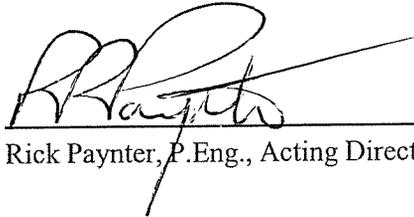

Halifax Regional Council
September 17, 2002

TO: Mayor Kelly and Members of Halifax Regional Council

SUBMITTED BY:



Rick Paynter, P.Eng., Acting Director, Public Works & Transportation Services

DATE: September 9, 2002

SUBJECT: Little Sackville River

INFORMATION REPORT

ORIGIN

Moved by Councillor Harvey, seconded by Councillor Johns, that a report be requested regarding the situation at the Little Sackville River. MOTION PUT AND PASSED. Item 12.1, July 16, 2002.

BACKGROUND

On July 12, 2002, a report of numerous dead fish in the Little Sackville River was received by the Nova Scotia Department of Environment and Labour.

Staff from Environment Canada, Fisheries and Oceans and Nova Scotia Department of Environment and Labour responded to the fish kill. This response was coordinated by the Regional Environmental Emergency Team (REET), which is comprised of staff from these agencies. The Nova Scotia Department of Environment and Labour was identified by REET as the lead agency for this investigation.

Dead fish and a visible floc were observed for a reported four kilometre stretch of the Little Sackville River, which discharges into the Sackville River, which in turn discharges into Bedford Basin. The areas adjacent to the impacted reaches of the river are represented by Councillor Harvey in Sackville and Councillor Goucher in Bedford.

DISCUSSION

As detailed later in this section of the report, it appears that the contamination of the river and related fish kill was triggered by a water main break at the site of the K-Mart demolition at Downsview Mall, which discharged water into the acid bearing slate which was located under the building. This is the scenario as provided at this time by consultants of Atlantic Shopping Centres Ltd, who are the owners of the property.

On Sunday, July 14, 2002, HRM staff inspected a length of the Sackville River in response to a media report of a fish kill. No visible contamination or fish kill was observed at this time.

On July 15, 2002, HRM staff contacted representatives of the investigating agencies and determined that the origin of the problem appeared to be in the vicinity of the Downsview Mall property. HRM has storm water and sanitary sewer infrastructure near this area, so staff responded to the site to assist the other agencies, and to be aware of and manage any possible impacts to HRM infrastructure.

Over the next several days, HRM staff conducted a search of the approximate 300 acre watershed of the HRM storm sewer for a possible chemical discharge which might have caused the contamination. Many businesses and properties were inspected, and representatives questioned as to their knowledge of possible sources. None of these investigations yielded the source of the visible floc material and low pH water which had impacted several kilometres of the Little Sackville River.

Additionally, staff from Technical and Underground Services (TUGS) commenced temporary bypass pumping of HRM stormwater into a sanitary sewer line to reduce the hydraulic loading and any related contamination which may have entered the river.

Also, HRM staff took numerous pH readings of water in the area, in pipes, ditches and the river, and in standing water on private properties. On Friday morning, July 19, staff from HRM detected low pH (acidic) water in HRM's storm sewer, which discharges to a storm water pond adjacent to the Downsview Mall, which in turn discharges into the Little Sackville River. This finding triggered additional intense tracking activities and sampling, and at approximately 11:20 that morning, HRM staff isolated the acidic water as entering the municipal sewer system from the site of the former K-Mart building.

HRM staff immediately directed the consultants representing Atlantic Shopping Centres Ltd to undertake the necessary actions to control the discharge of the acidic drainage from entering the municipal stormwater and sanitary sewer systems. Representatives of Environment Canada and Nova Scotia Department of Environment and Labour were also immediately advised of the detected source.

HRM staff continued to provide onsite assistance on a continuous basis for approximately ten days, including sampling and monitoring, video inspection of HRM systems, and bypass pumping of stormwater flows to the sanitary sewer system. Also, staff from Wastewater Treatment conducted monitoring of influent sewage at the Mill Cove STP to insure that no operational impairment was occurring to the wastewater treatment process as a result of the temporary diversionary pumping of acidified stormwater to the sanitary sewer.

Staff from HRM began to regularly participate at REET meetings to assist in the delivery of a coordinated response by the various agencies represented at the site. Councillors Harvey and Goucher, as well as senior staff of HRM, were provided with regular updates of site activities.

Consultants representing Atlantic Shopping Centres Ltd have also been attending REET meetings. Atlantic Shopping Centres Ltd have undertaken to control the discharge from their property to the HRM sewer systems and to the Little Sackville River, as well as other onsite activities.

This has permitted staff from HRM to withdraw from the management of daily activities. Supervisory staff have been and will continue to inspect the site on a continuing basis until all remediation activities have been completed.

Consultants for Atlantic Shopping Centres Ltd have located and excavated a number of abandoned pipes which were suspected pathways for the low pH flow to enter the environment. Also, monitoring wells and bore holes have been installed to provide an understanding of the groundwater and geology of the site. Additionally, the building footprint of the former K-Mart site was covered with compacted material and plastic sheeting to minimize the entry of rainfall into the pyritic slate.

During the response to this event, the outfall of a private stormwater retention pond which had received acidic water from the K-Mart site was isolated from discharging into the Little Sackville River. Additionally, this pond was drained and sediments were removed and are currently stored on site in an engineered facility.

It is currently believed that during construction-related activities at the former K-Mart building site at the Downsview Mall property, a reported water main break resulted in the discharge of approximately 500 m³ of water into an infilled foundation area. This area consists of pyritic slate infill, and it appears that the discharge of water from the broken water main may have resulted in acidified drainage from this site entering into the Little Sackville River. Additionally, it is believed that the acid content of this drainage oxidized various metals such as aluminum, iron, cobalt, nickel and zinc which resulted in a visible floc that may have contributed to the fish kill.

REET meetings will continue on a required basis for the purpose of site management, and staff from HRM will continue to participate in a support role. To date, remediation activities have been short term or immediate in nature. Recently, discussions regarding long-term requirements or activities for both the Downsview site and the impacted watercourse have begun with the various representatives of REET.

Final remediation plans for this site are not currently known. A proposed "Draft Fish and Fish Habitat Restoration Plan for the Little Sackville River" has been prepared for Atlantic Shopping Centres Ltd. by Jacques Whitford Environmental Limited and has been reviewed by representatives of the various agencies, as well as members of the Sackville River Association. Discussion of this draft is still ongoing at the time of this report preparation.

HRM staff have met with Enforcement Officers from both Provincial and Federal agencies to provide observations, actions and recorded information regarding this event and will continue to cooperate effectively with all parties until all remediation and investigation activities are completed.

BUDGET IMPLICATIONS

It is intended that certain costs incurred by Halifax Regional Municipality which are related to our involvement in this incident will be recovered.

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.

ALTERNATIVES

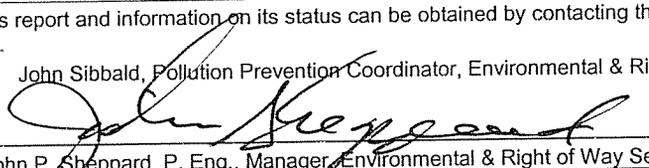
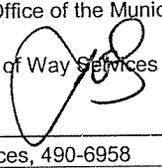
None recommended.

ATTACHMENTS

None.

Additional copies of this report and information on its status can be obtained by contacting the Office of the Municipal Clerk at 490-4210, or Fax 490-4208.

Report Prepared by: John Sibbald, Pollution Prevention Coordinator, Environmental & Right of Way Services

Report Approved by:  

John P. Sheppard, P. Eng., Manager, Environmental & Right of Way Services, 490-6958