

Treatment of of Sanitary Sewage at a Fishing Lodge  
Lunge Lodge Fishing Camp, Monetville, Ontario, Canada

Wastewater type: Sanitary  
Design flow: 21,190 L/day  
Pre-treatment: Septic tank  
Discharge: existing wetland

In the spring of 2003 AQUA Treatment Technologies Inc. and Canadian Shield Consultants Agency Inc. designed and installed the 'AQUA Wetland System' to provide treatment to 21,000 litres/day of sewage generated at a remote fishing camp located in northern Ontario. This site was especially challenging because access to the site was by water only and there was insufficient topsoil (the site is located on the Canadian Shield) to allow installation of a typical in-ground 'AQUA Wetland System' and leaching bed. The decision was made to apply for a permit to allow



discharge to an existing wetland located on the property and to install the entire system above ground. The AWS is contained in large boxes constructed of pressure treated wood and galvanized trusses. The system consists of 3 cells, each cell measuring 7m X 7m X 1.2m in depth. UV sterilization of the treated water allows for direct discharge into the existing wetland.

### Performance

Typical average monthly performance data is presented below:

<i>Parameter (mg/L)</i>	<i>Wetland effluent</i>
CBOD5	2.00
BOD5	2.33
TSS	2.66
phosphorus	0.05
TKN	4.60
ammonia	1.40
Un-ionized NH4	0.00476
nitrate	49.36
E. coli	0 cfu/100 mL