# Regional Water Supply Project Update Spring 1999

## Highlights:

The Board of Directors has selected Lake Fort Smith to meet the water supply needs for the service area through 2040.

Current project activities involve identifying the optimal dam height and spillway configurations.

Preliminary plans for two possible dam configurations are being prepared to better define impacts on Lake Fort Smith State Park.

A draft environmental assessment report will be published. It will discuss the project's potential environmental impacts and how to mitigate them.

ර

# Water Supply Study Focuses on Lake Fort Smith

The Board of Directors of Fort Smith, Arkansas, has selected the expansion of Lake Fort Smith as its preferred choice to meet the water supply needs for the service area through 2040.

The lake was chosen from five alternatives evaluated by Burns & McDonnell, the city's engineering and environmental consultant. The current phase of the water supply study, which began in December 1998, is focusing on engineering and environmental studies at Lake Fort Smith.

The project will involve constructing a new larger dam overlying the existing Lake Fort Smith Dam and constructing a new larger spillway. Current guidelines for dam and spillway design require larger spillways, which in turn result in improved safety for downstream residents and properties. The new, enlarged Lake Fort Smith dam will be required by regulators to cause no increase in the 100-year flood elevations downstream from the dam. Lake Shepherd Springs Dam, which is directly upstream from Lake Fort Smith, will be removed. Material from that dam will be used in construction of the new dam.

### Scope of Work for Current Phase

The project's current phase involves a combination of engineering and environmental studies focusing on Lake Fort Smith. Initial engineering tasks will identify two dam height and spillway configurations.

Additional hydrologic studies will also be performed along with preliminary civil engineering and geotechnical investigations to help identify an optimal dam height. Completion of this task is anticipated in June 1999.

Cost estimates for the two dam and spillway configurations will be prepared to help select the optimal dam height. Preliminary plans for these dam and spillway configurations are being prepared to better define impacts on Lake Fort Smith State Park. A meeting is planned with the Department of Parks in April to present our preliminary assessment of impacts on the existing park facilities.

During February and March, cores were taken from the existing Lake Fort Smith and Lake Shepherd Springs dams, as well



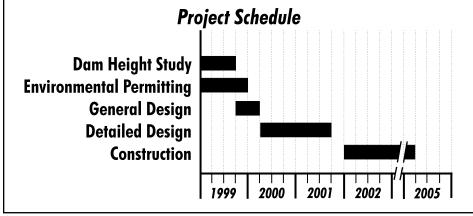
View of current Lake Fort Smith dam and spillway.

as at the new dam site and spillway locations. Areas near the proposed dam were also tested to see if they could serve as sources of materials to build the dam. The cores will be tested in the laboratory and geologists will study the results to gather information for dam and spillway design.

Mapping of the project site is under way. Ground control points have been established by field surveys for use in aerial photography and preparation of topographic maps. A boundary survey of the city's property will also be completed.

#### What's next?

"Initial activities in this phase of the project center on defining impacts on Lake Fort Smith State Park," said Frank Shorney, project manager for Burns & McDonnell. "It is the project team's goal to minimize impacts on park facilities as much as possible. In the event serious impacts to park facilities can not be avoided, the Board of Directors ing permits and approvals from regulatory agencies for the new water supply facility. The draft EA will be completed when the preferred dam height and spillway configuration is identified. The EA will compare the environmental impacts of Lake Fort Smith with other alternatives considered for the water supply project. Impacts on cultural resources, fish and wildlife resources, and people will be discussed in the EA, as well as ways to mitigate adverse impacts. The draft will be available for comment from the public and agencies.



has committed to replacing park facilities with facilities of equal or better quality. The emphasis of the project at this time is to first develop information regarding project impacts on Lake Fort Smith State Park, to provide this information to the Department of Parks and to work cooperatively with Department of Parks personnel as the project progresses. Defining impacts on the park is dependent on first determining the location of the spillway and the optimal dam height."

Upcoming environmental activities include completing an environmental assessment (EA) report for the project and obtain-

The original project schedule shows detailed design being completed in 2001 with construction starting in early 2002. The project is anticipated to be finished in early 2005.

Quarterly newsletters will continue to inform the public of progress.

