average dry weather flow, some must be overflowed at points around the harbour. During these overflow events, the effluent will still be screened before it's released into the harbour. However, for a couple of days after a heavy or protracted rain event that exceeds the WWTFs treatment capacity, bacteria levels may be higher in the Harbour and Northwest Arm, so contact should be avoided at those times. Once flow volumes are again below the 4 times dry weather flow level, full treatment will again be restored.

Sediments in the harbour around the present discharge points are contaminated with a variety of materials from over 200 years of sewage discharge. At present, there is no economic or technically feasible way to remove and properly dispose of these contaminated sediments. The best course of action for now is to leave the contaminated sediments where they are. Dredging of the harbour is <u>not</u> part of the HSP. Over time, these contaminated sediments will become covered by clean sediments which will also help ensure the contaminated sediments do not move from their present locations.

If in future a better method for removal becomes available, then consideration could be given to eventual removal.

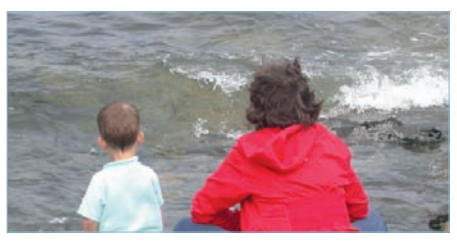
HRM has been and is continuing to conduct water quality monitoring at over 30 sites in the harbour from Herring Cove to Bedford Basin. The data will allow assessment of changes in water quality over time as the new treatment facilities begin to operate. This will allow us to know if the water quality is meeting the objectives which HRM has set for different areas of the harbour.

It is very important to remember that wastewater treatment facilities are designed to treat human waste only. No technology presently exists that would allow for the treatment of the many chemicals, medicines, paints, solvents and other hazardous materials that presently enter our harbour, lakes and rivers. The best way you can help our environment and watershed is to not pour these materials down your sink, toilet, storm drain at home or work.

Are you doing your part?

REMEMBER, ONLY RAIN IN THE STORM DRAIN.

For more information about the Harbour Solutions Project visit *www.halifax.ca* and follow the Naturally Green links to the Harbour Solutions Project. For proper disposal information follow the same NATURALLY GREEN links to our Pollution Prevention program.



Pollution Prevention

Our Harbour Our Rivers Our Lakes Our Community Our Environment Our Responsibility

Maritime Paper: Friend of the Environment

HRM Environmental Stewardship Award

HRM recently had the opportunity to present its new Environmental award to a local printing company. Maritime Paper, a local manufacturer of printed corrugated packaging, is the first recipient of HRM's new Environmental Stewardship Award.

Mayor Peter Kelly presented the award to Gary Johnson, President, Maritime Paper Products Limited, for the company's outstanding efforts in environmental stewardship. The award recognizes businesses that have taken a leadership role in improving the environment and quality of life in HRM.

Gary Johnson (centre), accepts HRM's new Environmental Stewardship Award on behalf of Maritime Paper Products Ltd from Councillor Jim Smith (left) & Mayor Peter Kelly (right)

"HRM continues to lead the way in environmental sustainability and it's due to the efforts of companies, like Maritime Paper, that we're making great progress in protecting and preserving our environment," said Mayor Kelly. "HRM thanks Maritime Paper for being proactive and taking a leadership role. Their initiative should be an inspiration to others and is a shining example of good, positive corporate responsibility in our Region."

Maritime Paper Products Limited, located in the Burnside Industrial Park, recently installed a fully self-contained wastewater treatment system as part of a multi-million dollar modernization program. The system, which was designed by a Nova Scotia engineering company, cleans all wastewater created at the plant during the manufacturing process, allowing only clean water to be released into the HRM sewer system.

Originally, the processes at Maritime Paper involved oil-based inks that were discharged directly to the sanitary sewer, usually with a solvent-based cleaning fluid. Now, between each order, the printing presses need to be rinsed with water only because the company has switched to water-based inks. This eliminates any possibility of oil-based ink or cleaning solvents getting into drains and the environment as a result of a spill. Mr. Johnson explained that any wastewater from the printing presses is collected in reservoirs and then pumped to the new wastewater treatment system. The heaviest of the inks settle to the bottom of the tank, while the lighter inks go through a chemical process that will cause them to clump together like a solid until they are heavy enough to settle to the bottom as well.

Before the new treatment system was installed, some of the waste pulp would be discharged with the wastewater and accumulate in the pipes as a result of corrugated cardboard construction. Now with the new treatment system, the water is filtered through a series of presses. The solids that are filtered out of the water are then pressed into a cake and sent to the municipal landfill. The clean water is then, and only then, sent back to the sanitary sewer system, but the eventual goal is to have a completely closed-loop system. This will allow Maritime Paper to reuse their water for cleanup and save money in the long run.

Don MacKenzie, Chief Engineer (left) Maritime Paper Ltd. worked with HRM Pollution Prevention Coordinator John Sibbald, achieving outstanding results.

The commitment that Maritime Paper has made is key to the success of the Harbour Solutions Project (HSP).

Most residents of HRM are well aware of the construction of the new sewage collection system, 3 advanced-primary wastewater treatment facilities and biosolids processing facility that make up the HSP. We have waited a long time for this project to get underway. These new facilities will treat wastewater from our homes and places of business and provide a great environmental enhancement to our harbour and quality of life in HRM. To help ensure we all receive the maximum benefit from the HSP, it's important that we each do our part for the environment by ensuring we all use proper disposal methods in our places of business, and at home. The efforts of HRM's Pollution Prevention team and the team at Maritime Paper resulted in a significant win for our environment and essentially our health.

Maritime Paper is an environmental innovator and should be seen as an example of stewardship for us all. We want to encourage local businesses to contact the Pollution Prevention office to find out about proper disposal equipment and methods. HRM's Pollution Prevention team will work with businesses to protect our natural aquatic resources. It is their job to regularly inspect, monitor, educate and enforce the provisions of By-Law W-101, which regulates the quality and quantity of wastewater from all industrial, commercial and institutional locations that may be discharged to the municipal storm/sanitary sewer systems. By working together, we can achieve a healthy, sustainable, vibrant HRM and see a future where we can enjoy our beautiful natural resource.

If you would like more information about the Pollution Prevention Program or a copy of By-Law W-101, please visit us at *www.halifax.ca* or call 490–4000.

Naturally GREEN

SPECIAL EDITION

What do you think?

Please share with us any thoughts or comments that you may have about this Special Edition of the Naturally Green Newsletter. Hopefully, you enjoyed it and found it informative and easy to read.

What did you like most about it?

What features would you like to see included in future issues?

Please send your comments. The editor's contact information is located in the right column of this section.

Do you have a question about something you've read in this newsletter?

Please refer to the contact information located in the last paragraph of each article.

Layout & Design: B. Gellard, HRM Corporate Communications

Do you wish to give feedback or have a question about the newsletter itself?

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Naturally Green & Naturally Green Special Edition are Municipal newsletters reporting on environmental news and initiatives within the Halifax Region. The goal of the newsletters is to raise public awareness and provide a wide variety of useful information on environmental issues.

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