GEORGIA
WATER
COALITION

a report of the

GEORGIA WATER COALITION

2006

Joe Cook

"We think of our land and water and human resources not as static and sterile possessions but as life-giving assets to be directed by wise provisions for future days."

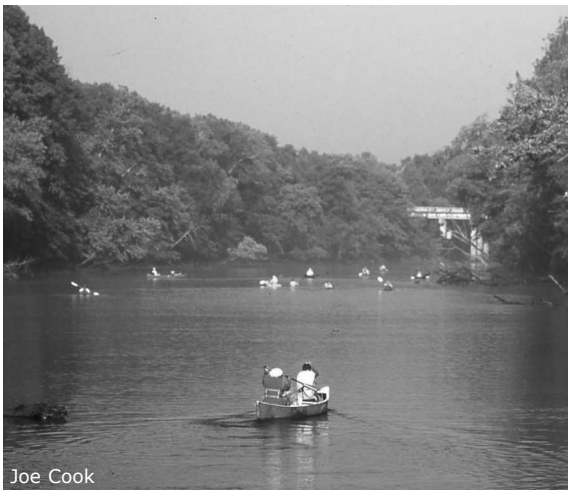
Franklin D. Roosevelt

Cover photos by Hank Ohme (left) and Richard Bryant (right)

The Georgia Water Coalition

Georgia is blessed with clean, flowing water. The abundant supply has enabled the state's population growth and economic activity over the past few decades. According to the U.S. Census Bureau, from 1990 to 2000, the population in Georgia increased 26.4%, compared to the national increase of 13.1%. Georgia is experiencing a population boom that, combined with persistent drought, is pushing our need for our once-abundant supply of clean water to the limit. If we do not carefully manage and protect our waters, we may squander an essential ingredient that makes living here so special.

Smart water management is key to sustainable growth, allowing both economic development and conservation to exist side by side. With this concept in mind, the Georgia Wildlife Federation, the Georgia Conservancy, the Upper Chattahoochee Riverkeeper, and the Southern Environmental Law Center worked with and sought support from The Sapelo Foundation to form the Georgia Water Coalition (the Coalition) in 2002. The Coalition's initial goal was to protect and care for Georgia's waters — an essential ingredient for strong property values, clean water for drinking, recreation, fish and wildlife, and Georgia's continued prosperity.


Joe Cook

The following four principles define the Coalition's work and its recommendations:

1. **Water management must be guided by a comprehensive state water management plan, developed by a lead agency with a dedicated planning staff, in coordination with other agencies and with the participation of all interested citizens.**

2. **Effective water management requires regional water planning that is based on watersheds, river basins, and aquifers, based on scientifically sound, high quality data, based on uniform, enforceable standards, and tied to implementation, including an adaptive management process.**

3. **The regulation of interbasin transfers must be strengthened to reflect scientific knowledge, respect natural systems, and protect the basins of origin and receipt.**

4. **The surface and ground waters of the state continue to be a public resource managed in the public interest and in a sustainable manner by the state to protect natural systems and meet human and economic needs.**

Over the past five years, 139 organizations representing more than 250,000 Georgians have officially joined the Coalition's efforts. From farmers to business owners, garden clubs to sportsmen's organizations, and religious groups to homeowners associations, the Coalition is working to benefit all Georgians and ensure that our leaders make responsible decisions on how to best protect our water — now and into the future.

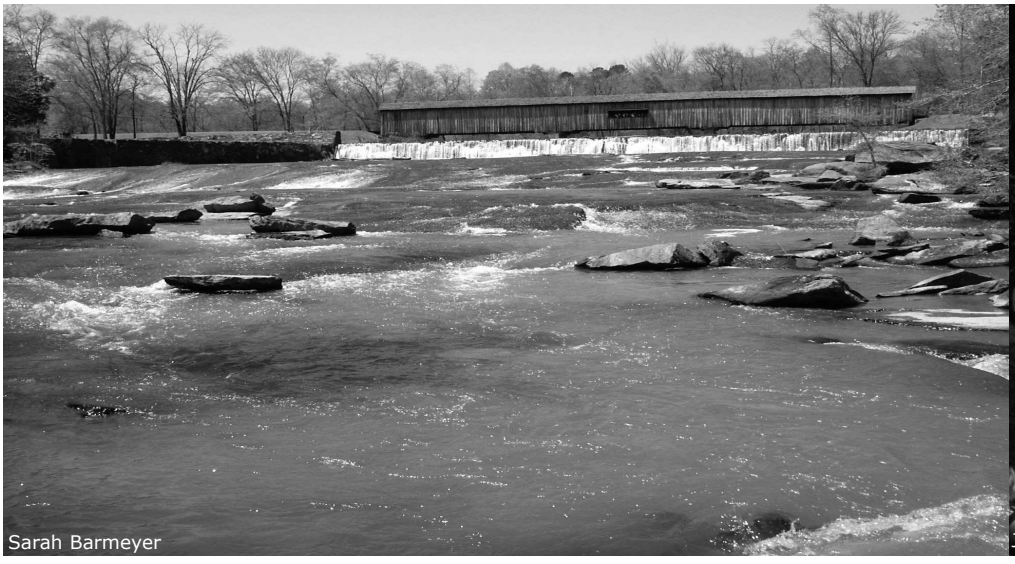
Statewide Water Management Planning

The 2004 Georgia General Assembly passed legislation requiring the development of Georgia's first comprehensive statewide water management plan, led by the newly formed Water Council, staffed by the Georgia Environmental Protection Division (EPD), and informed by a series of advisory committees. For the first time, Georgians would have the opportunity to review our past approaches to water management, our current situation, and where we should be heading in the future. Public input would be an important feature. The legislation stated that the initial water management plan is to be completed by the first day of the 2008 General Assembly session.

Thus, a main focus of the Coalition is to bring together communities, organizations, businesses, and concerned citizens to create local and statewide water management strategies and then insist on their inclusion in the comprehensive statewide water management plan.

Our recommendations contained in this 2006 report are organized according to the four management objectives established by the Georgia Water Council that frame the water management planning process. They are as follows:

MANAGEMENT OBJECTIVE 1	**Minimize water withdrawals by increasing conservation, efficiency, and reuse;**
MANAGEMENT OBJECTIVE 2	**Maximize water returns to the basin by managing interbasin transfers, septic systems, and land application systems;**
MANAGEMENT OBJECTIVE 3	**Meet instream and offstream needs for water through surface storage, aquifer management, and reducing water demands; and**
MANAGEMENT OBJECTIVE 4	**Protect water quality while meeting assimilative capacity needs.**


Sarah Barmeyer

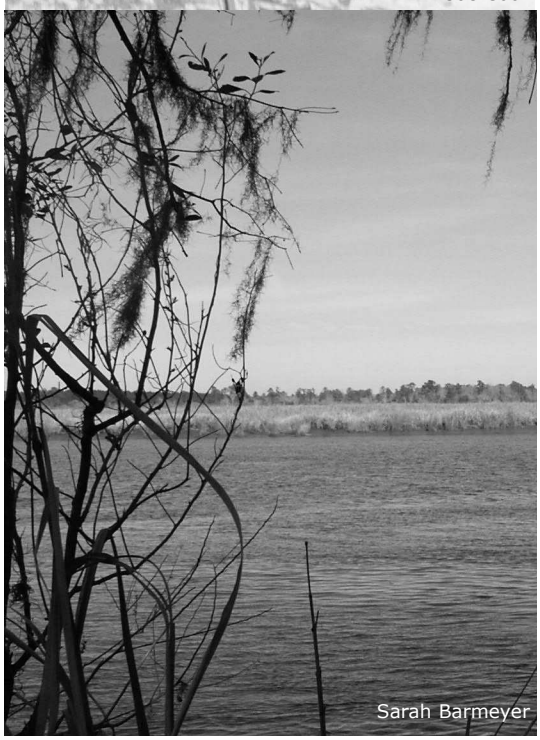
Joe Cook

Based on input from the advisory committees, the Georgia Water Council introduced a proposed policy framework for water quantity management, which integrates the first two management objectives. The new framework introduces the concept of a Consumptive Use Budget (CUB), which is the amount of water available to an area to be used and consumed, or not returned to the source. This budget is determined after the water needed for instream and downstream uses is calculated, and it will vary in each river basin and sub-basin. The Consumptive Use Budget concept allows each region the flexibility to determine how it will stay within its budget by using a variety of mandatory and voluntary conservation practices, taking steps to increase return flows, or using a combination of both kinds of measures. As sub-basins approach their budget, more aggressive conservation and return practices will be required in that area.

The following recommendations, representing a consensus of the Coalition, are an essential part of establishing a sustainable water management plan for Georgia for the next 100 years. The Coalition recommends that they be implemented by the Governor, the General Assembly, the Water Council, the Department of Natural Resources, and the Environmental Protection Division.

The Coalition continues to emphasize two components that are central to sustainable water management. First, enforcement and sufficient funding are critical to developing a water management program that goes beyond mere words and promises. The state must enforce the provisions that are enacted to protect our waters, and the legislature must appropriate sufficient funding to support planning, enforcement, research, and policymaking. Second, there is no one-size-fits-all policy or solution that represents the best option for every river basin within this state. Because of this, we believe that watershed planning, based on the natural boundaries of watersheds, will be crucial after broader statewide water policies have been established.

Joe Cook



Sarah Barmeyer

"Any one who can solve the problems of water will be worthy of two Nobel prizes — one for peace and one for science."

John F. Kennedy

Joe Cook

"Enforcement and sufficient funding are critical to developing a water management program that goes beyond mere words and promises."

Georgia Water Coalition

STATE WATER PLAN MANAGEMENT OBJECTIVE 1:
Minimize water withdrawals by increasing conservation, efficiency, and reuse

Considering that Georgia's combined residential, commercial, and industrial water use is 10% more than the national average, reducing our demand for water is an obvious first step in finding "new" supplies of water[1].

Minimizing water withdrawals through water conservation, efficiency, and reuse can help Georgia ensure enough clean water for future generations, for sustainable economic development, and for maintaining healthy aquatic systems. Water conservation, or the beneficial reduction of water use, waste, and loss, is the highest priority in planning to meet the needs of Georgia's citizens and ecosystems. It is the most efficient, least expensive way to ensure water supplies. Water conservation, efficiency, and reuse together will reduce excessive demand and allow us to forestall the need for expensive engineered ways to increase the availability of a finite resource. Comprehensive water conservation planning has the potential to improve water quality and instream flow levels, decrease the need for new capital investments, reduce vulnerability to drought, and provide additional benefits to people and ecosystems. The development of a robust water conservation plan through the statewide water planning process can get Georgia where it needs to be if the plan utilizes a range of mechanisms (i.e., education and technical programs, financial incentives, and regulatory actions) and measures that reduce water consumption and demand.

Managing demand is typically best done on a regional basis and is geared to the largest type of water use in each region. For instance, residential water use, which is the biggest water use in the 16-county, Metropolitan North Georgia Water Planning District (the "Metro District"), would be the focus of conservation efforts in the Atlanta area. Likewise, agricultural irrigation would be the focus of conservation efforts in southwest Georgia, while municipal and industrial use would be the primary focus in coastal Georgia.

The Georgia Water Coalition offers the following recommendations to address Management Objective One:

Recommendation 1: Incorporate the following principle recommended by the Water Rights Working Group of the Georgia Joint Comprehensive Water Plan Study Committee into the Comprehensive Statewide Water Management Plan:

> The State should conserve the waters of the State through suitable policies promoting water conservation, efficiency, and reuse and by encouraging private efforts to conserve and to avoid waste.

[1] Hutson, S.S., et al. 2004. "Estimated Use of Water in the United States in 2000." United States Geological Survey Circular 1268, available at <http://pubs.usgs.gov/circ/2004/circ1268/index.html> (last visited 10/30/06), Figure 13; Fanning, J.L. 2003. "Water Use in Georgia, 2000; and Trends, 1950-2000." Proceedings of the 2003 Georgia Water Resources Conference, held April 23–24, 2003, at the University of Georgia. Kathryn J. Hatcher, editor, Institute of Ecology, The University of Georgia, Athens, Georgia. Available at <http://ga.water.usgs.gov/pubs/other/gwrc2003/pdf/Fanning-GWRC2003.pdf> (last visited 10/30/06).

Recommendation 2: Aggressively manage the demand for water before increasing water supplies.

In all water supply plans, develop, invest in, and implement aggressive water conservation programs (i.e., Best Management Practices) to reduce the demand for water prior to the approval of new supply such as reservoirs and the expansion of existing permit capacity. EPD should require proof that aggressive water conservation goals are implemented. Specific measures can be added to an aggressive water conservation program, such as conservation pricing, plumbing retrofits, watering restrictions, etc. Ensure that state agencies and facilities implement water conservation plans and serve as models for conservation and efficient use of water.

Recommendation 3: Implement economic and regulatory incentives.

Provide incentives to encourage entities that are in full compliance with all applicable laws and regulations to voluntarily implement plans to reduce environmental impacts to water resources and to bring innovative conservation technologies to Georgia. Publicize innovative conservation technologies and incentives.

Recommendation 4: Develop educational toolkits about water conservation.

People need to know not only about the importance and benefits of water conservation, but also how to conserve water on a local, regional, and statewide basis. EPD should develop educational toolkits about water conservation for the public, businesses, and water treatment entities as a water conservation clearinghouse.

Recommendation 5: Maximize conservation through water withdrawal permit requirements.

Conservation plans should be included as enforceable provisions of new, renewed, or expanded permits. Require all permitted users to maintain a standardized record of their use of surface and groundwater. No increase in existing water withdrawal permits should be issued until the impact on the resource is known and the applicant has implemented specific conservation goals. New permittees should be required to use the most water-efficient practicable technology available. Unused portions of existing permits should be revoked to conserve the resource.

Recommendation 6: Standardize the criteria for issuance, amendment, or denial of both surface and ground water withdrawal permits for all proposed uses.

Amend the Groundwater Use Act and the Water Quality Control Act to authorize the Director of the Environmental Protection Division to grant or deny applications for agricultural permits under the same standards applicable to applicants for other uses, including water conservation requirements. All water withdrawal permit requests should include significant public notice prior to issuing the permit. Permits issued by EPD should be subject to amendment by EPD for purposes of reallocation and protecting instream flow.

Sarah Barmeyer

Recommendation 7: Improve the linkage between permitting and compliance status.

Permit renewals should not be granted to facilities that are not in compliance with their current permit unless the renewed permit contains a specific, enforceable plan to bring the permittee into compliance within the shortest practicable time period. Permit standards should reflect the best results that can be achieved to protect natural resources using the most practicable available technology.

STATE WATER PLAN MANAGEMENT OBJECTIVE 2:
Maximize water returns to the basin by managing interbasin transfers, septic systems, and land application systems

Many factors affect stream flow. We have no control over some factors, such as climate, stream and aquifer interactions, ground cover, and the slope of land. Management Objective Two focuses on three human factors that affect stream flow — interbasin transfers, septic systems, and land application systems.

Maximizing water returns to river basins provides a variety of benefits. Plentiful rivers support human consumption, economic development, water-based recreational activities, and the health and diversity of aquatic communities that depend upon water quantity and water quality. Maintaining stream flows is a critical component of water management planning. Rivers require a broad spectrum of flow conditions, such as low flows, high flows, and floods, which are an integral part of the health of a river system; the species dependent upon the system survive within such variability. Changing flows are important for the movement of plants and animals upstream and downstream, the survival and reproduction of aquatic species, the salinity levels in coastal estuaries, and the natural processes that remove nutrients, toxins, and other pollutants.

Joe Cook

The Georgia Water Coalition offers the following recommendations to address Management Objective Two:

Recommendation 8: Limit new interbasin transfers of water.

- Allow new interbasin transfers only in limited and narrowly defined circumstances to be defined by the Comprehensive Statewide Water Management Plan, such as for temporary emergencies declared by the governor.

- Treat any geographic extension or volumetric increase of an existing interbasin transfer as a new interbasin transfer.

- Insist that new or expanded water and wastewater systems return non-consumptive uses to the basin of origin.

- Establish detailed permitting criteria for EPD to use in considering pending and proposed interbasin transfers that will protect the basins of origin and receipt.

Recommendation 9: Strictly regulate existing interbasin transfers.

Establish strict guidelines for grandfathering existing interbasin transfers of water to include the following:

- The volume, end use, percentage of consumptive use, basin of origin, and basin of receipt of all existing interbasin transfers shall be explicitly incorporated into the water withdrawal permits associated with those transfers upon the renewal of such permits.
- Interbasin transfers should be allowed to continue only if the applicant is in full compliance with the Comprehensive Statewide Water Management Plan and any local, regional, or state water management or conservation plans.
- All transfers must protect the basins of origin and receipt.
- All transfers should reflect the natural hydrograph of the affected systems.

Recommendation 10: Regulate new and existing septic systems.

The Comprehensive Statewide Water Management Plan must include a policy for regulating new and existing septic tanks to protect Georgia's water resources.

STATE WATER PLAN MANAGEMENT OBJECTIVE 3:
Meet instream and offstream needs for water through surface storage, aquifer management, and reducing water demands

Rivers and streams in Georgia must provide many different services to Georgians: drinking water supply, navigation, wastewater treatment and assimilation, agricultural irrigation, recreation, hydropower, and industrial uses. To accommodate these competing uses, yet maintain ecosystems that are not degraded to the point of collapse, we must adopt a balanced instream flow policy to ensure that enough clean water remains in our rivers and streams for the near future, as well as for future generations.

Some people press for manmade solutions to water supply challenges through the construction of new reservoirs, the use of aquifer storage and recovery (ASR), and desalination. All three options bring high economic and ecological costs to our water supply sources and downstream communities. Georgia has the highest density of dams in the Southeast, yet the call is for more dams, particularly in North Georgia, to meet the projected demand for new supply. Moreover, numerous ecological and water rights concerns must be addressed before ASR should be considered a viable option for storing water in our pristine aquifers. Desalination can cause significant environmental harm and also brings a tremendous economic cost.

The Georgia Water Coalition offers the following recommendations to address Management Objective Three:

Recommendation 11: Incorporate the following principle recommended by the Water Rights Working Group of the Georgia Joint Comprehensive Water Plan Study Committee, as amended by the Georgia Water Coalition, into the Comprehensive Statewide Water Management Plan:

> The State should determine the safe yield for its water resources, maintaining optimal flows and levels in all water sources as necessary to protect the biological, chemical and physical integrity of waters by reserving such waters from allocation and by authorizing additional protections for the waters of the State.

Recommendation 12: Restore, maintain and preserve natural seasonal flow patterns for streams and rivers.

> Adopt and implement a final instream flow policy for Georgia that is science-based, is protective of the instream needs of water bodies and can be used for evaluating permit applications. Maintain and restore natural variation in stream flow patterns for all waters for water quality, ecology, and economic benefits, including recreation.

Recommendation 13: Protect and restore groundwater resources and aquifer recharge areas.

> Protect and restore groundwater resources, including significant recharge areas, concentrated recharge areas, and aquifers by increasing legal and regulatory protections and enforcing applicable laws and regulations.

Recommendation 14: Continue the moratorium on aquifer storage and recovery (ASR) indefinitely.

> Aquifer storage and recovery is not a viable or environmentally sound means of water supply in Georgia. Its effects on aquifer water quality have yet to be tested. Furthermore, ASR can lead to unfounded assertions of property rights in the injected water that may run counter to Georgia's riparian system of water regulation.

Recommendation 15: Consider the construction of reservoirs and dams only as a last resort.

> Georgia's remaining free-flowing streams and stream segments are vital for the people and wildlife of Georgia; therefore, consider the construction of reservoirs and dams only as a last resort.

Recommendation 16: Recognize that desalination is not a viable water supply alternative for Georgia.

> Desalination is not a viable water supply alternative for Georgia. Pollution byproducts of the desalination process are destructive to marine ecosystems and the economies that depend on them. Desalination discourages conservation and other more responsible water supply alternatives. The process is extremely expensive, both in terms of producing potable water and of transporting that water to a destination. It also results in the consumption of large amounts of energy and fresh water to produce that energy.

STATE WATER PLAN MANAGEMENT OBJECTIVE 4:
Protect water quality while meeting assimilative capacity needs

Concerns about water quality are shared by Georgians all across the state. Our rivers and streams receive unprecedented amounts of mud and silt, and their ability to assimilate wastes and pollutants is being jeopardized. Of the 14% of streams that are monitored in Georgia, 60% currently do not meet their designated use category (such as fishing, recreation or drinking), reflecting the magnitude of the issue of degraded water quality in our state and the need for more monitoring of our streams. Increased water monitoring is critical for sub-state and river basin planning, so that we can measure progress towards cleaner water in Georgia for future generations. In addition, water quality protections must be adequately enforced by local, state, and federal authorities for them to be effective.

The Georgia Water Coalition offers the following recommendations to address Management Objective Four:

Recommendation 17: Preserve and restore native vegetated buffers adjacent to Georgia's surface waters, including freshwater wetlands and coastal marshlands.

Natural buffers protect water quality, filter storm water, provide flood control, prevent erosion, and serve as wildlife habitat. Protections for vegetated buffers should be strengthened to reflect the value of all of these functions, and "the streambank" should be defined based on science. Strengthen vegetative buffer laws to reflect scientific understanding of what's needed to protect stream quality, and enforce these laws. Apply existing regulations uniformly and limit the granting of variances. Provide funding for enforcement, and create and apply effective penalties that include repairing damage and restoration.

Recommendation 18: Develop and implement a comprehensive plan for headwaters protection.

Twelve of Georgia's fourteen river basins have their headwaters in our state. Safeguarding these headwaters is vital to the protection of water quality, water quantity, and the health of our aquatic resources.

Recommendation 19: Inform citizens about potential health effects.

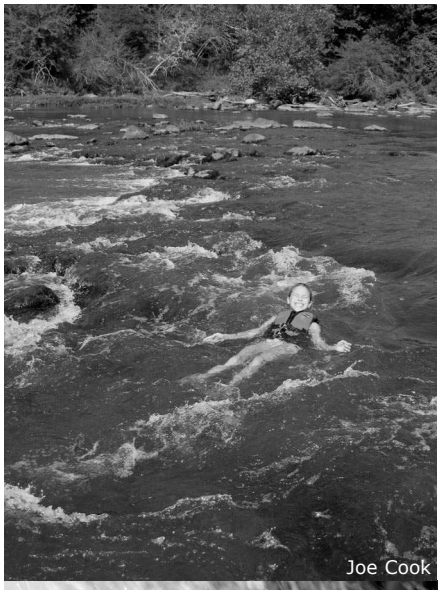
Provide better, accurate information on non-attainment issues that affect public health. Distribute widely, accessibly, and in real time.

Recommendation 20: Increase enforcement of the Erosion and Sedimentation laws and regulations.

Provide consistent, thorough and rigorous enforcement of laws relating to Erosion and Sedimentation control (E&S), including greater use of *stop work orders*. Increase the number and education of enforcement and inspection personnel through the appropriation of all the monies generated by user fees for this purpose. EPD should provide sufficient oversight of local authorities, provide guidance or guidelines for local authorities to use in enforcing the E&S laws, and assert their position as the ultimate authority under the State General Construction Stormwater Discharge Permit.

Recommendation 21: Increase funding for the TMDL program so there are sufficient resources for expanded and comprehensive water quality monitoring, the development of effective implementation plans, and effective implementation and enforcement of TMDL plans.

Georgia's current Total Maximum Daily Load (TMDL) program lacks sufficient resources to monitor the vast majority of our water bodies or to effectively carry out TMDL implementation plans that are developed. Local governments are often required to implement plans that they do not have the resources or expertise to implement, nor do they have the resources to monitor the effect of their work. Georgia needs to put more resources toward this program to ensure our impaired waters regain their health, and EPD must be willing to consult field data to address problems with impaired streams.


Joe Cook

Recommendation 22: Continue to improve stormwater Best Management Practices.

Continue to improve stormwater Best Management Practices for developed land, urban land, and flood plains.

Joe Cook

Recommendation 23: Recognize that water pollution trading will not work in Georgia.

Water pollution trading, also known as water quality trading or pollutant allocation trading, will not work in Georgia. Current monitoring of Georgia's waterways is woefully inadequate. The state needs truly comprehensive monitoring to provide data on existing water quality before discussing this alternative. Water pollution trading schemes in other places have resulted in the formation of pollution hot spots and in trading over long distances within a watershed. Combined with a lack of enforcement, these defeat the purpose of improving water quality within a specific watershed and undermine the intent of the Clean Water Act. In addition, water pollution trading must never be used to introduce water markets or water withdrawal permit trading in Georgia.

Sarah Barmeyer

ADDITIONAL RECOMMENDATIONS Beyond the Scope of the State Water Management Objectives

James Holland

While the scope of the initial statewide water management plan covers many aspects of water management, it also imposes some limitations. To ensure proper attention to these issues, the Coalition offers the following recommendations.

Recommendation 24: Restore and increase protection for Georgia's freshwater wetlands.

Georgia's freshwater wetlands recharge aquifers, improve water quality, filter pollutants, provide flood control, and serve as habitat for wildlife. Protections for and restoration of freshwater wetlands, including the use of buffers, should reflect the value of all of these functions.

Recommendation 25: Improve state protection of Georgia's saltmarsh ecosystem.

Georgia's coastal saltmarsh ecosystem provides a nursery for commercially and recreationally valued species of fish, shellfish and other wildlife; provides an important buffer against flooding and erosion; filters and disseminates pollutants; and provides a recreational resource that is vitally linked to the state's economy. Protections for the saltmarsh ecosystem, including the use of buffers, should reflect the value of all of these functions. Protections should take into consideration not only in-marsh activities, but also upland and freshwater wetland uses, both adjacent to the marsh and inland, that impact the saltmarsh ecosystem.

Recommendation 26: Provide adequate funding for enforcement positions.

Adequate funding for enforcement positions in the Environmental Protection Division should be included in the budget proposed by the governor and adopted by the legislature. These positions can be funded through permit fees and the institution of penalties for violations that accurately reflect the injury to public resources caused by the violation and the economic benefit to the violator for noncompliance. Constitutional amendments to dedicate these funds to these special purposes should be considered.

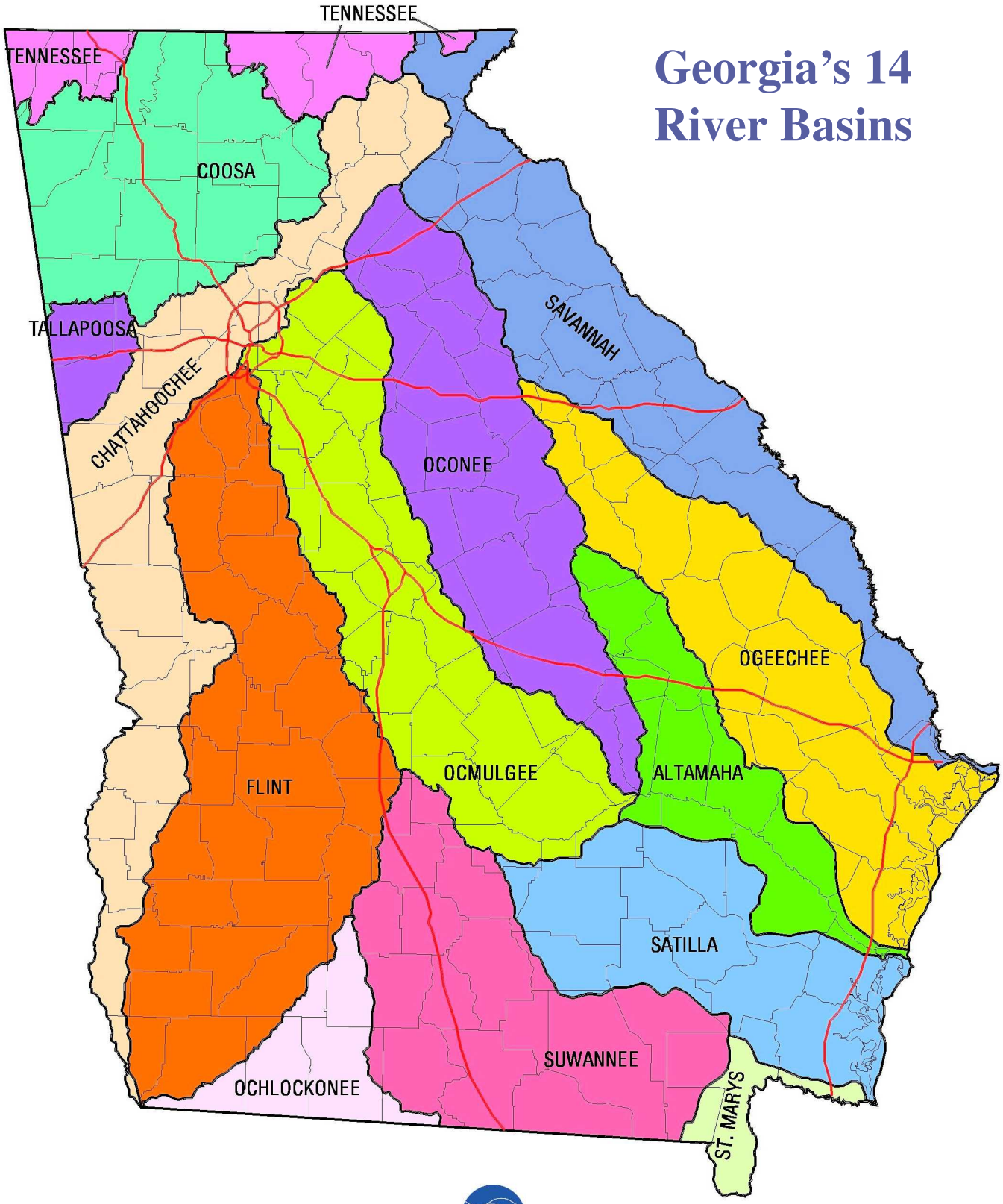
Recommendation 27: Evaluate EPD for ways to make enforcement more effective.

Conduct periodic independent performance audits of the environmental programs administered by EPD to identify where enforcement can be improved, and institute the recommended improvements.

Recommendation 28: Maintain citizens' rights to effective administrative and judicial review of all permit decisions.

The public plays an important and complementary role in the enforcement of Georgia's environmental laws. Permitting decisions can have significant impacts on our water resources, and our citizens must not be deterred from seeking review of these decisions before irreparable harm occurs.

Georgia's 14 River Basins



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Protecting and caring for Georgia's waters