

ERO Posting Construction Site Dewatering

This is in response to ERO Posting 019-6853 “Streamlining permissions for water takings for construction site dewatering activities and foundation drains”.

Ontario is seeking feedback on municipal sewer use by-laws, and specifically, why municipalities are imposing stringent conditions on construction dewatering/foundation drainage.

Construction dewatering and foundation drainage are two very different things. Construction dewatering is a temporary condition that is going on in order that a project may be completed. Foundation drainage is a more permanent need where the property requires accumulated groundwater or storm water to be constantly removed from around a foundation. Many residential homes are equipped with “sump pumps” that pump foundation drainage to the storm sewers. However, larger multi-residential developments will have elevator pits or underground parking garages that require the continuous removal of large quantities of water for the life of the building. The discharges from these properties should be acceptable to the storm sewers but municipalities have no tools available to make that determination.

In essence, municipalities are using more stringent criteria to assess discharges to storm systems because they have nothing else to use. The logic being applied is a) discharges to storm sewers end up in water bodies (i.e. there is no treatment at end-of-pipe) and b) the MECP has the practice of requiring municipalities to respond to discharges from municipal storm sewers in the event of industrial fires, spills etc and use the PWQO as the basis for the municipality to take action. Simply put, they have no other guidance to go by when it comes to a discharge to the environment. Municipalities generally have only two references to use

- Provincial Water Quality Objectives (PWQO) for discharge to the environment
- Sewer Use By-law (SUBL) for discharges to the sanitary sewer.

Limits to discharge to storm in most SUBLs require achievement to PWQO limits.

Both the PWQO and the “model SUBL” were established by the MECP. Municipal SUBL were created using the model SUBL template developed by the MECP in 1988. The 1988 Model SUBL had discharge limits for storm water discharges, however in past instances, the MECP has frequently taken samples from stormwater systems and identified contaminants in excess of PWQO and has prohibited discharge to the storm sewer. It has been the practice of the MECP to view such discharges as contaminated and the municipality is responsible (as the owner of the sewer). The MECP has told municipalities that they are responsible as owners of the system and must remediate it. To avoid this liability, municipalities are using PWQO as criteria for discharges.

For permission to discharge to environment, the only criteria we use is the PWQO which is very stringent (more stringent than drinking water standards). In many cases, storm and groundwater in Niagara is naturally exceeding PWQO limits. Most water in any drainage ditch in any municipality in Ontario would not meet PWQO limits and the PWQO limits were not designed for surface run-off regulation.

Niagara Region Wastewater Services division stance is that water-taking for construction purposes should not be discharged to sanitary sewers. It is water that has little to no contaminants that would be treated through a conventional wastewater treatment facility (WWTP), with the exception of suspended solids. A WWTP is designed to treat domestic sewage. Uncontaminated water has little to no organic material for the bacteria in a WWTP process to remove and essentially, the water is passing through the WWTP without treatment.

In addition, adding stormwater to a separated municipal sewer system is compounding a problem that we already have with inflow and infiltration using up capacity in our collection systems. Municipalities are spending millions of dollars trying to remove ground and storm water from the sanitary collection systems (e.g disconnecting foundation drains, eavestroughs etc.). Now the developer is being required to hook up to the sanitary sewer and drain surface and groundwater to the sanitary sewer because they are unable to meet PWQO limits being applied to a stormwater discharge.

Clean ground/storm water discharged to the sanitary sewers is taking up capacity that could otherwise be used for treatment of sewage which could accommodate more development/homes. Discharges can also impact the collection systems during wet weather events. Also, it is difficult to meter and bill for treatment of this type of discharge. Charges for treatment must be recovered for these discharges or the cost becomes a burden of the municipality.

It would be the preference of the Niagara Region Wastewater Services division for discharges of this nature to be discharged to the storm system/environment but with a new discharge guideline prepared by the MECP

The MECP has shifted the burden of approving discharges that should be returned to the environment to the municipality but have provided little guidance and potential liability in approving discharges to the storm above PWQO. In the 1988 model by-law storm sewer limits were included for certain heavy metals, total suspended solids and E.Coli that are higher than PWQO. However, in the proposed 1998 model sewer use by-law produced by MECP (the last model SUBL), limits were removed for discharges to limits to the storm sewers. The model by-law only references the Ontario Water Resources Act and Environmental Protection Act.

The MECP needs to provide guidance and assistance to municipalities to better assess water taking for construction purposes to reduce the liability to the approving municipality and to ensure protection of the natural environment.