



Lethbridge Country Club July 12, 2011 Alberta, Canada

Description: Golf course pond,
Dimensions: 81 x 25 meter.
Device type: LG Sonic XL plus on solar
power.

Problem Description: In July 2011,
the golf course pond at the Lethbridge
country club was treated with LG Sonic.

- The water surface was covered by mats of filamentous algae.
- The rocks within the pond were covered by Dydimo sp. An invasive (diatom) algae that is an emerging problem in Northern America.

Golf Course pond

Before treatment

The LG Sonic XL plus devices were installed, running on solar power.

A trial was running from 12 July 2011 to 17 September 2011. During this trial, the following parameters were measured:

- The area (in percentage) covered by filamentous algae.
- Concentration of zooplankton.
- Secchi disc measurements.



After treatment

During the 2 month trial, the filamentous algae on the water surface decreased by 90%. Some areas in the water that were shaded from the ultrasound still had a slight accumulation of filamentous algae. Dydimo growth on the rocks in the ponds was reduced and kept under control by the LG Sonic XL plus.



Before LG SONIC®



After 24 days

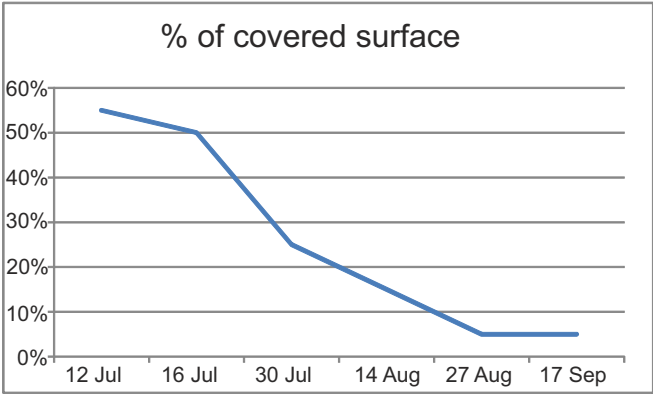


After LG SONIC®

Area covered by filamentous algae

The area that was covered by filamentous algae was measured regularly to determine the efficiency of the LG Sonic XL plus on filamentous algae.

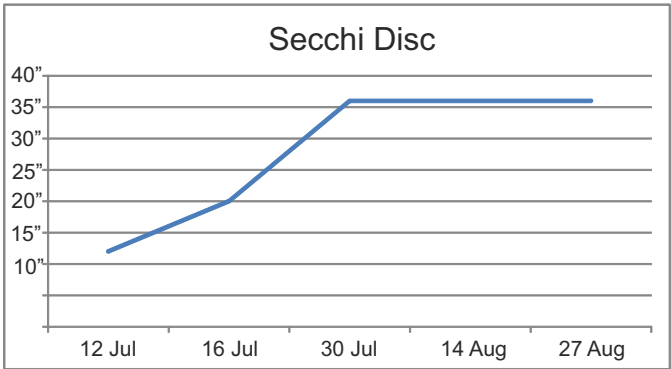
	12 Jul	16 Jul	30 Jul	14 Aug	27 Aug	17 Sep
% of covered surface	55%	50%	25%	15%	5%	5%



Secchi Disc/ Water transparency

The transparency of the water was determined with a Secchi disc. Below are the measurements in Inch.

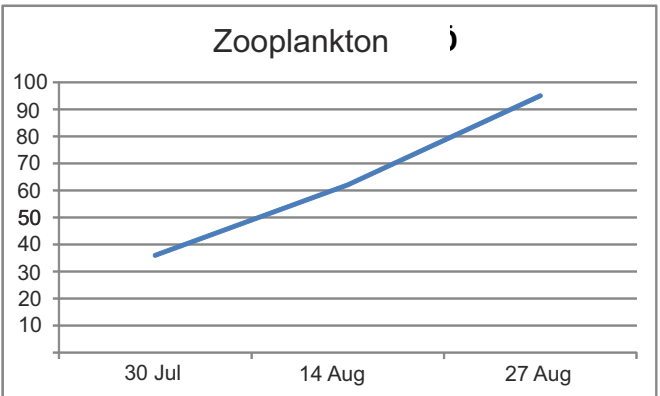
	12 Jul	16 Jul	30 Jul	14 Aug	27 Aug	17 Sep
Secchi disc (Inch)		12	20	36	36	36



Zooplankton concentration

The concentration of zooplankton was measured. Zooplankton is often used as a bio-indicator, determining possible harm to the ecosystem. In this case, zooplankton concentrations did not decrease, implicating that the ultrasound from the LG Sonic XL plus, did not harm them in any way.

	12 Jul	16 Jul	30 Jul	14 Aug	27 Aug	17 Sep
Zooplankton (µg/L)			36	62	95	



Summary of results

- A 90% reduction in filamentous algae.
- Strong growth reduction of the diatom *Dydimosira* on the rocks in the pond.
- Improved transparency of the water.
- No harm to the zooplankton present in the water.