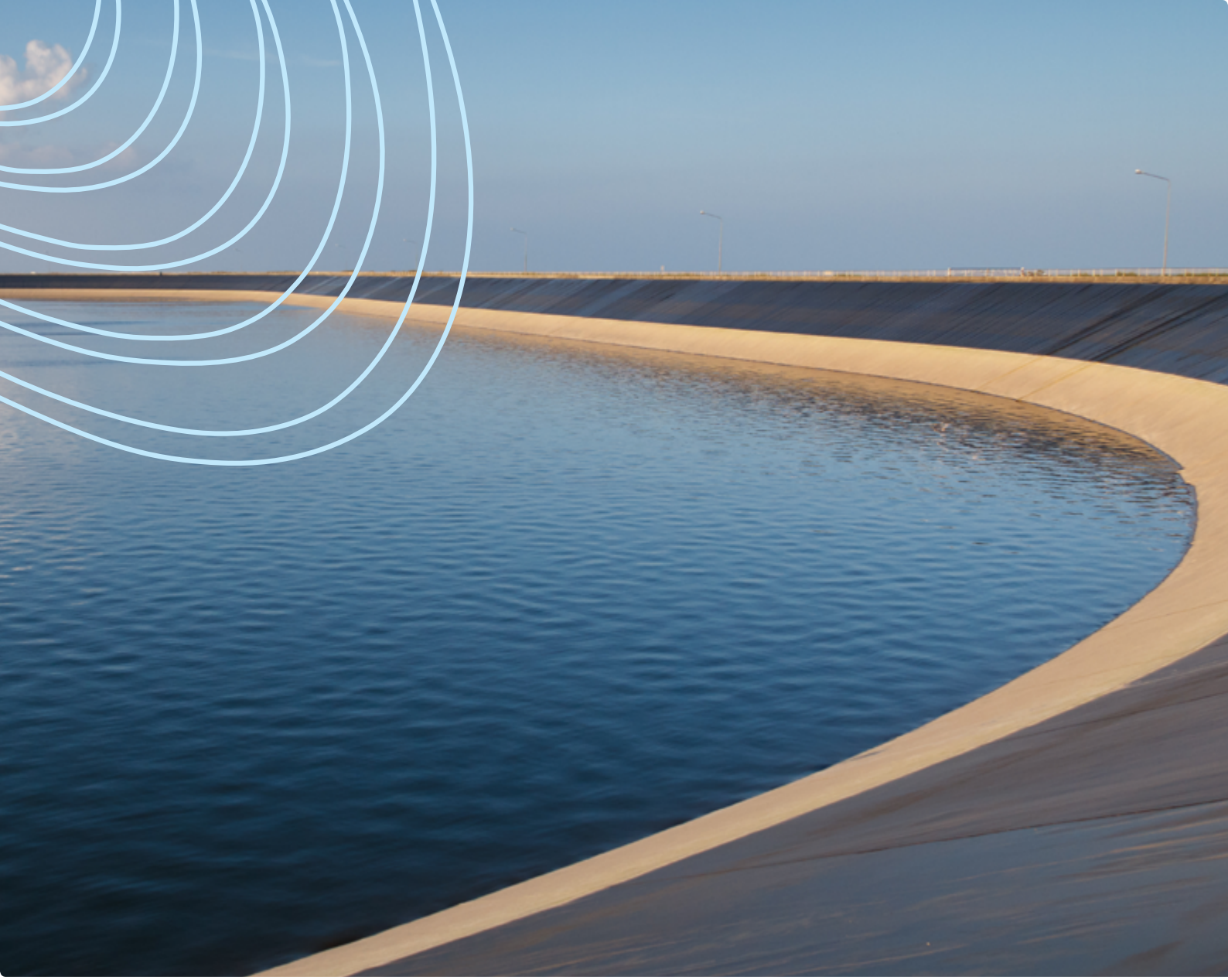


Algae Control in Irrigation Reservoirs

- Eliminate up to 70-90% of the algae
- Increase agriculture productivity and reduce maintenance
- Prevent operational problems such as clogged filters

LG SONIC
Leading in ultrasonic algae control

Algae Control in Irrigation Reservoirs

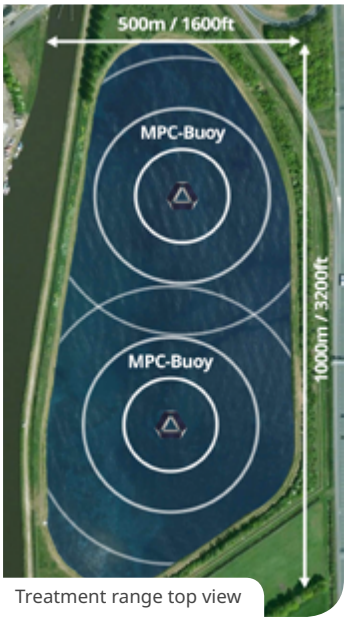
The MPC-Buoy is a floating, solar-powered system that combines real-time water quality monitoring and ultrasonic sound waves to control algae effectively.

- **Eliminate up to 70-90% of the algae**
- **Increase agriculture productivity and reduce maintenance**
- **Prevent operational problems such as clogged filters**

Control Algae with Ultrasound

Specific ultrasonic sound waves based on real-time water quality data can be used to control algae in irrigation reservoirs.

MPC-Buoy installed in the water



Treatment range top view

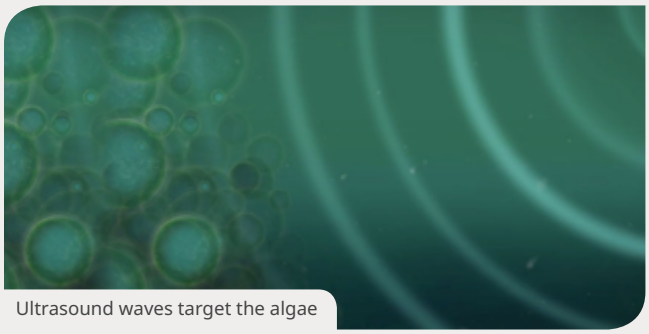
Each MPC-Buoy system has an ultrasonic treatment range of 500m in diameter

How Ultrasound Targets Algae

Specific ultrasonic frequencies, waveforms and amplitudes can be utilised to directly target algae.

1. Ultrasound waves create a sound layer in the top layer of the water
2. The sound layer has a direct impact on the buoyancy of the algae
3. The algae cells sink to the bottom where they are unable to photosynthesize and eventually die due to a lack of light

LG Sonic products have been tested by various universities and are proven to be safe for fish, plants, zooplankton, and insects.


Ultrasound waves target the algae

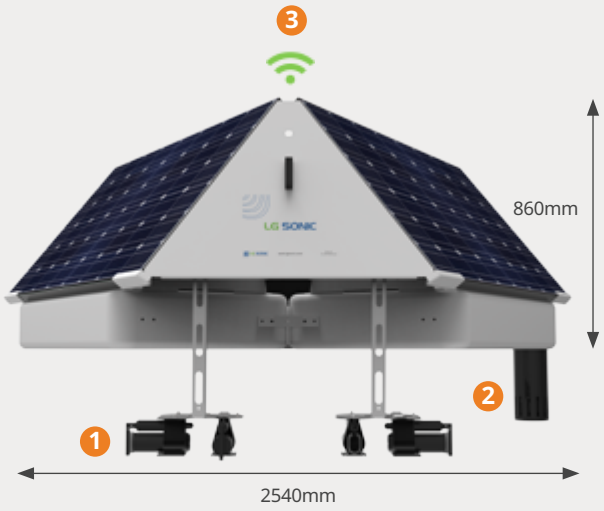
Learn more about ultrasound

LG Sonic Algae Control Products

MPC-Buoy

The MPC-Buoy is a solar-powered system that controls algae using sound waves. The solution is to anchor one or multiple systems that transmit specific ultrasonic parameters depending on the type of algae.

1. Specific ultrasonic parameters control algae up to 90%
2. Sensor package provides real-time insight in the water quality
3. The real-time water quality data is automatically transferred to online software



Learn more about the MPC-Buoy

Real-time Water Quality Monitoring Software

Real-time water quality monitoring combined with web-based software allows to have a clear overview of the water quality in a drinking water reservoir.

- **Real-time insight in the water quality**
- **Data transfer through radio, GPRS, 3G**
- **Ultrasonic program based on received data**

The MPC-Buoy provides a complete overview of the water quality by collecting the following parameters every ten minutes: Chlorophyll α (green algae), Phycocyanin (blue-green algae), pH, Turbidity, Dissolved Oxygen, and Temperature.

Based on the received data an algorithm determines the most effective ultrasonic parameters.

The customer can visually monitor the water quality, progress of the treatment, and technical status of the devices

Learn more about water quality monitoring

Case study: Algae control in Irrigation Reservoir in Spain

The challenge

Algae in irrigation reservoirs can clog the irrigation system and can also be spread over the irrigated area. Pumps and nozzles were continuously clogged in a water reservoir owned by a fruit producer in Murcia province, in South-eastern Spain

Key results

- **Reduction of aerobic bacterial count**
- **Reduction in chlorophyll a**
- **Increased water quality**

Applied product

LG Sonic e-line

"Controlled algae growth and prevented clogging of pumps, filters and sprinklers"

Over 10,000 LG Sonic algae control products have been successfully installed in a wide range of applications in 52 different countries

LG SONIC
Leading in ultrasonic algae control

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