



EMISSIONS REDUCTION & COMPLIANCE

Sewer Use By-Laws

How Do They Affect You?

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Cities and municipalities in metropolitan areas treat wastewater from industrial, commercial and institutional (ICI) facilities prior to discharge into the natural environment. Provincial and federal wastewater treatment standards must be met before final discharge. Many wastewater treatment plants are not capable of properly treating all of the substances released in ICI wastewater streams. Sewer by-laws are established to protect the environment where the treatment plant discharges treated wastewater.

As a discharger to municipal sewers, you are required to comply with the applicable sewer use by-law requirements, including but not limited to:

- ✓ Ensuring that discharge parameters from your facility are less than the by-law limits;
- ✓ Paying surcharges for discharges that exceed the by-law limits;
- ✓ Developing and implementing pollution prevention plans; and
- ✓ Complying with any other requirements mandated by a representative of the city or municipality having jurisdiction over the facility discharging to its sewers.

If discharges do not meet the by-law limits, the city or municipality may permit your company to pay a fee for the privilege of discharging above the limits. The surchargeable parameters vary by municipality but typically include Biochemical Oxygen Demand, Total Suspended Solids, Total Kjeldahl Nitrogen, and sometimes Total Phosphorous. Cities and municipalities enforce strict compliance with Oil & Grease limits because fats, oils and greases cause deposits and blockages in sewers, and interfere with the proper operation of the wastewater treatment process. High Total Kjeldahl Nitrogen and Total Phosphorous are often difficult and expensive to remove in a conventional sewage treatment plant, and these substances will cause adverse impacts to aquatic life without proper treatment. These parameters are surcharged at higher rates than others.

How do you know if you comply? ...and what if you don't?

1. Have the sanitary and storm discharges tested. The ideal sampling point is at a location where all of the facility's sewers converge and just prior to or at the point of connection to the city or municipal sewer.
2. Samples must be analyzed by an accredited laboratory.
3. Compare the laboratory analysis to the by-law limits to identify which parameters are in non-compliance.
4. If the non-compliant parameters can be directly attributed to specific processes at the facility, there may be opportunities to reduce them at the source. If it is not possible to identify a specific process contributing to the non-compliance, additional sampling at strategic locations throughout the facility may be required.
5. Any identified non-compliances must be reported to the city or municipality so a surcharge agreement can be prepared.
6. If it is not possible to reduce the non-compliant parameters there are alternative pollution prevention options such as:
 - ✓ Recycle waste materials;
 - ✓ Change raw materials used or processed at the facility;
 - ✓ Reformulate products to reduce or eliminate pollutants;
 - ✓ Increase process efficiencies to reduce the generation of pollutants; and
 - ✓ Increase the efficiency of the treatment systems in place or provide partial or full treatment of the process or storm water prior to discharge.
7. Once implemented, you must verify the ongoing success of the chosen pollution prevention options. **Sampling and analysis is the best way to determine if you are in compliance with the by-law limits.**



What cost savings opportunities are available?

- ✓ Costs related to discharges can be reduced or avoided by segregating recyclable solid waste products for disposal or alternative uses, rather than rinsing them to the sewer.
- ✓ Raw materials can be recovered from waste streams for reuse.
- ✓ Treatment costs can be reduced by treating only those streams that are the major contributors to the final discharge.
- ✓ Better facility housekeeping practices can reduce the amount of waste entering sanitary and storm drains.
- ✓ Some cities and municipalities offer special water rates for facilities if they are in compliance with the sewer use by-law discharges.

Sewer discharges in the Food and Beverage industry

The main sewer discharge issue in Food and Beverage facilities is controlling wastewater pH. Most cities and municipalities require pH to be more than 6 and less than 11. High Oil & Grease and Total Phosphorous are also concerns for the reasons already mentioned above. Biological Oxygen Demand can be easily reduced if most of it is in insoluble form or if it is due to the contribution made from the Total Suspended Solids and Oil & Grease content of the wastewater. Biological treatment is the only option available if the Biological Oxygen Demand content is dissolved in the wastewater (such as sugars). Biological treatment is the same process used at sewage treatment plants and is costly. Entering into a Surcharge Agreement with the city or municipality to treat the wastewater may be a more cost effective solution to onsite biological treatment.

Consistent quality and quantity of Food and Beverage wastewater is important to ensure treatment costs are kept to a minimum. Flow equalization and coordination of equipment wash up schedules are cost effective ways of reducing downstream more expensive treatment requirements.

How Pinchin can help

Pinchin's team of Engineers and Scientists can develop a wastewater/stormwater strategy specific to your operations, prepare the necessary reporting documents, and provide practical pollution prevention strategies to reduce your costs. All our work is supported by internationally-accredited third-party laboratories. Pinchin's complete list of water and wastewater services include:

- ✓ Sewer By-Law Assessments, Reporting and Surcharge Agreements;
- ✓ Pollution Prevention Planning;
- ✓ Wastewater Treatment Systems and Assessments;
- ✓ Drinking Water Analysis; and
- ✓ Provincial Environmental Compliance Approvals applications for stormwater and wastewater discharges.



For more information and updates contact:

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