

Dual Band Ultrasound helps reduce Algae Blooms & Lowers TSS in Lagoons, Sundridge, ON

Background And Problem

The Ontario Ministry of Environment, Conservation and Parks (MECP) sets effluent limits under an Environmental Compliance Approval (ECA) for the treatment plant including total suspended solids (TSS).

Exceedances of TSS limits was a concern. Algae blooms were determined to be the root cause of TSS exceedances. Therefore, algae needed to be controlled in order to take the burden off of the Submerged Attached Growth Reactor (SAGR) disc filter so that the treatment process was not overwhelmed by the algae. With the algae under control, the process could operate effectively without exceeding TSS objectives in the ECA. The Town of Sundridge has purchased two dual band ultrasonic units for 2021.



The Results

The direct effect of the ultrasound resulted in the **reduction of the Total Cyanobacterial cell count by more than 1300 times** (from 2,090,000 on August 18 to 1,600 by Oct. 28). Most of this reduction was achieved **in the first 30 days** of operation (from 2,090,000 on August 18 to 4,420 by Sept. 21, 2020 or a reduction of almost 500 times).

