



# WASTEWATER EVALUATION & MONITORING



## Regulations

## How Maxxam Can Help

## National Performance Standards

## About Maxxam

*“These standards will ensure untreated and under-treated sewage are not dumped in our country’s waterways.”*

– Peter Kent, MP  
Environment Minister of Canada  
July 18, 2012

In Canada, wastewater treatment plants (WWTPs) are managed under a shared jurisdiction, which has led to varying levels of treatment, maintenance and regulatory inconsistencies. Current treatment levels across approximately 3,500 wastewater facilities in Canada range from poor to very good.

Consultation processes consistently indicated the need for a harmonized approach to regulate and manage wastewater facilities across Canada, and the adoption of national effluent standards, similar to those currently followed in the US and the European Union. In February 2009, the Canadian Council of Ministers of the Environment (CCME) endorsed a Canada-wide Strategy for the Management of Municipal Wastewater Effluent.

## Regulations

As of July 2012, the Wastewater Systems Effluent Regulations were officially enacted by the federal government. The Regulations are established under the Fisheries Act.

The Regulations apply to any wastewater system designed to collect an average daily volume of influent of 100 cubic metres (100,000 litres) or more, or that actually collects an average daily volume of influent of 100 cubic metres or more, that deposits specified harmful substances into water frequented by fish, or a place referred to in subsection 36(3) of the Fisheries Act. Smaller wastewater systems that do not meet these conditions are not impacted by the Regulations.

Under the Regulations, all owners or operators of wastewater systems are required to monitor and report effluent quality and quantity. The Regulations specify the type of sample to be collected and minimum sampling frequencies, based on the annual average daily volume of effluent deposited and the type of wastewater system. The Regulations do not apply to wastewater systems in the far north (Nunavut, the Northwest Territories and northern regions of Quebec and Newfoundland and Labrador). More research is being done to determine an approach for those areas.

## The Maxxam Advantage

With the only national network of analytical laboratories and service centres in Canada, (including three specialized Ecotox Labs located in Vancouver, Edmonton and Quebec City), Maxxam is ideally prepared to assist municipalities across Canada

# WASTEWATER EVALUATION & MONITORING



with **all** the testing required to comply with this regulation. This includes acute and chronic toxicity testing, in addition to Toxicity Identification Evaluations (TIE) and Toxicity Reduction Plans. We are committed to being your partners in ensuring a cost-effective yet rigorous scientific approach to meeting these regulatory requirements.

With specialized processes in place to readily support medium to very large facilities (those with continuous daily discharge effluent of  $> 2,500 \text{ m}^3$ ), our customer service team is trained and ready to answer your questions.

## National Performance Standards

The adoption of National Performance Standards (NPS) aims to monitor pollutants common to most wastewater discharges and indicate if a second level of treatment for effluent will be required. The standards are:

- Average COD, BOD of less than or equal to 25 mg/L
- Average concentration of suspended solids of less than or equal to 25 mg/L
- Average concentration of total residual chlorine of less than or equal to 0.02 mg/L
- Maximum concentration of un-ionized ammonia of less than 1.25 mg/L, at  $15^\circ\text{C} \pm 1^\circ\text{C}$ .

Secondary level of treatment for these parameters removes 95% of conventional pollutants in wastewater (COD, BOD, TSS and nutrients). Medium and large facilities will also be required to test whole effluent acute lethality. If a facility fails this test, toxicity reduction evaluation process must be initiated.

## About Maxxam

Maxxam's Environmental Services group is the market leader in environmental analytical services to clients concerned with potential soil, water and air contaminants. The data helps clients comply with environmental regulations and standards that protect human health and the natural environment. Founded over 40 years ago, Maxxam is the market leader in analytical services and solutions to the energy, environmental, food and DNA industries. Maxxam's 2,000 dedicated employees proudly lead the industry in depth of technical and scientific expertise and serve customers through the only national network of laboratories. In processing over 2,200,000 samples and generating in excess of 38,000,000 results annually, Maxxam skillfully combines efficiency and customer service with rigorous science and uncompromising quality management. Maxxam is committed to success with responsibility – to its stakeholders, to its communities, and to the environment.

## References

- Canada-wide Strategy for the Management of Municipal Wastewater Effluent, Endorsed by CCME Council of Ministers, February 17, 2009, Whitehorse
- <http://laws-lois.justice.gc.ca/eng/regulations/SOR-2012-139/FullText.html>

These additional resources can be found at [maxxam.ca/ccmeww](http://maxxam.ca/ccmeww):

- TIE Fact Sheet
- Maxxam's Ecotoxicology Capabilities Overview
- CCME Wastewater Effluent Analytical Testing Parameters for each region

Maxxam is the Canadian market leader in analytical services and solutions to the energy, environmental, food and DNA industries and a member of the Bureau Veritas Group of companies – a world leader in testing, inspection and certification services. We support critical decisions made by our customers through the application of rigorous science and the knowledge and expertise of our over 2500 employees.

For more information please contact:  
Email: [ccmeww@maxxam.ca](mailto:ccmeww@maxxam.ca) or  
Call us toll-free: **1 800 563 6266**