

## **Response by the Federation of Canadian Municipalities to the Proposed Regulations on Wastewater Effluent**

May 19 2010

### **Introduction**

Environment Canada gazetted the proposed *Wastewater Systems Effluent Regulations* on March 20 2010. The broad objectives of these regulations, as described in the associated Regulatory Impact Analysis Statement (RIAS), is to protect ecosystem health, fisheries resources and human health by decreasing the level of harmful substance deposited in Canadian surface water from wastewater effluent. To achieve the objectives the proposed regulations, under the authority of the *Fisheries Act*, would set national effluent quality standards that would require secondary wastewater treatment or equivalent in wastewater systems across Canada.

Municipal governments own and operate 70% of Canada's wastewater systems. These regulations are expected to impact a thousand municipal wastewater systems in over 400 communities across Canada and are supposed to be based on the Canadian Council of Ministers of the Environment (CCME) Canada-Wide Strategy for the Management of Municipal Wastewater Effluent. The primary objective of the CCME strategy, which was officially signed by the federal, provincial and territorial Ministers of Environment (with the exception of Quebec, Nunavut and Newfoundland and Labrador) in February 2009 after more than 6 years of study, consultation and negotiation, was to ensure owners of wastewater management systems had regulatory clarity under a harmonized framework supported by an economic plan.

The requirement for municipal facilities to achieve the equivalent of secondary treatment of wastewater effluent is ambitious, but also necessary if we are to adequately protect human health and the environment. It is clear that all orders of government need to work together to achieve these proposed standards.

FCM is supportive of CCME's Canada-wide Strategy and agrees with the fundamental objectives of the proposed wastewater systems effluent regulations, to protect ecosystem health, fisheries resources and human health. However, and importantly, without a federal-provincial/territorial-municipal plan to finance the implementation of these regulations, as CCME called for, the proposed regulations will impose massive and unsustainable tax increases on residents and businesses of affected communities, and will result in a major offloading of federal responsibilities to municipal governments.

The submission that follows outlines the municipal sector's areas of concern with the proposed regulations, the elements that we support, and our recommendations to improve the final regulations.

### **I. Flawed or incomplete cost analysis**

No serious response or analysis of the impacts of the regulations can occur without understanding what the regulations will likely cost and who will bear these costs. In our analysis, the RIAS has substantially underestimated compliance costs, which calls into question the regulation's conclusion that the "proposed Regulations are expected to be

affordable for communities". Feedback and evidence provided to FCM by dozens of municipalities as well as our own analysis confirms this.

#### Compliance cost methodology

With the data available from the RIAS it was not possible for FCM to correlate the estimate total regulation costs (\$5.9 billion) with the costs presented by the CCME Canada-wide strategy (\$10-13 billion). It is possible that different discount rates and assumptions may explain the variance; however a survey of municipalities across Canada on the cost estimates to achieve the proposed regulations reveals that both of these costs are seriously underestimated as well as failing to account for additional costs.

For example, the cost of meeting these new regulations in just four cities is estimated by the local authorities at more than \$4 billion accounting for two thirds of the regulation's \$5.9 billion estimate for the entire country.

While for smaller communities the costs of compliance may not be a large portion of the national total, but as a per capita cost becomes unaffordable. For example the town of North Stormont, Ontario supports three municipal water systems and two sewage lagoons for 1,440 residents total. To meet the new proposed standards, the town would require lagoon upgrades which would cost between \$1-3 million. The 620 households in the community would be assessed thousands of dollars to cover these costs, and planned construction and maintenance of other local infrastructure would also suffer.

In addition, the estimated costs do not account for the cost of having to postpone critical infrastructure projects to address the regulations. For example, the unincorporated community of Fort Fraser, B.C., needs to upgrade their water system for which portions of the distribution system are reaching their end of useful life. The water system is a priority infrastructure project for the community. The residents of the community have limited funds and the implementation of new wastewater effluent standards may require the redirection of these limited funds that may jeopardize the sustainability of the community's drinking water system.

#### Combined sewer overflows

Beyond the capital costs of upgrading municipal wastewater systems, the CCME Strategy was clear that their estimations did not include the costs of replacing combined sewer overflows (CSO). Unfortunately, the RIAS is ambiguous as to whether the estimated costs of the regulations include the replacement of affected CSOs. This is an important concern for implicated municipalities considering the proposed regulations require elimination of identified high risk CSOs while the CCME Strategy only required "comparable efforts to reduce overflow" over the same time period. Thus the estimated costs of several billions of dollars under the CCME strategy would be expected to be much higher under the more stringent regulations and to either account for a large portion of or be in addition to the \$5.9 billion estimate.

In addition, the elimination of CSO may not be the best option for the receiving environment. For example, for the city of Ottawa, modelling shows that the removal of CSO will be worse for the Ottawa River since currently all storm water is treated to secondary standard. Instead, the city developed with public consultation a

comprehensive and integrated approach to addressing CSO which does not propose elimination, but significant reduction of CSOs. This was approved Ontario's Environmental Commissioner and will address this situation within 5 years. The cost of this approach is estimated at \$250 million rather than the much more extensive, disruptive, costly \$2 billion complete separation program that may take 30-50 years to implement with little, if any incremental benefit.

#### Ammonia effluent quality standards

The proposed regulations contain an effluent quality standard for ammonia, which did not appear in CCME's recommendations. The RIAS states that the data for its analysis was provided by CCME's Economics and Funding Task Group, which in turn collected data from all jurisdictions involved in developing the CCME Strategy. However, given that CCME's estimates did not include the cost of achieving this ammonia effluent quality standard, it seems likely that the costs presented in the RIAS, that are based on CCME data, do not account for the additional impact of having to achieve the fourth effluent quality standard for ammonia. For several municipalities already in compliance with the CCME strategy, achieving the ammonia standard will require tertiary treatment at a cost of several millions of dollars.

#### Monitoring costs and capacity

In addition to increased capital costs, municipal governments will be forced to accept responsibilities related to environmental effects monitoring studies including environmental risk assessment, wastewater effluent characterization, and regular reporting. While a limited number of municipalities do have the in-house technical expertise to undertake risk assessment and effluent characterization activities, for most municipal governments this will represent a new, and as yet unfunded activity.

Lastly, municipalities currently face a shortage of qualified staff for maintenance and operations of their wastewater systems. These new regulations will result in the need to retrain system operators and managers on the new wastewater treatment systems as well as actively recruit qualified personnel from a limited pool of candidates.

#### Conclusion: costs and affordability

Several communities, including the Capital Regional District, Metro Vancouver and Halifax Regional Municipality, have already determined the cost of regulatory compliance and have estimated that property taxes or water utility rates will have to increase by a minimum of \$700-\$900 per year, and up to \$1,300 per year, for more than a decade to offset the cost of achieving the effluent quality standards. Given these estimates, and the other compliance cost concerns detailed in this section, our conclusion is that these regulations are not "affordable".

## **II. The Municipal Infrastructure Deficit: Putting the new regulations in a broader context**

For a few communities, when viewed in isolation, the costs associated with meeting the new requirements would be substantial, but potentially manageable. However, the

projected costs must be viewed in the context of Canada's current municipal infrastructure deficit.

In 2007, an FCM-McGill<sup>1</sup> survey estimated Canada's municipal infrastructure deficit to be \$123 billion, with the deficit related to water supply, wastewater and stormwater systems estimated to be approximately \$31 billion. For the most part, the deficit in this area can be attributed to the aging of underground infrastructure, as well as accelerated deterioration of assets as they approach the end of their service life. In addition it has been estimated that \$115 billion more is needed to expand and build new infrastructure to serve growing populations and support economic development.

The deficit identified in the FCM-McGill study described the amount of resources that would be required to bring existing infrastructure up to then current standards. It did not, however, include estimates for new infrastructure, or for upgrades required to meet future standards such as those presented in Environment Canada's proposed regulations. As the CCME's *Technical Supplement 1: Economic Plan* states, "it can be reasonably assumed that the infrastructure requirements imposed by the Strategy will be mostly in addition to existing levels of expenditure."<sup>2</sup>

Regardless of the infrastructure deficit, municipal councils are always forced to balance competing need, for example between the delivery of safe drinking water and upgrading crumbling overpasses, or insufficient waste water treatment and congested roads, all while collecting just eight cents of every tax dollar paid in Canada. These new regulations will add to the infrastructure burden facing municipalities, without any increase to their already strained fiscal capacity.

With these regulations, the federal government acknowledges that there is a significant infrastructure gap in this country, and recognizes that solutions will require years to implement. Yet at the same time, these proposed regulations do not include a role for the federal, provincial or territorial governments in finding financing solutions. Regulatory approaches alone will not improve local infrastructure without directly resulting in higher taxes and fees.

### III. Inadequate financing plan

Throughout the RIAS, municipalities are clearly identified as the predominant if not the only source of funding to meet these regulations. Considering the evidence of severely underestimated costs and coupled with the larger municipal infrastructure deficit, these proposed regulations are not "affordable" to the municipal sector.

In fact, although the RIAS states that "municipalities have relied upon their own resources for water and wastewater investment, spending \$9 billion between 1999 and 2006", it is unclear how much was invested in wastewater infrastructure versus drinking water systems, or if the money was used to improve effluent water quality versus maintain existing systems, let alone meet the new proposed standards.

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<sup>1</sup> Federation of Canadian Municipalities. *Danger Ahead: the Coming Collapse of Canada's Municipal Infrastructure*. Authored by Saaed Mirza, McGill University. November 2007. [www.fcm.ca](http://www.fcm.ca)

<sup>2</sup> CCME. *Canada-Wide Strategy for the Management of Municipal Wastewater Effluent – DRAFT. Technical Supplement 1: Economic Plan*. Pp3-4. September, 2007.

The RIAS suggests that existing federal infrastructure programs will be the Government of Canada's contributions to address compliance costs. However these programs are either fully allocated (i.e. Building Canada Fund) or have already been dedicated to one of many other local infrastructure priorities (i.e. Gas Tax Fund). The Building Canada Fund, and the Infrastructure Stimulus Fund are completely if not almost completely allocated while the much smaller Green Infrastructure Fund has contributed only a small amount to wastewater projects to date. More importantly, funds already allocated to wastewater under these three programs has not been specifically directed to projects that are designed to meet the standards set out in the CCME strategy or in the proposed regulations. In short, existing federal programs are either insufficient or have not been designed or implemented in a way that will help communities meet these regulations.

The funding needs facing municipalities are both pressing and diverse, and include much-needed maintenance and improvements to existing roads and bridges, public transit systems, drinking water systems, waste management, and other cultural, social and community facilities. Focusing a significant portion of the Gas Tax Fund to meet these new standards would mean diverting funding away from other urgent and immediate needs that the Fund is currently supporting. While most municipal governments subject to new requirements will agree that improvements in wastewater treatment are necessary, the pressure to respond to other, and perhaps more urgent needs, remain, and in some communities, will be prioritized by citizens over wastewater improvements.

The federal government must work with municipalities, provinces and territories to develop a nationally coordinated financing and implementation plan for these new wastewater regulations as part of long-term national plan to eliminate the municipal infrastructure deficit. In the absence of such a plan, the new regulations will be an unfunded federal mandate that local property taxpayers will be required to absorb as higher taxes and fees, or face reductions to other municipal services and programs.

#### **IV. Inaccurate monetization of benefits**

The cost-benefit analysis (CBA) provides a 3:1 benefit to cost ratio for the implementation of the regulations. One of the main monetized benefits is the increase in property value resulting from the proposed regulations which are estimated to be \$14.2 billion nationally. However, the analysis by many of our members questions this estimate. For example, property values around Greater Victoria and Greater Vancouver have no correlation with secondary wastewater treatment; instead, interest rates and the overall health of the economy are the parameters presently dominating the real estate market. Given the disproportionate share of both of the real estate market and waste water upgrades of these two communities, it is not clear how the province of B.C. could account for close to one third of the total benefits of the RIAS of \$17.7 billion.

Although municipalities are supportive of the positive outcomes of these regulations, it must be clear that all orders of governments will benefit from implementation, yet municipalities are targeted to bear all of the costs. For successful implementation, all orders of government must work together to share the benefits and the costs of these proposed wastewater systems effluent regulations.

## V. Deviations from CCME recommendations

Although the regulations are supposed to be based on the CCME strategy, there are many inconsistencies and gaps between the intentions of the CCME Strategy and these regulations which significantly undermine the 6 years of consultation that informed the CCME's recommendations.

Most importantly, the CCME strategy stated that "implementation of the National Performance Standards will be based on risk, available funding and financial sustainability of communities."<sup>3</sup> These regulations, as already noted, do not provide a reasonable response to this CCME recommendation.

The Strategy is also clear that it "aims to ensure that owners will have regulatory clarity in managing municipal wastewater effluent under a harmonized framework..."<sup>4</sup> with the intention of establishing a one-window approach to governance. Currently for FCM members, these regulations will double and for some triple their reporting obligations with slightly different reporting criteria that would further strain the staff of an under resourced sector. In order to reduce the regulatory burden, the federal government should show significant progress towards equivalency agreements with the provinces prior to the coming into force of the regulations.

Finally, the proposed regulations go further in the performance standards and objectives than what was agreed upon in the Strategy without taking into consideration the receiving environment. The regulations require the elimination of identified high risk CSO while the Strategy only required "comparable efforts to reduce overflow"<sup>5</sup> over the same time period. Implicated communities may not only be faced with an additional and significant cost on top of the costs from upgrading their wastewater plant, it may in fact be physically impossible to replace a municipality's CSO in the 30 year time frame without placing the community under a complete construction siege. In addition, under the Strategy, ammonia is treated as an effluent discharge objective that is determined based on the assimilative capacity of the receiving environment. The regulations appear to dictate an ammonia standard that all systems must achieve with potentially large cost implications for some of our members who will have to implement tertiary treatment to deal with this particular effluent quality standard.

These deviations from CCME recommendations mean that many municipalities who had understood that they were in compliance with the CCME Strategy are no longer in compliance with the proposed regulations, which will have significant planning and cost implications on these communities.

## VI. Uncertainty and complexity of regulations

The regulations are complex and difficult to understand. Many FCM members had contradicting opinions on the intention of certain sections and many more municipalities were unsure of the implication of the regulations to their wastewater systems. In

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<sup>3</sup> CCME. *Canada-Wide Strategy for the Management of Municipal Wastewater Effluent*. Pp2. February 2009.

<sup>4</sup> CCME. *Canada-Wide Strategy for the Management of Municipal Wastewater Effluent*. Pp1. February 2009.

<sup>5</sup> CCME. *Canada-Wide Strategy for the Management of Municipal Wastewater Effluent*. Pp5. February 2009.

addition, a few municipalities will have to achieve tertiary treatment with significant cost implications that are obviously beyond the intention of the standards which supposedly represent a secondary level of wastewater treatment.

In addition, the regulations lack flexibility; FCM has heard over and over that one size does not fit all. These regulations take a blanket approach to all 3700 individual wastewater systems in Canada that do not take into account the receiving environment, the community priorities or the local financial constraints. Furthermore, the regulations do not recognise the plans that some communities already have in place to address wastewater: plans that map out the timing, and the finances in order to attain these long-term goals that are both realistic and achievable.

The regulations also hamper municipalities from prioritization. For many municipalities they will be forced to address wastewater over local community priorities. For example, most of communities in Newfoundland considered high-risk are also on boil water advisories that are not related to the state of their wastewater treatment. Yet these municipalities will need to explain to their local tax payers why the provision of clean drinking water is being delayed.

The CCME strategy was about ensuring regulatory clarity. This is not being achieved with these regulations that leave many of our members asking whether or not they will be implicated and at what cost to their tax payers. The members of FCM are extremely concerned that these regulations will come into force without addressing some of the major concerns of municipalities, the largest owners of wastewater systems

## **VII. Important recognition of challenges facing very small and remote communities**

FCM is supportive of the RIAS statement that "governments have also agreed to explore alternatives for very small communities to address the proposed regulatory requirements in an efficient manner". However, the federal government should not limit this initiative to communities of less than 250 people. Rural communities across Canada are struggling to survive as their numbers and economies continue to decline. An FCM report outlined the struggling state of rural communities in Canada and the need for a long-term plan and sustained resources acknowledging that a one size fits all approach can not address the diversity of rural Canada<sup>6</sup>.

FCM also supports the exemption of wastewater systems in the territories and north of the 54<sup>th</sup> parallel for Quebec and Newfoundland and Labrador, however, this exemption should extend to all communities north of the 54<sup>th</sup> parallel. The provincial north faces similar challenges such as distance, geography, climate and lack of technical capacity as other northern communities.

Overall it is important to recognise the diversity and challenges faced by our remote and very small communities working with very limited resources and finances to provide the

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<sup>6</sup> Federation of Canadian Municipalities. *Wake-Up Call: The National Vision and Voice We Need for Rural Canada, The Federal Role in Rural Sustainability*. Authored by Dr. Donald J. Savoie of the Université de Moncton and Dr. Bill Reimer of Concordia University. May 2009. [www.fcm.ca](http://www.fcm.ca)

basic services to their citizens. These regulations will be yet another unfunded download on the limited capacities of these municipalities. Successful implementation will be contingent on the research, resources and support of all orders of government.

### **VIII. Recommendations**

Municipal leaders recognize that greater attention must be paid to the potentially harmful effects of municipal wastewater effluent in Canada. FCM is supportive of the objectives of the Government of Canada in addressing wastewater effluent. However, FCM does not agree that the regulations are "affordable" or that current funding programs are sufficient to address both existing and new requirements. For these regulations to be successfully and affordably implemented, FCM recommends that:

1. The federal government work with municipalities, provinces and territories to develop a cost-shared financing and implementation plan for these new wastewater regulations, as part of long-term national plan to eliminate the municipal infrastructure deficit, and as recommended by CCME.
2. The federal government, as a first step in the development of a cost-shared funding plan, commits to work in partnership with municipalities, through FCM, to establish a thorough and objective estimation of the front line costs and trade offs of meeting the regulations and to resolve outstanding technical and implementation issues.

In addition to funding and consultation concerns, FCM recommends that the Government of Canada:

3. Strengthen the CCME goal of harmonization by ensuring regulatory clarity and a one window approach to reporting before the regulations come into force.
4. Change the ammonia effluent quality standard to an effluent discharge objective that would be established through site-specific Environmental Risk Assessments.
5. Follow the CCME Strategy recommendation on the treatment of CSO which looks to requires, within seven years, the development of a long-term plan to reduce CSO and capture substances based on achieving jurisdictional overflow objectives.
6. Exclude all communities north of the 54th parallel from the 5 year exemption of the application of the regulations due to the need for further research on the challenges faced by those northern municipalities.
7. Ensure municipal governments have access to the necessary guidance, tools and resources to complete effluent characterization and environmental risk-assessment processes, and introduce water conservation programs and incentives.