

Object:HOW TO MANAGE YOUR RINSING WATER

Date: 12 décembre 2013

WHAT SHOULD I DO WITH MY RINSING WATER? This is the question nobody likes to be asked.

There are mainly 2 categories of effluents: 1. STORM WATER & 2. SANITARY (or WASTEWATER)

Knowing the difference between the 2 is important!

The STORM WATER sewer system goes back directly to the lakes, rivers or oceans WITHOUT being treated or cleaned.

The SANITARY or WASTEWATER sewer system is being sent to a municipal treatment plant where water is cleaned and treated according to strict standards (minimum standards in Canada are set by the Federal government).

As a rule of thumb, only the water coming from a residence or an industrial building in a city is going directly to a municipal water treatment plant (also known as SANITARY or WASTEWATER sewer system).

So if you are washing your car outdoor, the rinsing water goes to the STORM WATER sewer system.

Industries that cannot meet the concentration limits for their contaminants will usually have their own water treatment to clean their effluents before sending it back to one of the 2 sewer systems. If you can't meet the concentration limits and do not want to have a water treatment, the only option is to send your effluents to a specialized company that will treat it for you.

What are the regulations? What concentration of which contaminant can I send back to the STORMWATER or the SANITARY systems? See tables 1 and 2 below to get a glimpse of 4 regulations from Canadian cities' bylaws.

Finally, it is forbidden everywhere in Canada to dilute your effluents in order to meet the concentration limits.

We are not experts in the matter but we can try to help if you have questions on the topic.

TABLE 1. BASIC CONTAMINANTS

| Contaminants | Toronto 2010 | | Montreal 2008 | | Vancouver 1999 | | Calgary 2013 |
|---|-----------------|--------------------|------------------|--------------------|-------------------|--------------------|--------------------|
| | Storm (mg/L) | Sanitary (mg/L) | Storm (mg/L) | Sanitary (mg/L) | Storm (mg/L) | Sanitary (mg/L) | Sanitary (mg/L) |
| pH | 6 – 9.5 | | 6 - 9.5 | 6 – 11.5 | 6 – 9 | 5.5 - 10 | 5.5- 10 |
| Temperature | ≤ 40°C | | ≤ 45°C | ≤ 65°C | ≤ 40°C | ≤ 65°C | ≤ 75°C |
| COD - Chemical Oxygen Demand | | | 60 | 800 | | | 600 |
| BOD (mg/L) Biological Oxygen Demand | 15 | 300 | | | | | 300 |
| Total Oil&Grease (mg/L) | | 150 | 15 | 150 | 15 | 150 | 100 |
| Mineral Oil&Grease (mg/L) | | 15 | 15 | 30 | | 15 | |
| Phosphorus (mg/L) | 0.4 | 10 | 0.4 | 30 | | | 10 |
| Total Nitrogen (mg/L) | | 100 | n.a. | 70 | | | 50 |
| Color (after dilution 4:1) | | | 15UCV | n.a. | | | |
| Suspended Solids (mg/L) | 15 | 350 | 30 | 500 | 75 | 600 ≤ 0.5cm | 300 |

Note: See Bylaws of each city for more precisions.

TABLE 2. SPECIFIC CONTAMINANTS

| Contaminants | Toronto 2010 | | Montreal 2008 | | Vancouver 1999 | Calgary 2013 |
|-----------------------------|-----------------|--------------------|------------------|--------------------|--------------------|--------------------|
| | Storm (mg/L) | Sanitary (mg/L) | Storm (mg/L) | Sanitary (mg/L) | Sanitary (mg/L) | Sanitary (mg/L) |
| INORGANIC SUBSTANCES | | | | | | |
| Aluminium | | 50 | 3 | 50 | 50 | 50 |
| Arsenic | 0.02 | 1 | 1 | 1 | 1 | 1 |
| Cadmium | 0.008 | 0.7 | 0,1 | 2 | 0.2 | 0.7 |
| Chromium | 0.08 | 4 | 1 | 5 | 4 | 3 |
| Copper | 0.04 | 2 | 1 | 3 | 2 | 2 |
| Cyanide | 0.02 | 2 | 0.1 | 2 | 1 | 1.2 |
| Fluoride | | 10 | 2 | 10 | 10 | 10 |
| Lead | 0.12 | 1 | 0.1 | 2 | 1 | 0.7 |
| Manganese | 0.05 | 5 | 0.1 | n.a. | 5 | 5 |
| Mercury | 0.0004 | 0.01 | 0.001 | 0.01 | 0.05 | 0.01 |
| Nickel | 0.08 | 2 | 1 | 5 | 2 | 2 |
| Silver | 0.12 | 5 | 0.12 | 1 | 1 | 0.5 |
| Sulphides | | | 1 | 5 | 1 | 1 |
| Zinc | 0.04 | 2 | 1 | 10 | 3 | 2 |
| ORGANIC SUBSTANCES | | | | | | |
| Benzene | | 0.01 | 0.12 | 0.5 | | 0.5 |
| Chloroform | | 0.04 | 0.08 | 0.16 | | 0.05 |
| 1,2 dichlorobenzene | | 0.05 | 0.2 | 0.2 | | 1 |
| 1,4 dichlorobenzene | | 0.08 | 0.11 | 0.5 | | 1 |
| Ethyl benzene | 0.002 | 0.16 | 0.19 | 0.4 | | 0.5 |
| Methylene Chloride | 0.0052 | 2 | 0.47 | 2 | | 0.09 |
| Naphtalene | | | 0.15 | 0.3 | | |
| Nonylphenols | 0.001 | 0.02 | 0.029 | 0.12 | | |
| Nonylphenol ethoxylates | 0.01 | 0.2 | 0.12 | 0.2 | | |
| PCBs | 0.0004 | 0.001 | 0.001 | 0.001 | | 0.004 |
| Phenolic Compounds | 0.008 | 1 | 0.02 | 1 | | 1 |
| Toluene | 0.002 | 0.016 | 0.2 | 0.4 | | 0.5 |
| Trichloroethylene | 0.0076 | 0.4 | 0.2 | 0.4 | | 0.054 |
| Xylenes (total) | 0.0044 | 1.4 | 0.36 | 0.7 | | 0.5 |

Note: only the main substances are listed in Table 2, refer to the Bylaws for more details