

The Hollis Q. Lathem Reservoir is an important element in the water supply infrastructure for Cherokee County. By constructing the reservoir, the Cherokee County Water and Sewerage Authority has assured that the customers of CCWSA will have a reliable water supply for many years into the future.

A major reservoir is one of the most difficult projects for local government to undertake. A reservoir creates a serious alteration of the natural environment and laws have been enacted that require such projects to undergo a federal permitting process. This process, which was enacted under section 404 of the 1972 Clean Water Act, is known as "404 Permitting". The process is administered by the U.S. Army Corps of Engineers. Applicants are required to perform environmental studies to determine that the proposed project is the least damaging alternative. Applicants also must prove to the reviewing agencies that the project is necessary for the public good.

The Authority understood these requirements and performed a study of numerous sites that were acceptable for construction of the reservoir. The primary concern for reservoir projects was the loss of wetlands and the Yellow Creek site had the least amount of wetlands of all the sites analyzed. Biological surveys were performed, to determine if any known endangered species existed in Yellow Creek and none were found. The Authority also performed a culture resources survey to determine if any critical archeological sites were present in the area. After extensive studies and preparation of a wetlands mitigation plan, the Authority applied for the 404 permit in December 1989. By summer of 1990, concurrence letters had been received from the required state and federal agencies. It seemed that the permit would soon be issued. However, in October 1990 the Authority received notification that the U.S. Fish and Wildlife Service had found the endangered species Amber Darter in the Etowah River. The agency was now concerned that the reservoir could have an effect on water quality in the Etowah River and this could degrade the habitat of the darter. In order to show that the Etowah River water quality would not be seriously affected by the reservoir, it was necessary to perform extensive testing of the existing water quality during different times of the year and run computer models to predict the changes that would occur. This work was not completed until July 1993.

Unfortunately, just as the Etowah River water quality study was being completed scientists with the Fish and Wildlife Service discovered two new darter species and had them listed as threatened or endangered.

One of these species, the Cherokee Darter was found in Yellow Creek as well as most other creeks that flow into the Etowah River. Thus the Authority was now required to perform additional studies to come up with an acceptable mitigation plan for loss of Cherokee Darter habitat in Yellow Creek. These studies were completed and the permit was finally issued for the project on September 23, 1994.

The permit contained conditions requiring the Authority to take steps to protect the Darters downstream of the reservoir and other locations in the county. The reservoir out-let structure had to be designed with intakes at multiple levels so that the temperature of the water leaving the reservoir could be kept within an acceptable range for the Darters living downstream.

The design of the Dam was then completed and approved by the Georgia Safe Dams Program. Because of the height of the Dam, it was required to meet the most stringent design criteria. Spillways had to be designed to handle a flood event that would be created by 28 inches of rainfall occurring in a six-hour period. The Dam uses an innovative "labyrinth" spillway that allows for higher flows with a given flood pool depth.

Construction of the project began in January 1997 and filling of the reservoir was begun in July 1999.

The reservoir is used for stream flow augmentation during drought conditions. Water is released from the reservoir during low flow conditions to make up for the withdrawals by the Authority's water treatment plant on the Etowah River near Ball Ground. The reservoir got its first use during the summer of 2000 when water supply releases had to be made to supplement the low flows in the Etowah River. The reservoir first reached full pool in the spring of 2002.

Reservoir Statistics

Dam Height	114 feet
Reservoir Area	334 acres
Reservoir Volume	3.5 billion gallons
Water Supply yield	33 million gallons per day