

# CCME Canada-wide Strategy for the management of municipal wastewater effluents

## *Environment Canada's proposed implementation*

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Environment  
Canada

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Canada

Canada

# Presentation Overview

- **Context**
  - Existing federal instruments and activities
  - CCME Canada-wide Strategy
- **Environment Canada's proposed implementation**
  - Overview
  - Proposed Elements

Your feedback will inform EC in completing the negotiation with provinces and territories on the CCME Canada-wide Strategy and EC's proposal for implementation

# Existing Federal Instruments and Activities

- Instruments

- *Canadian Environmental Protection Act, 1999*
  - Effluent
    - chlorine, ammonia
  - Sources
    - effluents from textile mills, surfactants (NP/NPEs), phosphorus in laundry detergents
  - Release reporting
    - Releases of pollutants, i.e. National Pollutant Release Inventory
- *Fisheries Act*
  - Effluent - general prohibition, subsection 36(3)
- Federal wastewater system guideline for wastewater treatment and effluent quality

- Activities

- Infrastructure funding
- Science and technology research

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# CCME Canada-wide Strategy

- ***Options for a Canada-wide Strategy for managing municipal wastewater effluent: Consultation Document***
  - CCME consultation materials available for review and comment: [www.ccme.ca](http://www.ccme.ca)



## Overview of EC's Proposed Implementation of the Canada-wide Strategy

- EC's primary instrument would be regulations applicable to effluents discharged from wastewater systems
- EC is considering additional preventive, control and management instruments for:
  - other aspects of managing wastewater systems on federal lands and Aboriginal lands
  - sources, e.g. pollutants in discharges to wastewater collection systems



# Overview of EC's Proposed Regulations Applicable to Wastewater Effluents

- Existing authorities of *Fisheries Act* and *Canadian Environmental Protection Act, 1999*
- Application to effluents from all wastewater systems, including those in First Nations, Inuit and Métis communities and those on federal lands.
- “End of pipe” standards for wastewater effluents
  - 2<sup>nd</sup> treatment as baseline: standards for biochemical oxygen demand and suspended solids
  - Standard for residual chlorine
  - Standard for non-acutely lethal effluent release
  - Monitoring and reporting requirements
- Federal regulatory instruments would be complementary to provincial, territorial and other regulatory regimes – formal bilateral agreements



# EC's Perspective

- CCME Canada-wide Strategy
  - Agreement between federal/provincial/territorial governments on the management of municipal wastewater effluents
    - Performance
      - » Environmental Risk Management
      - » Define a new collectively agreed-to regulatory baseline including national standards
    - Governance
      - » Harmonized Regulatory Framework
      - » “One-window”





# National Performance Standards

- National Performance Standards developed through the CCME Canada-wide Strategy in the federal wastewater effluent regulations
- The National Performance Standards for CBOD and TSS
  - national minimum baseline of secondary treatment or equivalent effluent quality
    - CBOD - 25 mg/L
    - TSS - 25 mg/L
- The National Performance Standard for TRC
  - national baseline for residual chlorine in wastewater effluents
    - TRC - 0.02 mg/L



# Additional Performance Standards

- Consideration for including regulatory requirement for the release of a non-acutely lethal effluent
  - toxicity identification and reduction
  - ammonia toxicity addressed whereby ammonia reduction standards established based solely on the assimilative capacity of the site-specific receiving environment, not end-of-pipe concentrations



# Application

- Consideration for all wastewater systems in Canada that discharge effluent to surface water, regardless of ownership
- Consideration to limiting the regulatory application to a minimum level of flow, e.g. 5 cubic metres per day
- CCME size categories for wastewater systems being considered to tier monitoring and reporting requirements



# Site-specific Standards

- CCME Strategy
  - site-specific environmental risk assessments lead to the establishment of effluent discharge objectives.
  - more stringent standards for national performance standards where needed for certain effluent releases to achieve acceptable risks
  - additional standards for other pollutants would be needed for certain effluent releases to achieve acceptable risks
- Environment Canada is considering the need to incorporate these actions and activities in the federal wastewater effluent regulations
- CCME Guideline for environmental risk assessments and effluent discharge objectives



# Effluent Monitoring

- Environment Canada is considering including in the federal wastewater effluent regulations, effluent monitoring requirements comparable to those articulated in the CCME Strategy
- Effluent monitoring requirements would commence under the federal wastewater effluent regulations when the regulations come into effect
  - Existing effluent release reporting requirements under the *Canadian Environmental Protection Act, 1999* (e.g. NPRI) would be adjusted accordingly



# Receiving Environment Monitoring

- Environment Canada is considering including environmental monitoring requirements in the federal wastewater effluent regulations
  - Objective would be to identify any potential effects of the effluent on fish populations, on fish tissue and on the benthic invertebrate community
  - Scope of the environmental monitoring requirements still need to be determined
    - compatible with risk elements outlined in proposed CCME Strategy for receiving environment monitoring



# Overflows and Spills

- Overflows
  - The proposed CCME Strategy includes an approach to address combined sewer overflows and sanitary sewer overflows
  - Environment Canada is considering the scope of requirements for overflows that could be reasonable to include in the federal wastewater effluent regulations
- Spills
  - Environment Canada would include in the wastewater effluent regulations a requirement for notification within a short time period
  - Reporting mechanisms for unplanned releases and spills are already coordinated with some provinces and this would be retained and expanded



# Implementation

- Environment Canada is considering the implementation elements of the CCME Strategy for the purposes of the federal wastewater effluent regulations
  - establish high, medium and low priorities for implementation timelines in the regulations



Risk Level

High

Medium

Low

**“Unacceptable Risks”**

**Acceptable Risks**

Time line (15 – 20 years)



# Exceptions

- CCME Strategy proposes a number of options to address a certain subset of smaller wastewater systems depending on remoteness, arctic climate and sensitivity of the receiving environment
  - Environment Canada's current thinking is that a risk-based approach to implementation will address the proposed exceptions



# Reporting

- Environment Canada proposes that all effluent and receiving environment monitoring results would be reported to regulators
- Environment Canada is considering elements of CCME Strategy in terms of public reporting

# Governance

- “Structures” include:
  - Municipal: federal-provincial and municipal continuum
  - Territories
  - First Nations (reserves)
  - Inuit
  - Métis
  - Federal Lands

# Governance

- CCME standards
  - Reflected in federal wastewater effluent regulations
- “One-window approach” ensured through formal agreements between federal government and other regulators

**Outcome: One set of standards applied in a fair, consistent and predictable manner**



# Sources

- CCME Strategy proposes a number of different performance instruments
  - Sewer use bylaws (CCME Model)
  - Instruments under federal authority e.g. CEPA 1999
  - Water management instruments



# Management and Oversight of Federal Wastewater Systems

- Environment Canada is currently analysing options to address the need to develop management and oversight instruments under federal legislation including the *Canadian Environmental Protection Act, 1999*.

# Consultation Mechanisms - Events

- Jurisdiction sessions
- First Nations, Inuit and Métis consultations
- National workshop (Jan. 30/31 2007)
- Science and technology research focused session (Feb. 2007)
- CWWA national wastewater management conference and policy forum (Feb. 2007)
- Other sessions with specific groups



# EC's Consultation

- Feedback will inform EC's negotiations to complete the CCME Canada-wide Strategy and EC's development of the federal wastewater effluent regulations
- Consultation process with interested parties
  - Current phase: Fall 2006 to March 2007 and Spring 2007
    - elements of the Canada-wide Strategy that the federal government intends to include in wastewater effluent regulations
  - Next phase: Fall 2007
    - draft federal wastewater effluent regulations, i.e. non-legal text
  - Final phase
    - Winter 2007-08: formal 60 day comment period on the draft wastewater effluent regulations
    - Winter 2008-09: publication of final wastewater effluent regulations.



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**Thank you!**



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