

Report to/Rapport au :

**Environment Committee
Comité de l'environnement**

and Council / et au Conseil

October 9, 2012
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Submitted by/Soumis par :

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CITY WIDE / À L'ÉCHELLE DE LA VILLE

Ref N°: ACS2012-COS-ESD-0019

**SUBJECT: NEW WASTEWATER SYSTEMS EFFLUENT REGULATIONS
UNDER THE *FISHERIES ACT***

**OBJET : NOUVEAU RÈGLEMENT SUR LES EFFLUENTS DES SYSTÈMES
D'ASSAINISSEMENT DES EAUX USÉES EN VERTU DE LA *LOI
SUR LES PÊCHES***

REPORT RECOMMENDATION

That Environment Committee and Council receive this report for information.

RECOMMANDATION DU RAPPORT

**Que le Comité de l'environnement et le Conseil municipal prennent connaissance
du présent rapport.**

BACKGROUND

On July 18, 2012, Environment Canada published new Wastewater Systems Effluent Regulations under the *Fisheries Act* to establish national wastewater effluent quality standards and to set monitoring, testing and reporting requirements. The City of Ottawa's wastewater system is subject to these new regulations.

The City's Robert O. Pickard Environmental Centre (ROPEC) wastewater treatment plant already meets three of the four effluent standards: carbonaceous biochemical oxygen demand, suspended solids and un-ionized ammonia; and a new plant process will be commissioned by year-end to meet the fourth parameter, total residual chlorine.

The Regulations increase the current monitoring, sampling and reporting that the City is performing on its wastewater system. There are three types of monitoring requirements: effluent volume, effluent composition and acute lethality testing.

The monitoring and reporting requirements come into effect in January 2013 and the effluent quality standards reporting requirements in 2015, with the exception of the total residual chlorine which comes into effect in 2021.

There are currently no impediments for the City to be in compliance with these timelines. The business processes are already in place to meet the new requirements. It is estimated that a budget pressure of \$15,000 will be necessary to increase the laboratory analysis currently performed.

The Regulations also speaks to Combined Sewer Overflows (CSOs). It only requires the City to report annually on dates and volumes. The information is already prepared for the Ontario Ministry of the Environment.

DISCUSSION

Effluent from wastewater systems represents one of the largest sources of pollution, by volume, in Canadian waters. In Canada, the management of wastewater is subject to shared jurisdiction, which has led to inconsistent regulatory regimes.

National Quality Effluent Standards

The objective of the Regulations is to reduce the threats to fish, fish habitat and human health from fish consumption by decreasing the level of deleterious and harmful substances deposited to Canadian surface water from wastewater system effluent. To achieve the objective, the Regulations set national effluent quality standards that reflect a secondary level of wastewater treatment or equivalent in wastewater systems across Canada.

On March 20, 2010, Environment Canada published the first draft of new regulations. City staff has actively participated in commenting on the draft regulations, through the Canadian Water and Wastewater Association and the Federation of Canadian Municipalities. On July 18, 2012, Environment Canada finalized the Regulations and published them in the Canada Gazette. The Regulations have been developed under the *Fisheries Act* and fulfill a commitment under the Canadian Council of the Ministers of the Environment (CCME) Strategy for the establishment of a national effluent quality standard.

The Regulations are applicable to the Ottawa wastewater system. The Robert O. Pickard Environmental Centre (ROPEC) wastewater treatment plant has been a secondary wastewater plant since 1992.

The criteria for three of the four parameters listed in the Regulations as new national effluent standards are already being met by the City, namely: carbonaceous biochemical oxygen demand, suspended solids and un-ionized ammonia. The fourth parameter is total residual chlorine and a new plant process will be commissioned by year-end to meet this parameter

Provincial regulations require ROPEC to disinfect its effluent. The method utilized by Ottawa is chemical disinfection by chlorination. This method releases total residual chlorine in the environment above the new national effluent standard. In advance of the new Regulations, the City commissioned a project to add a new process at ROPEC to dechlorinate the effluent. The construction is well underway and commissioning is expected before year end, in advance of the Regulations requirements.

The City is currently in a position to meet the requirements of the new national effluent standards by the end of this year.

Monitoring and Reporting

In addition to new national effluent standards, the Regulations also impose new monitoring and new reporting requirements. There are three types of monitoring requirement: effluent volume, effluent composition and acute lethality testing.

The City already has in place all of the equipment and processes to monitor the volume of effluent deposited via the system's final discharge point. This will not create an additional burden on the City.

As well, the City is already carrying out monitoring of the effluent composition. The Regulations impose a schedule that is somewhat different from the current process, but compliance will be easily achieved.

Acute lethality testing is currently carried out monthly, from May until October. The frequency of this test will have to be increased to year-round. Since business processes are already in place, the additional testing is not considered significant.

The current reporting frequency is annual, through the ROPEC Annual Operations Report and other complementary reports. The Regulations require quarterly and annual reports, depending on the parameter. This does not raise a significant issue as the reporting business processes are currently in place. However, the additional reporting frequency will increase the demand on human resources.

Combined Sewer Overflows (CSOs)

This aspect of the Regulations has changed the most between the draft posted in 2010 and the final version. The original proposed requirement to prepare a plan to eliminate CSOs has been removed. It was replaced by a requirement to report on every CSO occurrence, at each outfall, with the date and the volume discharged. This report must be submitted annually. The City already produces an annual report of a similar nature and scope for the Ontario Ministry of the Environment.

Timelines

The monitoring and reporting requirements come into effect in January 2013 and the effluent quality standards reporting requirements in 2015, with the exception of the total residual chlorine which comes into effect in 2021.

There are currently no impediments for the City to be in compliance with these timelines.

Financial Implications

To meet the new sampling, testing and reporting requirements, additional resources will be required. It is estimated that the additional laboratory analysis will cost approximately \$15,000. Most of the additional budget is required for acute lethality testing, at \$1,000 per tests.

RURAL IMPLICATIONS

There are no rural implications related to this report.

CONSULTATION

This report did not require public consultation.

COMMENTS BY THE WARD COUNCILLOR(S)

This is a City-wide issue.

LEGAL IMPLICATIONS

The Wastewater Systems Effluent Regulations were registered on June 29, 2012 as regulation SOR/2012-139. Though published on July 18, 2012, the Regulations came into force on June 29, 2012 (the date of registration) with certain provisions to take effect on a phased basis, as described in the Executive Summary. The information and measures described in this report will allow the City to be in compliance with the new Regulations. There are no legal impediments to receiving this report.

RISK MANAGEMENT IMPLICATIONS

There are no risk implications with this report, if only that new regulatory requirements are imposed on the City. Staff is well positioned to comply with the new requirements.

FINANCIAL IMPLICATIONS

This report has no tax or 2012 budget implications. The requirements for laboratory analysis costs of \$15,000 will be included and identified in the 2013 Draft Rate Operating Budget to be tabled with Council in January 2013.

ACCESSIBILITY IMPACTS

There are no accessibility impacts related to this report.

ENVIRONMENTAL IMPLICATIONS

The implementation of the Regulations will positively impact the environment in Canada. With respect to Ottawa, requirements directly impacting the environment have already been implemented in the past. The addition of dechlorination to the plant effluent will marginally improve the receiving water body, the Ottawa River.

TECHNOLOGY IMPLICATIONS

There are no direct technical implications associated with this report.

TERM OF COUNCIL PRIORITIES

Adherence to the new Wastewater Systems Regulations will fulfill Council priorities ES2 – Enhance and Protect Natural Systems, and ES3 – Reduce Environmental Impact.

SUPPORTING DOCUMENTATION

There is no supporting documentation attached to this report.

DISPOSITION

The Environmental Services Department will implement the Regulations' requirements.