

DEVELOPING THE WEST GEORGIA REGIONAL WATER SUPPLY PLAN

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INTRODUCTION

This paper describes the planning process used to develop a long-range water supply plan for a five-county area northwest of Atlanta, Georgia. Demand for water in the study area is projected to increase from a current 32 mgd to 157 mgd in the year 2050. The corresponding population increase is from about 240,000 currently (many without connection to a public water system) to 840,000 in the year 2050. The 1,615-square-mile study area includes portions of three major drainage basins—the Chattahoochee, the Coosa, and the Tallapoosa—all of which feed rivers flowing downstream through or adjacent to the State of Alabama. Demand projections are predicated on no large water-intensive industries locating in the study area.

BACKGROUND

In 1989 and 1990 a study was performed by another consultant with a similar goal of providing a reliable water supply for the five counties. That study focused on developing one large surface-water source in the Coosa and/or Tallapoosa basin and identified a large reservoir on the Tallapoosa River as the preferred alternative.

Shortly thereafter, the State of Georgia and the Atlanta Regional Commission requested a reallocation of storage in Lake Lanier, north of Atlanta on the Chattahoochee River, from hydropower to water supply to serve the needs of the metropolitan Atlanta region through the year 2010. In light of the significant existing interbasin transfers in the Atlanta region, the prospect of additional interbasin transfers due to the reallocation of Lake Lanier storage, and the construction of a large water supply source on the Tallapoosa River, the States of Alabama and Florida filed suit against the State of Georgia and the United States Army Corps of Engineers (COE) to halt the reallocation and delay consideration of all Section 404 Permits for reservoir construction in the basins. In a 1991 Memorandum of Agreement (MOA), all parties agreed to coordinate additional water supply planning activities with a Comprehensive Study of the major river basins in

the region and to delay submitting regional Section 404 Permit applications until 1995.

The water supply planning process began anew in 1993 with the selection of a consultant to develop a water supply planning process that would coordinate with the Comprehensive Study, involve stakeholders and regulators during the planning process, evaluate all water resources in the study area, and result in a recommended water supply plan that was permissible. The process described below was developed to achieve these objectives for the West Georgia area.

METHODS

Project Team

The Georgia Department of Natural Resources (DNR) contracted the study consultants, CH2M HILL and The University of Georgia Institute of Community and Area Development (ICAD), to assist the West Georgia Regional Water Authority (WGRWA) in developing a water supply plan. CH2M HILL developed the project approach and performed the engineering, planning, and scientific analyses; ICAD coordinated and facilitated public meetings and developed the decision analysis approach.

Project Approach

The methodology and documentation developed in the planning process were designed to meet National Environmental Policy Act (NEPA) guidelines for developing, evaluating, and documenting water supply alternatives. The project approach included these activities:

- Forming a Technical Advisory Group (TAG) of stakeholders
- Developing project guidelines and goals
- Developing evaluation criteria
 - Downstream Effects
 - Relative Cost
 - Environmental Effects
 - Reliability
 - Water Quality
 - Regional Acceptance

- Identifying water supply sources
- Reviewing the water supply needs assessment
- Analyzing groundwater availability
- Screening water supply elements (preliminary)
- Developing water supply alternative packages (multiple elements)
- Evaluating, reviewing, revising alternative packages
- Recommending a preferred alternative at the decision workshop
- Developing a water supply plan
- Developing an EA/EIS for the preferred plan

Technical Advisory Group

The TAG was composed of about 60 representatives from WGRWA, county water utilities, Georgia and Alabama state agencies, federal regulators, electric utilities, industry, and environmental and other interests. As significant activities were completed, they were documented in brief Technical Memoranda (TMs) that were distributed for comment before TAG meetings. At each meeting a summary of the TM key points was presented for discussion. In addition, ICAD held public meetings in the study area and downstream in Alabama to solicit input on the planning process. The TAG will recommend a preferred alternative to the WGRWA based on evaluation of data developed by CH2M HILL at a decision analysis workshop facilitated by ICAD. Among the options for this analysis is a decision method that allows the TAG to weight the evaluation criteria, i.e., downstream effects, cost, etc. In addition, the TAG could then develop utility curves for the data associated with each criterion, which would transform the data to a common scale—for example, what is the relative importance of impacting 10 versus 100 acres of wetlands?

PROJECT PROGRESS

As of the end of October 1994, five TAG meetings have been held, with an average attendance of 30. All groups, including the regulators (for example, the COE and EPA), have typically been represented. Four public information meetings have been facilitated and six TMs issued (five in final form). To its members' credit, the TAG has worked well together considering the broad diversity of interests represented. Initial and revised alternative packages have been submitted to the TAG for review and comment. The WGRWA is currently reviewing the alternatives to reach a consensus on whether the existing alternatives are acceptable to move forward or require further refinement.

LESSONS LEARNED

Six factors have become apparent as the study has progressed:

- Interbasin transfer is still an issue of great concern, particularly for environmental and Alabama interests.

- The county water utilities are concerned with operational control issues (clear distinctions between ownership of water sources, facilities, etc.), as well as issues such as cost.
- County water utilities also place a premium on the source's reliability. For example, because groundwater in the Piedmont geologic region has not been developed before on a regional basis, and because individual wells have gone dry during drought periods, county utilities consider groundwater a poor option. In contrast, downstream and environmental interests consider the groundwater availability estimates to be extremely conservative.
- It is difficult to focus the process on water supply planning when surface-water supplies are involved. The process is rapidly complicated by issues such as property values near downstream impoundments; potential for growth, development, and recreation around new reservoirs; political pressures, etc. The process needs to be distanced as much as possible from issues not directly related to water supply.
- A reasonable, defensible needs assessment is crucial to getting the process off the ground.
- All interests should voice their opinions and concerns in front of the entire group as early as possible in the process. Otherwise, issues such as groundwater reliability, source water quality, operational considerations, plans for future facilities, etc., could delay the process of achieving consensus.

CONCLUSIONS

The planning process outlined in this paper provides the following key benefits: (1) efficiency—potential roadblocks to implementing the plan are identified early; (2) credibility—involving parties with differing views in the process increases the exchange of information and improves the credibility of the process and product; (3) implementability—involving regulators and agencies such as the COE, EPA, Fish and Wildlife Service, and many others provides the opportunity for responsible agencies to reach a consensus along with the stakeholders; and (4) quality—the stakeholders and regulators bring a wealth of local and regional information to the table, which in turn makes the resulting plan more realistic and viable.

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