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Item No. 6

Halifax Regional Council March 3rd, 2009

TO: Mayor Kelly and Members of Halifax Regional Council

**SUBMITTED BY:** 

Brad Anguish, Director of Business Planning, Information Management Services & Halifax Harbour Solutions Project

**DATE:** February 18, 2009

# SUBJECT:Harbour Solutions Project - 3rd Quarter ReportOctober 1 to December 31, 2008

# **INFORMATION REPORT**

# <u>ORIGIN</u>

This report originates from the Council session of October 22, 2002 when staff was authorized to submit quarterly reports for the duration of the project.

# BACKGROUND

HRM has entered into five contracts to date for the implementation of the Halifax Harbour Solutions Project, namely:

- an infrastructure development agreement for the construction of the three Wastewater Collection Systems on October 15, 2003 with Dexter Construction; and
- a development agreement for the construction of three advanced primary Wastewater Treatment Facilities on June 15, 2004 with D&D Water Solutions, Inc.; and
- a development agreement for the construction of a Biosolids Processing Facility on November 30, 2004 with SGE Acres Limited, and
- an operating and maintenance agreement for the Biosolids Processing Facility on November 30, 2004, with N-Viro Systems Canada Inc.; and
- an operating agreement for the transportation of dewatered biosolids from the three new Wastewater Treatment Facilities on May 31, 2006, with Seaboard Liquid Carriers Limited.

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# DISCUSSION

The completion of the Wastewater Treatment Facilities (WWTF), Wastewater Collection Systems (WWCS) and Biosolids Processing Facility is progressing within budget.

# Halifax

The Halifax Wastewater Collection System work during the 3<sup>rd</sup> quarter of 2008/09 continued to focus on the identification and rectification of deficiencies and the application of Substantial Completion process.

Substantial Completion was achieved on December 19, 2008 on the Halifax WWCS with the exception of Pier A Pumping Station and CSO chamber, as well as the other CSO chambers, excluding the Balmoral CSO chamber. These exceptions remain the responsibility of the Contractor until satisfactory performance can be proven. The remainder of the WWCS is now owned by HRM and operated by Halifax Water (HW).

The Halifax Wastewater Treatment Facility has been continuously treating sewage from Halifax since November, 2007. During the 3<sup>rd</sup> quarter work concentrated on identification and repair of deficiencies. Substantial Completion was achieved on December 19, 2008 on the Halifax WWTF. The WWTF is now owned by HRM and operated by Halifax Water (HW).

At the time of writing this report, the Halifax WWTF has been temporarily shut down due to a wastewater flooding incident and all wastewater formerly treated at the Halifax WWTF is being diverted to Halifax Harbour through the combined sewer overflows (which screen solidCSOs) in the collection system. The CSOs continue to screen floatables out of the flows prior to discharge. Information reports have been submitted to Council on January 20, 2009 and February 24, 2009 regarding this matter. The plant has extensive insurance coverage and HRM's insurance adjusters, HRM, Halifax Water and Contractors alike are working diligently to determine the cause of the malfunction and return the WWTF back to operation as soon as possible. It will be several more weeks before a reasonable estimate of time and cost to repair can be developed.

# Dartmouth

The Dartmouth WWCS work during the 3<sup>rd</sup> quarter of 2008/09 continued to focus on completing the remaining connections and fine-tuning of the regulation structures. The SCADA system was connected and deficiencies were identified. Remedial action is underway.

All works relating to the Dartmouth WWTF work were essentially completed during the 3<sup>rd</sup> quarter of 2008/09 with the exception of the security gates. Repair work on deficiencies have begun. Commissioning tests were carried out with the exception of the odour control system which is still undergoing improvements.

# Herring Cove

The Herring Cove WWCS work during the 3<sup>rd</sup> quarter of 2008/09 continued to focus on completing the Roaches Pond retention tank and the Herring Cove Pumping Station.

Regarding the WWTF, structural and architectural work as well as exterior reinstatement was substantially completed during the  $3^{rd}$  quarter of 2008/09. Installation of equipment, piping, and cabling continued with good progress being made. Commissioning activities are still on schedule for the  $2^{nd}$  quarter in 2009/10.

# **Biosolids Processing Facility**

During the 3<sup>rd</sup> quarter of 2008/09, the Biosolids Processing Facility (BPF) continued to process biosolids from the Aerotech Dewatering Facility, and from the Halifax and Dartmouth WWTFs. The finished product continues to meet the class "A" biosolids standard for the Province of Nova Scotia with some product even meeting the "exceptional quality" standard. Consumer demand for the finished product remains high. Defect rectifications continued throughout the quarter.

# Safety

There were no lost time incidents during this quarter.

# **BUDGET IMPLICATIONS**

The Harbour Solutions Project spent \$1.3 million in the 3<sup>rd</sup> quarter of 2008/09 and, since the start of the project, \$306.2 million to December 31, 2008. Projections to meet the capital budget of \$332.7 million are still on target.

As all completion dates certain for the various components have now passed, there should be no additional inflation risk to the Project. History of the Halifax Non-Residential Construction Index over the past twenty years shows average annual inflation of just over 2%. At the beginning of the project, staff conservatively estimated annual inflation at 2.8% for budget purposes. However, fiscal years 2004/05, 2005/06, 2006/07, and 2007/08 brought inflation of 7.87%, 4.31%, 5.25%, and 7.78% respectively. In the first quarter of 2008/09, inflation was 6.24%. To mitigate this risk and financial impact, staff revised the inflation estimate to approximately 6% per year over the life of the contract and a substantial portion (\$14.7 million) of the \$18.2 million contingency was committed to address this issue.

As all of the dates certain for completion of the various components have now passed, staff has estimated the actual total inflation to the end of the project to be \$24.1 million, based on the inflation rates experienced and the invoices received to date. As the original inflation budget at 2.8% was \$12.3 million, the remainder of \$11.8 million is being taken from the contingency budget.

At the time of writing this report, the financial impact of the wastewater flooding event and temporary shutdown of the Halifax WWTF is still unknown. Although the plant has extensive insurance coverage, HRM may incur some initial recovery costs up front and therefore may have to draw on the project contingency balance until insurance details have been agreed upon. As well, it should be noted that there remain numerous potential project risks that may require funding from the uncommitted contingency balance. For example, due to recent changes in the electrical code, D&D Water Solutions Inc. has identified various areas in which the design/construction of the Herring Cove WWTF may be impacted. D&D has not yet finished their analysis of this issue and, therefore, it is not possible to quantify the actual financial impact at this time.

# FINANCIAL MANAGEMENT POLICIES / BUSINESS PLAN

This report complies with the Municipality's Multi-Year Financial Strategy, the approved Operating, Capital and Reserve budgets, policies and procedures regarding withdrawals from the utilization of Capital and Operating reserves, as well as any relevant legislation.

# ATTACHMENTS

Appendix 'A' - Halifax Harbour Solutions Project - 3rd Quarter Report - October 1 to December 31, 2008.

A copy of this report can be obtained online at <u>http://www.halifax.ca/council/agendasc/cagenda.html</u> then choose the appropriate meeting date, or by contacting the Office of the Municipal Clerk at 490-4210, or Fax 490-4208.

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# Appendix A

# Halifax Harbour Solutions Project Third Quarter Report - October 1 to December 31, 2008

# Introduction

The intent of this document is to provide Council and staff with a general overview of the Harbour Solutions Project progress during the period between October 1 and December 31, 2008.

It is presented in sections:

Section 1 - Wastewater Collection System (WWCS)
Section 2 - Wastewater Treatment Facilities (WWTF)
Section 3 - Biosolids Processing Facility (BPF)
Section 4 - Pollution Prevention Program
Section 5 - Water Quality Sampling Program
Section 6 - Financial Information
Section 7 - Public Involvement and Information Program
Section 8 - Construction Safety

## Section 1

# Wastewater Collection Systems

# Halifax Wastewater Collection System

Works during the 3<sup>rd</sup> quarter of 2008/09 were focussed on operating the sewage collection system as well as the identification and repair of deficiencies.

Substantial Completion was achieved on December 19, 2008 on the Halifax WWCS with the exception of Pier A Pumping Station, CSO chamber, as well as the other CSO chambers, excluding the Balmoral CSO chamber.

# Dartmouth Wastewater Collection System

Works during the 3<sup>rd</sup> quarter of 2008/09 concentrated on completing the remaining connections of regulating structures to the interceptors. All remaining sewersheds were connected.

The sewage collection system has been delivering flow to the Dartmouth Wastewater Treatment Facility (WWTF) since July, 2008. During the 3<sup>rd</sup> quarter, operation of regulating structures was fine tuned, SCADA was connected, and deficiencies identified and remedial action started. Substantial Completion documentation was also initiated by the Contractor.

# Herring Cove Wastewater Collection System

The Herring Cove WWCS work during the 3<sup>rd</sup> quarter of 2008/09 continued to focus on completing the Roaches Pond retention tank and the Herring Cove Pumping Station.

During the 4<sup>th</sup> quarter of 2008/09, remaining work on Roaches Pond Retention Tank is expected to be completed. The work at the Herring Cove Pumping Station is also expected to be completed.

# Section 2

# Halifax Wastewater Treatment Facility

Works during the 3<sup>rd</sup> quarter of 2008/09 were focused on identification and repair of deficiencies. Substantial Completion was achieved on December 19, 2008.

At the time of writing this report, the Halifax WWTF has been shut down and all wastewater formerly treated at the Halifax WWTF is being diverted to the Halifax Harbour through the combined sewer overflows in the collection system. The CSOs continue to screen floatables out of the flows prior to discharge. It will be several weeks before a reasonable estimate of cost and time to repair can be developed.

#### Dartmouth Wastewater Treatment Facility

During the 3<sup>rd</sup> quarter of 2008/09, work was substantially completed with the exception of the security gate. Repair work on identified deficiencies have begun. Commissioning tests were carried out with the exception of the odour control system which is undergoing necessary improvements.

#### Herring Cove Wastewater Treatment Facility

Structural and architectural work and exterior reinstatement was substantially completed during the 3<sup>rd</sup> quarter of 2008/09. Installation of equipment, piping and cabling continued with good progress being made.

Commissioning activities are still on schedule for the  $2^{nd}$  quarter in 2009/10.

#### Section 3

# **Biosolids Processing Facility**

During the 3<sup>rd</sup> quarter of 2008/09, the Biosolids Processing Facility (BPF) continued to process biosolids from the Aerotech Dewatering Facility, and from the Halifax and Dartmouth WWTFs. The finished product continues to meet the class "A" biosolids standard for the Province of Nova Scotia with some product even meeting the "exceptional quality" standard. Defect rectification work continues.

## Section 4

## **Pollution Prevention Program**

In support of the Harbour Solutions Project and as a requirement of Provincial legislation, HRM initiated a Source Control Strategy, now referred to as the Pollution Prevention (P2) Program. This program has been designed and implemented to reduce the levels of organic and inorganic compounds, toxins and other matter currently entering the municipal stormwater and wastewater sewer systems, and ultimately, freshwater and marine environments including Halifax Harbour.

The P2 program requires compliance with Halifax Water's Rules and Regulations through planning, education, inspections and monitoring at the source of these discharges from all industrial, commercial and institutional locations within HRM. Additionally, educational information is provided through various mediums for the residential sector to allow direct participation by the public in the protection of our natural marine and freshwater resources.

Staff previously provided updates to Council on the status of this program. Since the last update provided to Regional Council, activities that P2 staff have undertaken or completed include the following:

• Staff, during this reporting period, continued with inspections of businesses within the Dartmouth WWTF sewershed for compliance with Halifax Water's Rules and Regulations. It is estimated that over 90% of identified businesses have been inspected within this sewershed. Particular emphasis has recently been directed to identify observations of elevated pH values and conductivity levels at the Dartmouth WWTF.

A systematic approach was developed that started at the Dartmouth WWTF and tracked conductivity and chloride concentrations through the Dartmouth collection system to identify possible sources. Field

measurements of conductivity were performed to use as a surrogate measurement of chloride concentrations in the raw wastewater. Chlorides were also measured by taking grab samples at representative locations and used in establishing a correlation with conductivity measurements.

Sampling was performed several times at night, between midnight and 6 am when domestic flow from residential sources would be at a minimum and during periods of high tide. Sampling was also conducted during the day to identify any possible industrial or commercial source of elevated chlorides. Observed sources of sea water intrusion were identified and provided by P2 staff to the contractor and repairs were reported to be completed. These activities are currently believed to have corrected and stopped any inflow of sea water to the Dartmouth WWTF sewershed. Based on data as provided by the Dartmouth WWTF to date, conductivity and related chloride issues in Dartmouth appear to be non-existent.

Sea water intrusion to the collection system adds to the total volume of wastewater entering into the wastewater collection system, adds to the total volume required to be pumped by pumping stations and adds to the total volume of wastewater entering into the WWTF for treatment. Additionally, seawater intrusion may increase corrosion and affect wastewater treatment efficiencies. On-going monitoring will be maintained for the foreseeable future to insure no additional sources of seawater intrusion occur.

Elevated pH levels in raw sewage have been frequently reported by staff at the Dartmouth WWTF and have gone through periods of reduced and increased frequencies. P2 staff are monitoring manhole to manhole in the Dartmouth collection system and have deployed continuous recording pH meters to assist in locating any industrial source of pH. To date, three businesses have been identified that have had periodic elevated pH discharges. Two have altered their process and one has installed permanent pH neutralization equipment to meet Halifax Water's Rules and Regulations. Staff will be monitoring to identify and correct any source of elevated pH discharges.

Elevated chloride and conductivity levels believed to be a result of seawater inflow has also been observed in the Halifax WWTF sewershed. Staff have inspected and confirmed that components of the Harbour Solutions project such as CSO locations are not significant sources of sea water inflow. Currently, staff suspect as yet, unidentified direct connections such as old outfalls connected to the sanitary system, private property foundation or sump discharges to the sanitary system or sections of our existing collection system to be subject to tidal influence. Investigations to identify possible sources of salt water intrusion to the Halifax WWTF collection system is ongoing.

• P2 staff responded to 6 separate environmental incidents or related investigations since the previous report. Some of these events were related to the release of hydrocarbons into stormwater systems.

• P2 staff continue to deliver pollution prevention radio advertisements to promote environmental responsibility and awareness for the general public.

• The P2 program has been managing the disconnection of 30 private sewage outfalls to the Harbour, 15 located each in Dartmouth and Halifax. With the exception of 3 recently discovered locations, all known dischargers have been corrected. The remaining 3 are subject to the same disconnect protocol that has been used for all other private outfalls.

• To date, the P2 program has been following a business plan in which the program objective is to have pollution prevention fully implemented on a sewer shed basis consistent with the HSP commissioning.

#### Section 5

#### Harbour Water Quality Monitoring

The Harbour water quality monitoring program was initiated in June, 2004. Samples are collected at 35 stations in the harbour, from the head of Bedford Basin to the harbour mouth past McNabs Island. Stations are located down the centre of the harbour, and at various additional points including areas of recreational use such as the yacht clubs. Since 2006, additional samples have been taken in Dartmouth Cove, Fairview Cove, and new sampling sites were established at Herring Cove. Additional sampling was performed at Fairview Cove during 2007 to monitor for effects of sewage diversion due to construction at the Duffus Street pumping station. Sites were added in late 2007/2008 around the NW Arm to monitor for changes as the Halifax plant came online.

Regular sampling continues on a bi-weekly basis for bacteria, metals, nutrients and water chemistry. Samples are collected at the surface and 10 metres at each site. The data are compiled into bi-weekly and quarterly summary reports. Testing for oils and biochemical oxygen demand (a measure of organic constituents in the water) has been discontinued at regular sampling sites due to levels which are routinely below detection limits. Methods for more sensitive detection of metals have been instituted. The program remains on schedule and below budget.

The purpose of the program is to establish existing baseline water quality conditions in the harbour, and to track changes as each of the three new treatment plants is commissioned in 2008 (Halifax and Dartmouth) and 2009 (Herring Cove). The sampling program is scheduled to continue through 2009. Based upon oceanographic modelling of the harbour, it is predicted that the water quality objectives set by HRM, adapted from the Halifax Harbour Task Force, will be met through the advanced primary sewage treatment provided for Halifax and Dartmouth. Water quality objectives differ for different parts of the harbour, but for the Outer Harbour, Northwest Arm and Bedford Basin, it was predicted that guidelines for contact recreation will be met. With full commissioning of the Halifax plant in 2008, conditions in the Northwest Arm and Point Pleasant Park areas have rapidly improved. Beaches were opened at Black Rock and the Dingle for the month of August. Contact recreation guidelines were met, the only exceptions being the few days during or immediately following heavy rainfall events, when designed wet weather overflows occur at some points in the collection system. A few remaining leak situations in the aging NW Arm trunk sewer were detected in the bacterial data. These were mostly remediated during 2008. More intensive monitoring for fecal coliform and enterococci bacteria was ongoing near key overflow points during summer 2008.

Fecal coliform bacteria levels are much reduced throughout the middle and inner harbour, with commissioning of the Halifax and Dartmouth plants, and bacterial levels on the Dartmouth side are now also generally below swimming guidelines. Levels in NW Arm and the Basin are reduced below swimming guideline limits, except following heavy rain events. Metals levels are low throughout the harbour, as are BOD levels. Oxygen levels are depressed in the deeper waters of Bedford Basin at various times, likely due to decomposition of organic materials. Oxygen levels are often too low, below the desired objective. Overall, water quality objectives in the harbour are now often being met, based on the various measured parameters.

Quarterly reports and weekly/bi-weekly data reports and spreadsheets are available online at: <u>http://www.halifax.ca/harboursol/waterqualitydata.html.</u>

## Section 6

## **Financial Information**

As of December 2008, the Harbour Solutions Project has spent \$306.2 million of its \$332.7 million capital budget. Spending for the 3rd quarter of 2008/09 just completed was \$1.34 million, of which \$0.47 million was spent on the wastewater collection system, and \$.19 million on the biosolids processing facility. Contract management, the Public Involvement & Information Program, aggressive pollution prevention, water quality monitoring, community liaison committees and administration totalled \$0.68 million.

# Inflation

Over the life of the project, 2004/05 was an extraordinary year for construction-related inflation in HRM in terms of its strong increase. In 2005/06 the inflation trend stabilized somewhat, and was lower than the revised inflation projection of 6% (4.31% vs. 7.87% in 2004/05). Inflation for fiscal years 2006/07 and 2007/08 was 5.25%, and 7.78% respectively, while the first quarter of 2008/09 saw inflation of 6.24%.

As of June 2008, \$11.82 million over and above budgeted inflation of \$12.3 million has been spent on the sewage collection system and the sewage treatment plants. As the completion dates for all components have passed, there should be no further inflation incurred.

# **Contingency Spending**

The contingency budget of \$18.20 million is largely set aside for addressing inflation beyond budgeted levels. The contingency is also being used to fund small items that have arisen through the contract amendments.

Actual and planned spending of contingency funds is as follows (shown in millions).

Realized inflation in excess of budget	\$11.82
Amount committed for diffusers	2.50
net of CSIF contribution	(2.50)
Project amendments	0.91
Herring Cove Water & Sewer	1.66
Commitments	0.25
Uncommitted	3.56
Total	\$18.20

Commitments listed above include a larger Fournier press and a larger chemical tank storage.

At the time of writing this report, the financial impact of the flooding event and resultant temporary shut down at the Halifax WWTF is still unknown. Although the plant has extensive insurance coverage, HRM may incur the initial recovery costs up front and therefore may have to draw on the contingency balance until insurance details have been agreed upon. It should also be noted that there remain numerous potential project risks that may require funding from the contingency balance, such as insurance deductible(s) and design changes due to changes in Building Code.

# Canadian Strategic Infrastructure Fund (CSIF)

Because of the delays in the completion of various components of the Harbour Solutions Project, negotiations are currently underway with CSIF staff. Per the existing agreement, the end date for receipt of contributions is March 31, 2009. As the contributions occur only after the completion of the applicable component, it is anticipated that this end date may be extended until March 31, 2012.

	<sup>3rd</sup> Quarter	Year to Date	Project Total	Budget	Budget Adjustments		Revised Budget
					Net HST	Contingency	
Firm Price Contracts							
Wastewater Collection System	.47	1.04	118.27	112.3	3.9	1.16	117.4
Wastewater Treatment Facilities	-	11.41	124.36	136.9	4.7		141.6
<b>Biosolids Processing Facility</b>	.19	0.31	12.54	12.5	0.5		13.0
Net HST	-	-	-	9.6	-9.6	1.66	-
Community Liaison Committees	-	0.06	6.73	7.0			8.7
Land	-	-	4.92	4.8			4.8
Pre-Construction Contract	-	-	7.11	7.1			7.1
Total Firm Price Costs	0.66	12.82	273.93	290.2	-0.5	2.82	292.52
Variable Costs							
Admin., Contract Mgmt.,Communications	0.68	1.17	9.55	12.0			12.0
Contingency	-	-	-	18.2		-14.64	3.6
Inflation		1.88	22.74	12.3	0.5	11.82	24.6
Total Variable Costs	0.68	3.05	32.29	42.5	0.5	-3.3	40.2
Harbour Solutions Project Total Cost	1.34	15.87	306.21	332.7			332.7
Funding							
EP Reserve Levies	-	-	160.2	160.2			160.2
Long Term Debt N.S. Municipal Finance Corp. Federation of Canadian Municipalities	-	-	110.00 20.0	110.00 20.0			110.0 20.0
Cost Sharing: Province* Canada Strategic Infrastructure Fund	-	-	6.01 20.85	10.0 30.0			10.0 30.0
Potential short-term debt	-	-		2.5			2.5
Total Funding	-	-	317.06	332.7			332.7

Harbour Solutions Project -3<sup>rd</sup> Quarter of 2008/09 - (in millions of dollars)

\* The Province of Nova Scotia has committed \$30 million to the Project over a 15 year span. The \$10 million shown above in the table represents the portion that will be received during the construction period

#### Section 7

#### **Public Information and Involvement Program**

The Marketing, Design and Print Services section of the Corporate Communications Office assumed responsibility for the Public Information and Involvement Program for the Harbour Solutions Project in the fall of 2003.

#### Public Messaging

The beaches at Black Rock and the Dingle closed to supervision for the season on August 29<sup>th</sup>. Through the fall season, the beaches remained open for unsupervised use and signs were posted indicating this fact. Signage was developed and posted at beach sites to remind users not to swim following heavy rain events when overflows may have occurred.

Harbour Solutions continues to be a major player in the Naturally Green Newsletter. This environmentally focussed in-house produced piece is distributed to approximately 162,000 households in HRM. The latest edition was released Oct.14, 2008 with Harbour Solutions occupying 2.5 of the newsletters 12 pages. This edition focussed on the August 2<sup>nd</sup> re-opening celebration of Black Rock and Dingle beaches, Biosolids and a detailed explanation of the advanced-primary wastewater treatment process.

Corporate Communications, in its work with the P2 group, continues to run a radio campaign with the Metro Radio Group(Q104, C100, CJCH, KIXX and Sun FM). The campaign focuses on pollution prevention and the protection of our harbour. Previous radio ad campaigns have been award winning and we hope this latest campaign will be equally successful. The ads continue to make the link between HSP and Pollution Prevention.

Corporate Communications designed a user-friendly map outlining the various harbour related activities that will be possible once the Project is fully is up and running. The map has appeared in a number of publications throughout the quarter including, The Boating News, Boom and Halifax Magazines and continues to be very well received. Boom magazine also published a lengthy article on Harbour Solutions with copy supplied by Corporate Communications.

Since the temporary shutdown of the Halifax WWTF Jan.14, 2009, Corporate Communications has fielded numerous media contacts regarding the Halifax WWTF and its status. Corporate Communications has also communicated with residents adjacent to the WWTF. A wider communication to the local community is presently being worked on.

#### Community Liaison Committees (CLC)

The Herring Cove CLC has essentially completed their mandate with respect to the WWTF exterior design. The focus of the CLC is now on the landscaping around the WWTF, the Herring Cove pumping station and Latter's Pond recreation area. Staff from HRM's Community Development division are now assisting in these efforts. A meeting

was held in December 2008 and a plan for Latter's Pond development was presented by HRM staff and community member Brian Dempsey. The plan was well received by the CLC and endorsed.

Corporate Communications staff will continue to meet with CLC members as required. Corporate Communications also continues to work with the community to address any concerns that might arise during construction.

# Harbour Solutions Website

The Harbour Solutions website continues to be updated on a regular basis and is a valuable, user-friendly public source of information on the Project. PIIP staff continue to maintain the site for Harbour Solutions. The site features a large photo gallery, reference materials, past and current presentations, construction notices informing residents of any possible traffic impacts and a large collection of information related to the WWCS, WWTF and Biosolids processes.

# Construction Communications

Construction updates are emailed as required to stakeholders and posted on the website, along with notices of impending construction and their impacts. Newspaper and radio ads, media releases and web postings continue to be developed for construction that may impact traffic.

# Signage

Staff liaised with the federal and provincial governments to design, produce and install temporary construction signage for the sites of the three Wastewater Treatment Facilities.

More detailed permanent signage has been designed by Corporate Communications for the 3 WWTF sites as well as building mounted plaques.

# Correspondence

As requested/required, letters and e-mails are drafted to address concerns/enquiries from citizens regarding the Project. PIIP staff also regularly respond to numerous requests for HSP information from the general public, interest groups, media, Mayor Kelly and HRM Councillors, staff and others. Letters are also drafted for the CLC's and other levels of government.

# Section 8

# **Construction Safety**

There were no lost-time incidents during the 3<sup>rd</sup> Quarter of 2008/09.