

MUNICIPAL WASTEWATER EFFLUENT

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Common Acronyms

MWWE (Municipal Wastewater Effluent)

CCME (Canadian Council of Ministers of the Environment)

M/P JAG (*Nova Scotia* 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)

WWT (Wastewater Treatment)

DC (Development Committee)

CAG (Core Advisory Group)

ERMM (Environmental Risk Management Model)

EPPC (Environmental Planning and Protection Committee)

EFTG (Economics and Funding Task Group)

NPS (National Performance Standards)

PROVINCIAL CONSULTATION FOCUS SESSIONS PLANNED

The ongoing development of the Strategy for the Management of Municipal Wastewater Effluent (MWWE) is entering its final stages. It is critical that stakeholders be informed and consulted with prior to implementation of the strategy. The Nova Scotia Municipal/Provincial Joint Advisory Group (M/P JAG) on MWWE has organized a series of **'focus sessions'** to provide opportunity for stakeholders to be fully engaged in the strategy development process.

Stakeholders, specifically those representing municipalities, need to be aware of the potential impacts of the strategy to the communities they represent—for both short-term and long-term planning—regarding the provision of wastewater services.

Several focus sessions will be held in conjunction with key meetings attended by municipal politicians, administrators and facility operations staff. Sessions are scheduled as follows:

- **Monday, October 15th 2007**, Halifax, Lord Nelson Hotel, (day prior to AMANS Annual Meeting);
- **Tuesday, October 16th 2007**, Richmond County, Dundee Resort, (day prior to MPWANS Fall Conference);
- **Tuesday, October 30th 2007**, Kentville, County of Kings Council Chambers;
- **Wednesday, October 31st 2007**, Truro, Truro Council Chambers; and
- **Monday, November 5th 2007**, Halifax, Westin Nova Scotian Hotel, (day prior to UNSM Annual Meeting).

All sessions will start at 1:00 PM and run until 4:00 PM. Session registration begins at 12:30 PM.

For further information, or to register for any of the sessions, contact Carmella Robertson: robertcv@gov.ns.ca (email) or call 424-2553.

ECONOMIC IMPLICATIONS A PLAN TO SUPPLEMENT THE STRATEGY

Deputy Ministers established an **Economics and Funding Task Group** (EFTG) to address issues related to costs and options for funding as it relates to the strategy. The group has compiled information related to the costs associated with the Strategy and this work will contribute to the development of a feasible strategy for the management of municipal wastewater effluent in Canada.

EFTG has submitted an **Economic Plan** as a technical supplement to the Strategy. The plan includes information on:

- Historic and potential future funding;
- Capital and non-capital costs; and
- Funding considerations, sources and mechanisms.

The plan recommends that funding principles: **a)** emphasize economic, environmental and social sustainability; **b)** be flexible and considerate of jurisdictional factors; **c)** promote opportunities for innovative financing arrangements;

and **d)** take into account risk to help inform the appropriateness of the funding options considered.

It is estimated that over 30 years, and depending on inflation, capital costs will range from \$7.5 to \$9.3 billion to meet the requirements of the Strategy. Non-capital costs may be as high as \$3.6 billion during that period. The plan estimates that the overall costs will be slightly less if implemented over a 20 year period.

The plan also recommends that implementation address high risk facilities first, identify municipal capacity, and form a national MWWE management committee to provide guidance on various elements of the Strategy.

EFTG contracted the Nova Scotia Municipal Finance Corporation to adapt the **Municipal Debt Affordability Model** to look specifically at affordability of municipal wastewater treatment plant upgrades. The model will be made available to interested municipalities as a planning tool.

~ Submitted by Marvin MacDonald, SNSMR



Websites

Government of Nova Scotia — www.gov.ns.ca
UNSM — www.unsm.ca
AMANS — www.amans.ca

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KEY DELIVERABLES PROPOSED TIMELINES

Timelines have been proposed for municipal wastewater facilities to meet specific requirements of the MWW Strategy. The following is a partial list of the required timelines for specific components of the Strategy:

- **Risk Assessments:** Within 5 years, all facilities will complete an environmental risk assessment (ERA) and establish site specific effluent discharge objectives (EDOs);
- **National Performance Standards (NPS):** All new and upgraded facilities will meet the standards immediately; High-risk facilities within 10 years; Medium-risk within 20 years; and Low-risk within 30 years;
- **Combined Sewer Overflows (CSOs) and Sanitary Sewer Overflows (SSOs):** Effective immediately, development will not cause an increase in overflow events; Within 5 years, overflow events will be recorded, no overflows during dry weather, floatables will be removed, and long-term plans will be in place;
- **Monitoring:** Within 1 year, all facilities will monitor effluent for compliance with the standards and objectives; All compliance testing to be done by an accredited laboratory;
- **Regulatory Reporting:** Within 1 year, all facilities will begin to report monitoring results for compliance with NPS and EDOs;
- **Reduction at Source:** Effective immediately, reduction of substances at the source is to begin;
- **Public Reporting:** Within 5 years, all facilities must meet public reporting requirements;
- **Full Cost Accounting:** Within 3 years, regulatory jurisdictions will provide tools needed for municipalities to implement full cost accounting in accordance with the Public Sector Accounting Board.

FACILITY PROFILE

KINGSTON WASTEWATER TREATMENT FACILITY—MORE THAN JUST TREATMENT FOR THIS VILLAGE

Kingston's In-Plant Lab

The Village of Kingston's secondary treatment wastewater facility serves 3800 residents and handles an average flow of 700 cubic metres per day (m³/d). The flow ranges between 550 m³/d (dry weather) to 800 m³/d (wet weather).

The facility utilizes an oxidation ditch process for biological treatment. Currently the ditch provides a retention time in excess of 24 hours for aeration and mixing purposes.

The treatment facility removes >95% of the biochemical oxygen demand (BOD) and suspended solids (SS) from the raw sewage. Sampling and testing indicate that the influent contains an average of between 220-230 mg/L for both these parameters. This is a particularly good BOD/SS removal efficiency given that the plant is designed to handle up to 180 mg/L of each.

The Village is actively looking to the future when it comes to municipal wastewater management.



Danny Lundrigan preparing to analyse samples

They are ensuring that operations staff are qualified, trained and certified to operate, maintain and effectively monitor the wastewater treatment processes. Investment has been made recently in equipment for enhanced in-plant analysis which is normally done by an external lab. As well, the village has made application for membership in the Canadian Association for Environmental Analytical Laboratories (CAEAL) which will monitor the lab program and conduct testing for quality assurance purposes. The village anticipates that these investments will provide better data to make process decisions, and at the same time, reduce their sampling and testing costs to meet regulatory requirements. Kingston is positioning itself for the future when it comes to municipal wastewater treatment.

~ Submitted by Danny Lundrigan, Manager of Wastewater Services, Village of Kingston