



# Membrane Bioreactor



## The Best Treatment Performance at a Lower Cost for a Campground Located Near a Water Course

**Client:** Camping de l'Estrie, QC, Canada

A campground in the Eastern Townships (between Granby and Bromont, in the small town of Shefford not far from Waterloo), Camping de l'Estrie offers up to 150 camp sites to accommodate campers during the high season.

### Context

The existing underground disposal field had reached the end of its useful life so it was time to select a new treatment technology. In addition, the receiving environment was considered sensitive as it emptied into Lake Waterloo, one of the most polluted lakes in Quebec.

### Challenge

A very high level of treatment that could virtually eliminate phosphorus and fecal coliforms from the discharge was thus required. As campgrounds are mainly seasonal facilities, the system also had to be able to withstand substantial and seasonal influent fluctuations. The solution had to be ultra compact so as not to reduce the number of available campsites, a key source of revenue for the owners.

Effluent quality requirements

P <sub>tot</sub>	0.1 to 0.3 mg/L
Fecal coliforms	Zero tolerance



## Solution

An ultra compact Ecoprocess™ MBR facility was designed by the Sherbrooke environmental and civil engineering consulting firm Groupe Poly-Tech with the help of Premier Tech Aqua's process engineering team. This plant also had to meet the following conditions:

- Very strict environmental standards
- Small footprint
- Best possible treatment performance for the budget
- Seasonal influent fluctuations

Built by Lan-Ro Équipements, the new wastewater treatment plant is half the size of other systems considered. In addition, the building blends perfectly with the environment, so there is no negative visual impact.

Thanks to the modular design of the Ecoprocess™ MBR, the treatment plant can operate at full capacity during the summer season and at reduced capacity during low season, without any decline in efficiency or reduced effluent quality. In the winter, one membrane train will be shut down and the other will operate at low flow.

The new treatment facility is an underground plant and thus does not encroach on valuable land. The building was constructed above the concrete bioreactor, which means a smaller footprint and lower process equipment costs.

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The new Ecoprocess™ MBR system of Camping de l'Estrie, which can treat up to 74 m<sup>3</sup>/d, was commissioned in September 2011.

*"Thanks to the new wastewater treatment plant, our operations comply with today's strict standards. Outstanding performance and peace of mind without spending beyond our budget... we couldn't have asked for a better solution!"*

**Sonia Duclos**  
Co-owner, Camping de l'Estrie



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