

RESPONSE TO THE CANADIAN COUNCIL OF
MINISTERS OF THE ENVIRONMENT (CCME)
CONSULTATION DOCUMENT: OPTIONS FOR A
CANADA-WIDE STRATEGY FOR MANAGING
MUNICIPAL WASTEWATER EFFLUENT

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Response to the Canadian Council of Ministers of the Environment (CCME) Consultation Document: Options for a Canada-Wide Strategy for Managing Municipal Wastewater Effluent

INTRODUCTION

The Canadian Environmental Law Association (CELA) is a non-profit, public interest group established in 1970 to use existing laws to protect the environment and to advocate environmental law reform. Funded as a community legal clinic specializing in environmental law, CELA represents individuals and citizens' groups before trial and appellate courts and administrative tribunals on a wide variety of environmental issues. In addition to environmental litigation, CELA undertakes public education, community organization, and law reform activities.

The purpose of this submission is to comment on the Canadian Council of Ministers of the Environment's (CCME) Canada-wide Strategy for Managing Municipal Wastewater Effluent. These comments respond to the document, *Options for a Canada-wide Strategy for Managing Municipal Wastewater Effluent: Consultation Document*, including appendices A through G, and discussions which took place at the National Consultation Workshop in Toronto, on January 30 & 31, 2007. The specific focus of this submission is on the proposed Model Sewer Use By-law contained in the Consultation Document at Appendix F.

A) GENERAL COMMENTS

CELA continues to have a number of general concerns with Canada Wide Standards. Because such standards require consensus, they often result in lowest common denominator outcomes. As well, concerns linger that the CCME constitutes a 'new level of government' which is not accountable to both a legislature and electorate. Finally, Canada Wide Standards inevitably result in voluntary initiatives in areas which require regulatory control.¹

CELA generally supports the proposed Model Sewer Use By-law as outlined in the CCME Strategy. This support is based on the belief that a model sewer use by-law for Canadian municipalities can contribute to the overall reduction in levels of toxic substances released from sewage treatment facilities.

Although CELA generally supports the model by-law, we believe that the seriousness of environmental and health concerns regarding sewage and wastewater discharges must be

¹ For CELA's concerns on the CCME and Canada Wide Standards see CELA Brief 332: Brief to the House of Commons Standing Committee on Environment and Sustainable Development Regarding the Canadian Council of Ministers of the Environment (CCME) Environmental 'Harmonization' Initiative, October 21, 1997.

stated in clear and explicit language. In 2005, sewage treatment facilities were responsible for releases to water of 98586376 kg. of National Pollutant Release Inventory (NPRI) pollutants, which included 48004653 kg. of CEPA toxic substances.² These releases impact the surrounding ecosystem, fish population and habitat, and water quality. Since many communities across the country draw drinking water from the same water bodies receiving wastewater effluent, concern regarding the potential health impacts continues to grow. Therefore, the proposed Model Sewer Use By-law must contain strong language on the threats posed by discharging contaminants into our water system. The introduction included in the Ontario Provincial Water Quality Objectives (PWQOs)³ provides such explicit language, and can be used as guidance.

1. **Recommendation:** The Introduction of a Model Sewer Use By-law should adopt wording similar to the Introduction included in the Ontario Provincial Water Quality Objectives (PWQOs). As such, the introduction to the Model by-law should state explicitly that contaminants that impair water quality are a major environmental concern. It should also address the impact of releasing contaminants into water, including the fact that it kills aquatic life and that persistent and bioaccumulative contaminants inevitably enter the food-web to be consumed by humans.

B) POLLUTION PREVENTION

It is essential that the primary goal of any municipal wastewater effluent strategy is pollution prevention. Pollution prevention is reducing or eliminating waste at the source by modifying production processes, promoting the use of non-toxic or less-toxic substances, implementing conservation techniques, and re-using materials rather than putting them into the waste system.⁴ The specific goal of pollution prevention is at the center of the Canadian Environmental Protection Act (CEPA) and has been incorporated into a number of provincial Acts regulating the environment.⁵ One of the main justifications for this focus is the recognition that it is far more economical to prevent pollution prior to its occurrence than to treat it after the fact.

2. **Recommendation:** Pollution Prevention must be at the center of any wastewater effluent strategy to ensure that the overall goal is the reduction and elimination of toxic substances at their source rather than relying on pollution abatement and ‘end of the pipe’ solutions to reduce contamination of the environment.

² PollutionWatch, Online: < <http://www.pollutionwatch.org>>.

³ Ministry of Environment, Online: <<http://www.ene.gov.on.ca/envision/gp/3303e.htm#14>>.

⁴ U.S. EPA, Online: < <http://www.epa.gov/p2/>>.

⁵ See for example: Ontario’s *Environmental Bill of Rights, 1993*, S.O. 1993, c. 28, s. 2(2); Alberta’s *Environmental Protection and Enhancement Act*, S.A. 1992, c. E-13.3, s. 2(d); Nova Scotia’s *Environment Act*, S.N.S. 1994-95, c. 1, s. 2(iii).

The application of pollution prevention strategies should be required for any facility discharging effluent to the sewage treatment stream. CELA supports targeting specific industries which are known to produce, release and dispose of hazardous wastes, including the dental industry, whose waste is a recognized source of mercury releases into the sewage system.

The reduction of contamination at its source should be a high priority. The model by-law as currently proposed should be expanded to specifically address the source pollution of other industries including pulp mills, cement factories and petroleum producers, etc. Further, any facility that releases substances listed under the CEPA Schedule 1 should be captured under a model sewer use by-law. The U.S. Environmental Protection Agency (U.S. EPA) has addressed the reduction of source pollution from 55 industries.⁶ Similarly, the CCME should identify particular industrial polluters, and develop binding strategies for the reduction of contaminated discharges from these industries.

3. **Recommendation:** All industrial sources should be required to undertake pollution prevention strategies.
4. **Recommendation:** Those industrial sources that release, dispose and discharge hazardous substances (persistent, bioaccumulative, toxic substances, carcinogens, endocrine disrupting substances, neurodevelopment toxicants, reproductive and developmental toxicants, etc.) should be addressed in a model by-law and reduction targets to hazardous substances present in discharges to the municipal wastewater system should be made.

C) RESTRICTED WASTE

It is extremely important for any proposed model sewer use by-law to include a Schedule recommending maximum concentration levels of various contaminants. Due to the projected weight of CCME recommendations, standards must be strict. Recommended levels should, at a minimum, correspond to stronger by-laws already in place in Canadian municipalities. As an example, the recommended concentration limit of Mercury in Schedule “B” of the proposed by-law is 0.1 mg/L. The level of recommended allowable mercury concentration should, at the very least, correspond to the limit currently in place in Toronto’s Sewage Use By-law of 0.01 mg/L.⁷

5. **Recommendation:** A Schedule recommending maximum concentration levels for contaminants should be included with the Model Sewer Use By-Law. Such a Schedule should address a wide-range of contaminants and must be stringent. At the very least, recommended levels should correspond to more stringent limits already in place in various Canadian municipalities.

⁶ U.S. EPA Draft: A strategy for National Clean Water Industrial Regulations.
Online: < <http://www.epa.gov/guide/strategy/304mstrategy.pdf>>.

⁷ City of Toronto, By-law No. 457-2000, *Sewer Use By-Law*, (06 July 2000), as amended by By-law No. 855-2002.

6. **Recommendation:** The Schedule of recommended maximum concentration levels should not only clearly state that it is a preliminary recommendation, it should also clearly state that a site-specific assessment of the receiving-water should be undertaken and that such an assessment may warrant more stringent release levels.
7. **Recommendation:** A Schedule recommending maximum concentration limits for contaminants should explicitly require a reduction of these substances over a specified timeframe. All discharging facilities should be required to develop and submit action plans indicating reduction targets and timelines for listed substances.
8. **Recommendation:** Recommended concentration limits must be adaptable to reflect emerging science and be flexible so as to continually improve. Limits should be reassessed and updated on a yearly basis. Municipalities should be alerted to any alterations in recommended concentration levels.

D) PROHIBITED WASTE

CELA strongly supports the prohibition of discharging toxic substances (as defined by CEPA) into all municipal systems. Nonetheless, we are concerned that there is an inherent contradiction with recommending the prohibition of CEPA toxics on the one hand, and setting recommended allowable concentration limits for the same toxics on the other hand. Therefore, recommended allowable concentration limits should not be provided for CEPA toxics, including Mercury, Lead, Trichloroethylene and Tetrachloroethylene.

9. **Recommendation:** The discharge of toxic substances, as defined by CEPA, into municipal systems should be prohibited under the Model Sewer Use by-law. A Schedule listing these toxics substances should be included in the model by-law. Substances which are defined as toxic under CEPA should not include a recommended allowable concentration limit, unless that limit is zero.

E) MONITORING DISCHARGES

CELA believes that citizens have a right to know which substances are being discharged into a shared resource (i.e. water). At the same time we recognize that it is very difficult for both small and large municipalities to monitor all the inflow to their municipal systems. Therefore, commercial sources should be required to monitor and report their own discharges of contaminants.

10. **Recommendation:** Commercial facilities and sewage treatment plants which discharge contaminants into a municipal system should be required to monitor and report the contaminants they release and the volume of contaminants released. Reporting of these releases should be done through the NPRI.
11. **Recommendation:** The monitoring regime for municipalities should be expanded to require testing for all substances listed in the Schedules of the Model Sewer Use By-law.

F) WATER CONSERVATION

CELA believes that there are two overarching objectives in the regulation of municipal waste effluent. The first objective is to discharge effluent with the least toxicity possible. The second objective, often overlooked, is to reduce the inflow or the overall quantity of water which goes through the sewage system.

One method of reducing the inflow to treatment systems is through water conservation. Water conservation can occur via numerous sources. One possibility which can be specifically promoted by the CCME and municipalities is the promotion of water efficient household appliances including: toilets, shower heads, dishwashers and washing machines. Promotion can take the form of rebates to purchasers of such water efficient products. Another way to reduce inflow, perhaps the most obvious way, is to eliminate combined sewers. CELA strongly supports the suggested ban on new combined sewer construction.

12. **Recommendation:** Water conservation should be promoted by the CCME and all municipalities. Provinces should provide funding to municipalities in order to offer rebates to customers who purchase water efficient appliances.
13. **Recommendation:** CELA strongly supports a ban on new combined sewer construction.

G) ENFORCEMENT

CELA agrees that there is a general benefit in having national standards for municipal wastewater systems. However, we believe national standards are only beneficial if they are both enforceable and enforced.

CELA believes strongly in the need to include enforcement powers for municipalities in any effluent by-law. National standards mean very little unless they are enforceable. This requires national standards to be mandatory rather than mere guidelines. We therefore support the attachment of a penalty provision, which can be imposed by municipalities, for violations of a by-law.

Along with the power to enforce by-laws, enforcement tools must also be provided to municipalities. Therefore, we support the granting of search and monitoring powers to Directors of municipalities as suggested in the Model Sewer Use By-law.

Enforceability on its own is not sufficient. Violations must actually be addressed in some manner when they are committed. A “compliance deficit” occurs where non-compliance is known to exist, but no enforcement action is taken because the regulator lacks the appropriate tools or resources to address violations.

CELA has some concern that the ability of municipal directors to actually and effectively enforce wastewater by-laws is, in practice, minimal. Regardless of powers granted, municipalities will have a difficult task enforcing discharges of every substance into their wastewater. This is largely a result of financial constraints and the lack of technological capabilities. Therefore, we believe the CCME should specifically address the gap between the powers granted by the proposed by-law and the actual ability of municipalities to monitor and regulate the substances finding their way into municipal wastewater.

14. **Recommendation:** National standards relating to compliance with a Municipal Sewer Use By-law must be mandatory, not merely guidelines.

15. **Recommendation:** A Municipal Sewer Use By-law should include a penalty provision, which can be used by municipalities, for violations of the by-law.

H) TERTIARY TREATMENT

CELA believes that a timeline should be imposed for so-called large and very large municipal systems to implement tertiary treatment into their sewage-systems. Tertiary treatment adds an additional step to sewage treatment. The most common method involves filtering already treated sewage through sand or activated carbon and chemical oxidation. Alternative methods exist including the diversion of sewage into constructed wetlands allowing plants, micro-organisms and insects to naturally remove toxic substances. Tertiary treatment does much to reduce a number of harmful substances including phosphorous, ammonia, nitrogen, heavy metals and toxic pollutants.

16. **Recommendation:** Municipal wastewater treatment facilities which fall within the designated “very-large” category (over 50,000 m³/day) should be required to invest in tertiary sewage treatment technology within 5 years.

I) GREAT LAKES:

By volume, sewage is among the top pollution sources to Great Lakes waters.⁸ There has been significant progress made on effluent into the Great Lakes, however, the quality of the Great Lakes continues to be stressed from effluent discharges. National standards should complement the progress already made, and which will be made in the future, with regard to the Great Lakes. Currently there are opportunities to strengthen policies and legislation relating to discharges from these sources through the review of the Canada-Ontario Agreement Respecting the Great Lakes Basin Ecosystem (COA) and the Great Lakes Water Quality Agreement (GLWQA).

- 17. Recommendation:** Municipalities discharging wastewater effluent into the Great Lakes must meet, or better, exceed the objectives of the GLWQA with regard to discharges from sewage treatment plants. An effective approach would be based on applying pollution prevention strategies.

J) FUNDING

The Federal and Provincial governments must ensure that municipalities have adequate funding to replace aged infrastructure and to acquire the appropriate technology necessary to properly treat wastewater effluent.

- 18. Recommendation:** Funding must be put in place which can support the transfer of technologies from the higher levels of government to municipalities and assist municipalities in the replacement of out-of-date infrastructure.

K) CONCLUSION

CELA appreciates the opportunity to provide comments on the CCME's Canada-wide Strategy for Managing Municipal Wastewater Effluent. CELA's recommendations are summarized below:

- 1. Recommendation:** The Introduction of a Model Sewer Use By-law should adopt wording similar to the Introduction included in the Ontario Provincial Water Quality Objectives (PWQOs). As such, the introduction to the Model by-law should state explicitly that contaminants that impair water quality are a major environmental concern. It should also address the impact of releasing contaminants into water, including the fact that it kills aquatic life and that persistent and bioaccumulative contaminants inevitably enter the food-web to be consumed by humans.

⁸ CELA Publication #553, Promises to Keep; Challenges to Meet. Online: <http://cela.ca/uploads/f8e04c51a8e04041f6f7faa046b03a7c/553GLWQA_promises.pdf>.

2. **Recommendation:** Pollution Prevention must be at the center of any wastewater effluent strategy to ensure that the overall goal is the reduction and elimination of toxic substances at their source rather than relying on pollution abatement and ‘end of the pipe’ solutions to reduce contamination of the environment.
3. **Recommendation:** All industrial sources should be required to undertake pollution prevention strategies.
4. **Recommendation:** Those industrial sources that release, dispose and discharge hazardous substances (persistent, bioaccumulative, toxic substances, carcinogens, endocrine disrupting substances, neurodevelopment toxicants, reproductive and developmental toxicants, etc.) should be addressed in a model by-law and reduction targets to hazardous substances present in discharges to the municipal wastewater system should be made.
5. **Recommendation:** A Schedule recommending maximum concentration levels for contaminants should be included with the Model Sewer Use By-Law. Such a Schedule should address a wide-range of contaminants and must be stringent. At the very least, recommended levels should correspond to more stringent limits already in place in various Canadian municipalities.
6. **Recommendation:** The Schedule of recommended maximum concentration levels should not only clearly state that it is a preliminary recommendation, it should also clearly state that a site-specific assessment of the receiving-water should be undertaken and that such an assessment may warrant more stringent release levels.
7. **Recommendation:** A Schedule recommending maximum concentration limits for contaminants should explicitly require a reduction of these substances over a specified timeframe. All discharging facilities should be required to develop and submit action plans indicating reduction targets and timelines for listed substances.
8. **Recommendation:** Recommended concentration limits must be adaptable to reflect emerging science and be flexible so as to continually improve. Limits should be reassessed and updated on a yearly basis. Municipalities should be alerted to any alterations in recommended concentration levels.
9. **Recommendation:** The discharge of toxic substances, as defined by CEPA, into municipal systems should be prohibited under the Model Sewer Use by-law. A Schedule listing these toxics substances should be included in the model by-law. Substances which are defined as toxic under CEPA should not include a recommended allowable concentration limit, unless that limit is zero.

10. **Recommendation:** Commercial facilities and sewage treatment plants which discharge contaminants into a municipal system should be required to monitor and report the contaminants they release and the volume of contaminants released. Reporting of these releases should be done through the NPRI.
11. **Recommendation:** The monitoring regime for municipalities should be expanded to require testing for all substances listed in the Schedules of the Model Sewer Use By-law.
12. **Recommendation:** Water conservation should be promoted by the CCME and all municipalities. Provinces should provide funding to municipalities in order to offer rebates to customers who purchase water efficient appliances.
13. **Recommendation:** CELA strongly supports a ban on new combined sewer construction.
14. **Recommendation:** National standards relating to compliance with a Municipal Sewer Use By-law must be mandatory, not merely guidelines.
15. **Recommendation:** A Municipal Sewer Use By-law should include a penalty provision, which can be used by municipalities, for violations of the by-law.
16. **Recommendation:** Municipal wastewater treatment facilities which fall within the designated “very-large” category (over 50,000 m³/day) should be required to invest in tertiary sewage treatment technology within 5 years.
17. **Recommendation:** Municipalities discharging wastewater effluent into the Great Lakes must meet, or better, exceed the objectives of the GLWQA with regard to discharges from sewage treatment plants. An effective approach would be based on applying pollution prevention strategies.
18. **Recommendation:** Funding must be put in place which can support the transfer of technologies from the higher levels of government to municipalities and assist municipalities in the replacement of out-of-date infrastructure.