GENERAL INFORMATION ABOUT THE DUCK RIVER DAM

Location
- The dam will be located just north of Highway 278
- Duck River is located between Cullman and Holly Pond

[Map of proposed reservoir]

map is an approximation of the location of the reservoir

Dam details
- Rock fill dam, with earth core
- 1,925 feet long and 130 feet high
- 600 foot long, 15-foot diameter tunnel will be used for releasing minimum flows
- Cost then $43,785,000 (1999)
- Cost now? Over $52 million

Reservoir details
- 640-acre reservoir with normal pool elevation of 725 feet above mean sea level
- River elevation varies from approx. 620’ near the dam to 720’ near the top of the reservoir
- Five-mile long reservoir
- Storage capacity is 26,500 acre-feet (8.5 billion gallons)
- 100-foot wooded buffer zone to be maintained around the perimeter of the reservoir
- 37-square mile drainage area
- Withdrawal capacity is 32 million gallons per day (MGD)

River Details
- Duck River is 20 miles long
- Over 5 miles of the river will be impounded, and 3 miles of tributaries
- The drainage area for the entire basin is 63 square miles
- The Duck River drainage is 17 percent of the Mulberry drainage at the Garden City gage
Cullman-Morgan Water District
- Formed in 1993 as a “temporary political subdivision of the State of Alabama”
- Consists of nine water systems: City of Cullman; Cullman County; V.A.W. Water District; Johnson Crossing Water District; Hanceville Water District; Garden City Water District; Walter Water District; Joppa, Hulaco, and Ryan Water District; and East Cullman Water District
- Not all systems are currently obtaining water from Cullman
- Will have powers of eminent domain when reorganized as a water authority

Water usage
- Average usage reported in 1998 was 14.8 MGD, peak demand in 1998 was 24.2 MGD
- Lake Catoma capacity 25 MGD
- Demand was predicted as 21.8 MGD by 2005 and 27.0 MGD by 2015
- The Cullman Utilities Board reported using about 15 MGD in June 2005, which is less than the predicted amount of 21.8 MGD.

Water Quality
- Water in the reservoir must be re-classified by the Alabama Department of Environmental Management as Public Water Supply before withdrawals begin
- The Duck River is currently classified to meet Fish and Wildlife standards, which are less protective than Public Water Supply standards
- Water quality standards must be met before ADEM can approve the reservoir for public supply
- Water quality impairments exist in Duck Creek and Long Branch, both tributaries in the basin.
- Tributaries are still impaired for nutrients and pathogens, even though no longer on 303d list

Flow releases
- Minimum flows will be released from the dam based on a monthly schedule
- The Duck River reportedly runs dry on occasion in the summer months and these are the natural conditions for this system.
- Peak flows in the winter whitewater paddling months will be drastically reduced
- Downstream pollutant loads may increase due to reduced peak flows in the winter
- Normal releases from the dam in low flow months are actually less than average conditions.

<table>
<thead>
<tr>
<th>Month</th>
<th>Actual Average Monthly Flow (cfs)</th>
<th>Normal Releases</th>
<th>Percent Reduction</th>
<th>Actual Monthly Low Flows</th>
<th>Proposed Drought Releases</th>
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<td>January</td>
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