



# Federal Wastewater Systems Effluent Regulations: an overview

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# Outline

- The CCME Strategy
- The WSER
- Requirements
- Potential Costs
- FCM's response
- Next steps





# CCME Strategy

- Canada-wide Strategy for the Management of Municipal Wastewater Effluent
- Released February 17, 2009
- Endorsed by all provinces and territories except Quebec, Newfoundland and Labrador, and Nunavut
- Set out
  - National standards for wastewater treatment
  - Timelines for implementation
  - A risk-based reduction plan for combined sewer overflows





# CCME Strategy

- Combined and Sanitary Sewer Overflows:
  - no increase in combined sewer overflow frequency due to development or redevelopment,
  - no combined sewer overflow discharge during dry weather, except during spring thaw and emergencies
  - removal of floatable materials where feasible
- Within seven years:
  - National standards would have to be met
  - A long-term plan to reduce overflows and their impacts would need to be in place





# CCME Strategy

- The estimated cost = \$10 - \$13 billion
- Amount includes:
  - Capital costs
  - Environmental risk assessment
  - Annual monitoring
  - Environmental monitoring
- Operating and maintenance costs, as well as cost for combined and sanitary sewer upgrades are excluded.





# Wastewater System Effluent Regulation

- Published March 2010
- Under the authority of the *Fisheries Act*
- Drew on several elements of the CCME strategy with some differences.
- Impacts:
  - Created legal requirements for treatment and collections systems
  - No funding was included





# Wastewater System Effluent Regulation

- National requirements:
  - CBOD: average  $\leq 25$ mg/L
  - TSS = average  $\leq 25$ mg/L
  - Chlorine residual: average  $\leq 0.02$  mg/L
  - Unionized Ammonia: maximum  $< 1.25$  mg/L, expressed as N, at 15degC
  - Effluent must not be **acutely lethal**
- Risk based compliance based on point system (10, 20, or 30 years)
- Option to extend compliance period based on elimination of combined sewer overflows (CSOs)





# WSER: Concerns

- Need for a “one-window” approach
- Liability
  - First 24 months after coming into force
  - Risks relating to private prosecution
- Additional parameters
  - Ammonia
  - Acute lethality
  - Total Residual Chlorine



# WSER: Concerns

- Combined sewer overflows
  - Considered “deposits out of the normal course of events,” with requirement for elimination or prevention
  - Requirements to notify the administrative authority when a CSO took place and providing details on spill quality, and remedial measures
  - Diverged significantly from the CCME strategy



# WSER: Concerns

- Testing environment
  - Proposed a 100 meter mixing zone for testing in the environment maybe inadequate
- Environmental effects monitoring
  - A large number of sites would have to conduct this monitoring
  - Criteria for site selection needs to be reworked

# Environment Canada's Response

- Committed to “one-window”
- Has no intention to prosecute during the first 24 months
- New parameters – exploring options
- Mixing zone – kept at 100 m (CCME)
- Environmental effects monitoring requirements to be removed
- CSOs – not to be eliminated or prevented



# WSER: Costs

- RIAS Estimate:
  - \$5.9 billion (NPV)
    - Includes capital and operating costs
    - Excludes cost of CSO and SSO management
    - Excludes cost of other pre-build studies
  - Assessments by individual jurisdictions indicate that estimates problems with the RIAS.
    - Costs for Cape Breton and Halifax exceed RIAS estimate for Nova Scotia
    - Costs for Metro Vancouver exceed RIAS estimate for all of British Columbia





# WSER: Costs

Jurisdiction	Number of Facilities Requiring Upgrades Based on National Ranking System				Proportion of population impacted	Federal Capital Cost Estimates NPV (000s)
	Low Risk 2040	Medium Risk 2030	High Risk 2020	Total		
Alberta	6	40	2	48	10-50%	102,931
British Columbia	0	5	8	13	36%	254,862
Manitoba	0	81	0	81	2%	349,078
New Brunswick	13	44	0	57	10-50%	83,232
<b>Newfoundland and Labrador</b>	<b>0</b>	<b>1</b>	<b>185</b>	<b>186</b>	<b>66%</b>	<b>410,141</b>
Nova Scotia	9	37	16	62	>50%	216,512
Ontario	102	4	3	109	11%	95,380
Prince Edward Island	17	7	0	24	>50%	6,875
<b>Quebec</b>	<b>0</b>	<b>154</b>	<b>33</b>	<b>187</b>	<b>&gt;50%</b>	<b>1,554,721</b>
Saskatchewan	0	29	1	30	1%	23,349
Yukon	0	1	1	2	>50%	11,146



# Financing

- The Gas Tax transfer
  - \$2 billion per year
- The GST rebate
  - To date represent approximately \$700 million
- The Building Canada Fund
  - Expires in 2014





# Next steps

- FCM will continue its dialogue with the federal government regarding planning for long-term infrastructure funding
- Municipalities will need to prepare themselves to cover at least 1/3 of the costs of their projects
- New tools for revenue raising will be a critical part of this.





# Thank you

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# WSER: Costs

## Most affected

- Newfoundland and Labrador
  - 186 systems affected
  - 185 high risk, 1 medium risk
  - Total cost: \$410 million
- Quebec
  - 187 systems affected
  - 33 high risk, 154 medium risk
  - Total cost: \$1.5 billion
- Affects over 50% of the population

## Least affected

- Saskatchewan
  - 30 systems affected
  - 1 high risk, 29 medium risk
  - Affecting 1% of the population
- Manitoba
  - 81 systems affected (medium risk)
  - Affecting 2% of the population