



Halifax Regional Council
March 4, 2003

TO: Mayor Kelly and Members of Halifax Regional Council

SUBMITTED BY:

Paul Dunphy, Director of Planning & Development Services

DATE: February 24, 2003

SUBJECT: Environmental Study for Sackville River

INFORMATION REPORT

ORIGIN

Motion of Council - August 20, 2002: (Based upon Report of North West Community Council) (Ref. Information Report to North West Community Council, May 23, 2002)

At the August 20, 2002 Regional Council session, staff was asked to bring back a report addressing the implications of conducting an environmental study of the Sackville River based upon correspondence received from Walter Regan of the Sackville Rivers Association and further that this report respond to the availability of funding for this study through the Harbour Clean up project. (status sheet item 11.2.3 - August 20, 2002)

SUMMARY

- The magnitude of the requested study is so large that a precise cost estimate cannot be produced. The order of magnitude however is several hundred thousand dollars.
- Council has not yet made fundamental decisions on the mandate and role of the municipality in management of water resources, nor have priorities been set for issues and areas which may require study and subsequent action. Recommendations from the pending Water Resource Management Study will help Council set policy direction, following which appropriate action may be defined. The Water Resource Management Study is now being reviewed by the three Watershed Advisory Boards. They have been asked to provide comments to staff by May 1, 2003. Once these comments have been reviewed and considered by staff, they will be forwarded to Council.
- The Harbour Solutions reserve is not an appropriate source of funds for such studies. The Sewer Charges By-law (S-100) only permits these funds for infrastructure to transport/treat storm and waste water.

DISCUSSION

Magnitude of Request

Council requested information on the implications of conducting a study of the Sackville River basin. While one overall study has been referenced in the correspondence from Mr. Walter Regan of the Sackville Rivers Association (attached), various types or categories of study have been requested in relation to the Sackville River basin. A study (or studies) would, in conformance with this request, have to include:

- an inventory of existing water resources and impacts within the basin;
- remediation of existing impacts;
- inventory of resources at risk; and
- planning for prevention of future impacts (See Appendix A for possible study components).

It should be noted that while this request may have been instigated in response to the Sackville River fish kill, this past summer, not all impacts result from business or commercial/industrial activity. Much of the non-point source impact on the river originates from residential areas within the basin.

The magnitude of the request is so large that it would be difficult and time consuming to produce an accurate cost estimate, so exact costs are unknown as yet. Figures mentioned during discussions of this study concept have been in the several hundred thousand dollar range. This is not unrealistic as an approximate estimate. If Council decides to proceed with this study, rather than undertaking a time consuming and imprecise cost estimate, staff would develop a Request for Proposals (RFP) in consultation with the Bedford and Halifax County Watershed Advisory groups. A maximum acceptable budget for the study could be established in advance.

Choices

HRM does not have a comprehensive watershed management program, nor has HRM adopted a watershed-based approach to planning (although some adjustments to the Lakes/Watershed Board boundaries have better aligned them with watershed boundaries). A number of watersheds intersect the urbanized core of HRM (Maps attached). No priorities have yet been set for watershed studies or issues. Prior to allocating several hundred thousand dollars to study one watershed, Council should consider priorities in terms of urgency and magnitude of issues. For example, there are other areas of rapid growth and impacts occurring in other watersheds around Halifax/Dartmouth. Proceeding with the requested study prior to consideration of regional policy, and establishment of regional priorities, would be premature. Following consideration of the Water Resource Management Study, Council will make decisions regarding the municipal role, mandate priorities and costs associated with water resource management, which will provide a regional policy context for consideration of requests for such studies. This report is now being reviewed by the various Watershed Advisory Boards.

Water Resources Study

HRM recognises the importance of the environmental impacts on water resources of land development, and as a result has funded the Water Resource Management Study (\$130,000). The consultant's report has been submitted and is being reviewed by staff and the Watershed Advisory Boards. This study is intended to provide Council with a range of policy options and recommendations to address water resource issues and the role of the municipality. Other initiatives at the community, provincial and federal levels are intended to improve water resources and reduce environmental and human health impacts. All of these may benefit from a more integrated and coordinated strategic approach, focussed at the municipal level to provide direction to each department, clearly identify the role of HRM and others, identify where efforts are required, and provide a plan to best apply resources over time. The recent reorganization of HRM services will bring together many of the units responsible for water-related issues.

Mandate

In terms of the existing impacts of development, HRM's role under the Municipal Government Act (MGA) is to set zoning for land areas which determines acceptable uses, and to set subdivision by-laws which govern how development proceeds. Municipalities have no formal role in environmental management, except indirectly through the impacts of development. The Water Resources Management Study will provide recommendations on options the municipality may decide to adopt, with an indication of the costs and the mandate (legislated, optional or currently not enabled by the MGA). Municipal mandate in the area of environmental management is not always clear, but there have been increasing expectations for the municipal role on the part of the public and stakeholder groups.

HRM Water Related Initiatives

HRM has already initiated several programs to mitigate the effects of wastewater flows on natural water bodies. The Pollution Prevention (Source Control) program and the Inflow and Infiltration Reduction (I&I) program are consistent with the approach and recommendations adopted for the Harbour Solutions Project. Many other HRM initiatives, itemized in Appendix B, also represent ongoing efforts to mitigate the impacts of development on water resources. Undertaking an extensive new study would be at the expense of existing programs, or would require new funding.

Funding

Watershed management was a recommendation of the Harbour Solutions Advisory Committee, whose Report to Council (1998) has formed the basis for that project. However, funding the Sackville River study from the Harbour Solutions Reserve is not permitted by the Sewer Charges By-law. The Pollution Control charges which fund this reserve can only be allocated to the installation of the infrastructure needed to transport and treat waste or storm water.

It is possible that the study could be funded through either an area rate or from general revenue. It may also be possible to explore federal and/or provincial sources of funding for such a study. Staff would investigate this option in developing an RFP. It should be noted that any study budget would

not include the eventual costs of implementing any resulting recommendations, which could be a considerable additional expense.

Sackville River Fish Kill

Acidic slate run-off from a construction site last summer raised acidity in the Sackville River and caused a fish kill. Atlantic Shopping Centres has volunteered to implement a rehabilitation plan which has been approved by the Department of Fisheries and Oceans. The plan proposes to:

- monitor sediment and water quality for a year;
- monitor the river's insects until they recover;
- measure how quickly the fish population recovers; and
- rebase 6000 salmon into the river.

BUDGET IMPLICATIONS

Required funds for any such study will depend upon the scope of work, size of the watershed, and other sources of funding. The referenced Sackville River study has not been budgeted in the current 2002/03 budget or the proposed 2003/04 budget. As the Pollution Control Reserve is not a funding option, funds would have to be identified within existing budgets for this FY, or provided for in next year's budget.

ALTERNATIVES

1. Council may decide not to proceed with the requested study at this time. This is the recommended course of action.
2. Council may decide to proceed with the study and direct staff to proceed with development of a RFP. This is not recommended for the reasons indicated in the report.

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 - Scope of the requested study
- Appendix B - HRM water-related initiatives
- Appendix C - Maps of urban area watersheds and Sackville River watershed
- Appendix D - Correspondence from Mr. Walter Regan, Sackville Rivers Association

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: Tony Blouin, Manager of Environmental Policy, 490-4610

Report approved by: Paul Dunphy, Director, Planning & Development Services

Appendix A - Scope of the Requested Study

The basic categories of study to be undertaken would be:

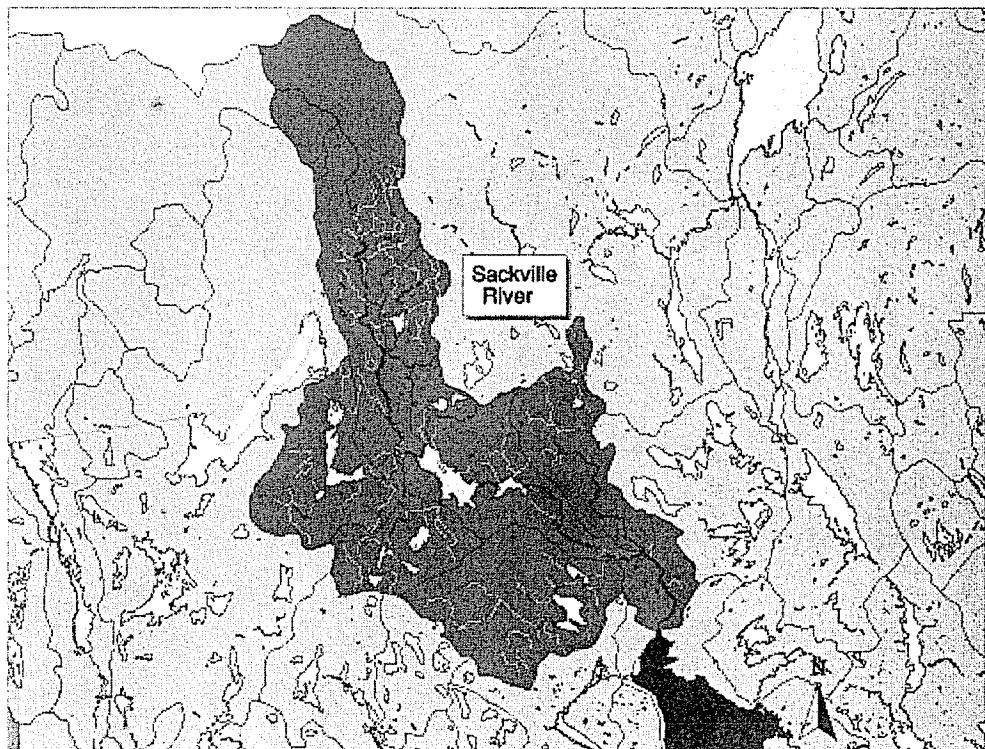
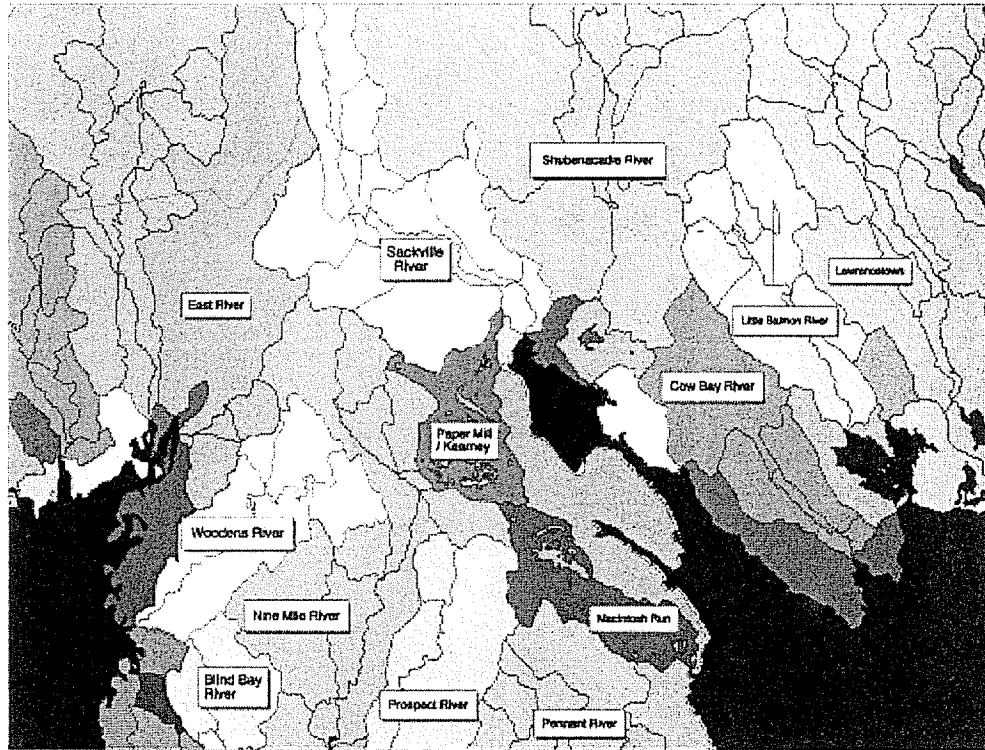
- documentation of existing impacts (inventory of existing land uses, identification of point and non-point sources of pollution, documentation of nature and magnitude of impact, mapping of results);
- monitoring programs (review of existing data, design of appropriate monitoring scope - number and location of monitoring stations, parameters to be measured, frequency of sampling, analyses required, statistical analysis of results, modelling of drainage system pollutant loadings based on results);
- habitat studies (fish, benthic invertebrates, riparian (streamside) vegetation);
- hydrology and limnological inventories (hydrological studies - flow, flooding potential, limnological studies of lakes within the basin - characterisation, monitoring, trophic status);
- stormwater management plans (basin / sub-basin plans for stormwater infrastructure and treatment);
- watershed planning (consideration of cumulative impacts); and
- best management practises (adoption of remediation measures, stormwater/wastewater treatment technologies, preservation of natural features).

Appendix B - HRM Water-Related Initiatives

Many HRM programs are intended to reduce negative impacts or have positive impacts on water resources. Examples include:

- Infiltration and Inflow Reduction Program;
- Pollution Prevention/Source Control Program;
- Pesticide By-Law;
- street sweeping;
- catch basin cleaning;
- sewer separation;
- the Pumping Station and Force main study;
- sewer rehabilitation;
- spill response;
- sewer inspection and cleaning;
- wastewater treatment plant operations;
- storm water retention/detention pond maintenance;
- roadside ditch maintenance;
- surface water quality sampling programs;
- litter management;
- road deicing agent application; and
- vegetation management in parks and green spaces.

Appendix C - Maps of urban area watersheds and Sackville River watershed



**Appendix D - Correspondence from Mr. Walter Regan, Sackville Rivers Association
(Extract)**

Sent: August 17, 2002
Subject: Watershed Plan

The issues pertaining to the concept of watershed management and from that focussing on the cause, pathways and fate of impurities that impact the waterbodies within the Sackville River Watershed. Very briefly, I see a overview of the watershed from a land use perspective, then identifying what impacts can be documented or suspected as attributable to the various land use activities.

Within each land use area or by sub watershed, characterization of point and non point pollutants, description of each, sources, magnitude and composition. Additionally, inventories of each discharge point and location description for broad reach discharges such as field run-off should be developed. Then design of appropriate or discrete monitoring programs should be considered which would include a review of existing databases, number and location of monitoring stations for future characterization analysis of monitoring data, statistical analysis, possible modelling projects and loading functions.

Additional inventories such as habitat studies, hydraulics, limnology, vegetation, storm water management projects, riparian projects, chemical spill reporting etc, etc, should or could be catalogued and interpreted with respect to pollutant loadings.

All of this should be morphed into long term and short term projects, timelines and deliverables that could be part of an on-going research by the university as part of the students curriculum. Partnerships and information exchanges with SRA, the university and various other volunteers and gov't agencies identified and possible formulation of steering committee etc.

This could be expanded to look at overall stormwater management plans as well as watershed planning and protection policies possibly driving recommendations for curb and gutters, swales, culverts, alternative drainage systems, detention and sedimentation ponds, their use and locating, pond and wetland management. The role of gov't agencies vs volunteer and community, financing issues, work with other municipalities, common by-laws to protect the river and watershed, this could be done by groups like in universities, EDM, Jacques Whitford etc, would be all encoming and on going all going to protect our watershed and use as a working example for other watersheds,,,,,,,,,,,,, the list could go on.

Also HRM committed by Council under Harbour Clean up to do watershed planning for Sackville and other watersheds.