

# EFFECTIVE GEORGIA WATER POLICY FOR THE 21<sup>st</sup> CENTURY

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**Abstract.** *The single most important issue for the State of Georgia in the 21<sup>st</sup> Century is how to manage the state's surface and ground water resources to satisfy the need for adequate supplies of clean water by the different, often competing, users.* Georgia's water problems can be solved through public-private partnerships of government leaders, business leaders, professionals and the citizens of Georgia. Eight essential elements for effective Georgia water policy planning are discussed. Georgia must develop comprehensive water policy based on a combination of water science, water engineering, water technology, water law and water economics.

## INTRODUCTION

*The goal of water policy, water planning and water management in Georgia should be to maintain and enhance the quality of life and livable communities for every Georgian.* Quality of life requires a strong economy, good public health, good recreational opportunities, and well-managed natural resources. All of these depend on adequate supplies of clean water. Georgia needs a basic State Water Policy Plan that will permit the achievement of the objective of ensuring access to adequate supplies of clean water.

## GEORGIA'S CRITICAL SURFACE & GROUND WATER ISSUES: 2001

[\*\* See Map, Georgia Water Issues: 2001 at Page 6]

*Georgia's surface and ground waters include 14 major river basins, 6 aquifers, as well as reservoirs, lakes, and wetlands.* Each water source has unique challenges. In three years of traveling throughout Georgia's four geographic regions and holding over 300 meetings with Georgia water stakeholders (at Governor Barnes' request), the author identified a number of critical water issues and suggested solutions

in Georgia. Four critical water issues are common to all of Georgia's four geographic regions, yet each of the regions has additional unique water issues that must be individually addressed.

**The common objective of Georgia water policy in all four geographic regions should be to assure adequate supplies of clean water are available to all Georgians. Four water policy issues are common to all Georgia's regions.** (1) Georgia water policy needs to recognize that wastewater management, water supply management and water allocation are interrelated. (2) Georgia water policy needs to recognize that substantial vegetative riparian buffers offer an extremely cost-effective way to clean water and ameliorate the effects of flooding as well as provide wildlife habitat that are symptoms of the health of river systems. (3) Georgia water policy must examine the issue of interbasin transfer and the associated need for basin-of-origin protection. (4) Georgia water conservation measures, through voluntary best management practices, must be practiced, with the burden equally shared by all. These four issues listed above are common to all of Georgia's four regions.

In **North Georgia** and, more pointedly, the greater Atlanta Metro Region, the critical water issues (in addition to the four issues common to all Georgia's regions) include (1) water quality strategies that must consider non-point source pollution as well as point-source pollution, (2) the Tri-State Water Compact, (3) water scarcity, and (4) the loss of vegetated riparian buffers and groundcover.

In **Southwest Georgia**, stakeholders identify a number of critical water issues (in addition to the four issues common to all Georgia's regions). These include; (1) drought and flood management plans, (2) the legal status of groundwater withdrawal permits, (3) the need for irrigation efficiency research, (4) the Tri-

State Water Compacts, and (5) aquifer recharge area protection.

In **Southeast Georgia**, at least five issues are specific to the region (in addition to the four issues common to all Georgia's regions). These include; (1) the legal status of groundwater withdrawal permits, (2) the Savannah Harbor Deepening Project, (3) aquifer storage and recovery, (4) protection of the recharge areas for the Floridan Aquifer on the coast, and (5) saltwater intrusion into the aquifer.

In **Middle Georgia**, the most significant issue other than basin-of-origin protection (in addition to the four issues common to all Georgia's regions) is protection of aquifer recharge areas.

These are the major water problems specific to each of Georgia's four regions. They illustrate the importance of Water Policy Planning at the statewide and regional levels with equal attention given to each geographic region.

## **NINE ESSENTIAL ELEMENTS FOR EFFECTIVE GEORGIA WATER POLICY**

*The solution to many, perhaps most, of Georgia's regional water issues is a state water policy framework that will require a change in the way Georgians and their governmental leaders think about water and its role in their quality of life.* There are eight essential elements to effective Georgia water policy.

### **1. Establish a Philosophical Foundation for Water Management: Is Georgia Water a Public Resource, or is Georgia Water a Private Resource?**

A Philosophical Foundation for Georgia's water policy must be formulated. The philosophical question is: how will this state and its people view the ownership of Georgia's surface and ground water? There are two choices: Is Georgia's surface and groundwater water a Marketable Commodity? Or, Is Georgia's surface and ground water a Public Trust, a public resource? Water Markets would view Georgia's surface and ground water as a commodity, much like underground minerals, that can be bought and sold in bulk for profit in private transactions, in private in-state and out-of-state markets, simply by applying for

Georgia water withdrawal permits. The other philosophical choice views water as an essential public resource that is essential to life itself. This choice is that Georgia's surface and ground water can be viewed as a Public Trust, managed by the State for the public good, for both the present and for future generations.

The Public Trust for Water currently applies to Georgia's navigable rivers and tidal marshlands. This doctrine has applied to Georgia's navigable rivers for over 200 years and has not restricted economic development. The compelling question is ... what is the legal status of Georgia's groundwater aquifers? Will the Public Trust for Water cover Georgia's underground aquifer water and support Georgia's economic growth, by protecting Georgia's water for use by Georgia business, industry, agriculture, counties and municipalities? Or will Georgia's waters be sold to support the economic growth of other states or foreign countries, through bulk sales by for-profit water marketers who hold water withdrawal permits? If this water is sold in bulk, it could be pipelined to other states and/or shipped to foreign countries.

### **2. Create Water Policy by a Multi-Disciplinary Approach.**

Effective Georgia water policy planning requires multidisciplinary planning with all disciplines included in the process. Clearly, effective water policy, planning and management must include the integration of water science, water engineering and technology, water management and water law as well as water economics. Consideration of the effect of water on the public health is essential.

### **3. Manage by Watershed and River Basin, while Respecting Political Boundaries.**

Planning and management on a watershed or river basin basis, not solely according to artificial political boundaries, must be another foundation of Georgia's water policy. The reality of political boundaries and the desire for local control must be respected, but water planning and management by watershed is essential. Components of watershed planning and management should include three essentials. The first essential is maintaining hydrologic integrity within a regional framework. The second essential is developing multi-jurisdictional management structure that coordinates water planning and landuse planning. The third essential is the use of federal-state-regional-

local partnerships as well as private-public partnerships.

#### **4. Manage Water through Local-Regional-State Partnerships and Private-Public Partnerships.**

Effective cooperative partnerships are the key to effective Georgia water management. Water policy in Georgia should encourage water management through local-regional-state partnerships that encourage local participation and decision-making within the context of regional needs and goals. The private sector has a knowledge base and capabilities that are essential to effective water management and must be integrated through private-public partnerships. The capabilities of Georgia's public and private academic institutions must be included, as well as private firms and citizen's organizations. Finally, a partnership between the state and federal agencies is essential.

#### **5. Coordinate Georgia Surface and Ground Water Management with a State Water Plan.**

The State Water Plan for Georgia should have, at the very least, six components. The Plan should include; (a) coordinated regional planning, (b) comprehensive drought and flood management, (c) coordination of state and federal activities, (d) inter-regional, interbasin water transfer with basin-of-origin protection, (e) a review of the existing water withdrawal permit system to better reflect Georgia's water needs, and (f) sufficient resources for implementation.

#### **6. Develop a Comprehensive Georgia Water Data Base.**

Sound water policy planning requires a statewide, centralized, coordinated and reliable comprehensive source for water-related data and current reliable information. The information should include data on Georgia's water gathered by the state government, federal government, academic institutions, the private sector and organizations.

#### **7. Provide Adequate Financing for Water Policy Formulation and Implementation.**

Adequate financing of regional and local water plans is essential. As suggested by the Association of

County Commissioners of Georgia and the Georgia Municipal Association, Georgia's water policy should include provisions for state grants, loans and permits that would provide substantive incentives for regional solutions. Federal assistance to water projects, especially through the Bureau of Land Management, has and still plays a pivotal role in economic progress in the West. At our stage in history, the eastern states must demand equal access to federal funding for water projects. Georgia should call upon its Federal Officeholders in the Senate and House to lead a bi-partisan initiative for fair-share water funds for Georgia.

#### **8. Implement Georgia's Existing Laws & Regulations.**

A careful review of the Official Code of Georgia will note that Georgia has existing, effective laws pertaining to water. The laws should be reviewed and implemented, and the agencies that enforce them must be given appropriate resources to do so. Many other states with similar water issues devote considerably more resources to water management than does Georgia. DNR and EPD are under-funded and understaffed for the important tasks that lie ahead.

#### **9. Educate & Involve the Public in Surface and Ground Water Issues and Solutions.**

The state must emphasize public education about the critical role of surface and ground water in Georgia's prosperity. This education should include law and policy makers, the private sector and the public. Public education should be a clear communication of water policy, regulatory requirements, and other directives that are consistent, comprehensive, coordinated and adaptive.

### **GEORGIA WATER POLICY PLANNING IN THE YEARS 2001-2002**

Georgia water policy planning should proceed keeping the following six precepts in mind.

*First. Local, regional and state coordination in water policy planning is necessary to solve most of Georgia's water issues and should begin this year.* Solutions to future predicted water quality and water quantity issues cannot be accomplished without comprehensive planning. Water science, water

engineering and technology, water law and water economics should drive the planning.

**Second. Georgia's planning solutions to water issues in each of Georgia's four major regions should begin immediately; coordination between geographic regions is essential.** Water issues in each of Georgia's regions are, or will soon become, as critical as Metro Atlanta's water issues are now. Finding solutions to water issues in all of Georgia's regions must begin now before they become critical.

**Third. Georgia's water policy planning formulation should utilize Georgia's own governmental, academic, organizational and private sector expertise.** Research in water policy at institutions within Georgia's public universities provides the academic resources and expertise necessary for development of a cost-effective Georgia water policy. At least five universities in Georgia are involved in research on water issues. A number of private Georgia organizations and professional firms offer expert knowledge of water resources as well.

**At least 10 separate water policy planning initiatives are on-going in Georgia.** They range from the North Georgia Water Planning District, developed from the Clean Water Initiative of the Metro Atlanta Chamber of Commerce, that focuses on Wastewater and Non-Point Source Pollution in Metro Atlanta, to the initiatives of the University of Georgia River Basin Science and Policy Center, concerned with comprehensive, statewide water policy. At least nine other regional or statewide initiatives exist in Georgia. Other Water policy initiatives in specific areas exist in local governments such as the Griffin Stormwater Utility. The Association of County Commissioners of Georgia and the Georgia Municipal Association sponsor a joint water policy project. Georgia State University and Albany State University sponsor water initiatives as well.

**Fourth. Georgia's water policy planning should begin utilizing the experience and data from Federal Agencies to supplement Georgia's own water-related sources of water expertise.** These include the U.S. Fish and Wildlife Service, the U.S. Geological Survey, the Environmental Protection Agency, and the Corps of Engineers.

**Fifth. Georgia's water policy formulation should include a review of the experiences of other U.S.**

**states to supplement Georgia's own water-related expertise.** Examples include the states of Oregon, Washington and New Jersey that have state-funded Watershed Protection Councils. South Carolina provides lessons learned concerning containing animal waste through the use of multiple voluntary Best Management Practices. Pennsylvania, Maryland, Virginia, the District of Columbia and the U.S. Environmental Protection Agency have joined together in the Chesapeake Bay Initiative, resulting in effective abatement of nitrates and phosphorous utilizing Best Management Practices and Vegetated Riparian Buffers. Tennessee includes all surface and ground water in the Public Trust Doctrine for Water.

**Sixth. Georgia's water policy planning should begin utilizing the experience and data from other nations that offer profound lessons on effective water policy.** A prime example is Israel and its water saving methodologies.

## IN CONCLUSION

Georgia Water Policy Planning depends on a commitment and a partnership. For effective water policy planning, the state needs a governmental commitment to water policy planning that equals the state's commitment to transportation, healthcare, and education. Georgia built a comprehensive ground transportation system, a healthcare system and an education system. Surely Georgia can make an equal commitment to comprehensive water policy planning.

As Georgians, we know what the water quality and quantity problems are. We know the solutions to the problems. We know how to plan for the future. The task is difficult but essential. Only one question remains. Do we all have the political will to do what must be done?

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