Chesterfield County Department of Utilities Taking Algal Monitoring and Control to the Cutting Edge

For many years, the Chesterfield County Department of Utilities has worked to identify, monitor, and control algae. Algae, if not controlled properly can decrease water quality and increase water treatment costs. Chesterfield Utilities is now looking to advanced technology to continue its proactive approach to monitoring and controlling algae in the Swift Creek Reservoir.

To accomplish a goal of high water quality and efficient treatment, Chesterfield Utilities is now turning to advanced technology from a company called LG Sonics. The new technology uses ultrasound to target the problem algae, causing them to safely sink to the bottom of the reservoir without harming water quality. Due to the limited light at deeper water depths, the algae are unable to survive. LG Sonics has coordinated with various universities to demonstrate that the ultrasound technology is environmentally friendly and does not impact aquatic life, other than specific algae that can cause water quality issues. Over 10,000 of the LG Sonics products have been successfully installed in over 52 countries. There are only a few in the United States, and this is the first installation in a Virginia reservoir.

The LG Sonic system will provide real-time water quality information through the system's monitoring sensors. This information will enable county staff to identify potential problems quickly so that control measures can be implemented. The system includes two buoy platforms that are located just upstream of the raw-water withdrawal in the Swift Creek Reservoir intake bay. The units are triangular in shape and work using environmentally-friendly solar power. Chesterfield Utilities ask boaters to avoid these buoys and do not moor boats to the buoys.

This symbol (△) indicates approximate buoy locations at the water treatment intake bay in the Swift Creek Reservoir.

One of two buoys located in the water treatment plant intake bay. Approximate dimensions are seven feet by eight feet wide and three feet high.