

300% Filter Runtime Boost for Municipal Drinking Water U.S.

The City of Archie restores public trust and water quality at a Municipal Drinking Water in USA through chemical-free ultrasonic algae control.

- ✓ **Influent turbidity reduced by 65%**
- ✓ **Effluent turbidity reduced by 53%**
- ✓ **Reduction in backwash water by 88.3%**



Operational Impact

Algae caused DBPs, taste & odor issues, and public concerns.

Treatment Strain

Blooms increased turbidity (**0.9–1.2 NTU**), stressing filters and pushing **effluent turbidity to 0.2 NTU**.

Ineffective Chemicals & Regulations

Copper sulfate and permanganate failed; DBPs remained a concern under Missouri DNR oversight.

The City of Archie, Missouri, relies on a 5.5-acre surface reservoir to supply its municipal drinking water. The city was unable to apply certain chemicals, such as oxidation agents, due to the treatment plant's design. Seeking a sustainable and chemical-free solution, the city installed LG Sonic's MPC-Buoy system in August 2021.

“**The Grand River is so green you'd think someone painted the water, yet our impoundment remains clear.**”

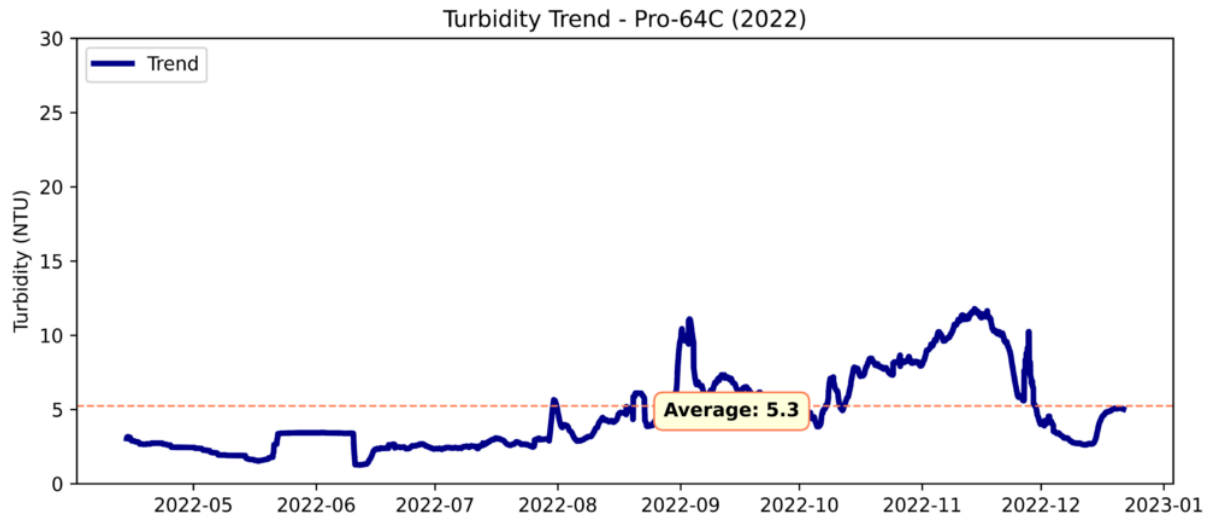
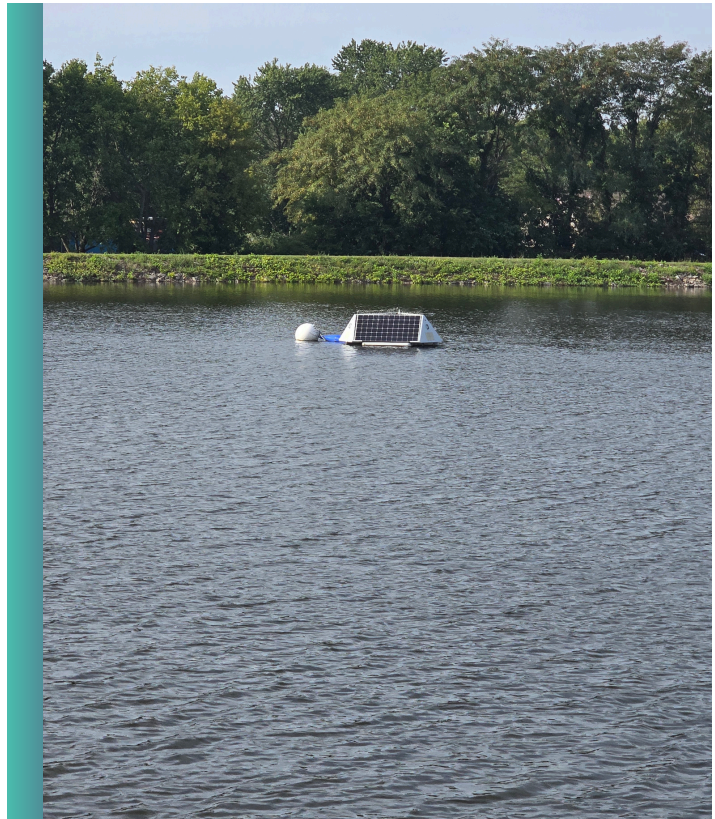
For the first time in decades, residents could see multiple feet into the water, and the lake was reopened for recreational fishing.

Measurable Results

✓ **12 to 48 hours**
Filter runtime increased 300%; ultimately, leading to **reduced backwash water use by 88.3%**.

✓ **10–13%**
Rise in daily water consumption, showing renewed public trust and cleaner supply.

✓ **<5 NTU**
Turbidity remained consistently **low for 70% of 2022**; brief spikes tied to rainfall.



Environmental Resilience

The algae control wasn't just a short-term fix. Despite continual nutrient inflow from crop runoff, the ultrasonic system maintained balance in the reservoir. According to Rick Blundell, Water Superintendent for the City of Archie:

“I am happy, the state is happy!”