

ECOFLO®

Cluster treatment system



Sandbanks

Customer: Sandbanks Provincial Park, ON, Canada

Sandbanks Provincial Park is a provincial park located on Lake Ontario in Prince Edward County near Picton, Ontario, Canada. It is noted for its picturesque sand dunes and beaches. It also has the world's largest fresh water sand bar and dune system.

Facts

Following an ever increasing crowd of visitors each year and the expansion of existing facilities (three Comfort Stations), the Park's managers were facing a notable increase of the wastewater volume. In 2008, as the old sewage systems in place could not meet the stringent requirements of the MOE, the installation of a new wastewater treatment plant became a necessity.

Challenges

Superior protection for a very sensitive and unique environment

Sandbanks Provincial Park and surrounding beaches are visited by hundreds of thousands of tourists each year. This protected area is a very sensitive zone due to its unique fresh water sand bar and dune system.

Important constraints had to be respected:

- **Eco friendly** A high performance technology that preserves sensitive zones and lakes
- **Compact and discreet** A treatment system that discretely adapts to the immediate environment of the site and that minimizes space requirement
- **Stable** A solution able to handle and treat variable peak flows of wastewater (seasonal)

Also, one of the problems facing management was not having trained staff with knowledge of sewerage systems. The staff was experienced in other key aspects of park maintenance and management but not specifically on sewage or wastewater treatment systems. So the new installation needed to be easy to operate and maintain while showing a capacity for growth.



Case Study





Solution

Sandbanks is run by the government of Ontario, so the solution had to answer to strict regulations and be approved by the Ministry of Environment (MOE) of the Province of Ontario.

Conserving natural and cultural heritage in Sandbanks Provincial Park was the premium objective for the government of Ontario regarding the selection of a discreet and high performing septic installation. That's why the main criteria for design were to get a septic installation that would blend perfectly in a natural footprint and that would not affect the existing environment.

After evaluating a number of treatment technologies, the government selected a modular system option with Ecoflo® Biofilters. The treatment units were clustered on the site in two (2) treatment plant locations minimizing site disruption:

- Sixteen (16) Ecoflo® units
- Thirty two (32) Ecoflo® units

Results

	TSS (mg/L)	BOD ₅ (mg/L)	CBOD6 pt (mg/L)	Number of sampling
Ecoflo® effluent	4 ± 1	5 ± 1	> 4 ± 0	4
Objective	≤ 10	≤ 15	≤ 10	

Benefits and future

After the installation, the area was reinstated to suit the existing landscape, leaving a working septic installation with no evidence of any groundwork.

The treatment units only require annual service by Premier Tech Aqua Service Partners.

The treatment system capacity and design provide a lot of flexibility. It also minimized the initial infrastructure investment. It is a modular solution and other units can easily be added if the Sandbanks Provincial Park needs to expand or add facilities.

"It is so easy to install!"

Wemp and Smith Construction Ltd.
Installers, Kingston, ON

"Natural and sensitive, this Provincial Park is unique in the world – it needs to be well protected for next generation... Ecoflo® is much better for the environment. It is a unique technology that is able to fit so many buildings into a small and sensitive area!"

Don Bucholtz
Park Superintendant



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