

Client:

City of Canton, Georgia, and
the Cobb County-Marietta
Water Authority

Location:

Canton, GA

Service Provided:

- Automated monitoring

Value Provided:

- Enabled continuous monitoring of an operational dam remotely

Background & Project Challenges

The Hickory Log Creek Dam is approximately 950 feet wide and 180 feet high, making it one of the largest roller-compacted concrete dams authorized by the Georgia Safe Dams Program. The lake is about 370 acres in size;

the reservoir holds over 5 billion gallons of drinking water, and as much as 44 million gallons of water per day may be withdrawn. The City of Canton, Georgia, and the Cobb County-Marietta Water Authority engaged a team to design and construct the dam and water supply reservoir on the Hickory Log Creek. Geocomp was faced with the challenge of providing a method to monitor an operational dam continuously in an inaccessible area.



Geocomp Role & Accomplishments

Geocomp installed a real-time automated monitoring instrumentation system. Both the water flow situation of the dam along with its remote location promoted automated monitoring techniques. Geocomp was able to install and remotely operate the monitoring system. The large and sophisticated array of instruments in and around the dam includes:

- 19 vibrating wire piezometers (1 temporary for lake water level)
- 6 Casagrande-type piezometers
- 4 inclinometers
- 56 thermistors in eight different lifts
- 19 survey monuments
- 2 wiers
- 4 observation wells staff gage

The instruments are routed to three locations within the drainage gallery and within adit tunnels inside the dam and monitor deformation and water flow.

Monitoring took place during the reservoir-filling stage and will continue for several years. Geocomp is providing continuous monitoring of the dam with a call-alert system that automatically notifies authorities of potential issues.