



**REPORT TO CORE AREA LIQUID WASTE MANAGEMENT COMMITTEE
MEETING OF WEDNESDAY, AUGUST 8, 2012**

SUBJECT IMPLICATIONS OF NEW FEDERAL WASTEWATER SYSTEMS EFFLUENT REGULATIONS

ISSUE

The federal government recently finalized the Wastewater Systems Effluent Regulations under the *Fisheries Act*. These new regulations have implications on the Capital Regional District's (CRD) eight municipal wastewater treatment plants and outfalls.

BACKGROUND

The Canadian Council of Ministers of the Environment developed and endorsed a Canada-wide Strategy for the Management of Municipal Wastewater Effluent in February 2009. This strategy provided a framework for managing the effluents from the more than 3,500 wastewater facilities across the country, along with effluent quality performance standards set to ensure protection of human health and the environment.

On July 18, 2012, the federal government released the Wastewater Systems Effluent Regulations that provide the regulatory authority under the *Fisheries Act* to enforce the above mentioned effluent quality performance standards. The performance standards require final effluent quality from all municipal wastewater systems to be equivalent to secondary treatment and include limits on the average effluent concentrations of carbonaceous biochemical oxygen demand (CBOD), suspended solids, total residual chlorine, and the maximum concentration of un-ionized ammonia.

Facilities that currently discharge effluent quality equivalent to or better than the secondary treatment performance standards will not be required to undertake any further upgrades unless their effluent quality declines below the standards. Facilities that do not meet the secondary treatment performance standards will be required to upgrade. The regulations include deadlines for upgrades that depend upon the effluent flow volume, effluent quality, receiving environment and presence of combined sewer overflow points of each facility. Facilities considered higher risk based on an assessment of the above factors must be upgraded by December 31, 2020. Upgrade deadlines for medium and low risk facilities are December 31, 2030 and December 31, 2040, respectively.

There are no opportunities to get an exemption from the new regulations, unless the facility is located in the north (i.e., Nunavut, Northwest Territories, and north of the 54th parallel in the provinces of Quebec and Newfoundland and Labrador).

The CRD owns and operates eight wastewater treatment plants (WWTPs) and outfalls. Five of the WWTPs meet the secondary treatment performance standards and will not require further upgrades to meet the regulation. These facilities include the Saanich Peninsula WWTP, the

Cannon Crescent WWTP and Schooner Way WWTP on Pender Island, the Ganges Harbour WWTP on Salt Spring Island and the Port Renfrew WWTP.

Three of the CRD's WWTPs do not currently meet the performance standards and will require upgrades to meet the regulation. The two core area outfalls (Clover Point and Macaulay Point) are considered higher risk facilities, due to their large flow volumes and relatively high CBOD and suspended solid concentrations, and will require upgrades by December 31, 2020. The Core Area Wastewater Treatment Program has a timeline of approximately 2018 to replace the Clover Point and Macaulay Point facilities with a secondary treatment plant at McLoughlin Point to meet the performance standards. The third CRD facility that currently does not meet the performance standards is the Maliview Estates WWTP on Salt Spring Island. A preliminary review of this facility indicates that it is also considered higher risk and will require upgrading by December 31, 2020. However, more effluent quality data is being collected and it may be determined that the facility is actually of lower risk and will have an upgrade deadline of either 2030 or 2040.

The federal regulations also contain other requirements that must be met by WWTPs with respect to effluent monitoring and reporting. Staff are currently reviewing these requirements to determine whether our current provincially approved monitoring and reporting programs meet the minimum federal requirements. It should be noted that the provincial government still has direct regulatory authority over the CRD's WWTPs and outfalls and through this authority can require monitoring and reporting above and beyond the requirements of the federal regulation.

ENVIRONMENTAL IMPLICATIONS

The federal regulations contain WWTP performance standards set to protect human health and the environment. Without further upgrades, three of the CRD's wastewater facilities (Clover, Macaulay, Maliview) will not be in compliance with the regulations and potentially will be deleterious to the environment as defined by the regulation.

ECONOMIC IMPLICATIONS

Plans are already in place to upgrade the Clover and Macaulay facilities with design plans that will ensure the effluent quality regulations are met. Financial commitments from senior levels of government will provide approximately two-thirds of the estimated \$780-million upgrade cost for these facilities. Conversely, plans are not yet in place to upgrade the Maliview facility to meet the regulatory performance standards and the potential upgrade deadline has yet to be confirmed.

LEGAL IMPLICATIONS

Under the Fisheries Act any officer, director, or agent of the corporation who directed, authorized, assented to, acquiesced in or participated in the commission of the offence is a party to and guilty of the offence and is liable on conviction to the punishment provided for the offence whether or not the corporation has been prosecuted. Penalties include fines of up to \$500,000 and/or imprisonment for a term up to two years per offence under the *Fisheries Act*. Each day the violation occurs constitutes a separate offence

CONCLUSION

Three of eight CRD WWTPs will require upgrades to ensure compliance with effluent quality performance standards required in the new Federal Wastewater Systems Effluent Regulations.

RECOMMENDATION

That the Core Area Liquid Waste Management Committee receive this report for information, and forward the report to the Capital Regional District Board for information.

Glenn Harris, Ph.D, R. P. Bio.
Senior Manager
Environmental Protection

Larisa Hutcheson, P.Eng
General Manager
Environmental Sustainability

J.A. (Jack) Hull, MBA, P.Eng
General Manager
Integrated Water Services

Kelly Daniels
Chief Administrative Officer
Concurrence

CL:cam:hr