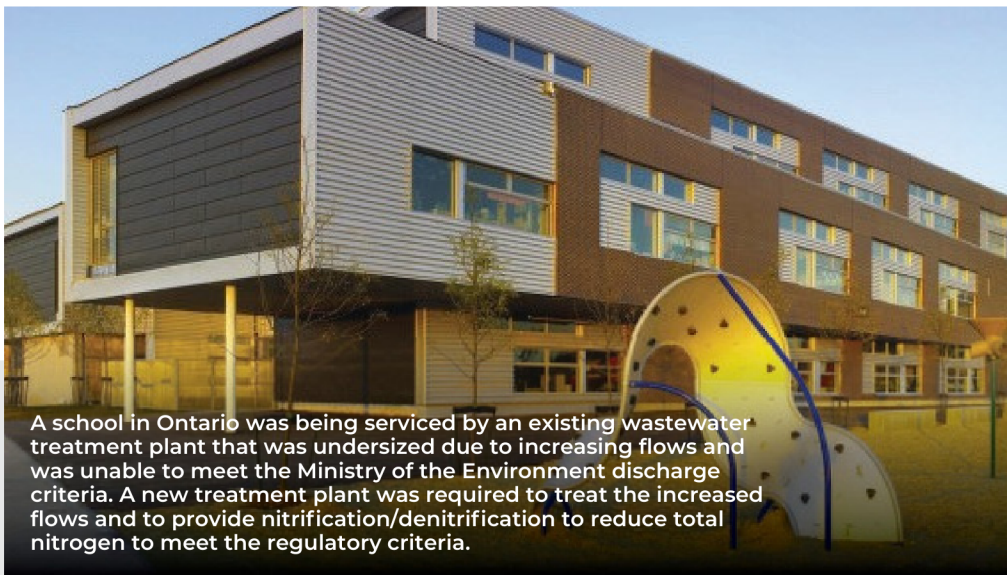


SMALL SCALE WASTEWATER TREATMENT  
**MAKE-WAY  
ENVIRONMENTAL**

Ontario School



A school in Ontario was being serviced by an existing wastewater treatment plant that was undersized due to increasing flows and was unable to meet the Ministry of the Environment discharge criteria. A new treatment plant was required to treat the increased flows and to provide nitrification/denitrification to reduce total nitrogen to meet the regulatory criteria.

## The Challenge/Problem

The new system was designed to treat 18,300 liters per day but due to unforeseen changes the actual flow going into the new system turned out to be 7,000 liters per day. The lower than expected flow caused a longer than expected retention time within the pre-treatment equalization tanks causing odors and more of the organic content in wastewater to convert to ammonia.

This resulted in the following challenges:

- The new treatment plant was unable to produce an effluent that met the regulatory criteria for BOD, TSS, NTot
- The new system was generating odors that were disrupting the overall school environment

## SciCorp Treatment Plan and Execution

The engineering firm that designed and built the new system contacted SciCorp engineers for assistance.

SciCorp engineers evaluated the system and proposed that BIOLOGIC™ SR2 be added to the system daily.

## Success

As a result of the daily additive of BIOLOGIC™ SR2, the following results were achieved:

The new treatment plant was able to meet the regulatory effluent standards.

All the odors disappeared, and the school was able to achieve a healthy learning environment.

Effluent BOD concentrations were reduced on average to below 10 mg/l.

Effluent TSS concentrations were reduced on average to below 15 mg/l.

Effluent NTot, concentrations were reduced on average to below 2.6 mg/l.

## Issues Avoided

**By working with SciCorp the school was able to avoid:**

- Costly wastewater treatment plant infrastructure modifications
- Relocating students until odors were addressed
- Regulatory enforcement/fines