

# **Building Strong Collaborative Relationships for a Sustainable Water Resources Future:**

**STATE OF GEORGIA**

SUMMARY OF STATE WATER PLANNING

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The findings contained in this report are based on the information collected from the literature search and interviews for this initiative and should not be construed as an official Department of the Army position, policy or decision unless so designated by other official documentation.

# **STATE OF GEORGIA**

## **1. STATE/REGIONAL WATER PLANNING STATUS**

In early 2008, the Georgia Legislature passed a resolution which approved the “Georgia Comprehensive Statewide Water Management Plan (SWP); days later Governor Sonny Perdue also signed the resolution. The SWP is a framework and guide for the creation of regional water planning councils (RWPCs), and the development of corresponding regional water development and conservation plans (WDCPs). In Georgia’s approach to future water resources management, these WDCPs, once approved by the Director of the Georgia Environmental Protection Division (EPD), will be the basis upon which the Director will make future water, wastewater, and stormwater permitting decisions involving water uses within each water planning region.

Water planning regions are delineated by counties (Figure 1). Each region contains one or more major surface or groundwater resources, and the boundaries of each region generally considers the hydrology of regional surface or groundwater resources. In addition to the Metropolitan North Georgia Water Planning District (MNGWPD) which was established under a 2001 statute, the SWP creates 10 new water planning regions.

Membership of the 10 new Regional Water Plan Councils will be decided by Georgia's governor, lieutenant governor, and the Speaker of the Georgia House of Representatives. Selections will be made in early 2009, and will largely be derived from a list of nominations collected by EPD during the period July to September, 2008. Each RWPC consists of 25 members and three alternatives, all of whom are residents of the planning region and broadly represent agriculture, forestry, industry, commerce, local governments, water utilities, regional development centers, tourism, recreation and the environment.

## **2. RESPONSIBLE STATE AGENCIES/REGIONAL ENTITIES**

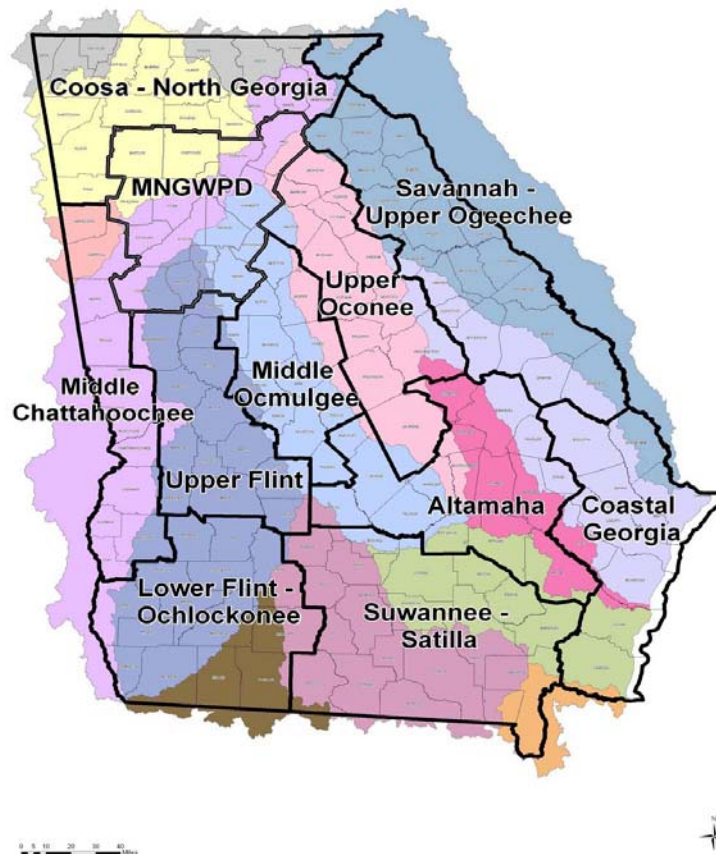
The Water Council is the coordinating committee created by the 2004 Comprehensive Statewide Water Management Planning Act (Official Code of Georgia Annotated (O.C.G.A.) § 12-5-520). The Water Council consists of agency heads from each of the state agencies with one or more water management related responsibilities, as well as citizen members and elected state officials. There are eight council members from each of the following state agencies: EPD, Department of Community Affairs, Soil and Water Conservation Commission (GSWCC), Georgia Environmental Facilities Authority (GEFA), DNR, Department of Agriculture, Georgia Forestry Commission (GFC), and Department of Human Resources (The Water Council, Nov. 12, 2008). These members are joined on the Water Council by two state senators, two members of the Georgia House of Representatives, and two citizen members.

Georgia’s Department of Natural Resources (DNR), Environmental Protection Division (EPD) is the lead agency on state water resources management. EPD led the Water Council’s development of the draft version of the SWP. The Water Council submitted the proposed SWP to

the Georgia General Assembly. EPD's Director serves as both the chairperson for the Water Council and the state's Drought Response Committee.<sup>1</sup>

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Within EPD, the Watershed Protection Branch is responsible for managing the state's water resources programs (e.g., floodplain management, safe dams, water withdrawal permitting, safe drinking water permitting, NPDES permitting, total maximum daily load (TMDL), etc.) (EPD, Nov. 12, 2008).



**Figure 1. Final Water Planning Regions Delineated in the SWP (The Water Council, Nov. 12, 2008).**

<sup>1</sup> As of the date of this summary, there has not been a designated POC for this assessment.

### 3. WATER MANAGEMENT VISION AND GOALS

The purpose of the SWP is consistent with the mission statement set out by the the Comprehensive Statewide Water Management Planning Act: "Georgia manages water resources in a sustainable manner to support the state's economy, to protect public health and natural systems, and to enhance the quality of life for all citizens," (O.C.G.A., § 12-5-522(a)). The SWP focuses on developing statewide policies (strategies) and management practices in several specific areas (although policies are sometimes duplicated): integrated water policy, water quantity, water quality, water resource assessment, water quantity management, water quality management, water demand management, water return management, water supply management, water quality management, enhanced water quality standards and monitoring practices, enhanced pollution management practices, and regional water planning. Provisions of the SWP are intended to guide RWPCs and the development of WDCPs consistent with requirements of the Comprehensive Statewide Water Management Planning Act.

Georgia strives to have an integrated water policy that is implemented in coordination with current and future state plans such as the various WDCPs and the State Energy Strategy (Governor's Energy Policy Council, 2006). The state's water resource goals are expressed as policy statements found throughout the GWP. Examples include:

- *Georgia will work within existing mechanisms, and will seek to develop new mechanisms, to foster effective interstate management of the water resources shared with its state neighbors to the north, south, east, and west.*
- *Water conservation will be a priority water quantity management practice implemented to help meet water needs in all areas of the state, and will be practiced by all water use sectors. The State of Georgia will ensure that new water supply reservoirs are designed, sited, and operated in a sustainable manner to maximize opportunities for reasonable offstream water uses while minimizing harm to the environment.*
- *The State of Georgia will protect the reasonable use of water in donor basins through the regulation of interbasin transfers.*
- *Water quality management practices are most effective when implemented on a watershed basis.*
- *Coordination of environmental planning and management between state agencies, permittees, and local government entities responsible for land use planning and management will serve to reduce the adverse effects of land use and stormwater on water quality.*

The WDCPs and the SWRP will be long-term planning documents. The GWP states that WDCPs must include (pg. 37 and 38):

- *Forecasts of 10-, 20-, 30-, and 40-year population expectations, water demands, wastewater returns, land surface types and distribution, and employment characteristics, developed in consultation with EPD.*
- *Water quantity and quality management objectives for 10-, 20, 30-, and 40-year time horizons.*

#### 4. SCOPE OF WATER RESOURCES PLANNING AND MANAGEMENT

Prior to the passage of the Comprehensive Statewide Water Management Planning Act, the state recognized the need for comprehensive water resources planning in the greater Atlanta area due to rapid population and economic growth. In 2001, the Georgia General Assembly passed the MNGWPD Act which established the district, its RWPC, and mandated the development of regional plans for stormwater management, wastewater treatment, and water supply and conservation. Three comprehensive water plans were adopted by MNGWPD in 2003 (MNGWPD, 2008). Development WDCPs for the other water planning regions will be influenced by the experiences of the MNGWPD. The SWP establishes that, “[future MNGWPD WDCP] updates must also be consistent with the provisions of this plan, which may require additional planning time as provided by O.C.G.A § 12-5-574(c),” (pg. 37).

The SWP highlights specific strategies intended to meet statewide goals. These include:

- *Implement an integrated water policy.*
- *Develop water quantity resource assessment plans and a budget to direct the collection of data.*
- *Develop a comprehensive and accessible database.*
- *Base water resource management decisions on sound scientific and technical information.*
- *Recognize that economic prosperity and environmental equality are interdependent.*
- *Coordinate implementation of the GWP and WDCPs with current and future state plans such as the State Energy Strategy.*
- *Foster interstate management of resources.*
- *Recognize opportunities for offstream and instream uses of water that are supported by historic flow regimes.*
- *Implement a variety of water quantity and quality of management practices that are specific and well-suited to each region (e.g., conjunctive use, conservation, water reuse, interbasin transfers, etc.).*

Consumptive use or water quantity resources assessments will be conducted by EPD for each water source. In conducting these assessments, the EPD Director and/or Division must take into consideration (pg. 18):

- *The extent to which any specific water source contributes to the flow regimes of hydrologically connected adjoining water sources, so as to ensure preservation of opportunities for other water users and uses.*
- *The entire history of flows, natural and altered, in the connected water resources, and the flow contributions the source in question has historically made to the hydrologically connected water resources.*
- *The extent to which the water withdrawn from a surface water source will be, after reasonable use, returned to the water source within a time frame that allows contemporary users of that surface water source, and users of hydrologically connected surface water sources, to make corresponding reasonable use of that returned water.*

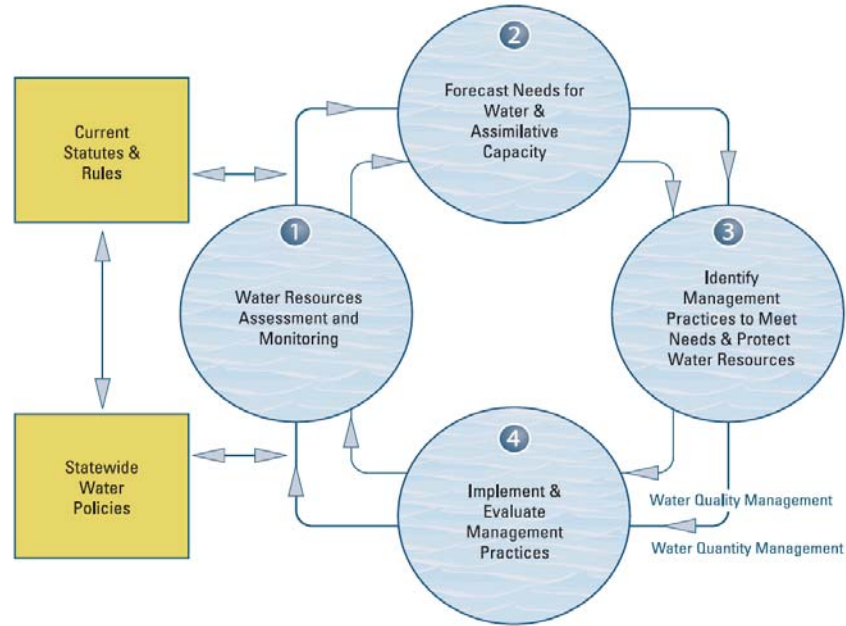
- *The impact of on-site sewage management systems, land application systems, transfers of withdrawn waters to sources that are not by nature hydrologically connected to the subject source, and other water management practices that may impact return flows.*
- *The extent to which prior water development and management practices have affected the consumptive use assessment of a source.*
- *The impact of the size and operational characteristics of water storage projects, the extent, location, and timing of discharge of waters from interbasin transfers, and other current water management practices that have altered the natural sustainable yield of the source.*
- *Flow regime requirements related to the consumptive use assessment of a water source and the instream flow conditions applied to surface water withdrawals from that water source.*

The Comprehensive Statewide Water Management Planning Act replaced the River Basin Planning Act of 1992 that charged the EPD Director with development of river basin management plans (RBMPs) for Georgia's major river basins: Altamaha, Chattahoochee, Coosa, Flint, Ochlockonee, Ocmulgee, Oconee, Ogeechee, St. Marys, Satilla, Savannah, Tallapoosa, and Tennessee.

Within the framework of current laws and policies, the SWP lays out a cyclic, integrated water management plan (Figure 2) consisting of four major steps:

- Water resources assessment and monitoring—EPD identifies watershed and aquifer boundaries for use in the assessment. Consumptive use assessments are conducted under dry year conditions. EPD analyzes the collected information and determines whether or not enhanced monitoring is needed. This step fulfills the requirement that water resources management decisions and efforts are based on “a comprehensive and accessible database,” and, “a sound scientific foundation” (O.C.G.A. §12-5-522(b)(4) and (b)(6)).
- Regional water demand and assimilative capacity forecasts—Georgia will be divided into several planning regions and each RWPC is responsible for conducting regional water demand forecasts. RWPCs must also determine assimilative capacity or the amount of contaminant loads that can be discharged without exceeding water quality criteria for each water body.
- Creation of regional water development and conservation plans—RWPCs and EPD will work cooperatively to develop regional water development and conservation plans that identify pertinent water management practices.
- Plan implementation & evaluation—Each regional plan will be implemented by the region's water users and evaluated by the EPD and the regional planning council. EPD will then make water permitting decisions based on the regional plan.

Throughout the cycle, EPD will continue to monitor and update the status and condition of the state's water resources. This long-term assessment process is meant to aid future revisions of the GWP, as well as river basin and regional plans.



**Figure 2. The Georgia Comprehensive Statewide Water Management Plan (SWP, pg. 29).**

As part of the integrated water policy established in the SWP, “Georgia’s economic well-being, the health and welfare of its citizens, and the diversity and health of its natural environment are dependent on the availability of clean water in the rivers, streams, lakes, wetlands, estuaries, coastal waters and groundwaters of the state (pg. 12).” Further, “Water resources in Georgia will be managed in a manner that recognizes the opportunities for offstream and instream uses of water that are supported by historic flow regimes (pg. 14).” Instream uses are defined as “all those human and ecological uses of water which occur within the banks of rivers and streams, including waste assimilation, hydropower production, recreation, maintenance of aquatic habitats, and support of biological integrity (pg. 10).”

To effectively meet the goals of the SWP the State of Georgia will need the necessary resources. Ensuring that the framework for comprehensive water planning and management is accomplished will require support from a variety of sources in addition to the support from the Georgia Legislature. Funding will be paramount to achieving the goal of a comprehensive state water plan. Financial resources are needed to enhance data collection and monitoring and to hire the apropos personnel in developing mathematical models to explore complex water resources problems and to present and demonstrate to key decision makers the need for the appropriate management strategies.

A rapidly growing population and economy are the sources of the state’s major water resources challenges. The guiding policies of the SWP are:

1. *In order to support the state’s economy, protect public health and natural systems, and enhance citizens’ quality of life, Georgia must protect the ability of the state’s water resources to meet all reasonable current and future water needs of the state. These needs include the offstream and instream uses that sustain the state’s cities, counties, rural communities, farms, businesses, industries, and the environment.*

2. *Georgia's surface waters have assimilative and water supply capacities that govern their use for instream and offstream purposes. Georgia's groundwaters have similar capacities that govern their use. Exceeding these capacities, or supplementing them in ways that foreclose opportunities for other users and uses, may have detrimental effects on current and future users and on the health and well-being of Georgians and natural systems.*
3. *Water uses, wastewater discharges, runoff and various management practices in one water source may affect the assimilative and water supply capacities of hydrologically connected water sources.*
4. *'Water use' refers to the particular purposes or end uses for which water is employed in Georgia, whether instream, offstream or pumped from an aquifer. Water use includes human consumption, irrigation and other farm uses, industrial and commercial production, wastewater assimilation, recreation, hydropower, habitat maintenance and species protection, among others. "Water users" refers to those within Georgia using the water such as water utilities, homeowners, farmers, industries, and commercial businesses. Georgia's water resources will be managed to support water uses related to both human needs and natural systems.*
5. *Water quality and quantity and surface and groundwater are interrelated and require integrated planning as well as reasonable and efficient use.*
6. *Water resources management must have a sound scientific foundation and recognize that economic prosperity and environmental quality are interdependent.*
7. *Improving the information base for water management is critical to supporting current and future human use of water and the needs of natural systems. While the information base is being improved, management decisions must be based on the best information available at the time and on the laws, rules, plans, and administrative procedures in place at the time. Water use and management, including decisions regarding water permits, will proceed under these terms as resource assessments are conducted and regional water plans are developed.*
8. *This water plan and subsequent regional water development and conservation plans will be implemented in coordination with current and future state plans, such as the State Energy Strategy, that may affect water resources.*
9. *Georgia will work within existing mechanisms, and will seek to develop new mechanisms, to foster effective interstate management of the water resources shared with its state neighbors to the north, south, east, and west.*

Individual regions within the state present their own unique challenges to water resources planning and management. As Georgia continues the process of developing a SWP it will need to further analyze and address these issues and expand its scope accordingly. Some of the key issues facing Georgia's water resources at a regional level were identified by an agency point of contact during the **interview phase** incorporated into the development of this summary:

- The southwestern portion of the state, which consists of mostly agrarian counties, has issues relating to shared ground water resources for irrigation, and diminished stream flows effecting aquatic ecosystems. In the Alabama-Coosa-Tallapoosa (ACT) and Apalachicola-Chattahoochee-Flint (ACF) River Basins competition over water has led to ongoing litigation

among Georgia, Alabama, and Florida with involvement by the U.S. Army Corps of Engineers to resolve the interstate water conflicts.

- In the northwest, intense population growth has been occurring without the addition of water resources to meet the increasing needs. As a result of transformed landscapes and growing demand, increased stress has been put on water supplies and downstream users.
- Near the border with South Carolina, at the south end of the Savannah River, heavy industry has created issues regarding the river's assimilative capacity to handle waste water. There is a need for cooperative water resources planning and management among the two states as South Carolina becomes increasingly concerned about whether the assimilative capacity will exist to accommodate their future expected growth.
- Metropolitan Atlanta has experienced intense growth over the past few decades. As a result there have been acute increases in water demand and no appreciative increase in supply as well as impacts on water quality due to increased demand for wastewater treatment and expanding impervious surface areas.

## **5. PARTNERSHIPS, STAKEHOLDER, AND PUBLIC INVOLVEMENT**

Georgia currently partners with several federal, state and regional agencies and organizations to develop and execute water resources planning and management. Like most states, Georgia works closely with the USEPA to implement the Clean Water and Safe Drinking Water Acts. Georgia also collaborates with USACE, USGS, USDA-NRCS, the U.S. Fish and Wildlife Service, the U.S. National Park Service, NOAA and FEMA. Within the state, DNR partners with the Department of Agriculture, the Department of Economic Development, the Department of Human Resources, GEFA, GEMA, GFC, GSWCC, the Office of the State Climatologist, and the University of Georgia.

When developing the SWP, the Water Council held a series of public and town hall meetings to solicit public comment on the SWP. Similar to the process of SWP development, each RWPC, through a memorandum of agreement with EPD and DCA, must establish procedures that include "provisions for appropriate public sector involvement in [WDCP] plan development and implementation of management practices," with "specifications for other advisory bodies and processes, including opportunities for meaningful public participation in plan development," (pg. 36). EPD must also develop, "minimum requirements for public participation in preparation of recommended water development and conservation plans," (pg. 37), and "provide opportunities for public review and comment during preparation and review of recommended water development and conservation plans."

## **6. PLAN IMPLEMENTATION STRATEGY**

The Water Council recently released a 3-year SWP implementation schedule (Figure 4). Resource assessments and forecasting are underway. There may or may not be efforts to adopt or alter water resources-related legislation in 2009-2011 (*don't see the relevance of this statement*). The Water Council expects that finalized WDCPs will be adopted by EPD by mid-2011.

EPD, RWPCs, and partners and affected stakeholders will assist in the development of WDCPs. However, once adopted, RWPCs "are not expected to have a direct role in implementation of the

adopted WDCPs. Rather, implementation of management practices specified in the WDCPs will be the responsibility of water users in the region, including local governments and others with the capacity to develop water related infrastructure and apply for the required permits, grants, and loans. EPD will ensure that water planning is carried out consistently and equitably across water planning regions, and that the resultant plans will lead to management of water resources so that opportunities for current and future use of water resources are maintained.”

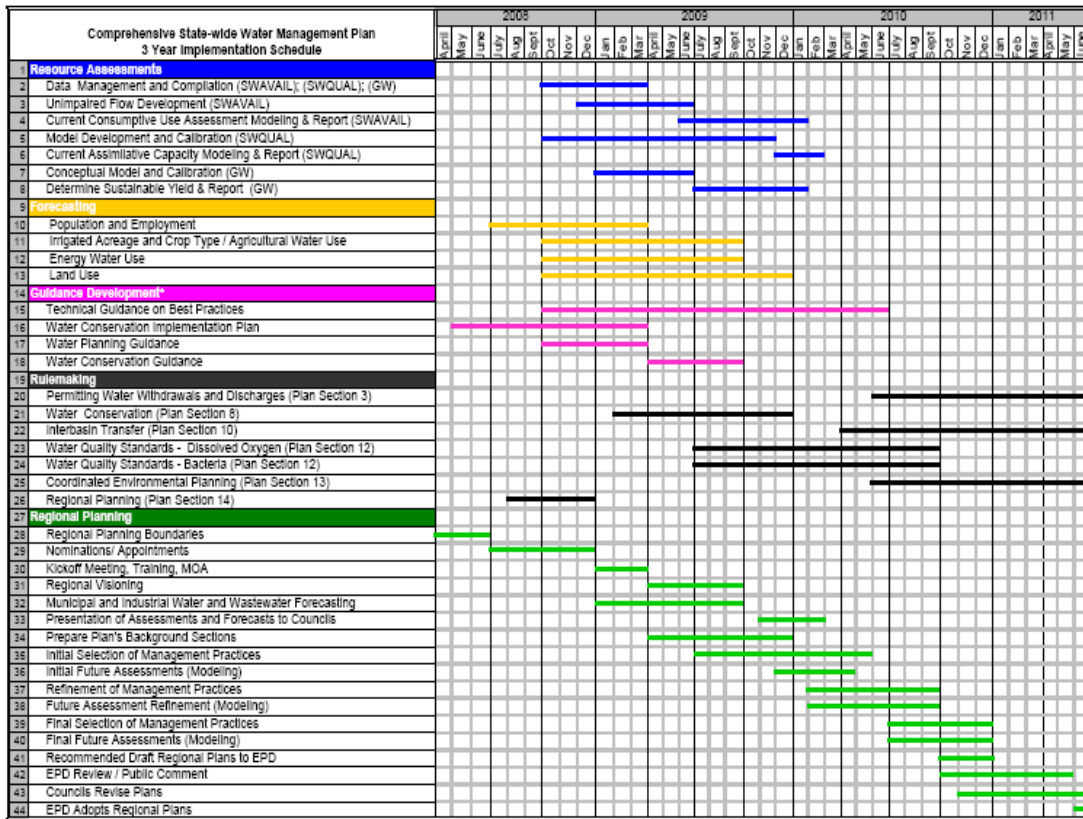
In the MNGWPD Water Supply and Watershed Management Plans (MNGWPD, 2003a and 2003b), entire sections are devoted to plan implementation. In both plans, a timeline for each implementation action is presented along with the responsible entity (i.e., local jurisdictions and utilities, MNGWPD, EPD) and specific duties.

## 7. OUTCOMES ASSESSMENT PROCESS

Once developed and approved, RWPCs will conduct 5-year reviews of the WDCPs that include the following (pg. 38):

- *Assessment of progress against plan objectives and benchmarks for water quality and quantity*
- *Assessment of the need for further scientific assessment of issue(s) relevant to water planning in the region*
- *Updates, where necessary, of water and wastewater forecasts*
- *Recommended changes in the plan*

All three of the MNGWPD plans went up for review and updates in 2008 (MNGWPD, Nov. 12, 2008). Results of those reviews, including assessment of plan implementation actions, are currently unavailable.



(SWAVAIL) = Surface Water Availability Assessment  
 (SWQUAL) = Surface Water Quality Assessment  
 (GW) = Groundwater Quantity and Quality Assessment  
 \*Additional Guidance may be completed if necessary

\*\*Supplemental Information regarding these implementation items are provided on the following pages.

Posted by EPD 11/7/08 1

**Figure 4. Comprehensive Statewide Water Management Plan: 3-Year Implementation Schedule (The Water Council, 2008 November 7)**

**8. NEEDS, CHALLENGES AND CRITICAL PRIORITIES - INTERVIEW INSIGHTS**

The key water resources issues/needs in the State of Georgia are:

- Meeting the future water supply and water quality needs of its citizens, businesses, industries, and environment in the face of a rapidly growing population.
- Developing a solid understanding of the interconnected relationship between the state’s surface and ground water resources and how that relationship affects water supply and water quality in the state.
- Developing an integrated process for water resources management that includes partnerships among key agencies and stakeholders both within the state and beyond the borders.
- The need to work cooperatively to manage resources to reach a degree of equity in treating a source that has been collectively impacted.

In order to effectively address the key water resources needs identified above Georgia will need an integrated statewide management guide. It is expected that in developing individual regional

water resources plans, the state will gain a better comprehension of the competing needs for water and work to find a way to meet those needs with a minimum level of conflict. In addition, effectively addressing future statewide water resources issues will require the involvement of other states, most notably Florida, South Carolina, and Alabama. Issues regarding water allocation in the Alabama-Coosa-Tallapoosa (ACT) and Apalachicola-Chattahoochee-Flint (ACF) River Basins have led to an opportunity for collaboration among the member states, however, conflicts persist and progress has been slow.

Obtaining the adequate human, financial, data, and technological resources to fully execute a comprehensive state water plan is a concern. Currently Georgia lacks the financial resources to collect and organize data as well as to hire the personnel it needs to develop and utilize models that simplify complex problems and aid in making sound and informed decisions.

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