

MUNICIPAL WASTEWATER EFFLUENT

INSIDE THIS ISSUE:

<i>MWWE Background</i>	2
<i>One-Window Approach</i>	2
<i>Marine Environment</i>	3
<i>Funding Required</i>	3
<i>Science-Driven Process</i>	4
<i>CCME</i>	4
<i>Consultation Benchmark</i>	4

**Prepare Against —
Acronym Overload!**

MWWE (Municipal Wastewater Effluent)

CCME (Canadian Council of Ministers of the Environment)

MPJAG (Municipal/Provincial Joint Advisory Group)

NSEL (Nova Scotia Department of Environment and Labour)

UNSM (Union of Nova Scotia Municipalities)

AMANS (Association of Municipal Administrators of Nova Scotia)

SNSMR (Service Nova Scotia and Municipal Relations)

EC (Environment Canada)

CEPA (Canadian Environmental Protection Act)

P2 (Pollution Prevention)

DC (Development Committee)

CAG (Core Advisory Group)

ERMM (Environmental Risk Management Model)

EPPC (Environmental Planning and Protection Committee)

MUNICIPAL/PROVINCIAL JOINT ADVISORY GROUP FORMED

A Canada-wide strategy for the management of municipal wastewater effluent (MWWE) is currently being developed through the Canadian Council of Ministers of the Environment (CCME). To ensure that critical issues of concern to Nova Scotia municipalities are brought forward during the strategy development, a Municipal/Provincial Joint Advisory Group (MPJAG) has been formed in the province.

Following the MWWE regional municipal meeting held in Moncton, New Brunswick in June 2004, the Nova Scotia Department of Environment and Labour (NSEL) identified key stakeholder organizations from which to form the advisory group. The group was formed to promote a province-wide approach for active participation and to facilitate effective communication with municipal stakeholders who will be directly impacted by outcomes of the MWWE Strategy. Identified stakeholders included: the Union of Nova Scotia Municipalities (UNSM); the Association of Municipal Administrators of Nova Scotia (AMANS); and one other provincial department, Service Nova Scotia and Municipal Relations (SNSMR). An inaugural meeting was held in Halifax on June 8th, 2005. The meeting resulted in agreement on a **Terms of Reference** for the group which will be officially adopted by all parties at the UNSM meeting in Halifax in October.

The Advisory Group determined that it is critical that MWWE information be widely distributed to municipal units through a newsletter. An Edito-



Hantsport Wastewater Treatment Facility

rial Committee was established and newsletter distribution options were discussed. Each organization will distribute the newsletter to members and the provincial government will investigate online posting options.

Key points discussed during the meeting included:

- Acknowledgement of the importance of environmental protection through stewardship in a collaborative manner;
- Addressing issues and concerns within a fiscally responsible framework that focuses on priorities.

To ensure that your views on MWWE are addressed, feel free to contact one of your members on the MPJAG.

ADVISORY GROUP MEMBERSHIP

Membership on the advisory group includes:

UNSM: Mayor John Leefe, Region of Queens; Councilor Bruce Morrison, County of Victoria; Mayor John Prall, Town of Berwick.

AMANS: Brian Smith, CAO, Municipality of the County of Kings; Kelly Rice, Clerk/Treasurer, Village of Kingston; Ashley Brown, CAO, Town of Parrsboro.

NSEL: David Briggings, Manager Water and

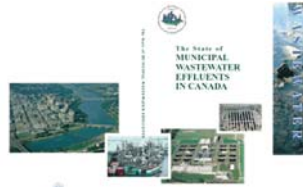
Wastewater Branch; Darlene Fenton, Regional Manager Central Region; Alan Benninger, Program Administrator, Water and Wastewater Branch. — **Alternates:** Don Feldman, District Manager Central Region; Bob Rowe, Engineer, Water and Wastewater Branch.

SNSMR: Marvin MacDonald, Director, Registry and Information Services. — **Alternate:** Aileen Waller-Hebb, Canada/Nova Scotia Infrastructure Program.

MWWE BACKGROUND

FROM ENVIRONMENT CANADA TO CANADIAN COUNCIL OF MINISTERS OF THE ENVIRONMENT

The MWWE initiative began as a federal one and has evolved into one where the provinces and territories became involved through CCME. In 2001, Environment Canada (EC) published a comprehensive report – ***The State of Municipal Wastewater Effluents in Canada***.



The report concluded that municipal wastewater effluent remained one of the most common contributors to water

pollution problems in Canada such as: beach closures; restrictions on shellfish harvesting; and degradation of aquatic habitats. It also stated that other non-apparent problems may be associated with the presence of persistent, bioaccumulative substances in municipal wastewater. To remedy these problems, the report suggested that Canadians devote more effort and resources to wastewater management and the improvement of our wastewater treatment capabilities.

In 2002, in response to specific substances being declared as toxic under the Canadian Environmental Protection Act (CEPA), EC released a draft – ***Risk Management Strategy Addressing Ammonia, Inorganic Chloramines and Chlorinated Wastewater Effluents***. Notices were subsequently posted in the CEPA Environmental Registry.

Regional stakeholder consultation meetings were held to discuss EC's proposed risk management instrument – Pollution Prevention (P2) Plans – and the proposed triggers used to identify municipalities which would be required to develop the P2 plans. Following the consultation meetings held by EC, CCME formed a Scop-

ing Committee to develop recommendations for a coordinated Canada-wide approach.

In 2003, CCME approved a path forward for the development of a long-term Canada-wide strategy for the management of municipal wastewater effluent. A Development Committee (DC) was formed to steer and oversee the development of the strategy. As the DC is only made up of federal, provincial and territorial representatives, a key concern of the committee was how to ensure that effective municipal consultation was included in the strategy development.

In 2004, as the first stage of consultation, the DC formed a Core Advisory Group (CAG), met with municipalities, held regional consultation meetings and included MWWE on the CCME website. Nova Scotia participated in a regional municipal meeting held in Moncton, New Brunswick in June. Also in 2004, several subcommittees were established to address identified key topics:

- Environmental Risk Management Model (ERMM);
- Harmonization of the Regulatory Framework;
- Coordinated Science and Research;
- Economic Implications.

As a related topic, the DC also formed an ad hoc working group to look at biosolids.

In Nova Scotia, NSEL met with many municipalities to discuss the importance of MWWE and possible impacts of the process.

In 2005, regional consultation meetings were held. Nova Scotia participated at a meeting on May 17th in Amherst. As well, consultant reports have prepared on ERMM and Harmonization of the Regulatory Framework.

“Ongoing reporting to multiple levels of government on wastewater effluent is not acceptable to Nova Scotia Municipalities”

*- Bruce Morrison, Councillor,
County of Victoria*

ONE-WINDOW APPROACH NEEDED

HARMONIZATION OF THE REGULATORY FRAMEWORK

MWWE is currently managed through a variety of policies, by-laws and legislation at the federal, provincial/territorial and municipal levels. Such governance often creates confusion and complex situations for regulators, system owners and operators. Municipalities have been very clear in voicing that they are not prepared to report to multiple levels of government regarding wastewater management.

The mandate of the Harmonization of the Regulatory Framework subcommittee includes:

- Prepare an outline of the current regulatory situation;
- Identify gaps and duplication;
- Define a clear, forward-looking and flexible regulatory model;
- Harmonize monitoring and reporting requirements.

A one window approach for the management of wastewater is a requirement of the Canada-wide Strategy.

THE MARINE ENVIRONMENT

HARMONIZATION OF THE REGULATORY FRAMEWORK

The effectiveness of the Canada-wide Strategy is dependent on professional consideration being given to effluent impacts on the marine environment.. It is recognized that a 'one size fits all' approach will not be effective as there are many variables involved across the country.

In Atlantic Canada, wastewater facility design and operation has been effectively addressed for many years based on identified risk management. The ***Atlantic Canada Standards and Guidelines Manual for the Collection, Treatment and Storage of Sanitary Sewage*** has served as a benchmark to help determine proper risk management approaches. Assimilative capacity is commonly used in assessment of the risk as it illustrates lower risk to the marine environment.

The mandate of the ERMM subcommittee includes the development of the concept of an ERMM as well as to develop a comprehensive framework to guide the decision making process

to manage MWWE by:

- Establishing a list of parameters of national concern and developing achievable/desirable performance standards;
- Integrating the characteristics of the site specific receiving environment in the development of these standards;
- Developing a risk based decision making process, where treatment standards can be adjusted depending on risk, with the onus on the discharger to demonstrate no adverse effects.

The subcommittee has drafted a proposed framework which was distributed at the 2005 regional municipal consultation meetings. For example, the framework recommends that risk management decisions be made following stakeholder input, consideration of societal values and detailed identification of the cost and investigation of possible funding opportunities.

SPECIFIC FUNDING IS REQUIRED

ECONOMIC IMPLICATIONS



Halifax Harbour Solutions—Work in Progress

Building and operating infrastructure is expensive and may be a burden on municipalities with very limited funding to apply to wastewater management. Early in the Canada-wide Strategy development process, it was clear that economic implications needed to be identified and effectively addressed. An Economics Implications subcommittee was formed with the following mandate:

- Review of existing and alternate funding mechanisms (infrastructure grants, taxation, funding models in other countries, etc.);
- Examine cost implications of implementing a Canada-wide strategy with consideration given to various end-points or results;
- Examine the economic/opportunity costs with respect to cleaner source water in both the rural and urban context;
- Recommend sustainable funding mechanism models.

A large number of municipalities in Nova Scotia will be considering upgrading their wastewater infrastructure. Funding mechanisms will need to address the capital costs but also the ongoing operational costs associated with any upgrade to the service they provide.

A key principle of the Canada-wide Strategy, and on the Atlantic Environment ministers insisted on, is to be fiscally responsible, taking into account other municipal priorities— such as the provision of clean, safe drinking water and the handling of solid wastes.

“Sustainable funding is required and the subcommittee needs to consider ongoing operational costs as well as the capital costs”

*- Kelly Rice,
Clerk/Treasurer, Village of
Kingston*



Websites

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AMANS — www.amans.ca

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SCIENCE-DRIVEN PROCESS

COORDINATED SCIENCE AND RESEARCH

The negative impact on the environment of parameters such as biochemical oxygen demand (BOD), suspended solids (SS) and pathogens has been well known and addressed through regulation for many years. However, the science and research underlying MWWE management, and the associated treatment technologies are constantly evolving. Several research issues relevant to MWWE are currently focusing on: a) effects of persistent organic pollutants; and b) bioaccumulative contaminants and metals on ecosystems and human health. The Coordinated Science and Research subcommittee

is charged with:

- Reviewing the state of knowledge on science and technology;
- Identifying approaches to fill information gaps and disseminate information;
- Determining required action on emerging issues.

Promoting collaboration between government and non-government researches is critical in the path forward on emerging issues.

CCME

The purpose of CCME is to:

- Improve environmental protection and promote sustainable development;
- Foster intergovernmental cooperation and harmonization;
- Support jurisdictions in their work;
- Produce positive environmental benefits.

Based on this, it is clear that CCME is well-suited to lead the development of the Canada-wide MWWE Strategy. Decisions are made on

the basis of consensus and members sit as peers. Activity reporting to the ministers is accomplished through the Deputy Ministers from the Environmental Planning and Protection Committee (EPPC) - a permanent intergovernmental advisory steering committee. When a DC is formed, it is made up of representatives from each CCME jurisdiction and they bring a range of skills and knowledge to the process.

The current chair of CCME is the Nova Scotia Minister of Environment and Labour, the Honorable Kerry Morash.

CONSULTATION BENCHMARK

NOVA SCOTIA—FOCUSED ON EFFECTIVE CONSULTATION

Stakeholder involvement and consultation is important to the province as it positions us to effectively involve and communicate with our stakeholders on specific issues. Nova Scotia is setting a benchmark in Canada when it comes to effective municipal consultation. In 2003, NSEL formed a **Stakeholder Committee** with the Municipal Public Works Association of Nova Scotia (MPWANS) for consultation on water and/or wastewater issues.

During the CCME scoping exercise, our province represented the other Atlantic provinces and a key issue continually brought forward by Nova Scotia was the need to involve municipalities as early in the process as possible. Bob Langdon, retired Director of Environmental and Natural Areas Management, NSEL, passionately suggested to the scoping committee “the sooner, the better on this issue.” Following the decision to move forward on the CCME strategy, Bob arranged face-to-face meetings with municipal representatives to discuss the importance of becoming “fully engaged” in the MWWE process. These meetings had a positive

impact as illustrated by the high number of Nova Scotia participants at the regional municipal consultation meetings, both in 2004 and 2005. Municipalities made it very clear at the 2004 meeting in Moncton that they were dissatisfied and discouraged at the lack of municipal consultation. Following this meeting, NSEL approached UNSM, AMANS and MPWANS suggesting a MWWE stakeholder process to ensure that a mechanism exists in Nova Scotia to effectively engage the municipalities in the strategy development. UNSM and AMANS agreed to participate in the advisory group with MPWANS opting to let their concerns be dealt with through the Canadian Water and Wastewater Association (CWWA). MPWANS is being kept informed on MWWE activities through the Stakeholder Committee. It appears as though Nova Scotia is the only provincial/territorial jurisdiction that has applied these consultation mechanisms.

Does collaboration exist between the province and municipalities in Canada? For Nova Scotia the answer is a resounding ‘YES!’