

# CASE STUDY

## WOODLAND RESERVOIR

SYRACUSE, NY

Woodland Reservoir is a 126 million gallon man-made reservoir serving as a drinking water supply for the City of Syracuse in New York. The reservoir's water surface area is approximately 14 acres with a maximum depth of 35 feet. The city has a population of 145,170

### Presented Issue

Records dating back to 1975 showed copper sulfate was applied for 44 consecutive years to control phytoplankton growth in the reservoir, averaging over 8,700lbs per year for the last 10+ years. Elevated Chroococcus Type II cell counts continued to be problematic for the city.



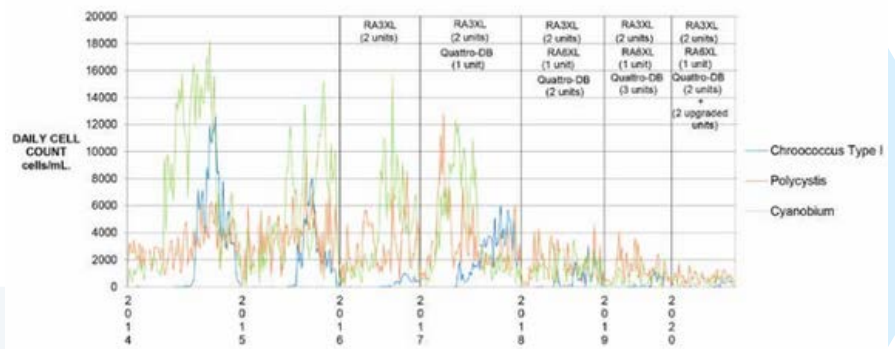
WOODLAND RESERVOIR  
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### Our Solution

In July 2017 a Quattro-DB ultrasonic algae control unit was installed in the reservoir's north basin. The coverage includes up to 17 acres for green algae and diatoms and 120 acres for cyanobacteria. In 2018, an additional Quattro-DB was installed in the south basin, followed by a third unit in 2019.

### The Results

Woodland Reservoir showed an exponential decline in algal cell counts. Prior to installation maximum cell counts exceeded 30,000 cells/mL, averaging 13,752 cell/mL. In 2020, the algal cell count was 2,127 cells/mL.



DOMINANT CYANOBACTERIA ALGAL FORMS  
2014-2020