

# American Crystal Sugar Company innovates to improve water Quality

American Crystal Sugar Company is the first company in the sugar beets industry to start using ultrasound technology to improve water quality. The ultrasound technology is applied to control algal blooms in the final effluent wastewater pond at the American Crystal Sugar Company factory.



American Crystal Sugar Company is an agricultural cooperative corporation owned by more than 2,800 sugar beet growers in Minnesota and North Dakota, United States. Making it one of the leading sugar beets growers of the country.

## Innovation

With innovation and continued improvement in the company's core values, the choice to use LG Sonic ultrasound technology to control algal blooms fits within the company's vision. The reservoirs of American Crystal Sugar Company contain high levels of nutrients resulting in elevated levels for both TSS and pH.

In the United States discharge wastewater needs to comply with NPDES effluent standards before it can be discharged into the environment. Two restricted parameters, TSS and pH, are influenced by excessive algae growth. Controlling algae successfully lowers both TSS and pH, allowing to comply with NPDES standards.

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- ✔ 85% Chlorophyll-a reduction
- ✔ Improved TSS values

## 85% Chlorophyll-a reduction

Since the installation of MPC-Buoy in the wastewater pond, American Crystal Sugar Company has been able to reduce 85% in Chlorophyll-a levels in the pond, lowering TSS values to comply with NPDES limits. Together with LG Sonic, the company is now planning to install further MPC-Buoy systems in other wastewater ponds.

*"During the first year of use, the MPC-Buoy controlled algae blooms, resulting in TSS levels within discharge standards. LG Sonic's real-time monitoring and support team was great!"*

Lynn Overend, Environmental Compliance Supervisor



Figure 1: The MPC-Buoy uses ultrasound technology and real-time water quality monitoring to control algal blooms.