Fort Smith Regional Water Supply Project Update

Spring 2004

Highlights:

- Early work on new state park completed
- The new park will have many options for campers plus a swimming pool and marina
- The new park should be completed in 2006
- The new intake tower is beginning to take shape
- A new temporary pump station is nearly complete
- An approximately 10,000-year-old stone point was found at one of the archaeological sites

Park Progress

One benefit of the expansion of Lake Fort Smith not related to future water supply is the construction of a new and expanded Lake Fort Smith State Park. The new park, located on the west side of the lake in the vicinity of the old Lake Shepherd Springs dam, will have many amenities such as a visitors center, a lodge, a dining hall, cabins, drive-in and walk-in campsites, a swimming pool, and a marina. These facilities will accommodate day users to long-term campers, including those who like to "rough it" and those who want to enjoy the outdoors in a more comfortable setting.

The new park is being built in phases. Phase 1, which has been completed, includes a new access road from Highway 71, the relocation of portions of Lake Shepherd Springs Road, two employee residences, and a maintenance facility. The new 2.2-mile-long access road is the first 2-lane rural highway built in Arkansas across new land in the last 50 years. The designers of this $2.7 million road had to contend with crossing national forest land, a 600-foot change in elevation, and cultural resources sites.

Phase 2 will consist primarily of preparing the site for construction of the other major components of the park. Approximately 2.7 miles of roads and associated parking lots will be built. Water, sewer, and electric utilities will also be installed. Building sites will be graded and drainage systems will be constructed. Once the sites are prepared and the infrastructure is in place, Phase 3 construction will begin. This phase will include building the visitors center, the four lodge structures, the dining hall, an additional employee residence, 15 cabins, and the swimming pool and bathhouse.

Phase 4 will see the construction of five camp cabins, 10 tent campsites with water and electricity, four walk-in campsites, a group campground with tent pads, and 25 campsites with full hook-ups for recreational vehicles. The final phase of construction will be for the marina and a day-use area. The new park is expected to be completed in mid-2006 at an estimated cost of $22 to $23 million.

Construction Update

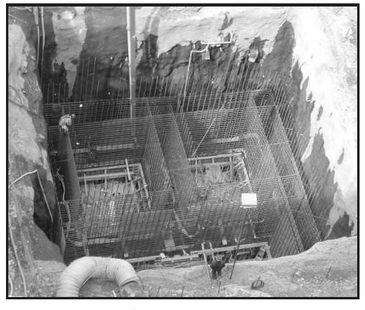
The new intake tower is contained within an approximately 120-foot deep pit and shaft on the east side of the lake just upstream from the dam. Excavation and stabilization of the shaft has been completed, and concrete for the base of the tower and the start of the walls has been placed. The relocation of God's Ranch Road around the new intake tower is nearly complete except for the asphalt surfacing.

The tunnel from the base of the intake tower through the east abutment of the dam has also been completed. The two 48-inch-diameter raw water lines, which will take water from the lake to the treatment plant, and the 8-inch-diameter minimum flow release pipe have been installed in the tunnel and connected to the base of the intake tower.

Work on the new dam embankment and principal spillway continues.

A new temporary pump station has been constructed to replace the old pump station that was located in the footprint of the new dam. This pump station moves water from the lake to the treatment plant when the water level in the lake is not high enough for gravity to do the job. The new temporary pump station was recently connected to the water line leading to the treatment plant and to one of the new 48-inch raw water lines. This line is now in use even though the new intake tower is still under construction. These connections will permit the old 27- and 30-inch raw water lines that lie within the footprint of the new dam to be removed.

The principal and auxiliary spillways allow water to safely flow out of the lake when water levels in the lake are high. Removal of overburden for both spillways continues. Instrumentation has been installed along a portion of the crest of the auxiliary spillway to monitor stability during the excavation process. For the principal spillway, work for the box culvert portion continues, and work has just begun on the chute that leads from the principal spillway to the stilling basin. During a 100-year flood event, water will flow down the spillway chute at an estimated 60 miles per hour. The purpose of the stilling basin is to dissipate the energy in the water, thereby preventing erosion in Frog Bayou.



Placing concrete for the intake tower.

Moving earth and rock to build up the new embankment continues. The stockpiling of clay for the impervious core of the dam is nearly complete and will be finished this summer when drier conditions permit. Reinforcing the upstream side of the existing dam with an additional layer of rock continues as clean rock becomes available from excavation of the spillways. The first line of instrumentation that will monitor dam stability will be installed soon.

Lake Shepherd Springs will close to the public on May 3, 2004, as the first step in preparing the Lake Shepherd Springs dam for removal.

Archaeological Update

Excavations at the Eliot Huffman site (3CW967) have revealed that the primary occupation at the site appears to be associated with the Toms Brook complex, which is approximately 5,000-6,000 years old, placing it in the Middle Archaic period. Artifacts that have been recovered from the site dating it to this period include Williams and Johnson points. An even older component may be indicated by the presence of a Dalton point, which dates to approximately 9,500 to 10,500 years ago.

The primary activity conducted at the site was apparently the maintenance of chipped stone chert tools and the production of chipped stone tools out of a local material called Trace Creek siltstone, which is also known as argillite. The recovery of several grinding stones and two nutting stones indicates that some plant materials were processed at the site. Animals could have been processed at this site, too, but no bones were recovered to support this assertion, perhaps because of poor preservation. The processing and analysis of soil samples should yield clues as to what kind of plant materials were used at the site.

Williams points found at the Eliot Huffman site.

A single feature, apparently a small hearth, was found at the site. A charcoal sample was removed from this feature and submitted to a laboratory for carbon dating. Analysis of the artifacts recovered continues and a final report will be prepared in the near future.

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