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Lakes and Reservoirs

Lake-sized water bodies in Georgia are managed primarily by the U.S. Army Corps of Engineers and Georgia Power Company. The U.S. Army Corps of Engineers is responsible for lake-level management, and Georgia Power is responsible for lake-level management and reservoir operations. Monitoring the water quality of lakes and reservoirs is important because many factors can affect the water quality. The U.S. Army Corps of Engineers and the U.S. Geological Survey (USGS) collect data on lake-level changes, water quality, and other relevant environmental parameters at a number of lakes and reservoirs throughout the state.

Lake Hartwell is the largest and most important reservoir system in North Georgia. The lake is the most upstream of the Chattahoochee River, and its construction was authorized by the Public Law 83-404, 78th Congress, which was enacted on May 21, 1943. The lake is impounded by the Lake Hartwell Dam and Lake Hartwell Dam and Reservoir Operations, and was completed in 1956. The reservoir is used for flood control, water supply, and hydroelectric power to Troup County, and its water quality is managed to meet the needs of the Savannah River, the Northwest Florida Water Management District, the Middle Chattahoochee Water Planning Region, and the Lower Flint-Ochlockonee Water Planning Region.

Water-quality monitoring is conducted at Lake Hartwell by the USGS, and the results are used to determine the water quality of the lake and to inform decisions about water-use planning and management. The USGS monitors the lake for a variety of water-quality parameters, including dissolved oxygen, temperature, pH, and biological indicators. The USGS uses these data to assess the water quality of the lake and to help inform decisions about water-use planning and management.

Water-quality monitoring at Lake Hartwell is conducted as part of the USGS National Water-Quality Assessment Program (NWQAP). The program is designed to assess the water quality of the nation’s watersheds and to inform decisions about water-use planning and management. The program is conducted at a number of lakes and reservoirs throughout the state, and the results are used to inform decisions about water-use planning and management.

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The Ocmulgee River is a major tributary of the Chattahoochee River (U.S. Geological Survey, 1970). It is a relatively small river that is located entirely within the state of Georgia. The Ocmulgee River flows out of Jackson Lake and into the Chattahoochee River near Macon, Georgia (02213000). Daily discharge and 7-day average streamflow for the 2011 water year are provided in the table below. The table includes historical median flows for most of the 2011 water year.

### Historical Daily Flow

<table>
<thead>
<tr>
<th>Monitoring Location</th>
<th>Daily Mean Discharge ( cubic feet per second )</th>
<th>7-Day Average Discharge ( cubic feet per second )</th>
<th>Median Flows</th>
<th>2011 Flows</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ocmulgee River at Macon, Ga. 02213000</td>
<td>1,000</td>
<td>10,000</td>
<td>2011 Flows</td>
<td></td>
</tr>
</tbody>
</table>

The Chattooga River flows in the northwestern part of Georgia and is completed in the surficial and ground water, and groundwater interactions. The water levels in this well generally remain below the historical daily median for much of the 2011 water year. The water level in Well 16MM03 responded to seasonal change similarly to streamflow at the nearby streamgage on Chattooga River at Summerville, Georgia (02398000), which indicates atmospheric, surface-water, and groundwater interactions. The water level in Well 16MM03 remained below the historical daily median for much of the 2011 water year.