

# THE LOCAL COMPREHENSIVE WATER SUPPLY MANAGEMENT PLAN DEVELOPMENT PROCESS: A REVIEW OF BULLOCH, LIBERTY AND MCINTOSH COUNTIES

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**Abstract.** The Georgia Environmental Protection Division (EPD) requires 24 counties in Southeast Georgia to develop comprehensive water supply management plans by January 1, 2001, that address past, present, and future water demand, water supply options, and wastewater treatment. This plan requirement is part of a regional effort to stop salt water intrusion in certain portions of the Upper Floridan Aquifer and reduce withdrawals from this threatened groundwater source. The Coastal Georgia Regional Development Center is assisting Bulloch, Liberty, and McIntosh Counties with the preparation of these plans. Emphasis is placed on including significant public participation in the plan development process, as well as outlining the steps of the process to ensure that each required element of the plan is addressed and the plan is completed in a timely manner. The Board of Commissioners in each of these counties appointed an advisory committee and technical committee comprising diverse community interests to guide the preparation of the plan, and three public meetings during the course of the plan development process are scheduled in each of these counties.

## INTRODUCTION

### Local Water Planning Requirements

The Georgia Environmental Protection Division (EPD) issued its *Interim Strategy for Managing Salt Water Intrusion in the Upper Floridan Aquifer of Southeast Georgia* in April 1997 to address saltwater intrusion that threatens future groundwater supplies in Savannah and Brunswick, and potentially other areas of Southeast Georgia. Specifically, EPD's objective is to stop the intrusion of saltwater before municipal water supply wells in Hilton Head Island, South Carolina, and Savannah are contaminated, and to prevent an existing saltwater problem at Brunswick from worsening (EPD,

1997). As part of its strategy, EPD requires 24 counties in the region that utilize the Upper Floridan Aquifer (Figure 1) to develop comprehensive water supply management plans by January 1, 2001, that assess past, present, and future water demand, water supply sources, and wastewater management. A comprehensive water supply management plan is an effort and process to protect the long-term viability of the water resource as a source of potable water for residential, commercial, and industrial use (Rutherford, 1997). Each plan should serve as a decision-making tool for local elected officials and Georgia EPD for managing growth, projecting future water demand, and permitting future groundwater and surface water withdrawals. Local governments should note that EPD will not issue new municipal, industrial, or agricultural Upper Floridan Aquifer groundwater permits (required for withdrawals greater than 100,000 gallons per day) after December 31, 2000, to applicants in any county of the 24-county area which has not developed a comprehensive water supply management plan and had it approved by EPD.

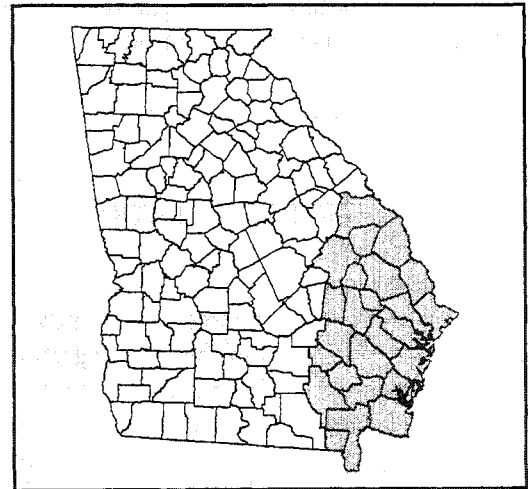


Figure 1. 24 Georgia counties covered by EPDs Interim Groundwater Strategy.

### **Purpose and Scope**

The Coastal Georgia Regional Development Center is assisting Bulloch, Liberty, and McIntosh Counties with the preparation of these comprehensive water supply management plans. Emphasis is placed on including significant public participation in the plan development process, as well as outlining the steps of the process to ensure that each required element of the plan is addressed and the plan is completed in a timely manner. The purpose of this paper is to share the plan development process that is being utilized in these three counties in order to assist other local governments that have not initiated this process to-date.

### **The Need for Groundwater Management and Planning**

The Upper Floridan Aquifer is the primary source of drinking and industrial process water for the 24 Southeast Georgia counties required to prepare comprehensive water supply management plans. The aquifer underlies Southeast Georgia, most of Southwest Georgia, Coastal South Carolina, a portion of Southern Alabama, and Florida. Secondary aquifers include the Surficial, Upper and Lower Brunswick (Miocene), and Lower Floridan. Most groundwater management issues in Coastal Georgia relate to lateral or upward movement of the freshwater-saltwater interface in the Upper Floridan Aquifer. Groundwater withdrawals since the late 1800s have resulted in long-term water level declines in the Savannah and Brunswick areas, saltwater encroachment in the Hilton Head area of South Carolina, and upward movement of highly mineralized water in the Brunswick area (Clarke and others, 1990). Present pumpage from the aquifer in Georgia's coastal counties; Wayne County, Georgia; Beaufort County, South Carolina; and Nassau County, Florida, is approximately 320 million gallons per day (Krause, 1997).

## **PUBLIC PARTICIPATION**

### **Advisory and Technical Committees**

Addressing the interests and needs of all stakeholders is a key aspect of the planning process. For this reason, the Board of Commissioners in each county appointed an advisory committee and technical committee comprising diverse community interests to guide the development of the comprehensive water supply management plan. Utilizing two committees allows for increased involvement in the process and separate discussions of technical and non-technical

issues. The advisory committees are comprised of county and city elected officials; citizens; industrial, business, agricultural, golf course, and environmental representatives; and other interests. The technical committees are comprised of public drinking water and wastewater managers, industrial engineers, and other technical interests. However, McIntosh County has chosen to prepare its water plan with a single advisory committee, and this may be more preferable for smaller jurisdictions. In Bulloch and Liberty Counties, these committees are meeting separately for approximately three-quarters of the plan development process but are operating on a similar schedule.

### **Public Meetings**

In order to further public participation and community acceptance of the comprehensive water supply management plan, each county will hold three public meetings during the plan development process. The first two meetings are intended to be informal consensus-building sessions, while the third meeting will serve as a formal public hearing prior to adoption by the Board of Commissioners. The first meeting will take place after the committees have assessed population projections; past, present, and future water demand; present and future wastewater treatment needs; and present water supply sources (considered to be the "plan inventory," discussed below). The second meeting is scheduled after the committees have preliminarily considered potential future water supply options. The purpose of both meetings is to share the committees' work with the community, gain additional input and ideas, and attempt to reach consensus on various elements of the plan. By modifying the plan during the development process, based on public input at these meetings, the committees can submit a plan to the Board of Commissioners that should have broader public support, as compared to limiting public input to the end of the development process.

## **PLAN OUTLINE AND SCHEDULE**

After reviewing EPD's minimum planning requirements (EPD, 1997), Chatham County's water planning process (Rutherford, 1997), and the Chatham County Comprehensive Water Supply Management Plan (Chatham County-Savannah Metropolitan Planning Commission, 1995), a plan outline and schedule were developed for each of the three counties. In order for the comprehensive water supply management plan to be

approved by EPD and used an effective planning and management tool, it will address the following aspects of water use:

- Past, present, and future water demand for the domestic/commercial, industrial, and agricultural sectors
- Present water supply and systems management
- Present and future wastewater treatment and disposal
- Future water supply options
- Preferred water supply management scenario
- 50-year implementation schedule

### **Developing a Plan Outline**

Based on the required elements listed above, the plan development process can be organized into the following five steps:

- Plan inventory
- Future water supply option development
- Plan implementation strategy development
- Plan finalization
- Local plan adoption and submission to EPD

This outline helps to guide the committees through the long process of developing the comprehensive water supply management plan and provides milestones for completing the plan in a timely manner. Public meetings are scheduled near the conclusion of the plan inventory, after preliminary discussion of future water supply options, and near the conclusion of developing the plan implementation strategy (discussed above).

### **Developing a Schedule**

EPD must approve the comprehensive water supply management plans by January 1, 2001. Therefore, each county will complete and adopt its plan by mid-summer 2000 to allow for adequate review time and approval by EPD. Committees began meeting in late 1998 and will have approximately 20 months to complete the plan development process. Approximately 15 meetings are scheduled for each committee during this time period, and each committee will meet every one month to six weeks. While the committees could probably accomplish their work in a shorter time span, spreading the meeting dates over 20 months should help to maximize participation, decrease committee member weariness, and allow for plan modifications and time to address problems and issues that arise during the process. All meeting dates were set in the beginning of the plan development process to allow for committee members to mark their schedules well in advance, but these dates can be modified as needed. In addition, the subject to be

discussed, plan elements to be reviewed or approved, and tasks to be completed by Coastal Georgia Regional Development Center staff prior to each meeting were determined in the beginning of the process. These measures may seem cumbersome but are helpful in assisting the committees in finishing each plan element, addressing each of EPDs minimum planning requirements, and meeting the completion deadline.

## **CONCLUSION AND RECOMMENDATIONS**

This review of the comprehensive water supply management plan development process that is being undertaken in Bulloch, Liberty, and McIntosh Counties should be useful to local governments that have not initiated the process to-date. With a goal of producing a workable plan that addresses the long-term water needs of a community, meets EPDs approval, and serves as a useful resource management tool, the following practices are recommended during the plan development process:

- Committee membership should be diverse and include a wide range of community interests, including all major water users
- Local elected officials should be involved in the entire plan development process, preferably as members of the committees, in order for the plan to have strong political support
- Attendance at the committee meetings should be encouraged to ensure that each stakeholder has input in each element of the plan; meetings should be scheduled well in advance and for a day and time that is convenient for most committee members
- Committee meetings should be spaced far enough apart to avoid committee member weariness and allow for adequate time to address problems and build consensus on each plan element
- Public meetings during the plan development process are highly important for the plan to be accepted by the community; local media should be encouraged to attend these meetings
- EPD should be involved in the plan development process by receiving draft plan elements as each is developed; this may help to eliminate major disagreements during EPD's formal review of the plan

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