

January 31, 2008.

Claude Fortin
Environment Canada
Place Vincent Massey
351 St. Joseph Blvd. 18th Floor
Gatineau, QC. K1A 0H3

Dear Mr. Fortin:

Proposed Regulatory Framework for Wastewater

CWWA's Wastewater and Stormwater Committee has over the last several months been reviewing and assembling their comments on the Proposed Regulatory Framework For Wastewater consultation document dated October 2007. The comments assembled are set out below:

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Vision

Part of the vision statement includes the outcome: "water conservation measures supported by water metering".

Although we believe this to be a non-binding outcome the Association points out that metering of water services is an issue, which can create intense political tensions at the local level. CWWA does support and encourage universal metering on several grounds (equity of service, enhance possibility of cost recovery, etc.). We believe though that it might be more appropriate to eliminate the reference to "supported by metering" in this vision, as there are many other methods of achieving water conservation that do not require metering.

CWWA has urged Environment Canada to tackle the issue of water conservation by introducing legislation that would address the efficiency in water using appliances and devices. If we could ban nationally the importation and sale of for example, toilets flushing at more than 6 L (as has been done in the USA) then we would achieve overtime, significant reductions in water demand, regardless of whether or not there is a water meter installed. The same applies to many other water appliances, such as laundries, dishwashers, shower heads, irrigation systems, etc. CWWA is willing to work with Environment Canada to draft and support the passage of such legislation.

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Managing sources of pollutants discharged in to sewer systems

Under this heading, CWWA is pleased with the statement that the “authority of CEPA 1999 will be used to manage the risks of chemicals that are not treatable...”

However, there is no need to await the completion of site-specific environmental risk assessments. It is known that there are untreatable substances appearing in wastewater effluents that arise from ICI discharges or from the use of commonly available retail products. These substances can be found in virtually all effluent discharges. The Strategy and the Regulatory Framework must include commitments to:

- use immediately, the authority of CEPA 1999 to manage risks known to exist generally from untreatable substances discharged by ICI or contained in consumer products,
- assign to Environment Canada, the necessary additional resources to undertake this regulatory initiative, and
- work with national ICI Associations to identify and prepare pre-discharge treatment Best Management Practices that will result in lower discharge levels into sewers,
- work with national consumer product manufacturing Associations to establish standards for the presence of untreatable substances in these products.

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Science and Research

Under this heading, options for the coordination committee or process are set out. CWWA knows that research is undertaken by many stakeholders, and the coordination process must incorporate all sources within Canada and as far as possible, internationally. CWWA notes that Environment Canada issued an electronic communication as follows:

Wastewater Research in Canada — a Move to Improve Co-ordination

As part of CCME's forthcoming Canada-wide strategy for managing municipal wastewater effluents (MMWE), Environment Canada (Water S&T) will manage the establishment of a National Science and Research Coordination Group.

This body will help develop a clear national focus on research priorities, better capitalize on funding and collaboration opportunities, and better coordinate transfer of knowledge between researchers and end-users. The proposed body will better link wastewater researchers as a community and ensure a stronger link between wastewater research activities and policy and program needs of practitioners in Canada, in all levels of government, the private sector, and associations.

CWWA applauds this initiative and notes that it seems to pre-empt the options mentioned in the Framework. CWWA's comment therefore is that National Science and Research Coordination Group must be linked to and take guidance from the proposed National Municipal Wastewater Management Committee of the Strategy. Research funds must be used as effectively and efficiently as possible, and where necessary directed to solve problems.

Economic Implications

Under this heading, estimates are provided as to the expected levels of costs likely to be incurred. CWWA feels that these costs are understated and have made this comment before – for example the costs do not address the added operational costs from meeting the strategy, do not address adequately the implications of CSOs and stormwater management, nor the many external costs associated with obtaining approvals for infrastructure changes (environmental impact assessments, etc.) or the external costs to society and the environment, that will be incurred as a result of implementing the strategy. That being said, CWWA would expect that these costs will be better understood as the implementation phases start and particularly by the end of the first five-year period.

CWWA hopes that the Strategy and the Framework proposals may be flexible enough to enable adjustments to be made to balance the costs incurred with the benefits obtained.

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A. Wastewater Effluent Regulations under the Fisheries Act

Application

CWWA urges that the application section be expanded to apply to “dischargers” of untreatable substances to a municipal sewer system that exceed designated limits. In effect these “dischargers” are discharging deleterious substances to the receiving body of water, and are beyond the control of the municipality. This would enable a municipality to initiate charges against persistent dischargers with greater impact than what can be obtained through municipal by-laws.

CWWA also urges that other Fisheries Act Regulations applicable to industrial sectors such as Pulp and Paper and food processors be amended to apply not just to discharges to the natural environment but also discharges to sewers.

Define Residual Chlorine

CWWA has consistently pointed out that there are technical difficulties with measuring chlorine residuals at the level of 0.02 mg/L yet the proposed regulation persists in using this level as the reference point. We still understand there are problems with obtaining accurate measurements at the regulatory level of 0.02 mg/L TRC. Amperometry or potentiometry is recommended and stated to have a detection limit of 0.01 mg/L. Good practice dictates you should use a method with a detection limit an order of magnitude below your level of detection. The stated methods for TRC would be prone to false positives.

In addition, CWWA has previously pointed out that there are circumstances that occasionally arise in operations necessary to protect public health (e.g., flushing of repaired water distribution lines) or to assure the successful operation of a treatment plant (control of filamentous bacteria) where chlorine must be used, that will result in occasional spikes in chlorine residuals above the

proposed level. These operational needs must be allowed. An analogous example is that police and emergency vehicles are allowed under pursuit or emergency conditions to exceed speed limits and other traffic controls such as red lights – these provisions are stated in the regulations.

Define Acutely Toxic Effluent

CWWA is concerned that the proposed regulation would reference a biological test method that, Environment Canada acknowledges, “*is thought to present unreasonable costs and could result in challenges to secure laboratory testing capacity.*”

This is clearly unacceptable and the logistical issues concern taking and transporting 30 L samples and scheduling access to laboratories – many of which cannot do more than a few tests at a time. (See further comments on the proposed frequency of monitoring.)

There is also the concern that any given test may not provide a reliable indication of the management practices, as by chance the sample might be taken at a time when an illegal discharge into the sewer system is passing through the plant. A positive result from the test may be meaningless if it is a spike issue rather than continuing effluent discharges, and determining the source of the positive test results may be either a futile or an expensive exercise.

Given these issues, it is suggested that the Acute Lethality Test be dropped from the proposed regulation, and that a focus group of municipal experts, laboratory stakeholders and regulators be formed to consider how this test might be improved or an alternative defined.

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Define ammonia as a deleterious substance

There is a need to specify a time frame for the definition of chronic toxicity – note that the US EPA uses a 30-day time frame.

CWWA is concerned that system controls will have to be set up on the basis of a calculated value rather than on actual receiving body conditions.

New:

The CWWA welcomes the creation of a Fisheries Act Regulation that would clarify what deleterious means in the context of the capabilities, and lack thereof, of municipal wastewater treatment.

CWWA requests that the proposed regulation define deleterious substances as simply and only being CBOD, TSS, Chlorine residual and Ammonia.

Protection must be provided under the Fisheries Act and CEPA from sampling effluents and the finding of a CEPA Toxic or some other substance. These are essentially untreatable substances, the presence of which in an effluent may be spurious or the consequence of illegal dumping.

In support of this position, CWWA notes the ERA process in the Strategy and statements regarding “emerging substances”, that there is recognition of numerous substances beyond those addressed in the regulation that may be of issue in municipal wastewater effluents. It is felt this leaves municipalities with liability for these other substances and does not recognize that municipalities are not the generators of these wastes, but rather involved in trying to control or treat them. With regard to control, municipalities will never be able to have more than a deterrent effect because of the extremely high number of entry points into a municipal wastewater system. When a deleterious substance is found in an effluent and a municipality is being duly diligent, any legal action should be taken against the discharger. A municipality should not be held responsible for clandestine discharges or societal (e.g., personal care products) or conventional systemic matters (e.g., copper leaching from water pipes).

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The proposed requirements to daily CBOD and monthly acute toxicity testing for **very large plants** are excessive, and will add considerably to costs without commensurate benefit.

CBOD monitoring twice per week is an adequate level to assess and document process performance. Since test results always lag at least five days after sampling, CBOD is not the best tool for identifying process upsets and therefore daily sampling would provide little improvement.

It is not clear what the effect would be of a positive test result. For drinking water testing, where there is a determination of the presence of Coliforms, the practice is to perform an immediate second test, before initiating remedial measures – this is due to the possibility of test error.

Due to the inherent variability of wastewater qualities discharged into sewers and passing through the collection system to the treatment plant, CWWA believes that these acute lethality (end-of-pipe) monitoring schedules should be adjusted to decrease the frequency of testing, but require re-testing if a positive result is obtained as a confirmation that the system is not performing well. CWWA notes that the search to find the cause of the acute lethality could be both expensive and futile if it relates to an unknown spike of contaminants in the effluent that has passed through the system

Receiving Environment Monitoring

CWWA is concerned about the monitoring requirements for fish populations and particularly on the proposal to examine fish tissues. Fish are essentially a mobile population, some of them definitely migratory. Capturing a fish and conducting a tissue sample does not indicate in most cases the source of the harmful effect. It is not certain that the results of these studies would provide useful information.

Reporting

It is realized that policies and programs must be based on reliable data and information, but the question has to be asked “for what purposes are the reports to be used?”

CWWA's members and all municipalities are asked to report on all kinds of matters to many government authorities, and it is unclear what benefits are achieved from the significant costs incurred in preparing and submitting the reports.

Any information reported must not be used for enforcement or compliance purposes.

CWWA requests a definition of a **bypass**. Sometimes it is necessary to bypass the secondary treatment process during a major flow event to prevent washing out of the biomass – the effluent still gets primary treatment.

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Timelines to achieve effluent discharge levels.

It would be useful to have a definition of **new** and **upgraded wastewater** systems, given the lengthy process that is required to receive authority to finance, design, obtain regulatory approvals, and tender new plants or upgrades. It is suggested that new plants or upgrades to plants that have commenced this cycle, should not be considered as new plants for the purposes of meeting the requirements of the regulations immediately.

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Timeline to achieve effluent discharge levels....

From the description of the two options, it is not possible to make a rational judgement of preference. It is believed that some systems would prefer the one and be handicapped by the other, and vice-versa. More information and discussion is needed.

OTHER

The CWWA understands from several municipalities that extensive environmental risk assessments have been made of receiving bodies and have conclusively shown that there are no significant effects on the receiving environment. This applies to both the CBOD and TSS as well as toxicity due to ammonia and to total reduced chlorine.

We believe that the Fisheries Act Regulation, although desired for purposes of legal certainty, has to be considered in the light of expected information to flow from the initial five-year stage of the strategy.

There remains a general feeling that the default mixing zone is too small.

With respect to the ammonia as described in the Regulatory Framework, the definition of the mixing zone must be flexible enough to address the options available for dry ditch discharges. The mixing zone must be applied at the point where the dry ditch enters natural receiving waters. This flexibility is shown in the Strategy, but is not clearly stated.

Yours sincerely,

A rectangular box containing a handwritten signature in black ink. The signature is written in a cursive style and reads "T. D. Ellison".

T. D. Ellison
Executive Director