



**GEORGIA CONSERVATION BRIEFING BOOK**

**2009 | 2010**



## GEORGIA CONSERVATION VOTERS EDUCATION FUND

# Welcome to the Georgia Conservation Briefing Book

Georgia Conservation Voters Education Fund is a nonprofit, nonpartisan statewide conservation organization. Our mission is to preserve and enhance Georgia's clean water and air, wildlife, and land for the quality of life for all Georgians by maximizing informed citizen participation in conservation decision-making at the state and local level.

The 2009/2010 Conservation Briefing Book expands upon our previous Briefing Books published in 2002 and 2004. It provides updated information to the public, legislators, state officials and the media on current conservation issues.

In this book, you will find summaries of and proposed solutions to many of the major challenges now facing Georgia's environment. During the 2009-2010 legislative session, state legislators and elected officials will make decisions on issues that will affect Georgia's environment for years to come.

We hope the information in this briefing book will give Georgia's elected officials and citizens a better understanding of Georgia's conservation dilemmas and recommendations on how to work together to create common sense solutions that will protect Georgia's environment, economy and quality of life for our families and future generations.

Information is presented on a wide range of Georgia's conservation challenges because this book is a collaborative effort that combines the expertise of conservation leaders statewide. We thank these contributors for their valued knowledge and constant vigilance to improve Georgia's environment.

Each topic includes a list of suggested next steps that should be taken by legislators, state agencies, and/or citizens. Please note that views expressed on any particular issue are not necessarily the views of all contributing organizations. Each brief also includes the name of one or more environmental community leader that will focus on that issue in the coming years. We encourage you to use the directory at the end of the book to contact the leaders listed regarding any issues that interest you.

Thank you for reading the 2009/2010 Georgia Conservation Briefing Book to learn more about how you can contribute to a clean and healthy future for Georgia.

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## Fast Facts

According to the Alliance for Water Efficiency, water conservation and efficiency costs \$0.46 to \$1.40 per 1000 gallons of capacity while dams can cost \$4000 per 1000 gallons of capacity.

The average residential water use in the U.S. is 101 gallons per person a day, almost three times that of Brisbane, Australia which has the same high standard of living as the U.S.

Between 2003 and 2008, Cobb County maintained its 65 million gallons per day (MGD) consumption by investing in water efficiency despite a 10% increase in population.

The Metropolitan North Georgia Water Planning District water utilities collectively lose 16%, roughly 104 MGD, of their water supply to leaks and other unaccounted for uses.

For More Information:  
American Rivers,  
Peter Raabe or Jenny Hoffner

Georgia Conservancy,  
Shana Udvardy

Upper Chattahoochee Riverkeeper,  
Laura Hartt

Georgia Water Coalition

# Secure Water Supply Through Investing in Water Conservation and Efficiency

## What's at Stake?

Clean water is our birthright, the lifeblood for a way of life enjoyed by so many. Georgia faces unprecedented challenges to its clean water supply. Growing populations and the increased recurrence and duration of drought are putting new strains on communities and our limited water resources. The pressing question is: "How do we ensure enough clean, reliable water for current and future generations?"

Georgia has spent countless hours and millions of dollars attempting to maximize reservoir storage to the detriment of downstream users and neighboring states. We no longer have the dollars or time to waste in court rooms and on massive storage proposals. These short-sighted approaches have time and again failed to provide lasting relief to Georgians.

Georgia continues to attract businesses and the people who run those businesses from all over the country. Our water must be used wisely to support our growing communities- provide places we can all swim, boat, hunt and fish; taking only what we need from our rivers and leaving them as community assets.

## Challenges

Traditionally, building more dams and reservoirs was the first and only answer for water supply managers and legislators. These antiquated approaches do not address the modern problem: we are not using our water wisely. Dams are fixed in one place and hold a limited amount of water. When we get replenishing rains to fill our many reservoirs, they lose tremendous amounts of water through evaporation. Lake Lanier loses up to 194 million gallons of water per day (MGD) to evaporation. The proposed Lower Little Tallapoosa Dam is estimated to provide roughly 10 MGD while costing taxpayers \$115 million. In contrast, DeKalb County's new water efficiency program will provide taxpayers with nearly as much water, 9 million gallons per day, at less than a tenth of the cost, \$10.6 million.

Conservation and efficiency leverage our water resources to go farther and do more. By using less water and being more efficient in what we do use, we can ensure we have enough affordable clean water for our families, neighbors and businesses. Georgia leaders must champion these modern solutions to secure our water supply.

## Next Steps

The Legislature should:

- Require community water supply plans approved by Georgia EPD include at a minimum: a leak detection and mitigation plan, metering of all water users, tiered water pricing that sends a conservation price signal, and technical and/or financial assistance for water users to increase their efficiency.
- Provide no less than \$25 million for communities to implement strong water efficiency programs.
- Pass legislation requiring the Georgia Environmental Facilities Authority to provide technical assistance to utilities and communities on water conservation and efficiency programs and policies.

Georgia EPD should require that community plans be updated bi-annually and that water permittees report water use to EPD on a monthly basis. EPD should make these reports available to the public at a minimum online via the internet.



## Fast Facts

Unrestricted interbasin transfers can devastate “donor rivers.” The Colorado River, drained by Denver, Phoenix and Southern California, has seen its discharge to the Gulf of California reduced to less than 6 percent of historic discharges.

Massive energy use is required in transporting water across river basins. In California, 20 percent of the state’s electricity used is for moving and treating water, primarily from water-rich Northern California to water-poor Southern California.

Water transfers create intra and interstate conflicts. In 2007, in a move reminiscent of Georgia’s water battles, South Carolina filed suit in federal court to prevent North Carolina communities from transferring water from the Catawba River.

Interbasin transfers can be avoided through water conservation efforts. In metro Atlanta, replacing the region’s old water-wasting toilets with low-flow models would save 42 million gallons a day by 2030, nearly double the current Etowah-to-Chattahoochee transfer.

For More Information:  
Coosa River Basin Initiative,  
Joe Cook

Georgia Water Coalition

# Grow Where Water is Adequate Rather than Move Water to Promote Growth

## What’s at Stake?

Depending on what part of Georgia you hail from, interbasin transfers are commonly referred to as simply “water transfers,” or more descriptively, “grand theft water”—the latter moniker being used most often in downstream communities where residents see water leaving their rivers upstream, never to return for their use, enjoyment and economic benefit.

No other water issue has as much potential to divide Georgia into warring factions or has as much potential to set off new wars with neighboring states. While moving water from water-rich areas to water-poor areas will always be part of the state’s water supply toolbox, this issue is so divisive and has so much potential to harm our state’s waterways and the economic future of downstream communities, it demands our immediate attention.

## Challenges

We must enact measures now that will guide the Environmental Protection Division (EPD) in decisions regarding issuance of permits for transferring water between river basins, with consideration of all the effects of such transfers, and measures, such as mandatory return flows, to mitigate their effects.

On the Chattahoochee River, communities like LaGrange and West Point are denied about 55 million gallons a day through water transfers in metro Atlanta. On the Etowah and Coosa Rivers, Cartersville and Rome currently forfeit some 23 million gallons a day (MGD) to transfers to metro Atlanta. During critical summer months, when water withdrawals are at their highest and our rivers are at their lowest, these transfers generally increase. It has been suggested that the Etowah-to-Chattahoochee transfer could grow to as much as 150 MGD in the future—a level that could translate into a 29 percent reduction in flows at Rome during drought conditions.

Interbasin transfers fundamentally alter natural water flows. This translates into irreparable damage to the health of our rivers and the long term economic vitality of downstream communities.

Currently, Georgia law regulating interbasin transfers is weak, leaving much discretion to the EPD Director. All that is required for certain parts of the state is the issuance of a press release in the impacted areas and consideration of “competing existing uses.”

For such a contentious issue with many repercussions for our environment and our economy, this simply is not enough.

## Next Steps

State legislators can help protect Georgia’s rivers from the adverse effects of interbasin transfers by:

- Passing legislation that increases restrictions on new interbasin transfers, allowing them only in narrowly defined circumstances and establishing criteria for the EPD to use in evaluating proposed new or expanded transfers; or
- Urging EPD to initiate a rulemaking process, in accordance with the Comprehensive Statewide Water Plan, that will result in the adoption as rules and regulations of EPD the interbasin transfer guidelines outlined in the Water Plan.



## Fast Facts

Chemically treated water pumped into groundwater is a threat to drinking water.

Bacteria and pathogens found in surface water and then pumped down into groundwater pose a significant health risk to hundreds of thousands of Georgians who rely on groundwater to drink.

The General Assembly twice passed a moratorium on aquifer storage and recovery to protect drinking water, which is scheduled to sunset in 2009.

For More Information:  
Ogeechee-Canoochee Riverkeeper,  
Chandra Brown

Georgia Water Coalition

# Protect Well Water

## What's at Stake?

Companies have proposed to pump chemically treated wastewater or other surface water down into our pristine groundwater system. This proposal (known as aquifer storage and recovery or ASR) is a risky scheme that can easily contaminate vital drinking water sources for many Georgians.

The General Assembly recognized the risk that ASR posed and has twice placed a moratorium on the practice. However, the Statewide Water Plan, a policy adopted by the General Assembly in 2008 without the force of law, seems to endorse experimenting with the safety of Georgia's water supplies by allowing injection of surface waters into our aquifers. Unless further action is taken, the ASR moratorium will be lifted in 2009.

## Challenges

The National Research Council found in 2001 that a proposal for ASR in south Florida posed significant risks to groundwater, including potentially increasing heavy metal concentrations, such as mercury. This report also found that the chemically treated surface water could still contain more bacteria and pathogens and contaminate the groundwater that it is pumped down into. The U.S. Army Corps of Engineers found levels of arsenic that exceeded safe drinking water levels in areas using ASR in South Florida.

Analysis of a project in South Carolina by the U.S. Geological Survey found that less than 25% of the water pumped into an aquifer would be available to reuse. This study also found that pumping water down into the ground did not help to increase groundwater levels in wells near the injection site. These studies indicate that the use of ASR may risk contaminating drinking water for very little recovery capacity.

Before ASR moves forward in Georgia, the National Ground Water Association recommends obtaining answers to many technical, economic and regulatory questions, such as:

- What type and degree of water treatment is necessary to ensure that no pathogens will survive in groundwater? Will disinfection lead to the formation of carcinogenic compounds that will move to broader groundwater areas?
- What information is needed to ensure that the water being recharged is geochemically and microbiologically "compatible" with native ground water? Unanticipated reactions may lead to poor-quality water, biomass formation, pathogen growth, and well clogging.
- What are the energy costs associated with ASR?
- What monitoring will be required to ensure that unforeseen water quality problems do not affect broader groundwater resources? Who will pay for it?
- What are the impacts of ASR on property values? On land use patterns?
- What alternatives exist to augment drinking water supplies? How do they compare with ASR?

Until proven otherwise, pumping chemically treated water into the ground continues to pose a significant health risk and may not provide a consistent, efficient storage mechanism for drinking water.

## Next Steps

The General Assembly should permanently place a moratorium on aquifer storage and recovery.



## Fast Facts

According to a 2002 University of Georgia study, there are approximately 68,000 reservoirs in Georgia, which represents the highest density of dams in the Southeast. The state should prioritize the preservation of its remaining sections of free-flowing rivers and streams.

The Alliance for Water Efficiency estimates it costs roughly \$0.46 to \$1.40 to produce 1000 gallons of water through more stringent water efficiency and conservation measures versus the \$4,000 it would cost for the same amount of water from a new reservoir.

Because of federal and state permitting, reservoirs can take over 10 years to come online, assuming that rainfall is sufficient to fill them. Conservation and efficiency can be used to provide water supply right now.

For More Information:  
Southern Environmental Law Center,  
Gil Rogers

Georgia Water Coalition

# Evaluating Reservoirs

## What's at Stake?

As historic droughts continue and more people move to Georgia, some of our state's water resources are becoming increasingly stressed. Many of our officials believe that new water supply reservoirs are the best way to "drought-proof" Georgia and to allow for several million more people to move to metropolitan Atlanta. However, water supply reservoirs are the most environmentally costly, not to mention the most expensive, water supply option. Our officials should look to alternatives, particularly low-hanging fruit options such as increased water conservation and efficiency before resorting to the long lead times of such massive new dam infrastructure. Georgia's remaining sections of free-flowing rivers and streams will be forever altered if the state constructs many more reservoirs.

## Challenges

Atlanta is one of the largest cities in the country that lies within one of the smallest watersheds, primarily the Upper Chattahoochee Basin. Metro Atlanta has always been challenged to identify reliable water sources; its primary sources are now Lake Lanier and the Chattahoochee River, Lake Allatoona and the Etowah River. In addition to these sources, several cities and counties in the metro area have constructed their own reservoirs, ranging from hundreds to thousands of acres in size on tributaries of the Chattahoochee and Etowah Rivers and other streams. Rather than shift growth to areas of the state that have natural water supplies available, many believe we can continue to engineer our way out of the water limitation by constructing more reservoirs.

Roughly a dozen new water supply reservoirs have been proposed for construction in Georgia. Many of these have been permitted and are underway. Some, such as two proposed dams on the Flint River, may take decades to become reality. These reservoirs cost anywhere from \$50 million to hundreds of millions of dollars to permit and build, if they are allowed to proceed. Now is the time to stop focusing on these expensive projects.

Putting dams on rivers chokes off flow downstream, depriving communities and aquatic systems of the flows they need for ecosystem function, economic use and recreation. Many rivers downstream from dams are in a state of almost permanent drought flow because much less water flows out of their reservoirs. They fragment stream habitat, preventing fish and other aquatic species from migrating to their feeding or spawning grounds. Reservoirs also cause dirt and silt to build up behind the dam, requiring expensive dredging or other means to maintain the storage capacity of the reservoir. On the other hand, water conservation and efficiency measures cost only a fraction of the price for a new water supply reservoir, and conservation does not harm Georgia's river systems or the property values of those who live along and use those rivers.

## Next Steps

- The General Assembly should pass legislation facilitating water conservation and efficiency measures as the cheapest, fastest option for new water supply.
- The General Assembly should mandate an economic and environmental cost-benefit analysis to be performed when a reservoir is proposed, which should be made available to the public and affected local, state, and federal officials.
- The Georgia Environmental Protection Division should study alternatives to reservoir proposals and evaluate all direct and cumulative impacts of new reservoirs. The study process should be transparent with opportunities for public involvement.



## Fast Facts

It costs from \$650 to more than \$1,000 per acre-foot to desalinate seawater as compared to about \$200 per acre-foot for water from normal supply sources, according to the U.S. Geological Survey.

The Tampa Bay, Florida desalination plant experienced \$75 million in cost overruns and difficult technical problems which required the plant to close for repair from late 2005 to early 2007.

The Tampa desalination plant has a capacity of 25 MGD. The Metro North Georgia Water Planning District estimates metro Atlanta can save 136 MGD by 2030 through implementing water efficiency and conservation measures.

In 2006, a Jonesboro-based business announced plans to build a \$1 million demonstration desalination facility in Brunswick but the project was shelved in 2008 due to financial problems.

For More Information:  
Center for a Sustainable Coast,  
David Kyler

Georgia Water Coalition

# The Downside of Desalination

## What's at Stake?

As Georgia struggles to meet its water management responsibilities, some officials have proposed increasing water supply using desalination. Desalination is the process of removing salt and other minerals from seawater or brackish water to create water fresh enough for human consumption. While desalination is heavily utilized in Middle Eastern countries, it is generally considered unnecessary in states with numerous more practical alternatives for meeting future water needs, like Georgia.

## Challenges

There are environmental impacts associated with desalination. The process is extremely energy intensive, which could actually lead to more water consumed by cooling towers at power plants. Desalination creates a salty discharge, or brine consisting of the salt and minerals pulled out of the salty water, which must be discharged. Discharging the brine directly into Georgia's coastal estuaries and marshes could lead to consequences including marsh dieback and diseased seafood populations.

Desalination is extremely expensive. It costs from \$650 to more than \$1,000 per acre-foot to desalinate seawater as compared to about \$200 per acre-foot for water from normal supply sources, according to the U.S. Geological Survey. And because Georgia's coastal waters receive a continuous deposit of sediment from the many rivers that empty into the ocean, the filtration process is likely to be much more complex.

Of all the methods available for increasing water supply through business ventures, desalination is one of the least competitive and thus the technology whose proponents are most likely to request public subsidy.

Elected officials must implement good water management. The research, planning, and administrative activities required to resolve water protection, distribution, conservation, and recovery are not simple or cheap.

Studies find that the highest benefit/cost ratio in water management is achieved by eliminating wasteful practices, recovering and reusing wastewater, and repairing leaking distribution systems. Practical water conservation methods can reduce demand at a fraction of the cost of increasing supply with virtually none of the environmental damage. State funds and tax credits should not be used to subsidize unwise pursuit of desalination, which would have counterproductive effects on far better water management options.

## Next Steps

- Conduct an independent analysis of current water demand and supply circumstances in Georgia.
- Explore data that compare water use and efficiency in Georgia by user group with performance in other states.
- Document facts describing the cost of water supplied via desalination compared with other methods (groundwater, surface water, reservoirs, etc.)
- Project Georgia water needs and costs for meeting them under two scenarios: (1) current practices by each user group, and (2) demand reduction to national standards by eliminating waste and improving efficiency for each user group.



## Fast Facts

In 2001, the DNR Board adopted an “Interim Instream Flow Protection Policy” until more specific studies could be undertaken. Those studies have yet to be conducted.

Flow alterations have destroyed, compromised, or threatened a wide range of ecosystem services including commercial and sport fisheries, flood attenuation, groundwater recharge, wildlife habitat, pollution dilution, timber production, crop production, soil productivity (moisture-content and nutrient availability), recreation, and aesthetics.

The invasion and success of exotic and introduced species in rivers is facilitated by the alteration of flow regimes.

For More Information:  
Georgia Conservancy,  
Shana Udvardy

Satilla Riverkeeper,  
Gordon Rogers

Georgia Water Coalition

# Protect Instream Flows

## What’s at Stake?

In Georgia, we are blessed with abundant water resources and a myriad of native aquatic species. But rising pressures to develop land and imprudent water use are threatening our precious water resources. Rivers in Georgia are under intense pressure to provide many different services to Georgians, such as drinking water supply, boating, wastewater treatment, agricultural irrigation, recreation, hydropower and industrial uses.

In order to accommodate all of these competing uses and continue to maintain an ecosystem which is not degraded to the point of collapse, we must adopt a balanced approach to protect our ecological infrastructure and ensure that enough water remains in our rivers and streams. Without enough clean water in an aquatic system, a river can no longer provide a reliable supply of water for human consumption. Instream flow, or simply the amount of water flowing in a river or stream at a given time, is a key to the health and viability of rivers and streams throughout the state. Instream flows are reduced by dams and municipal and industrial withdrawals. Flows are further decreased by ‘hardening’ of the landscape due to ditching, draining, channelization, and ‘impervious surfaces’ (rooftops, driveways, roads, parking lots, et cetera).

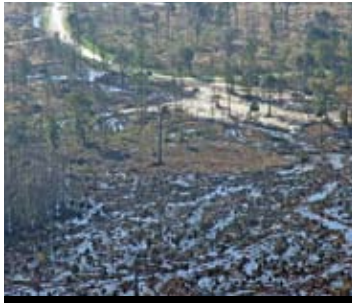
## Challenges

Reduced stream flows can result in many negative impacts, including loss of fish and wildlife, increased erosion and sedimentation, and increased concentration of pollution, as well as the loss of river recreation. Reduced flow also magnifies the problem of stormwater runoff – caused by poorly planned development and increased impervious surfaces – by reducing a river’s capacity to dilute the pollution contained in the runoff. In addition, reduced flow can also diminish the availability of clean drinking water and destroys aquatic habitat. A statewide one-size-fits-all instream flow volume will not work because such an approach “flatlines” the natural flow variability of a river and reduces it to a low, constant drought flow.

## Next Steps

Ideally, instream flow regimes would be determined by very focused, scientific, sub-basin studies to evaluate aquatic habitat and water demands specific to each location. With the implementation of the statewide water plan, now is the time for Georgia to shift from simply setting minimum flow volumes to determining instream flow regimes that address how much water can safely be removed while sustaining the function and services of our rivers.

- Georgia Environmental Protection Division (EPD) should take the opportunity to develop these basin-specific flow regimes during the resource assessment phase of the statewide water plan.
- EPD should implement a true adaptive management program which evaluates maximum withdrawals and accounts for variable flows. EPD should invite an independent scientific review committee to ensure the best models are being utilized and that they are being applied in a sound manner and based on the best available data.
- EPD should utilize instream flows as a yardstick against which permitting and/or planning decisions regarding water withdrawals, types of development, and restoration strategies, either surface or groundwater, can be made.



## Fast Facts

Wetlands are often called the “nurseries of life” because they are so diverse and so productive.

The Okefenokee Swamp in southeastern Georgia covers more than 412,000 acres and is one of the largest freshwater wetlands in the nation.

Clayton County uses constructed wetlands to provide tertiary water treatment to 9.3 million gallons of treated water a day. This approach is more cost effective and efficient than conventional methods of treatment.

For More Information:  
Southern Environmental Law Center,  
Bill Sapp

Georgia Water Coalition

# Freshwater Wetlands

## What’s at Stake?

Freshwater wetlands are a critical resource for people and wildlife alike. These waters include the Okefenokee Swamp, where alligators reside alongside towering cypress trees, to pine flatwoods, where crayfish chimneys and pitcher plants can be found rooted in the moist soils, to spring-fed mountain seeps and bogs. Wetlands are like the “kidneys” of a watershed, improving water quality by filtering, removing, even neutralizing pollutants from stormwater. They also act like sponges soaking up floodwaters during storms. And they provide homes to a multitude of mammals, fish, reptiles, and amphibians.

In short, freshwater wetlands are very special places. For the hunter, they provide a breeding ground and food supply for countless waterfowl. For the fisherman, they provide the shallows for spawning and a ready source of insects. For the water manager, they provide tens-of-thousands of small reservoirs across the state to trap rainwater for drier periods. For the wise developer who is willing to incorporate them into property development plans, they can become green spaces that increase property values. And for all of us, they provide a quiet place to go and appreciate nature.

## Challenges

As a result of two recent U.S. Supreme Court decisions (*SWANCC* and *Rapanos*) that have confused wetlands law, it is unclear which wetlands are actually protected by the Federal Clean Water Act. To be considered a *wetland* under the 1987 Federal Wetlands Delineation Manual, an area must meet the following three criteria: 1) the area must contain hydric soils (black, high carbon soils); 2) the area must have a predominance of federally listed wetlands plants; and 3) there must be evidence that water in the area rises to within twelve inches of the ground surface for a prescribed period. To be a *federally protected wetland*, the wetland must also have a “significant nexus” with a “traditional navigable water,” or that is, a water that has been used to transport commerce in the past, or can support canoe or kayak trips today.

According to one source, about 5.3 million acres, or 13 percent of Georgia’s land area is covered with wetlands. Especially on Georgia’s coastal plain, federal wetlands regulators consider many of these wetlands to have no “significant nexus” to a “traditional navigable water” because the regulators have not found evidence that during a storm, water would drain out of these wetlands into a nearby stream or ditch. Although such decisions can be challenged, more often than not these “isolated” wetlands are left without any federal protection because individual protection is expensive.

Neighboring states like North Carolina and Florida have both enacted laws to protect such “isolated” wetlands. Georgia has not. As a result, developers have built houses in such wetlands and the new homeowners have paid the price. Some have ended up with cracked foundation slabs due to poor soils or discover mold problems that require costly repairs. Others are seeing crayfish chimneys sprouting in their front lawns and experiencing drainage field problems in their back yards.

## Next Steps

The General Assembly should create a state permit system covering wetlands not protected under the federal wetlands regulatory program.



## Fast Facts

Georgia has 70,000 miles of rivers, 100 miles of coastline, 850 square miles of estuaries and 425,000 acres of public lakes.

Only 16% of the waterways in Georgia are monitored every year to ensure that they are safe for recreation, fishing and drinking water supplies.

On the Chattahoochee, the most heavily-used river in the state, the EPD does not have the resources to install a real-time water quality station in the river below Atlanta to ensure that environmental standards are met.

For More Information:  
Upper Chattahoochee Riverkeeper,  
Sally Bethea

Georgia Water Coalition

# Fund Water Monitoring Programs

## What's at Stake?

We are fortunate to have 70,000 miles of streams, 100 miles of coastline, 850 square miles of estuaries and 425,000 acres of public lakes in Georgia. Yet, only a small percentage of these waterways are monitored every year to ensure that they are safe for recreation, fishing and drinking water supplies.

The U.S. Environmental Protection Agency (EPA) requires that each state has an acceptable monitoring program so water permits in accordance with the federal Clean Water Act can be issued; however, Georgia's Environmental Protection Division (EPD) has never received sufficient resources to operate the kind of program that Georgians deserve and need to plan for their communities and families—and that other states provide for their environmental agencies. Without a clear picture of the health of Georgia's waterways, it is virtually impossible to implement common sense protections to ensure an abundant supply of clean drinking water for all Georgians.

## Challenges

EPD contracts with the U.S. Geological Survey (USGS) to conduct a cooperative water quality monitoring program statewide that consists of water quality sample collection at 49 long-term stations, as well as the operation of three continuous water quality monitoring stations in the Chattahoochee, Coosa and Savannah Rivers. This critically important \$1.16 million program is funded in part by the USGS with a match of \$400,000, requiring Georgia to contribute \$760,000 annually through an appropriation by the state legislature. Data collected are available to the public at <http://ga.water.usgs.gov> and are used to make water management decisions that affect communities throughout the state.

EPD also conducts its own water quality monitoring in key areas in the state, such as the coast, major lakes, aquifers and waterways where serious problems have been identified. On a five-year rotational basis, EPD concentrates on one of the five major river basins in the state; however, funds for this program are severely limited and need to be increased.

## Next Steps

- The Legislature should annually appropriate \$760,000 to EPD for its contract with USGS to continue the long-term cooperative monitoring program that collects water quality data at 52 sites in Georgia.
- The Legislature should appropriate funds to EPD so that the agency has sufficient resources to support its five-year rotational program to sample sites in Georgia's five major river basins.
- Secure funds to ensure that EPD can fund a real-time water quality station in the Chattahoochee River below Atlanta.
- Support EPD's Adopt-a-Stream Program to engage citizens in water quality monitoring.



## Fast Facts

Sediment carried by storm runoff from construction sites is the leading source of non-point source pollution in our streams, rivers, lakes and estuaries.

Georgia's riverkeepers found that *two-thirds* of the construction sites they investigated had major violations of clean water regulations.

In metro Atlanta an average of 55 acres, or 41 football fields, are covered with impervious surfaces like roads, rooftops and parking lots every single day.

For each of the past four fiscal years, the state legislature has failed to appropriate \$1 million or more of collected user fees back to Georgia EPD for use in program administration and enforcement.

For More Information:  
Upper Chattahoochee Riverkeeper,  
Sally Bethea

Georgia Water Coalition

# Reducing Muddy Runoff from Construction Sites

## What's at Stake?

Sediment carried by stormwater runoff from construction sites and other land disturbing activities has been documented as the leading source of non-point source pollution to streams, lakes, rivers and estuaries in Georgia. The sediment that flows into our waterways after it rains can result in serious environmental and economic impacts—decreasing storage capacity for drinking water supplies, increasing water treatment costs, damaging recreational areas and natural ecosystems, and decreasing property values.

## Challenges

To minimize the environmental and economic impacts of sedimentation, construction sites are regulated by the federal National Pollutant Discharge Elimination System (NPDES) with general construction stormwater permits as well as by local government ordinances in Georgia. These regulations require that developers install best management practices such as silt fences to minimize sediment loss and provide limits for how much sediment can be discharged during storm events.

Local, state, and federal personnel are responsible for inspecting the construction sites on a routine basis to ensure that developers are complying with the regulations and they are required to impose enforcement actions when a violation is found. A major problem in Georgia is that most of the government agencies responsible for inspection are understaffed and/or not properly trained to inspect and enforce the best practices at all construction sites.

Working with other riverkeepers and watershed groups, Upper Chattahoochee Riverkeeper studied the effectiveness of Georgia's erosion control program in 2005-06, supported by a grant from the U.S. EPA. Project partners visited more than 100 construction sites throughout the state during the study period and determined that *two-thirds* of the sites investigated had major violations of state regulations, threatening the health of nearby waterways.

## Next Steps

- *Better Education:* We need more and better training for developers, regulators, engineers, citizens, and elected officials on cost-effective best practices that will protect our water supplies and the places where we fish, boat and swim.
- *More Inspectors:* The state and local agencies responsible for the enforcement of Georgia's erosion and sediment control program must have adequate funds to hire and properly train inspection staff. User fees that are paid by developers to the state Environmental Protection Division (EPD) *must* be fully appropriated every year by the state legislature to support these programs.
- *Stronger Regulations:* In high impact areas, consideration should be given to increasing the width of required buffers along streams, lakes, marshes and other waterways; the maximum allowable fines should be increased to deter potential violators.



## Fast Facts

Metro Atlanta now has 526,000 septic systems in use, and is adding new septic systems at a rate of 12,000 tanks per year. One in four metro locations use septic systems instead of sewers.

There are currently between 90,000 and 100,000 septic systems in use in Gwinnett County alone. If all of these were in one city, it would be one of Georgia's ten largest towns.

One half of new metro Atlanta subdivisions are reliant on septic systems instead of sewers. That reliance jumps to 75% in fast-growing Hall County.

For More Information:  
Sierra Club, Georgia Chapter,  
Neill Herring

Georgia Water Coalition

# Improve Septic System Oversight

## What's at Stake?

Septic systems provide excellent service for the safe, environmentally sound disposal of wastewater over great expanses of the state of Georgia. Numerous places in our large state are never going to be reached by sewer lines since sewers need relatively dense populations, and Georgia is particularly lucky in its expanse of open space. However, Georgia has a problem with septic systems in areas of relatively high population density, areas where sewers would be cost-effective.

Gwinnett County, for example, has almost 100,000 septic systems, an immense number for any county and particularly for a place with a population now approaching one million people. Some of these septic tanks are old. They date to the era when Gwinnett was still largely rural before the boom years of the last four decades. But many of these installations are not that old. They were chosen by homebuilders because they were cheaper than providing sewer service.

## Challenges

What is wrong with reliance on septic systems in counties with dense populations? The problem lies in the regulation of waste water under Georgia law. Because septic systems were designed for predominantly rural installation, while the National Pollution Discharge Elimination System (NPDES) law, the Clean Water Act, deals with what are called "point discharges" into waterways. Septic systems do not directly discharge into waters, but slowly discharge into the soils of their drainfields.

Wastewater that is discharged by sewer systems is regulated by the Environmental Protection Division, as part of Georgia's agreement with the U.S. Environmental Protection Agency to enforce the provisions of the Clean Water Act. Waste water from septic systems is regulated by each county's Board of Public Health by an officer called the Environmental Health Inspector. This same official has other duties, such as making sure that restaurants are sanitary. In areas with large numbers of septic systems, Board of Health regulation is inadequate to make sure that existing systems are working properly and that new systems meet appropriate siting and soil suitability standards.

There is currently a debate among Georgia hydrologists as to the role of septic systems and stream flow levels. It is plain that sewers are able to return treated waste water to streams more quickly and in greater quantities than septic systems. Some scientists have argued that septic systems help augment or supplement the "base flow" of streams. These questions need a better point of resolution than that provided by County Boards of Public Health, which have other serious duties apart from hydrological investigations.

## Next Steps

Charging responsibility for regulation of septic systems in counties with populations exceeding 100,000 people to Georgia EPD, instead of an overburdened County Board of Health official is a sensible solution to problems presented by septic density in Georgia. EPD already provides regulation for large volumes of wastewater, so with proper support, it should not be difficult for them to regulate these additional large sources.



## Fast Facts

Every day, more than 100 acres of land in Georgia are covered by concrete, asphalt and rooftops.

Georgia voters are committed to protecting our natural areas. Since 2000, voters have passed dozens of local ballot measures, creating more than \$882 million for local land conservation initiatives.

According a University of Georgia study, across a sampling of 10 urban, suburban and rural counties, working farmland and forestland pays more in direct revenue than the cost of services received, unlike residential development.

Childhood obesity and cardiovascular diseases are growing problems statewide because of our less-active lifestyles. Outdoor recreation can reverse these trends.

For More Information:  
Georgia Wildlife Federation,  
Jerry McCollum or Glenn Dowling

The Conservation Fund,  
Rex Boner or Andrew Schock

The Nature Conservancy,  
Georgia Field Office,  
Shelly Lakly or Thomas Farmer

The Trust for Public Land,  
Helen Tapp

# Conserving Our Land and Parks

## What's at Stake?

From forested mountains to sweeping beaches, Georgia's natural environment provides sustainable jobs, vibrant communities and diverse opportunities for outdoor recreation. With leadership and foresight, we can set aside and protect our natural resources to ensure we have clean air and safe drinking water; to maintain the economic benefits that come to our state from tourism, forestry and agriculture; and to ensure our families continue to have the quality of life and health benefits derived from clean and plentiful natural resources, including parks and recreation areas.

In short, creating a culture of land conservation benefits Georgia by:

- Generating economic activity and tourism
- Ensuring balanced growth
- Increasing health and well being
- Protecting water and natural resources
- Building strong communities

Without continued investments in parks and natural areas, Georgia can lose its natural advantage in attracting workers, families, employers and tourists. And without state dollars for land conservation and parks, opportunities to leverage matching federal, foundation and private funds will be lost.

## Challenges

Georgia's natural landscape is disappearing at an alarming rate. According to the University of Georgia's Natural Resources Spatial Analysis Laboratory, more than 39,000 acres of land are covered with concrete, asphalt and rooftops every year. State agencies, local governments and conservation organizations are working together to identify the places most at risk and to prioritize the protection of these lands. This cooperation will provide a clear roadmap to protect the best of Georgia's remaining habitat and landscape-scale tracts of land.

Georgia's marvelous system of state parks and historic sites ranks among the top three in the nation and these sites help support our economy. To continue to draw millions of visitors annually, our state parks are poised to implement a clear plan of action laid out in the State Comprehensive Outdoor Recreation Plan.

But, without continued funding, we risk losing a legacy for future generations in land conservation and park development and maintenance. State grants and loans provide the critical leverage required to draw needed local, federal and philanthropic funds and partnerships to parks and land conservation statewide.

## Next Steps

As Georgia's population grows, it is critical for leaders in the public and private sectors to investigate the best way to protect conservation lands to ensure the health and future of our state's natural resources. Failure to invest now in protecting Georgia's natural resources will result in much higher expenditures for economic, social and ecological services we currently use and enjoy.

In order to invest in land conservation, the General Assembly can:

- Renew state funding for the Georgia Land Conservation Program;
- Fully fund state park development and operations;
- Study the successful land conservation experiences of other states as part of the Conserve Georgia agenda.



## Fast Facts

Examples of invasive species that impact high priority species and habitats in Georgia include feral hogs, flathead catfish, channeled apple snail, hemlock wooly adelgid, cogongrass, and Chinese privet.

More than 90% of the land in Georgia is privately owned, much of it in farm land and forest land. Any effort to protect and improve wildlife habitat must involve private landowners.

Georgia's bobwhite quail population has declined by more than 70 percent since the early 1960's primarily due to the loss of habitat.

Georgia ranks fifth of six southeastern states in land acquisition.

For More Information:  
Georgia Wildlife Federation,  
Jerry McCollum or Glenn Dowling

# Keep Wildlife from Becoming Endangered

## What's at Stake?

Georgia is one of the most biologically diverse states in the nation, ranking second in the number of amphibians, third in the number of freshwater fishes, seventh in the number of reptiles, and seventh in the number of vascular plants. The Georgia Department of Natural Resources spent three years working with a wide array of public and private agencies and organizations to develop a State Wildlife Action Plan (SWAP), a proactive plan that examines the health of wildlife and prescribes actions to conserve wildlife and vital habitats before they become more rare and costly to protect.

The five priority actions of the SWAP are to (1) increase education of private landowners and public agencies in the use of prescribed fire for habitat restoration, wildfire suppression, and conservation management; (2) improve wetland protection and mitigation methods; (3) provide technical and financial assistance to private landowners to conserve wildlife; (4) develop a statewide strategy for invasive exotic species assessment and control; and (5) facilitate the Georgia Land Conservation Program and other land protection efforts.

## Challenges

The SWAP identifies 25 types of problems affecting wildlife species and their habitats. Some of the most significant of these include invasive exotic species, altered fire regimes, and dam and impoundment construction.

Altered fire regime refers to an unnatural frequency or intensity of fire that reduces habitat quality. This includes suppression of fires in fire-adapted communities, prescribed burns conducted in the wrong season, and fires that are too intense for communities that are not fire-adapted.

The construction of dams and impoundments can alter stream flows and water temperatures and create barriers to dispersal of fish and other aquatic species. Many of Georgia's imperiled aquatic species are vulnerable to habitat degradation and fragmentation resulting from man-made impoundments.

## Next Steps

The SWAP is an ongoing project. The Department of Natural Resources will continue to protect wildlife and their habitat by:

- Working to establish a consistent source of funding for land protection to support wildlife conservation.
- Expanding efforts to assess and restore fire-dependent communities on state-owned properties and other public lands.
- Administering voluntary programs that offer incentives to private landowners to protect and improve natural resources on their property.



## Fast Facts

Georgia is blessed with 24.2 million acres of timberland, which consists of 45% pines, 42% hardwoods, 12% oak/pine, and 1% non-stocked, according to the Georgia Forestry Commission.

Timber is the highest valued vegetative crop in Georgia. Georgia's forest resources have a total direct economic impact of \$16.1 billion, according to a 2006 Georgia Tech Economic Development Institute report.

The same report shows that forestry directly creates 67,694 jobs statewide and supports a total of 154,147 jobs.

As of September 2008, 157 counties in Georgia have passed a resolution supporting prescribed fire.

For More Information:  
Georgia Prescribed Fire Council

Tall Timbers Research Station & Land Conservancy,  
Lane Green

Georgia Wildlife Federation,  
Glenn Dowling

# Protect the Practice of Prescribed Fire

## What's at Stake?

Forest lands constitute significant economic, biological and aesthetic resources of statewide importance. Frequent fires, set by lightning strikes and Native Americans, have shaped Georgia's ecosystems for thousands of years.

Our forest ecosystems evolved with fire and continue to need the strategic application of fire that mimics this natural cycle. The plants and animals of the pine woods are accustomed to frequent fires and depend on these fires for their survival. Fire is as natural as sunshine, rain and wind in many plant communities including upland pine, pine flatwoods, marshes and wet prairies. Fire also benefits many of the rare animal species in our state that are declining. Some of these declines are caused almost totally by fire exclusion. Frequent fires prevent the build-up of flammable fuels in the forest that set the stage for destructive wildfires when ignition does occur.

Specific benefits of prescribed fire include:

- Maintains healthy forests and scenic views
- Reduces the risk of destructive wildfires
- Perpetuates fire-dependent plants and animals and their habitats
- Controls tree diseases and insects
- Prepares sites for both natural and artificial forest regeneration

## Challenges

Smoke from prescribed fires is a sign that certain lands are being cared for properly, but many Georgians, especially those that live in urban areas, may not be familiar with the benefits of prescribed fire. Great care is taken by prescribed fire managers to minimize any temporary inconveniences created by smoke. Smoke management plans for prescribed burns are designed so that smoke-sensitive areas like roads and residences, etc. are not negatively affected by the burn.

Smoke from prescribed fires does not contribute appreciably to air quality issues since the practice typically avoids times of stagnant summer air. However, uncontrolled wildfires usually occur during the summer when there is already a bad urban air quality problem. We can reduce the risk of wildfires and the resulting smoke or air quality problems with well-timed prescribed fires. No other tool can so effectively remove the hazardous buildup of woodland fuels.

Further, some Georgians may not realize that prescribed burning is carried out by experienced, trained, and certified land managers on public and private lands throughout Georgia. These professionals assess forest conditions, determine the type of fire needed, and then write a "prescription" for the application of fire. Prescribed burns are permitted by the Georgia Forestry Commission (GFC) District Offices depending upon predicted weather conditions and safety measures to be used.

## Next Steps

Forest owners, farmers and hunters have used prescribed burning for generations. The U.S. Environmental Protection Agency has determined that only a certain amount of particle pollution can be emitted within a particular airshed. It is the responsibility of the Georgia Environmental Protection Division (EPD) to ensure these standards are met in order to protect public health. As new sources of pollution that emit particulates and other air pollution into the air are located in areas where prescribed burning is widely used, the practice of prescribed burning may be threatened.



## Fast Facts

According to several national studies, the estimated cost of implementing efficiency measures is one-half to one-third the cost per kilowatt hour of the energy produced by coal and nuclear power plants.

Governor Perdue committed all state agencies to reduce energy consumption in state facilities 15% below FY 2007 levels by 2020.

The Southeast has among the highest per capita electricity consumption in the nation, according to the Federal Energy Regulatory Commission.

For More Information:  
Southeast Energy Efficiency Alliance,  
Ben Taube

Southface,  
Dennis Creech

Southern Alliance for Clean Energy,  
Rita Kilpatrick

# Require Energy Efficiency and Promote Conservation

## What's at Stake?

Georgia's average residential consumer uses 25% more electricity and pays 9% more each month than the national average (EIA, *Electric Sales*, 2005). According to the 2008 State Energy Efficiency Scorecard published by the independent American Council for an Energy Efficient Economy, Georgia ranked 36th in promoting energy efficiency, behind Florida, North Carolina, South Carolina, and Virginia. Using less electricity would benefit the pocketbooks of Georgians as well as their health, economy, and environment, since electricity production from coal and nuclear plants uses enormous amounts of water and pollutes the air.

In 2006, Governor Perdue's Energy Council recommended, "as its highest priority that Georgia should aggressively pursue all cost-effective energy efficiency opportunities." This State Energy Strategy also concluded that the Governor should consider energy efficiency goals and programs to significantly reduce the forecasted load growth. As Georgia plans for an increase in population growth, the State must plan for a cost effective approach to meeting energy needs—an approach that balances new supply options with cutting energy costs by enhancing energy efficiency and promoting conservation.

## Challenges

Georgia lacks a comprehensive implementation plan for the 2006 State Energy Strategy with clear action steps, responsible leaders and agencies, and measurable outcomes that would ensure that the State is accountable for cutting energy waste. Georgia can also strengthen its economy through energy efficiency that encompasses buildings, transportation, and other initiatives throughout the industrial, commercial, and residential sectors. The State must engage all utilities, including Georgia Power and the 42 electric membership cooperatives (EMCs) in promoting conservation and efficiency.

The Georgia Public Service Commission's (PSC) current electricity ratemaking protocol ties utility revenues directly to energy sales, creating a disincentive for Georgia Power to implement demand-side management programs because they result in lost revenue. An alternative utility regulation strategy would reduce or eliminate penalties and thereby encourage utilities to pursue all resources that might satisfy energy demand, including energy efficiency. Over 15 states have adopted and implemented Energy Efficiency Resource Standards (EERS), which are targets for electric or gas utility companies to achieve end-use energy savings, expressed in terms of energy units, percentage of load growth forecast, or percentage of total energy sales.

## Next Steps

- Draft and enable legislation to adopt an Energy Efficiency Resource Standard for the State with a minimum of 1% of annual energy sales to come from energy efficiency over the next 10 years. Specifically enable the PSC to set electric and gas energy savings targets for utilities.
- Draft and enable legislation for the PSC to review current earnings mechanisms and determine whether additional measures need to be taken to appropriately allow utilities to earn on energy efficiency investments.
- Develop an aggressive implementation plan for the eight energy efficiency strategies recommended by the State Energy Strategy.



## Fast Facts

**Opportunity:** The Atlanta Regional Commission estimates that over half the buildings that will be in the metro area in 2025 have not yet been designed or built.

**Environment:** EarthCraft House, a market-based green building program of the Greater Atlanta Home Builders Association and Southface, has certified over 5,000 homes which exceed the state energy code by over 25 percent. The energy savings quickly repay the costs of the energy efficiency features.

**Economy:** Making buildings energy efficient creates jobs that cannot be exported overseas and stops the export of energy dollars from Georgia.

For More Information:  
Southface,  
Dennis Creech

# Save Energy and Water with Energy-Efficient Buildings

## What's at Stake?

The Georgia Environmental Facilities Authority (GEFA) reports that nearly all of our primary energy is imported from other states and foreign countries. Through the development of energy efficiency and Georgia-based renewable energy resources, such as biomass and solar, the state can reduce energy imports, strengthen local economies, create quality jobs and protect water and other natural resources.

According to the U.S. Department of Energy (DOE), buildings consume over a third of the total energy in our society—roughly equal parts for commercial and residential buildings. Additionally, the U.S. Energy Information Administration (EIA) reports that buildings use two-thirds of U.S. electricity generation and are responsible for 48% of greenhouse gas emissions. Of critical importance to Georgia is the link between energy and water. The production of electricity is one of the largest users of fresh water in Georgia—roughly 1 gallon of water is evaporated for each kilowatt-hour of electricity generated. Therefore, a pragmatic energy policy will help alleviate Georgia's water challenges.

Employing standard, off-the-shelf energy efficiency technologies can cut building energy consumption 25 to 50%, providing attractive rates of return on investment. Tracing energy cost-savings upstream leads to additional savings accrued when including the water consumption required in the generation of power.

## Challenges

As a major building owner, the State of Georgia has a valuable opportunity to cut energy waste and save taxpayers' money, yet current policy restricts the state in its ability to leverage private incentives to finance energy improvements. Other southern states rely on Energy Performance Contracts, agreements with private energy services companies (ESCO), which use future energy savings to pay for the entire cost of a building's energy efficiency retrofits. Today, Georgia law inhibits the state's use of Energy Performance Contracts.

Georgia has been proactive about adopting a mandatory statewide energy code for residential and commercial buildings; however, enforcement of the energy code is left to under-resourced local jurisdictions. In many communities, code enforcement staff is limited and code officials focus primarily on health and safety issues. A recent DOE study concluded the average time spent by a local code official on energy code compliance is ten minutes.

## Next Steps

- The General Assembly should pass legislation which lays out clear statutory authority for state agencies to engage in Energy Performance Contracts to cut energy waste in their facilities
- Georgia should commit that all new state facilities and major renovations must be certified under the federal Energy Star program.
- Georgia should provide incentives to local governments to bolster enforcement of the building energy code.



## Fast Facts

Over 10,000 megawatts of wind power potential exists off the coast of Georgia and over 4,000 megawatts in North Georgia.

According to a 2003 University of Georgia study, Georgia has enough biomass to potentially meet 12% of the state's energy needs.

In 2006, less than 5% of electricity was generated from renewable energy sources, mostly hydropower and wood/waste, according to the Energy Information Administration.

For More Information:  
Southern Alliance for Clean Energy,  
Anne Blair or Mary Carr

# Advance Renewable Energy

## What's at Stake?

Georgia has a wealth of homegrown, renewable energy resources, yet historically Georgia has relied heavily on coal and nuclear energy, which can harm our economy, health, security, water resources, and the environment.

Neither coal nor nuclear power plants come without a heavy price tag. Georgia's two proposed coal plants and two nuclear reactors are all estimated to cost billions of dollars, which will increase the rates paid by utility customers.

## Challenges

Despite notable financial and health risks, utilities across Georgia are attempting to build new coal and nuclear power plants to the detriment of Georgia's ratepayers and the environment. In order for Georgia's utilities to move away from these traditional dirty power sources, state and federal policies and incentives need to be enacted so that solar, wind and biopower can be easily incorporated into utilities' overall energy mix.

## Next Steps

Investing in renewable energy will help diversify Georgia's energy supplies, reduce our reliance on fossil fuels from volatile regions of the world, help stabilize electricity prices, create jobs, and reduce emissions of carbon dioxide and other harmful air pollutants.

According to Georgia's state wind map, developed in 2005 by AWS Truewind, the lead wind-mapping specialist in the nation, there are over 10,000 megawatts of **wind power** potential off the coast of Georgia and over 4,000 megawatts of wind potential in North Georgia (<http://www.gawwg.org>).

Additionally, the Southeast has the greatest growth potential for **biopower**. In 2008, we saw significant proposals by electric utilities and others to build new biopower plants, to convert coal-fired plants to burn biomass, or to upgrade coal-fired plants to burn small percentages of biomass in a process called co-firing. This is because biopower technology is well developed, can be implemented relatively quickly, and can be easily integrated into current operations.

**Solar energy** also offers an opportunity for Georgia's utilities and small businesses. Throughout the United States, including the Southeast, utilities are beginning to develop large-scale solar projects. In 2008, the state's first solar cell manufacturing plant, Suniva, opened in Gwinnett County and plans to create 100 jobs by the end of 2009.

- Require utilities to provide their customers with information about the electricity they are supplying, such as the utility's fuel mix percentages and emissions statistics.
- Expand incentives for renewable energy, such as the Clean Energy Tax Credit passed in the 2008 General Assembly.
- Support statewide certification courses for residential and commercial solar and wind installers.
- Support the conversion of existing coal plants, such as Georgia Power's plans to convert Plant Mitchell near Albany to 100% biomass, to utilize Georgia biomass to produce electricity – provided sustainability criteria are in place.
- Support the development of a statewide Climate Action Plan.



## Fast Facts

According to the U.S. Nuclear Regulatory Commission, Plant Hatch withdraws an average of 57 million gallons per day from the Altamaha River and actually “consumes” 33 million gallons per day that is lost primarily as water vapor.

According to the National Renewable Energy Laboratory, each kilowatt hour (kWh) of electricity production in Georgia consumes 1.65 gallons of water. And, in 2007, Georgia’s Drought Response Unified Command stated that the average Georgia household’s electricity use is 1,148 kWh per month, consuming 1,894 gallons of water.

The proposed Plant Vogtle nuclear reactors are estimated to require withdrawal of 55-88 million gallons of water per day from the Savannah River with 50-75% of that lost as steam, according to Southern Company’s permit application. USGS figures show average per capita daily water use in Georgia is 75 gallons from surface and ground water sources. At these rates, the two existing and two proposed reactors at Plant Vogtle would consume enough water to otherwise supply 1.4 to 2.3 million Georgians.

For More Information:  
Southern Alliance for Clean Energy,  
Sara Barczak

# Make The Water-Energy Connection

## What’s at Stake?

In 2007, Georgia experienced one of its worst droughts in over a century. According to the University of Georgia’s Center for Agribusiness and Economic Development, the drought cost \$1.3 billion in economic damage and prompted crisis responses across the region. It also revealed a vulnerable electricity system. Power plants in the region, such as the Tennessee Valley Authority’s Brown’s Ferry nuclear plant along the Tennessee River, were forced to reduce electricity production due to high water temperatures and reduced river flows. Energy choices made today that do not take stressed water resources into consideration harm Georgia’s ability to cope in the future.

## Challenges

Georgia’s power sector is the largest water user in the state, followed closely by agriculture, according to a study by the U.S. Geological Survey (USGS). Most conventional power plants, especially coal and nuclear plants, must have large amounts of water readily available to create and condense steam to power turbines, and not all of the water is returned. Some plants return less than half of the water they use. Most conventional power plants degrade water quality and reduce water availability. These utility plants compete for water with other important uses vital to our state’s economy and quality of life: drinking water supply, agriculture, industry, fishing, and recreational opportunities. Less water used for conventional power generation in Georgia means more water available for other crucial needs.

Georgia faces proposals to build more coal and nuclear plants even though less water-intensive, affordable energy solutions exist. When comparing types of energy generation, reports from the U.S. Department of Energy (DOE) show that nuclear power has higher rates of both water withdrawal and consumption than coal and natural gas and far more than renewable energy sources such as wind, solar, and biomass. For example, according to the Department of Energy’s National Renewable Energy Laboratory, developing just 1000 megawatts of wind in Georgia would save 1628 million gallons of water per year. Water saving cooling technologies, such as dry cooling, are available but no existing or proposed power plants in Georgia are pursuing them.

A 2006 state study by the Georgia Environmental Facilities Authority showed that reducing electricity use through energy efficiency measures has the immediate impact of reducing water required by power plants. Individual actions also help but have a smaller impact. EnergyStar appliances use less energy and water. EnergyStar washing machines use 50% less energy per load and 30-50% less water than a typical model. This saves water and consumers money.

## Next Steps

State legislators and the Public Service Commission (PSC) should:

- Adopt energy policies that do not add unnecessary burdens on our stressed water resources;
- Require water-saving energy measures, such as energy efficiency and conservation and advance less water-intensive electricity supplies, such as biomass, wind and solar;
- Reject proposed utility plans to build more water-intensive coal and nuclear plants;
- Foster well-coordinated and comprehensive state energy and water planning;
- Support less water intensive technologies for new power plants, such as dry cooling; and
- Renew the EnergyStar and WaterSense Sales Tax Holiday.



## Fast Facts

Estimated number of annual work loss days in Georgia due to illness associated with diesel soot: 51,808

Estimated number of annual respiratory symptoms in Georgia children due to diesel pollution: 13,316

Number of Georgia households with someone living with asthma: 1 in 6

For More Information:  
Southern Alliance for Clean Energy,  
Anne Blair

Mothers & Others for Clean Air  
at the Georgia Conservancy,  
Rebecca Watts-Hull

# Help Georgia Attain Healthy Air by Cleaning Up Dirty Diesel Engines

## What's at Stake?

Diesel engines are known for their durability, reliability and fuel economy. They also produce toxic exhaust that threatens our health and environment. Diesel engines, both on-road (trucks, buses) and off-road vehicles (construction equipment, generators, trains), emit large amounts of particulate matter, smog-forming nitrogen oxides, carbon dioxide, carbon monoxide, black carbon and more than 40 hazardous air pollutants.

Diesel exhaust contributes to Atlanta's failure to meet federal standards for ozone and fine particle pollution. With a growing number of mid-sized Georgia cities in danger of failing a new ozone standard, diesel exhaust could also push them into "non-attainment." Moreover, because the particles and toxins in diesel exhaust are known to cause cancer and contribute to heart and lung diseases, all people – especially children – exposed to diesel exhaust from our roadways, rail yards and construction sites are at risk, regardless of their town or city's overall air quality.

## Challenges

Over time, new diesel engines will get cleaner. Federal rules require that within the next five years all new diesel engines cut their soot emissions by 90% from today's new engine levels. EPA officials estimate that by 2030, the new rules will prevent 8,300 premature deaths, 9,500 hospital visits, and 360,000 asthma attacks. However, due to very slow fleet turnover and the downturn in the economy, older and much dirtier diesel engines (legacy engines) will be on the road for at least 20-30 more years.

## Next Steps

The good news is that technology exists today to address the problem of diesel exhaust. Devices that can significantly reduce diesel soot, including diesel oxidation catalysts and particulate filters, are readily available and highly effective. However, fleet owners need help paying for this equipment and its installation. The Georgia General Assembly provided \$250,000 in the FY09 General Budget to serve as the state match for \$1 million in federal funding for school bus retrofit devices, giving thousands of children a healthier ride to school. This appropriation was a good start. Georgia's leaders need to help reduce air pollution in Georgia and protect citizens' health by taking additional steps to clean up existing diesel engines:

- Pass a resolution creating a Joint Study Committee to document the extent of the dirty diesel challenge in Georgia.
- Establish a permanent state fund to promote retrofits of diesel engines and the use of ultra-low sulfur diesel fuel in off-road and on-road diesel vehicles.
- Require the use of clean diesel engines (repowered or retrofitted with pollution control devices) and the use of either ultra-low sulfur or biodiesel on all state construction projects.
- Support the Georgia Environmental Protection Division's proposed statewide idling reduction rule to reduce idling from all diesel vehicles.



## Fast Facts

DOE estimates that, if the process starts now, leasing for new offshore leases will not begin until 2012 and production is not likely before 2017. Total domestic production of crude oil with access to the outer continental shelf (OCS) is projected to be only 1.6 percent higher from 2012 to 2030 than with no access.

Total domestic production of crude oil with OCS access is projected to be only 5.6 million barrels per day in 2030 and an average wellhead price decrease of \$0.13 than if no access was granted, according to the DOE.

Lower 48 natural gas production with OCS access is projected to be only 590 billion cubic feet higher in 2030 than if no access was granted, according to the DOE.

While technology for preventing oil spills has improved, there were still 187 large offshore oil spills recorded in the Gulf of Mexico between 1985 and 2005.

For More Information:  
Georgia Conservancy,  
Patty McIntosh

Center for a Sustainable Coast,  
David Kyler

Environment Georgia,  
Jennette Gayer

# Offshore Drilling is not the Answer

## What's At Stake?

Record energy prices combined with national security concern about foreign oil supplies have renewed interest in offshore oil and gas leasing along the Atlantic coast. In 2008, both the Bush Administration and Congress essentially ended federal moratoria on oil and gas leasing that have existed since 1982. Georgia and its neighboring states now may authorize the federal government to lease tracts off their respective coasts.

Georgia's near-shore coastal waters contain some of the most economically valuable and ecologically diverse ecosystems on the planet. Tourism brings more than 45 million visitors to our state annually, generating more than \$25 billion dollars for our economy. Many of Georgia's attractions lie in its natural features including our barrier islands, our wetlands and our coastal waters. We should not risk our state's greatest assets for an activity that will do little to secure our energy independence.

## Challenges

In its 2007 Annual Energy Outlook, the U.S. Department of Energy (DOE) estimates about 18 billion barrels of oil are available in off-shore regions currently off-limits for oil exploration and development. That's less than what than the amount of oil the U.S. imports in two days. Further, if these regions were opened, they wouldn't begin producing oil for about a decade and would have no significant effect on the price of fuel until about 2030 – over 20 years from now.

While new oil platforms would likely be located far enough offshore to be undetectable to the human eye, environmental impact would still be substantial. First, underwater oil drilling operations inject pollutants directly into the marine environment. Second, offshore operations will depend upon land-side facilities for support, supplies, and storage, creating a new industrial use at the marsh edge and competing with state efforts to acquire the few remaining coastal sites for tourism and recreation. Third, oil spills – whether resulting from accidents, negligence or storms at the platform, at inland storage or elsewhere – cause serious environmental damage.

Estimated domestic offshore oil reserves are 3% of annual global sales, but the U.S. accounts for over 25% of annual global oil consumption. Enhanced energy conservation can do more, faster to affect the global oil market picture than production from the small amount of Atlantic coast offshore resources.

## Next Steps

We should not get distracted from our pursuit of alternative sources of energy and energy conservation. Georgia legislators should continue to resist approval of oil and gas leasing off its coast, given its likely disruption of other aspects of the state's economy, such as tourism and fishing.

Instead, we should move ahead with common sense policies to create a new energy economy, such as raising fuel efficiency standards, reducing speed limits, creating incentives for fuel-efficient cars, investing in research and development for plug-in hybrids, improving building efficiency and setting strong renewable energy goals.



## Fast Facts

In 2008, Georgia DNR issued fish consumption advisories due to mercury on 23 public lakes 500 acres or larger and 49 different creeks and rivers as well as one advisory for ocean waters.

In 2007, Georgia Power's Plant Scherer, located in Monroe County, emitted more than 1500 pounds of mercury, making it the 4th largest power plant mercury emitter in the country.

In 2003, Olin Corp's chlor-alkali plant released more than 700 pounds of mercury into the air, making it the third largest source of mercury emissions in Georgia.

If constructed as proposed near Sandersville, coal Plant Washington will be among the top 10 industrial sources of mercury in Georgia.

Coastal plain rivers and streams contain higher levels of organic materials, which enhance the mobility of mercury in the environment, thus making it more likely to enter the food chain.

For More Information:  
Savannah Riverkeeper,  
Frank Carl

Ogeechee-Canoochee Riverkeeper,  
Chandra Brown

Environment Georgia,  
Jennette Gayer

# Reduce Levels of Toxic Mercury in Georgia's Fish and Waters

## What's at Stake?

Each year power plants and chemical facilities create thousands of pounds of mercury pollution, which makes its way into our homes and bodies in fish. In 2008, fish consumption advisories were issued in every major river basin in Georgia, the vast majority because the fish tested contained levels of toxic mercury that present a health hazard if regularly consumed.

Subsistence and sport fishermen who eat their catch are at particularly high risk of mercury poisoning if they fish regularly in contaminated waters. Mercury can affect the immune system, alter genetic and enzyme systems, and damage the nervous system, including coordination and senses of touch, taste, and sight.

Developing embryos are particularly sensitive to the permanent effects of mercury and the U.S. Environmental Protection Agency (EPA) has estimated that one in six women of childbearing age in Georgia has blood mercury levels that can harm a fetus.

## Challenges

Two of the biggest sources of mercury pollution are chlorine chemical plants and coal-fired power plants. Coal is naturally contaminated with mercury and when burned to generate electricity, mercury is released into the air through the smokestacks. Georgia Power has agreed to eliminate the bulk of this mercury pollution with the installation of pollution-control devices. However, they are not currently planning on equipping their smaller plants with this technology. Also, two new coal plants have been proposed to date in Georgia – one in Washington County and one in Early County. If constructed, both will add more toxic mercury to our environment.

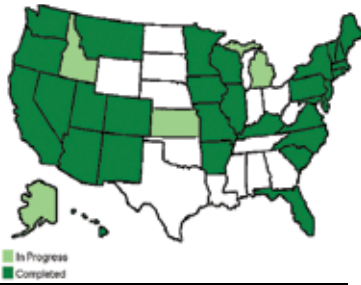
Chlor-alkali plants use mercury to convert salt to chlorine gas and lye, which is used in soaps and detergents, in plastics, and in the paper-making process. More modern chlor-alkali plants use a cleaner, mercury-free technology, but four U.S chlor-alkali plants continue to use mercury, including the Olin Corp chlor-alkali plant in Augusta.

At any given time, each of these plants has an average of 200 tons of mercury on site. In virtually every year since records have been kept, chlor-alkali plants have "lost" large amounts of mercury in the manufacturing process. These plants cannot account for where the lost mercury goes. On an annual basis, the loss at Olin's plant is estimated to be more than 500 pounds of mercury. Analysis by the Savannah Riverkeeper has indicated that the channel leading from this plant to the Savannah River is contaminated with levels of mercury requiring hazardous waste clean-up measures.

## Next Steps

Mercury poisoning is a serious problem, but the solutions are fairly simple. In the short term, we must urge Georgians to watch their consumption of high-mercury fish. In the longer term, we need mercury polluters to switch to pollution-cutting technologies.

- Continue to fund and support Georgia's extensive fish monitoring program.
- Place signs along rivers and lakes that contain the fish consumption advisories.
- Require mercury emission reductions at smaller power plants or convert these plants to run on clean alternative energy sources – similar to Georgia Power's conversion of Plant Mitchell near Albany.
- Place a moratorium on building new coal-fired power plants.
- Phase out the production of chlorine by mercury cell technology in Georgia.



## Fast Facts

Because burning coal is the predominant source of Georgia's energy, most of our greenhouse gas pollution comes from the electric utility sector. In 2006, Georgia Power's Plant Scherer was ranked as the single largest stationary source of carbon dioxide emissions in the United States, emitting 27 million tons of carbon per year.

Poorly planned development—and the resulting motor vehicle emissions from cars and trucks—is another leading cause of greenhouse gas pollution in Georgia. According to the Energy Information Administration, in 2005, Georgia ranked 10th in the nation for petroleum consumption per capita.

Fifty separate policy recommendations in Florida's climate action plan pave the way for the state to realize \$28 billion in net economic savings and reduce greenhouse gas emissions by 33% below 1990 levels between now and 2025.

For More Information:  
Georgia Conservancy,  
Patty McIntosh

Center for a Sustainable Coast,  
David Kyler

Southern Alliance for Clean Energy,  
Mary Carr

# Develop a State Plan to Address Climate Change

## What's at Stake?

Overwhelming scientific evidence exists that demonstrates that the release of carbon dioxide from the burning of fossil fuels by humans is the primary driver behind climate change. While some climate fluctuation has been recorded throughout history, the recent warming trend is unprecedented.

Climate change in Georgia may place coastal infrastructure, some state industries, and growing coastal developments at risk. Specifically, Georgia's 2006 State Energy Strategy, created by Governor Perdue's Energy Policy Council recognizes that, "Climate change could affect the economy through rising shoreline levels and resulting in damage to coastal development, disruption of growing seasons for agriculture and forestry, and reduced tourist trade."

Georgia's environment and economy stand to be affected by coastal flooding, shoreline erosion, saltwater intrusion and storm hazards caused by rising sea levels and higher ocean temperature. Warming temperatures can also increase the frequency of drought, alter growing seasons and wildlife migration patterns and wipe out prized trout fishing areas. Georgians' health will be jeopardized by added smog-related respiratory disorders, heat-related illnesses and scarce potable water supplies if warming trends continue.

## Challenges

Despite these concerns, Georgia is the only Eastern Seaboard state that has failed to take initiative to address climate change. Some 38 states have adopted or are developing climate action plans addressing steps including land-use and transportation, state purchasing, and energy-efficiency in public buildings and transportation. Many climate action plans map out the future of new technologies and renewable and efficient energy, creating opportunities for new jobs in sustainable, long-term markets. Climate action plans also advance public health and natural resource benefits through water conservation and improved water and air quality.

The comprehensive, integrated approach needed to effectively address climate change is a difficult undertaking, both politically and administratively. This challenge is made greater by current state budgeting constraints.

Bi-partisan coordination among state legislators and local, state and federal agencies is crucial to implementation of a Climate Action Plan. Energy and transportation interests, historically at odds with energy conservation and efficiency, renewable energy sources, and mass transit must be committed to the plan to ensure its success.

## Next Steps

Create a Joint Legislative Study Committee to draft a Climate Action Plan for Georgia to hedge against risks climate change poses to industry and coastal infrastructure. Coordinate the plan with the 2006 State Energy Strategy. The plan should include specific policy actions to be taken by state leaders and agencies as well as quantifiable outcomes.



## Fast Facts

Southern Company's Plant Vogtle, on the Savannah River, was initially proposed to have four units, and was projected to cost \$660 million in the mid-1970's. When it was completed 15 years later, two units cost almost \$9 billion. The cost increased to 27 times the initial estimate.

Estimates for the cost of two new reactor power units at Plant Vogtle, as late as 2006, were as low as \$3 billion. Today the estimated cost is \$14 billion. Before any construction work has been completed, estimated costs increased almost 5 times in only two years. If there are no delays, the two new units should enter service in 2016 and 2017, a full eight years from now.

In December 2007, Florida Power and Light estimated the cost of two new nuclear units at its Turkey Point Power Plant at \$24 billion.

The U.S. Congressional Budget Office, in May 2008, reported that the actual costs of building the last 75 nuclear units in the US increased by 300% over their estimated costs. The initial estimate was \$45.2 billion and the final bill was \$144.6 billion (1990 dollars).

For More Information:  
Sierra Club, Georgia Chapter,  
Neill Herring

# Use Power Produced in Georgia for Georgians

## What's at Stake?

Georgia's state government has been reluctant to implement policies that address the fact of climate change. The impacts caused by that change may already be apparent in contemporary weather patterns of drought cycles punctuated by stormy weather. As the impacts grow, from rising sea levels to stronger tropical storms to even more prolonged drought, the costs to the state and its residents are rising. At the same time, comprehensive federal policies designed to reduce human activities that worsen climate change are going to be implemented in Georgia, even if our state government does nothing.

One fact is common among all responses and proposed responses to climate change: all are aimed at reducing atmospheric carbon accumulation, the human activity most widely credited with causing the planet to grow warmer. A bewildering variety of ways to reduce the amount of carbon humans put in the atmosphere have been proposed. This carbon is largely the product of the combustion of fossil fuels, which means that the carbon is being taken from its repository in the earth, used in part for energy, and then allowed to become a greenhouse gas in the air.

Some plans concentrate on substituting fuels that emit less atmospheric carbon than others. This explains the relative advantage of natural gas. Others seek to use non-fossil fuels, hence the emphasis on cellulosic ethanol and bio-diesel. Still another strategy would substitute other sources of energy for carbon-based fuels, and wind, biomass and solar power seem to be the favored technologies.

A separate approach to reducing carbon that has been successful in some places, but in which Georgia has been slow to action, is to simply use less electricity. California has cut its use of electricity by 30% over the last 20 years, and has still accommodated record economic and population growth by using its savings to meet those needs.

## Challenges

Georgia's carbon footprint, the amount of carbon the state emits from smokestacks, tailpipes and forest fires, is not entirely due to meeting Georgia's energy needs. Since 1980, Georgia has produced electricity from burning coal that has served users on a firm or guaranteed basis in other states, predominately Florida.

Georgia can freeze its current carbon footprint, and perhaps even minimize it over the short term by simply ending the practice of supplying firm electric power to customers outside Georgia. The power suppliers in those states are perfectly capable of meeting their customers' needs and Georgia has sacrificed air and water quality for them for 30 years already.

## Next Steps

Plant Scherer, a coal plant near Macon, is owned by Georgia utilities except for Unit 4, which is owned by Florida Power Company and Jacksonville Electric Authority. Georgia utilities need to buy that plant before they build any expensive new coal or nuclear plants. Georgia Power has long term firm power sales contracts with out of state utilities. It could be in our state's best interest to retire those contracts if Georgians need the power.



## Fast Facts

On average, states contribute 12% of the capital funds and 23% of the operating funds for transit networks. Georgia provided 1% of the capital funds and 0% of MARTA's operating funds in 2006.

85% of metro Atlanta residents believe that increased investment in public transportation would strengthen the economy and reduce traffic.

In its first year of operation, Charlotte's \$500 million light rail line has generated \$1.8 billion in new and proposed development, added tens of millions of dollars in new property tax revenue, and exceeded ridership estimates by 186%.

For More Information:  
Mothers & Others for Clean Air at  
the Georgia Conservancy,  
Rebecca Watts Hull

Sierra Club, Georgia Chapter,  
Mark Woodall or Neill Herring

Southern Environmental Law Center,  
Brian Gist

Citizens for Progressive Transit,  
Lee Biola

# Fund Transportation and Transit for a Brighter Economic Future

## What's at Stake?

Atlanta's sprawl and gridlock are legendary. Air pollution is becoming a statewide problem. And maintenance of the state's existing transportation infrastructure is uncertain as the Georgia Department of Transportation (DOT) faces unprecedented funding shortfalls. All of these problems are the result of the way Georgia approaches and funds its transportation network. Inadequate investment in public transportation and an auto-centric approach to transportation threaten air quality, contribute to obesity, induce sprawl, lower quality of life and impair Georgia's ability to compete with other large metropolitan areas for new businesses.

Air pollution is linked to serious health problems including respiratory and heart diseases, cancer, premature death, and reduced lung function growth in children. And while it is difficult to estimate all the economic costs of air pollution, many estimates put that figure in the billions. At the same time, the state's attempts to build its way out of congestion have failed to clear the roads. Georgia's business leaders worry that our poor air quality and clogged roadways are already deterring leading corporations and organizations looking to relocate in the Southeast from considering Georgia for their new home.

## Challenges

In March 2008, the U.S. Environmental Protection Agency strengthened the federal standard for ozone pollution. The Augusta, Athens, Columbus and Macon regions are likely to join the greater metro Atlanta area in failing to attain this new standard. The air quality improvement due to clean fuels and vehicles has been offset by the increasing number of vehicles and the increasing distances people drive. As many of the easy-to-implement emission controls are already in place, it is highly unlikely that most of Georgia's larger cities will be able to meet the new ozone standard without a different approach to transportation and greater investment in our public transportation infrastructure.

Addressing Georgia's transportation problem will require creative and varied mechanisms for expanding the state's investment in public transportation, offering alternatives to car travel both between and within towns and cities.

## Next Steps

- The legislature should remove limitations on how and where transportation funds can be spent to ensure that existing transportation dollars are used most effectively.
- During the 2008 Session, the General Assembly came within a few votes of passing a Constitutional Amendment that would have dedicated one percent of the General Sales Tax on Motor Fuel to "all transportation purposes" and would have allowed local governments to work together to fund joint transportation projects, including their operating costs, through a new locally levied Transportation Special Purpose Local Option Sales Taxes (TSPLOST). Legislators need to pass these measures in 2009.
- The legislature should pass legislation that would give MARTA greater flexibility in the use of its tax revenue to enable the system to enhance services and attract new riders.



## Fast Facts

In Georgia, 108 acres of forest and farmland are converted to impervious surfaces every day, which adds up to more than 39,000 acres annually.

In the Atlanta region, approximately 54 acres of trees are lost to asphalt and concrete each day.

Metro Atlanta has higher asthma rates than the national average because of our poor air quality.

Road-based emissions, exacerbated by long commutes, are no longer just an Atlanta problem. They are now contributing to air quality problems in many mid-sized Georgia cities including Athens, Columbus, Macon and Augusta.

For More Information:  
Georgia Conservancy,  
Saskia Benjamin

# Promote Sustainable Growth Management

## What's at Stake?

Georgia is a state of remarkable natural diversity. Fresh water, clean air, and vast green and open spaces helped attract the families and businesses that have spurred economic development, making Georgia one of the fastest growing states in the country. Maintaining our position as an economic leader will require Georgians to adopt more sustainable development patterns. We must make sure that growth is accommodated, but not at the expense of the environment.

Georgia's rapid growth has increased the demand to develop more of the state's dwindling natural areas. Sprawling, decentralized development threatens our quality of life. It is also more expensive for local governments to serve and has a burdensome effect on the environment. Many of Georgia's most serious environmental problems – air quality, water quality, and loss of natural habitat – are a direct result of improper land use.

Sustainable growth management is not about stopping development. Instead it is about identifying natural, historic, and cultural resources worthy of protection and directing development away from these areas to ensure a responsible balance between the protection of our natural systems – air, land, and water – and the development needed to support population growth and the economy.

## Challenges

The results of poor, at best uneven, land planning are evident in our water shortages, poor air quality, traffic congestion, loss of natural habitat, and our land conversion rate. Hurdles to proper growth management in Georgia include:

- Lack of incentives and disincentives that promote balanced growth practices;
- Inconsistent zoning and weak land use regulations, which makes it difficult for developers to “do the right thing;”
- A distinct urban/rural political divide (“two Georgias”) and the misperception that growth management strategies are at odds with economic development goals;
- No dedicated source of funding for land conservation and for transit; and
- Lack of a requirement plan for land use and transportation simultaneously.

## Next Steps

- Integrate transportation investments with land use in regional centers and corridors, especially in metro Atlanta. Planning for transportation and land use simultaneously will improve traffic congestion thereby having a positive effect on commute times and air quality.
- Increase the variety of housing choices by promoting the removal of barriers that restrict the market and creating incentives to encourage more development options. Housing should be encouraged near jobs, transit, and services to increase access and decrease the need to travel by car.
- Create and/or educate local governments about the techniques and tools available to them for managing growth. Regulatory barriers to smart growth should be eliminated.
- Encourage the development of regional and state growth management policy. Coordinate local policies and regulations to support regional policies.



## Fast Facts

Georgia has approximately 160,000 acres of highway rights of way to improve for safety, health, and scenic beauty.

The DOT Roadside Beautification and Enhancement Fund has more than \$3 million available for rights of way improvement.

Granting exclusive use of land and vegetation management privileges on rights of way adjacent to 9500 billboards throughout Georgia is diminishing the scenic beauty of our state.

Digital billboards are a real threat to Georgia highway safety because of driver distraction and inadequate safeguards.

For More Information:  
Campaign for Safe and Scenic Highways,  
Bob Hydrick

The Garden Club of Georgia,  
Mary Lovings

Scenic Georgia,  
Wilton Rooks

Trees Columbus,  
Dorothy McDaniel

# Make Georgia's Highways Safer and More Scenic

## What's at Stake?

Billboards threaten health, safety and scenic beauty along Georgia highways. The billboard industry has continually sought expanded privileges to destroy trees near their signs along nearly 160,000 acres of highway rights of way in Georgia, making the state less scenic, increasing air pollution and threatening water quality. Beneficial trees belonging to Georgians are removed without regard to the public's interests or adequate compensation under existing laws and regulations.

Further, highways are made less safe by digital billboards - brightly lit, rapidly changing message signs – that increase visual clutter and driver distraction.

At stake is the future of the state's highway system. Will it become a wasteland of advertising signs, barren of trees and vegetation, and more dangerous for travelers? Or will Georgia's leaders resolve to make highways safer and more scenic by demanding responsible management of rights of way?

## Challenges

This threat needs fighting on several fronts. The Georgia Legislature should continue to refuse any expanded tree-cutting privileges and pass legislation to further define Scenic Areas and establish Conservation Areas in which billboards will be prohibited.

Involved citizens are working with Department of Transportation (DOT) as it reviews changes to billboard regulations, particularly those about digital billboards. The following obstacles need to be overcome:

- Power of billboard conglomerates that spend tens of thousands of dollars on lobbyists, political contributions, and other rewards in return for political support of private use of public rights of way ahead of public interests.
- Haste in permitting the erection and operation of digital billboards despite potential threats digital billboards pose to highway safety.
- Lack of understanding among some elected leaders about health and safety consequences of excessive outdoor advertising. These ill effects include increased auto crash rates and damage to land, air and water resulting from tree-cutting and construction. This degradation of Georgia's scenic beauty sacrifices its restorative value to quality of life.

## Next Steps

- Continue to work with DOT staff and board to strengthen billboard regulations, especially those relating to digital billboards, and to seek a moratorium on additional digital boards until reliable studies are conducted that inform safe permitting requirements.
- Establish Conservation Areas on state rights of way and expand the definition of Scenic Areas along the rights of way to prohibit erection of billboards in such areas through legislation.
- Defeat any attempt under any guise to grant expanded tree-cutting privileges on rights of way and to strengthen the DOT Commissioner's discretion in granting vegetation management permits under existing laws and regulations.
- Ensure that the balance of the DOT Roadside Beautification and Enhancement Funds be spent to improve both the safety and scenic aspects of Georgia's highway rights of way.
- Increase designated Scenic Byway segments throughout Georgia.



## Fast Facts

Jekyll Island State Park is legally required to generate income to support all park operations, so income generated by visitation is a primary concern.

There is a master plan for the island but it lacks details and there is insufficient public involvement in the planning process.

Private developers of hotels and other businesses on Jekyll Island pay relatively low lease fees compared with developers of facilities located in national parks.

Visitors to Jekyll Island place high priority on the state park's tranquility and environmental appeal, so the public is very sensitive about development choices.

For More Information:  
Initiative to Protect Jekyll Island,  
David Egan

Center for a Sustainable Coast,  
David Kyler

# Responsibly Manage Jekyll Island

## What's at Stake?

Jekyll Island State Park boasts wide, flat beaches on its eastern shore and is one of only four Georgia barrier islands easily accessed by car. Yet the island has suffered from a pattern of declining amenities, most notably the privately built and managed hotels resulting in suppressed park visitation and reduced revenues of the Jekyll Island Authority (JIA), the state agency responsible for managing the park and for ensuring its financial self-sustainability.

## Challenges

To counter this trend, JIA has launched a park revitalization effort. Unfortunately, in its master planning, the authority has not consulted with experts in public land planning and resource management before moving forward with park redevelopment. Instead, JIA forged ahead without determining the reasons for the decline in privately operated amenities; without establishing development objectives for revamping the park; and, most importantly, without adequate consideration of the impacts of development on the park's traditional character and natural assets.

Lost upon JIA is that effective public land planning must be an open and collaborative process built upon a comprehensive evaluation of all relevant conditions and trends. From this open process comes a clear statement of mission and goals of management, a draft plan that meets criteria for sustainable land management, clear statements of management options for achieving them, guidelines to govern implementation of the management plan; and strategies for on-going evaluation and monitoring.

JIA's neglect of established public land planning principles is jeopardizing the future of "the people's park." Steps must be taken to secure optimum park stewardship by JIA.

The political appointees who manage Jekyll Island exercise their authority with little accountability to state legislators or the general public. This insularity invites the risk of both ineffectiveness and conflicts of interests which threaten the public interest.

Adopting a coherent, accountable, and transparent process for park management is likely to be perceived as a threat by those who now control decisions. Politically connected private entities with a vested interest in Jekyll's redevelopment can also be expected to resist new requirements.

## Next Steps

- Establish an independent blue ribbon panel that provides expertise the Jekyll Island Legislative Oversight Committee currently lacks. The panel would consist of specialists in public land planning and resource management, hospitality, public finance, recreation, tourism, coastal ecology, and sustainable development.
- Charge the panel with three tasks:
  1. Evaluate JIA's revitalization plan, including its methodology, assumptions, goals, and forecast of the long-term impacts of development on Jekyll Island
  2. Formulate an adaptive management program that would include measurable objectives, performance standards, and annual monitoring and assessment of the revitalization effort and park stewardship by JIA.
  3. Recommend legislation that would help ensure Jekyll's revitalization while meeting public accessibility and affordability objectives.
- Build a coalition to promote the panel's findings and recommendations.



## Fast Facts

Georgia's valuable and naturally productive tidal marshes are only partially protected by the state's Coastal Marshlands Protection Act.

Services provided by marshes are estimated to be worth more than \$14,000 an acre annually, equivalent to \$5.6 billion a year for Georgia's 400,000 acres of marsh.

The value of coastal development at risk from flooding and storm surge has climbed by many billions of dollars in the past several decades.

Marshes provide safeguards important to owners of this valuable coastal property, but these natural buffers are under increasing threat.

For More Information:  
Center for a Sustainable Coast,  
David Kyler

Southern Environmental Law Center,  
Bill Sapp

Altamaha Riverkeeper,  
Deborah Sheppard

Ogeechee-Canoochee Riverkeeper,  
Chandra Brown

Satilla Riverkeeper,  
Gordon Rogers

Georgia Conservancy,  
Patty McIntosh or Will Berson

Sierra Club, Georgia Chapter,  
Neill Herring

# Improve Tidal Marsh Protection

## What's at Stake?

Georgia's valuable and naturally productive tidal marshes are only partially protected by the state's Coastal Marshlands Protection Act (CMPA). Marshes provide important services to Georgians, including water filtration, protection of property from flooding, and fishery habitat. These benefits are estimated to be worth more than \$14,000 an acre annually, equivalent to \$5.6 billion a year for Georgia's 400,000 acres of marsh.

The health of marshes is under threat from several trends not addressed by the Marsh Act. First, improperly regulated coastal development contributes to increased stormwater runoff and erosion of upland areas. Drainage ditches and tidal creeks carry eroded sediments and increased freshwater into marshes where they damage marsh vegetation.

Second, rising sea level and extreme weather trends linked to climate change impose unprecedented stresses that may reduce the area and productivity of tidal marshes. As sea elevation rises, the ocean's edge of Georgia's marsh will move westward, but the landward boundary is often constrained by highways, buildings, and other hard structures. Unless landward constraints are removed or open areas allowing marsh migration are provided, some marshlands and the services they provide will be lost. Many of these same limiting features also present increasing vulnerability to tropical storm damage as sea level rises; their removal may well prevent threats to neighboring properties.

Likewise, with extended periods of drought caused by weather extremes, tidal marshes will be deprived of freshwater flowing downstream, which is essential to the proper salinity balance in inter-tidal areas. Such destructive impacts are worsened by extensive ditching of timberlands throughout the coastal plain of Georgia, which severely compromises the ability of freshwater wetlands to replenish water in tidal areas during droughts.

## Challenges

Any attempts to improve protection of coastal marshes are likely to be opposed by many developers because they will be seen as restricting the profitability of making land use more intensive. The perceived economic benefit of development will be used as the basis for objecting to government controls to prevent marsh loss. In reality, the economic benefits of marshes far exceed any such constraints on profit – it is a question of long term public and investor benefit versus speculative short term private gain.

## Next Steps

- Legislators should create a study committee to evaluate stormwater impacts to marsh resources and the coast and recommend a course of action.
- Provide the Department of Natural Resources with statutory authority and the duty to analyze all of the potential environmental impacts any project for which a CMPA permit has been sought, including upland impacts.
- Create state programs to offer targeted incentives for property owners that will allow recovery of freshwater wetlands functions in coastal plain locations to mitigate the drought and flood effects on the coastal salt marsh. Incentives could be in the form of tax credits, tax deferrals, and/or technical assistance in land management.
- Adopt a comprehensive state plan to reduce tropical storm vulnerability and to accommodate marsh migration. The plan could be funded by surcharges on property and casualty insurance premiums and through tax incentives for property owners. Protective criteria for state projects/permits related to transportation, energy and water utility infrastructure need to be devised and implemented.



## Fast Facts

Dredging the harbor to 48 feet would result in the loss of 10 times as much freshwater wetland as dredging to 45 feet, even with mitigation, according to the U.S. Fish and Wildlife Service.

Dredging to 48 feet is projected to cost \$500 million. Georgia taxpayers will have to pay 35% of dredging costs up to 45 feet and 50% of dredging costs from 45 to 48 feet.

One half of freshwater wetlands in the Savannah National Wildlife Refuge have been destroyed by past deepening of the Savannah harbor and channel, according to the U.S. FWS.

Due to past harbor development, production of striped bass eggs in the Savannah River estuary has declined by about 95 percent since 1977. Federal and state natural resource agencies are working to restore this fishery.

For More Information:  
Center for a Sustainable Coast,  
David Kyler

Sierra Club, Georgia Chapter,  
Coastal Group, Steve Willis

Georgia Conservancy,  
Will Berson

# Justify the Need for Savannah Harbor Deepening

## What's at Stake?

The proposal to dredge the 30-mile-long Port of Savannah channel from 42 to 48 feet in depth is extremely controversial. To reach a responsible position on the harbor project, other relevant issues must be considered concurrently such as:

- inter-basin transfers to Atlanta and other cities;
- doubling of the water demands of the Vogtle Nuclear site;
- construction of the Jasper Port;
- current declines in world shipping; and
- increased residential and industrial water demands.

Harbor deepening must not be approved until the issues of economic development, water management, shipping congestion and public risk have all been addressed comprehensively in good faith. The orderly, scientific, and competent management of the Savannah River Basin is at stake. Consequently, the river's water quality and quantity, the health of the basin's ecosystems, and the safety and welfare of the population living in and dependent upon the Savannah River Basin hang in this balance.

## Challenges

Some interests may advocate funding the harbor deepening without comprehensive analysis being completed by the U.S. Army Corps of Engineers or reviewed by the public. Such 'blind faith' support of major projects is not only environmentally reckless, but it's fiscally irresponsible. At a time when public funds must be spent most judiciously, taxpayers cannot afford such risky speculative ventures.

The Corps was scheduled to release a draft environmental impact statement in October 2008, but meeting minutes show that Corps economists disagreed so boisterously over engineering, environment and economics that an internal review of the document was ordered before public release, which could take 12 months.

## Next Steps

The Georgia Legislature must ensure that no taxpayer dollars are allocated for dredging and no major new projects in the Savannah River Basin are granted state permits until exhaustive environmental and economic analyses have been completed and reviewed.



## Fast Facts

Georgia ranks tenth of all fifty states for the most active municipal landfills.

According to Georgia DCA, nearly 2.6 million tons - about 40% - of MSW Georgians throw away each year are common recyclable materials with reuse markets inside the state.

In 2004, Georgia residents and businesses spent an estimated \$90 million to dispose of common recyclable materials. Based on recycling market values, if these items were recycled, the resulting raw materials would be worth more than \$250 million.

More than ten percent of the waste - almost two million tons - disposed of in Georgia's landfills was imported from other states in FY07. The vast majority, 1.6 million tons of waste, went to MSW landfills.

In 2008, tipping fees posted at the gate were \$35.15 per ton of waste for MSW landfills and \$23.72 for C&D landfills in Georgia - half as much as tipping fees in some Northeastern and Mid-Atlantic states.

For More Information:  
Sierra Club, Georgia Chapter,  
Mark Woodall

# Reduce and Better Manage Solid Waste

## What's at Stake?

Waste discarded by Georgia's industrial, commercial and residential sectors that is not reused or recycled is deposited in landfills. The low cost of waste disposal in our state encourages the inefficient use of landfill capacity, burdens taxpayers with clean-up costs and leads to the poor use of our natural resources.

Landfills pose a threat to public health and our environment as chemicals and microbes are released as the waste is decomposed. These chemicals can contaminate the air, water and soil. The U.S. Environmental Protection Agency has repeatedly stated that all landfills eventually leak and their "leachate" can threaten our drinking water supply.

## Challenges

Garbage and trash from households is sent to municipal solid waste (MSW) landfills while waste from construction, repair and demolition of residential and commercial buildings, roads and bridges is sent to Construction & Demolition (C&D) landfills.

In 2003, the Georgia Department of Community Affairs reported the state has 25 years of remaining permitted MSW landfill space. Logically, this should be enough space to handle the trash Georgia produces through 2028. However, with large amounts of waste imported from other states and few incentives to reduce our waste stream, it is likely the remaining landfill space will not last nearly as long as projected - without undertaking controversial measures such as expanding existing landfills into the surrounding communities or permitting new landfills.

Large solid waste corporations have incentive to fill their landfills as quickly as possible. Importing waste from Florida and Northeastern states helps their bottom line, but harms Georgia's capacity for managing solid waste. Allowing materials to be deposited in a MSW landfill that can otherwise be disposed, like yard trimmings, also reduces critical landfill capacity.

Weak state and local regulations leave Georgia's natural resources at risk in regards to landfills. For example, current state regulations allow for the construction of landfills in poorly suited locations, such as 100-year floodplains.

Large solid waste corporations often look for rural counties that have the two attributes: lenient land use requirements (or lack of zoning) and cheap land. Georgia's current state requirements do not require liners for construction and demolition landfills. Yet the waste that goes into a C&D landfill is largely unregulated and many construction materials, such as leftover paint, adhesives, grease and batteries, are toxic.

## Next Steps

- Create strong, effective incentives for waste reduction and recycling.
- Oppose efforts to remove the ban on yard trimmings in MSW landfills.
- Fully fund the Solid Waste Trust Fund, which helps clean up abandoned landfills and aids local government efforts to reduce solid waste.
- Increase local host fees from \$1 to \$3 per ton of disposed solid waste and increase the state host fee from \$0.50 to \$3.50 per ton of disposed solid waste.
- Remove the EPD Director's ability to waive the requirement that C&D landfills have liners and leachate collection systems.
- Counties should adhere to local comprehensive solid waste management plans, further define restrictions on solid waste disposal and management, and identify sites not suitable for solid waste handling facilities.



## Fast Facts

There are hazardous waste sites located across the state with about two-thirds of Georgia counties containing at least one hazardous waste site.

Fulton and Chatham counties are home to the highest concentration of hazardous waste sites.

About 65% of hazardous waste sites inventoried are being cleaned-up by the responsible parties. About 25% are local government landfills. About 10% are abandoned sites. Since its inception, Georgia EPD has removed 224 hazardous waste sites from the inventory.

The majority of hazardous waste sites go from listing to delisting in 5 years or less.

For More Information:  
Sierra Club, Georgia Chapter  
Mark Woodall

# Preserve the Integrity of the Hazardous Waste Clean-Up

## What's at Stake?

If not properly cleaned up by those responsible, hazardous waste can contaminate soil and drinking water supply and cost taxpayers millions of dollars. The Georgia Environmental Protection Division (EPD) is charged with regulating government and businesses that generate and store hazardous waste, investigating spills and releases, and administering the Hazardous Waste Trust Fund to pay for the clean-up of some contaminated sites.

EPD uses the Hazardous Waste Trust Fund to:

- Investigate and clean up abandoned hazardous sites
- Help local governments investigate and clean up old leaking landfills
- Review private party investigation and cleanup plans for adequacy and oversee private party cleanups to ensure cleanup standards are met
- Pay for EPD administrative costs
- Fund the Pollution Prevention Assistance Division (P2AD)

The Hazardous Waste Trust Fund is financed by fees, surcharges and civil penalties. The fund collected almost \$20 million in FY08. According to Georgia Code, these revenues shall not lapse to the general fund. Yet the Hazardous Waste Trust Fund has been raided for millions of dollars over the years because there is no mechanism in place, like a constitutional amendment, to ensure appropriate allocation. Continued under funding of the Hazardous Waste Program will adversely affect the health and safety of Georgia's citizens, harm affected local governments and impede economic growth.

## Challenges

Georgia's Hazardous Site Inventory (HSI) lists 575 sites, as of July 2008, where there has been a known or suspected release of a regulated substance above a reportable quantity and which have yet to show they meet state clean-up standards.

These sites range from Class I sites to Class V sites. Sites listed on the HSI are prioritized based on the population drinking groundwater within ½ mile, population living within ½ mile, number of HSI sites within 3 miles and toxicity of chemical.

The majority of sites are Class II, which means further evaluation of the site must be done before EPD can decide whether corrective action is needed. Persons responsible for Class II sites are given an opportunity to voluntarily investigate and clean up their site and report their findings to EPD. The site is either removed from the HSI or reclassified as Class I, III, or IV based on whether it meets the clean-up standards.

In previous years, the Hazardous Waste Trust Fund has been raided. This has led to delays in hiring of EPD personnel needed to investigate sites and efficiently run the program, clean-up of abandoned sites, and reimbursements to local governments.

## Next Steps

The Legislature should:

- Maintain strong state clean-up standards for hazardous waste sites
- Fully appropriate fees, surcharges and civil penalties to the Hazardous Waste Trust Fund
- Enact a resolution for a Constitutional Amendment that will dedicate the hazardous waste fees and penalties for their intended purpose.



## Fast Facts

The American Lung Association's 2006 health disparities study revealed 65% of African Americans and 80% of Hispanics live in areas that failed to meet at least one of the EPA's health-based air quality standards.

The same study also revealed the asthma rate among African American children is 26 percent higher than the asthma rate among whites.

A 1982 U.S. General Accounting Office study surveyed eight southern states, Georgia among them, and revealed that three out of every four commercial hazardous waste landfills were in predominantly African American communities.

For More Information:  
GreenLaw,  
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# Afford Environmental Justice

## What's at Stake?

Georgia communities of color bear a disproportionate burden of pollution from incinerators, smelters, sewage treatment plants, power plants, chemical industries, landfills, and a host of other polluting facilities. This is not surprising as the landmark report, *Toxic Waste and Race*, by Robert Bullard of Clark Atlanta University, revealed that race was the most potent variable in predicting where polluting facilities were located—more powerful than poverty, land values, and home ownership.

Communities that sustain a higher concentration of polluting facilities also bear the burden of increased health problems associated with pollutants from these facilities.

For instance, increased exposure to air pollution is related to rising asthma rates and can cause serious respiratory and cardiovascular illnesses. A Centers for Disease Control and Prevention-sponsored study showed that pediatric emergency department visits at Atlanta's Grady Memorial Hospital increased by one-third following peak ozone levels.

While we all suffer the consequences of poor air quality, African Americans are hospitalized for asthma at higher rates than Caucasians and asthma deaths among African Americans are significantly higher than among Caucasians, according to the National Institutes of Health.

Furthermore, according to MSB Energy Associates, 68% of African Americans compared to 56% of whites live within 30 miles of a power plant, the distance within which the maximum effects of the smokestack plume are expected to occur. Many of the pollutants emitted from power plants are associated with a host of respiratory and cardiovascular illnesses.

Unfortunately, implementation of environmental laws continues to fall short of the goal of ensuring fair treatment and meaningful involvement of all people. The differences in environmental quality across communities often result from inequitable siting of polluting industries, inadequate public participation and access to resources, inequitable enforcement of environmental laws, and unequal environmental clean-up efforts.

## Challenges

The Georgia Environmental Protection Division (EPD) is not required to consider the demographics of the area surrounding a proposed facility when reviewing permit applications. Further, in deciding whether to issue a permit, EPD rarely considers cumulative impacts or the current environmental burden being experienced by a community.

## Next Steps

Environmental Justice is the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. In order to achieve this goal:

- Lawmakers should require that EPD and other environmental agencies consider the demographics of an area and cumulative impacts from existing environmental burdens when issuing or modifying permits to ensure that no community bears either a disproportionate level of or unacceptable health risk due to pollution and waste that would result from the enterprise seeking a permit.
- Lawmakers should also ensure that impacted communities receive actual notice of pending decisions in time to become involved in the decision-making process.



## Fast Facts

Two-thirds of Georgia's land area is privately owned commercial forest. This land use is highly protective of natural resources, particularly in comparison with other alternative uses.

Before there were any "environmental protection laws," common law property rights were the basis for innumerable court decisions that effectively protected natural resources from abusive misuse by reckless landowners.

One of the very first "environmental" court cases from the U.S. Supreme Court was *Georgia vs. Tennessee Copper Co.* (1907), in which Justice Oliver Wendell Holmes found for Georgia because Tennessee had allowed the Tennessee Copper Company's smelters to kill Georgia farmers' crops with air pollution.

For More Information:  
Sierra Club, Georgia Chapter,  
Neill Herring

# Protect Property Rights, Protect Natural Resources

## What's at Stake?

Georgia is blessed in its natural environment with a wide variety of landscapes, literally from the mountains to the sea. While it lacks extensive fossil fuel resources, it boasts fertile soils in a variety of types that support an array of crop choices and forest types. Its water resources are among the world's more abundant, even during periods of drought. Georgia is also fortunate in having a legal heritage of common law property rights, a system of protecting each property owner's right to use and enjoy his or her property. That system rests on an equality of rights among owners. Each owner is secure from abuse by another owner's actions, no matter how large that neighbor's landholdings may be.

Property rights are often described as a "bundle of rights." There are different rights enjoyed by property owners. Some differ based on the property itself and others differ according to the use to which the property may be put, but the rights of each property owner are, as stated above, equal. A neighbor who owns one acre has the same right to be free from nuisances and other trespasses as those who may own hundreds of acres.

Property rights are essential components in determining and maintaining the value of property. The state's most abundant mineral resource is fresh water. Access to that water, from streams or lakes or from groundwater aquifers, is a vital property right enjoyed by most Georgians. In a case decided over a century ago, by the Georgia Supreme Court, it was found that the value of the property right to water connected to a particular piece of land can be found by comparing the value of that land to a similar piece of land without access to that water.

A property owner who chooses to cut and sell timber or dig and sell a mineral from the land has a right to do so. And if that person's neighbor prefers to leave the trees and rocks alone, that right is also assured. Each owner must respect the rights of the neighbor, regardless of the use to which the land is put – as long as that use is legal and does not impair the neighbor's use of his or her land.

If the timber cutting or the mining or road construction or any number of other "land disturbing activities," all of which are perfectly legal in themselves, are conducted in ways that harm the value of a neighboring property, like one downstream, then the person who is harmed has a right to recover his or her loss.

## Challenges

Every legislative session produces bills that threaten property values by reducing the duty of property owners to protect the interest of their neighbors' land. These changes can be reducing stream buffer protections or making owners of contaminated sites less liable for damages.

## Next Steps

Our state leaders must maintain constant vigilance in order to protect property values.



## Fast Facts

Georgia citizens who hunt and fish have gladly paid license, stamp and tag fees for decades in order to make sure that wildlife and fisheries are managed to promote the taking of game and fish.

Georgia businesses have paid significant fees under programs designed to protect the environment.

A fee of one dollar is charged each time a person buys an auto tire to cover the cost of properly disposing of that tire when it is used up as well as to encourage waste reduction and recycling.

All of these fees have been subject to diversion by legislative action, and have been used for other purposes unrelated to the activities under which they were collected.

For More Information:  
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# Natural Resource Management Costs Require Dedicated Funding

## What's at Stake?

Georgia's programs for the protection and management of our natural resources need adequate and secure funding. In the last two decades, the assurance of such fiscal security has declined for the Department of Natural Resources and for its Environmental Protection Division. This has occurred during times when the population and economy of the state, and the impacts of that growth, have grown dramatically. As needs have increased, funding has declined.

## Challenges

Georgia has always relied on annual appropriations from the state's General Fund to support most state program activities, with the notable exception of the funding of the Department of Transportation, which receives a constitutional appropriation provided by the 7.5 cents per gallon excise tax on sales of motor fuel. Georgia's Constitution prohibits the "dedication" of any revenues to specific programs without such constitutional designation.

Meanwhile, the legislature has passed several pieces of legislation that can be interpreted as "dedicating" certain funds to certain purposes, by using language declaring that it is the intent of the legislature that certain funds go to particular uses. Among these "extra-constitutional" allocations, the largest, three percent of the General Sales Tax levied on motor fuel, goes to the Department of Transportation. That particular allocation has never been subject to legislative raiding, but other funds with intent language have been raided, some repeatedly.

Fees collected under the Hazardous Waste Trust Fund, the Solid Waste Trust Fund, and the \$80 per acre fee charged to developers for land disturbing activities are all intended to fund the programs under which they were created and under which they are collected. Fees paid by Georgians who hunt and fish are intended to support programs for those activities. But these funds have regularly been used to plug holes in other places in the State Budget since the Barnes Administration. This is a non-partisan application of the letter of constitutional law: our basic governing document says that funds cannot be dedicated and these funds certainly have not been dedicated to the programs under which they have been collected.

Georgia's natural resources are under growing pressure from development and increased use by all sectors of the population and the economy. The state has a duty to protect and manage these resources. If the funds for those purposes are not secure, then our natural resources are not secure.

## Next Steps

Georgia needs a Natural Resources Protection Constitutional Amendment that will allow the General Assembly to create natural resources programs that have dedicated funding from fees collected from the users of those programs. The Amendment should allow for legislative creation, modification and termination of those programs and the fees that support them. The amendment will allow for the timely implementation of programs and will adjust their costs to their actual needs.



## Fast Facts

Georgia has spent nearly \$5 million since 1998 on legal costs on the water war and metro Atlanta governments have spent about \$2.4 million since 2001.

More than \$19 million was appropriated for the Governor's Go Fish program to support the development of fish ramps, a visitor's center, and hatchery.

\$7.3 million was appropriated to the Georgia Agricultural Exposition Authority for design, construction, and equipping a new horse barn and practice ring for Perry, Georgia.

For More Information:  
Georgia Conservancy,  
Shana Udvardy

Sierra Club, Georgia Chapter,  
Neill Herring

Georgia Water Coalition

# Fund Statewide Water Planning

## What's at Stake?

The 2008 Legislature passed a Statewide Water Plan to plan water management in Georgia. To implement the plan, the Georgia Environmental Protection Division (EPD) must conduct resource assessments, then develop Water Development and Conservation Plans for 10 regional planning councils. It is critical that EPD has adequate funding to conduct thorough water resource assessments, implement regional planning, and provide a transparent process that allows for public input and local action. This is in addition to its statutory duties to protect downstream communities, ensure efficient water use all the time by all users and ensure water clean enough to drink and fish safe enough to eat.

## Challenges

Georgia EPD established an initial 3-year Statewide Water Plan budget in the amount of \$35.8 million dollars by allocating both federal and state funds:

Year	Federal	State	Total
2009	\$6.9	\$4.2	\$11.1M
2010	\$7.4	\$5.4	\$12.8M
2011	\$7.1	\$4.8	\$11.9M

However, at the request of the Governor, the Georgia legislature did not appropriate the first year's funds. The Statewide Water Plan was not included as a line item in the state budget for FY 2009. The first year of funding was spent off-budget. The funding came from multiple sources including the Federal Clean Water State Revolving Fund (\$3.07 million), the Federal Drinking Water State Revolving Fund (\$7.01 million), and previous year's State appropriations (\$1.05 million). We can presume that first year spending occurred as scheduled.

Now, Georgia is in the middle of a budget crisis and additional funding for 2010 and 2011 is at risk, particularly for new initiatives, like the Statewide Water Plan.

In addition, much of the Water Plan spending is not designated for government agencies, many of which already have in hand much of the data needed for planning. Instead, more than half the funding over the next three years is earmarked for the private sector, which is expected to recycle data and material already compiled by state and federal agencies. Of the \$35.8 million, approximately \$20 million is allocated for private sector contracts, approximately \$8 million is allocated for inter-agency agreements, and approximately \$8 million is allocated for the State to implement the Statewide Water Plan.

## Next Steps

- The Governor should recommend and the legislature must appropriate the funds necessary for the Statewide Water Plan as scheduled.
- Currently, EPD contemplates spending \$7.6 - \$14 million to contract private sector work for components of the water resource assessments, funds which may only purchase information the government already has on hand. The Legislature should work to avoid wasteful, duplicative spending and urge EPD to shift contracts to public institutions, such as state and federal agencies and public universities whenever the resource assessments can be conducted by public agencies.
- EPD is also planning to contract work for the development of the Regional Water Development and Conservation Plans for each of the 10 Regional Planning Councils and has budgeted \$5-9 million for the work. Contracting for the regional water plans should be similarly directed to public agencies.



## Fast Facts

One out of every six Georgians hunt or fish contributing to job creation, supporting local economies and contributing to the local tax base.

Every \$1 invested in wildlife management by the State of Georgia results in a \$40 benefit generated in economic activity.

Annual spending by Georgia sportsmen is more than the combined cash receipts for cotton, greenhouse/nursery, eggs, and cattle – four of the top agricultural commodities in the state (\$1.8 billion vs. \$1.67 billion).

Per the 2007 Georgia Farm Gate Value Report, deer hunting leases alone rank 17th out of 61 farm values, not counting government payments or crop insurance, ranking higher in farm value than sweet corn, tobacco, wheat, peaches and soybeans.

For More Information:  
Georgia Wildlife Federation,  
Jerry McCollum or Glenn Dowling

Georgia Wildlife Federation,  
Camo Coalition,  
David Waller

# Keep Budget Fair to Sportsmen

## What's at Stake?

Georgia's 1.1 million hunters and anglers spend \$5 million a day on their sport. Their annual spending totals upwards of \$1.8 billion. Sportsmen support as many jobs in Georgia as Delta Airlines and Hewlett Packard, two of the largest employers in the state, combined (31,000 jobs).

Our state is also the number one sporting destination in the nation for out-of-state hunters. Over 136,000 hunters visit Georgia annually to enjoy the hunting opportunities supported by a well-managed professional wildlife agency. Many of these are in jeopardy due to state budget cuts.

Proposed budget cuts by the Governor and legislative leadership include closure of one out of every five Wildlife Management Areas, closure of one of the three state trout hatcheries, elimination of 28 Wildlife Ranger positions and other cuts that will have a negative impact on sportsmen's programs.

## Challenges

Because of state revenue shortfalls, budget cuts are necessary to balance the state budget. However, the Georgia Wildlife Resource Division (WRD) has experienced budget cuts for the last six years even during the good economic times and have very little left to cut. The budget cuts proposed this year are extremely damaging. The challenge is helping others understand that WRD is bringing in new revenue that will exceed the budget cut proposals.

In 1987, a hunting and fishing license increase generated \$4.5 million annually. These funds were used to purchase land. Twenty-year bonds worth \$30 million were sold to purchase the land, and were paid off in 2007, resulting in \$4.5 million in unobligated funds flowing annually into the state's general fund. In 2009, a new hunting and fishing license system will be operated by a private vendor. This was the result of outsourcing of state functions. This change resulted in an increase of \$800,000 in new revenue as well as state savings of \$300,000 by eliminating the license unit. In addition, the reciprocal hunting and fishing license agreement with Florida was terminated in June of 2008, which will result in well over a \$500,000 increase in out-of-state license sales. These changes total a \$6.1 million annual increase in revenue.

## Next Steps

Rather than accepting across-the-board budget cuts, legislators should consider maintaining funding for sportsmen's and wildlife management programs. The General Assembly should consider developing a mechanism providing permanent funding to the state wildlife agency in order to avoid future budgetary cuts and shortfalls.

Action for a Clean Environment  
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Albany Audubon Society  
P.O. Box 705  
Albany, GA 31707

Altamaha Riverkeeper and Coastkeeper, Inc.  
P.O. Box 2642  
Darien, GA 31305  
912-437-8164  
[www.altamahariverkeeper.org](http://www.altamahariverkeeper.org)

American Rivers  
501 Dancing Fox Road  
Decatur, GA 30032  
404-373-3602  
[www.AmericanRivers.org](http://www.AmericanRivers.org)

The Archaeological Conservancy  
5997 Cedar Crest Road  
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PO Box 1085  
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Atlanta Audubon Society  
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Atlanta Bicycle Campaign  
233 Mitchell St., Suite 315  
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[www.beltline.org](http://www.beltline.org)

Benton-MacKaye Trail Association  
P.O. Box 53271  
Atlanta, GA 30355  
770-977-1530  
[www.bmta.org](http://www.bmta.org)

Bike Athens  
P.O. Box 344  
Athens, Georgia 30603  
[www.bikeathens.com](http://www.bikeathens.com)

Blue Heron Nature Preserve  
4055 Roswell Road  
Atlanta, GA 30342  
404-814-8228  
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Broad River Watershed Association  
P.O. Box 661  
Danielsville, GA 30633  
706-783-5777  
[www.brwa.org](http://www.brwa.org)

Burnt Fork Watershed Alliance  
[cehayes@bellsouth.net](mailto:cehayes@bellsouth.net)  
[www.geocities.com/burntforkwa](http://www.geocities.com/burntforkwa)

Center for a Sustainable Coast  
221 B Mallory St.  
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Center for Transportation and the Environment  
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Atlanta, GA 30308  
678-244-4159  
[www.cte.tv](http://www.cte.tv)

Central Savannah River Land Trust  
P.O. Box 148  
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[www.csrlt.org](http://www.csrlt.org)

Chattahoochee Hill Country  
6505 Rico Road  
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Chattahoochee Nature Center  
9135 Willeo Road  
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[www.chattnaturecenter.org](http://www.chattnaturecenter.org)

Chattahoochee RiverWatch  
P.O. Box 1492  
Columbus, GA 31902  
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[www.chattabout.org](http://www.chattabout.org)

Chattooga Conservancy  
8 Sequoia Hills Lane  
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Citizens for Clean Air and Water  
223 W. York St.  
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[www.citizens4cleanairandwater.org](http://www.citizens4cleanairandwater.org)

Citizens for Progressive Transit  
PO Box 56306  
Atlanta, GA 30343  
404-758-5300  
[www.cfpt.org](http://www.cfpt.org)

The Clean Air Campaign  
55 Park Place, Ste. 250  
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[www.cleanaircampaign.com](http://www.cleanaircampaign.com)

Clean Coast Inc.  
216 E. 58th St.  
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Clyde Shepherd Nature Preserve  
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Coastal Conservation Association of Georgia  
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Coastal Environmental Organization of Georgia  
P.O. Box 2107  
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Coastal Georgia Audubon Society  
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Cobb Land Trust  
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[www.conasaugariver.net](http://www.conasaugariver.net)

Coosa River Basin Initiative  
408 Broad Street Rome, GA 30161  
706-232-2724  
[www.coosa.org](http://www.coosa.org)

Dunwoody Nature Center  
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www.dunwoodynature.org

Earth Share of Georgia  
1447 Peachtree St., Suite 214  
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404-873-3173  
www.earthsharega.org

Environmental Community Action Inc.  
250 Georgia Avenue SE, Ste 309  
Atlanta, GA 30312  
404-584-6499  
www.eco-act.org

Ens and Outs  
1911 Cliff Valley Way NE  
Atlanta, GA 30329  
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www.uuca.org

Environment Georgia  
817 West Peachtree Street NW, Ste. 204  
Atlanta, GA 30308  
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www.environmentgeorgia.org

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Georgia Appalachian Trail Club  
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www.georgia-ATClub.org

Georgia Botanical Society  
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www.gabotsoc.org

Georgia Camo Coalition/GWF  
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www.camocoalition.com

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Georgia Conservation Voters  
175 Trinity Avenue SW  
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www.gavoters.com

Georgia Council of Trout Unlimited  
194 Kitchins Lane  
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Georgia Environmental Policy Institute  
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Georgia Forestry Association  
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www.gfagrow.org

Georgia ForestWatch  
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Georgia Green Industry Association  
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Georgia Poultry Justice Alliance  
8097 Roswell Road Bldg C, Ste 200  
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www.geocities.com/gpja2000/index2.html

Georgia Prescribed Fire Council  
http://www.garxfire.com/

Georgia Public Interest Research Group  
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Georgia Recycling Coalition  
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www.georgiarecycles.org

Georgia River Network  
126 S. Milledge Avenue  
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www.garivers.org

Georgia Rural Urban Summit  
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www.georgiasummit.org

Georgia Trust for Historic Preservation  
1516 Peachtree St., NW  
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www.georgiatruster.org

Georgia Water Coalition  
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Georgia Wildlife Federation  
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Covington, GA 30014  
770-787-7887  
www.gwf.org

Georgians Against Smoking Pollution  
2528 Lester St.  
East Point, GA 30344-3011  
404-766-3456

Glynn Environmental Coalition  
P.O. Box 2443  
Brunswick, GA 31521  
912-466-0934  
www.glynnenvironmental.org

Gwinnett Open Land Trust  
3280 Westbrook Rd.  
Suwanee, GA 30024  
770-945-3111  
www.gwinnettlandtrust.org

Harambee House  
Citizens for Environmental Justice  
1115 Habersham St.  
Savannah, GA 31401  
912-233-0907  
www.theharambeehouse.com

Initiative to Protect Jekyll Island State Park  
308 Old Plantation Road  
Jekyll Island, GA 31527  
912-635-2167  
www.savejekyllisland.org

Izaak Walton League of America, Greater  
Atlanta Chapter  
41 Blackland Road  
Atlanta, GA 30342  
404-231-0030

Lake Allatoona Preservation Authority  
PO Box 456  
Acworth, Georgia 30101  
678-801-4010  
www.allatoona.org

Lake Hartwell Association, Inc.  
P. O. Box 312  
Fair Play, SC 29643  
864-224-5253  
www.lakehartwellassociation.org

Lake Lanier Association  
615F Oak Street, Suite 100  
Gainesville, GA 30501  
770-503-7757  
www.lakelanier.org

Lake Oconee Property Owners' Association  
P.O. Box 4046  
Eatonton, GA 31024  
www.geocities.com/lopoa2000

League of Women Voters of Georgia  
PO Box 29751  
Atlanta, Georgia 30359  
678-547-0755  
www.lwvga.org

Lumpkin Coalition  
3865 Dawsonville Highway  
Dahlonega, GA 30533  
706-265-5282  
www.lumpkincoalition.org

Mothers & Others for Clean Air  
817 West Peachtree St., Ste. 200  
Atlanta, GA 30308  
404-876-2900  
www.georgiaconservancy.org/mothersandothers/

National Wildlife Federation, Southeast  
Natural Resource Center  
730 Peachtree St. NE, Ste. 1000  
Atlanta, GA 30308  
404-876-8733  
www.nwf.org

Newtown Florist Club  
1067 Desota Street  
Gainesville, GA 30501  
770-718-1343  
newtown193@charter.net

Nuclear Watch South  
(Formerly Georgians Against Nuclear Energy)  
PO Box 8574  
Atlanta, GA 31106  
404-378-4263  
www.nonukesyall.org

Oconee River Land Trust  
380 Meigs St.  
Athens, GA 30601  
706-552-3138  
www.orlt.com/

Ogeechee-Canoochee Riverkeeper  
PO Box 1925  
Statesboro, GA 30459  
912-764-2017  
www.ocrk.org

Park Pride Atlanta  
675 Ponce de Leon Ave., 8th Floor  
Atlanta, GA 30308  
404-817-7970  
www.parkpride.org

Oxbow Meadows Environmental Learning Center  
Columbus State University  
4225 University Avenue  
Columbus, GA 31907  
706-687-4090  
http://oxbow.colstate.edu

Residents United for Planning and Action  
P.O. Box 24318  
St. Simons Island, GA 31522  
http://rupa-ssi.org

Safely Treating Our Pollution  
354 Ninth Street, NE  
Atlanta, GA 30309  
404-873-6417

Sapelo Island Cultural and Revitalization Society  
P.O. Box 6  
Sapelo, GA 31327  
912-485-2197  
www.sapeloislandgeorgia.org

Satilla Riverkeeper  
PO Box 159  
Waynesville, GA 31566  
912-778-3126  
www.satillariverkeeper.org

Sautee-Nacoochee Community Association  
P.O. Box 460  
Sautee-Nacoochee, GA 30571  
706-878-3300  
www.snca.org

Savannah Ogeechee Audubon Society  
PO Box 12424  
Savannah, GA 31416  
www.savogeecheeaudubon.org

Savannah Riverkeeper  
PO Box 14908  
Augusta, GA 30919  
706-826-8991

Savannah Tree Foundation  
3025 Bull Street  
Savannah, GA 31405  
912-233-TREE  
www.savannahreefoundation.com

Scenic Georgia  
6345 Barberry Hill Drive  
Gainesville, GA 30506  
678-200-8070  
www.scenicga.org

Sierra Club, GA Chapter & Southeast Field Office  
1401 Peachtree St., Ste 345  
Atlanta, GA 30309  
404-607-1262  
www.georgia.sierraclub.org

Soque River Watershed Association  
P.O. Box 1901  
Clarksville, GA 30523  
706-754-9382  
www.soque.org

South Atlantans for Neighborhood Development  
P.O. Box 18342  
Atlanta, GA 30316  
www.sandatatlanta.org

Southeast Energy Efficiency Alliance  
PO Box 13909  
Atlanta, GA 30324  
404-931-1518  
www.seealliance.org

Southeast Institute for Earth and Spirit  
151 Shadowlake Lane  
Marietta, GA 30067  
770-953-8759  
swooten@bellsouth.net

Southeast Land Preservation Trust  
11 Wildwood Valley  
Atlanta, GA 30350  
404-870-9779  
www.slpt.org

Southern Alliance for Clean Energy In Atlanta: 250 Arizona Ave. Atlanta, GA 30307 404-373-5832 In Savannah: 428 Bull St, Ste 202 Savannah, GA 31401 912-201-0354 <a href="http://www.cleanenergy.org">www.cleanenergy.org</a>	The Conservation Fund 4500 Hugh Howell Rd., Ste. 470 Tucker, GA 30084 770-414-0211	Tybee Island Land Trust 8 Fifth St. Tybee Island, GA 31328 912-786-5523
Southeastern Natural Sciences Academy 1858 Lock & Dam Road Augusta, GA 30906 706-828-2109 <a href="http://www.phinizyswamp.org">www.phinizyswamp.org</a>	The Nature Conservancy, Georgia Field Office 1330 West Peachtree St., Ste. 410 Atlanta, GA 30309 404-873-6946 <a href="http://www.nature.org/georgia">www.nature.org/georgia</a>	Upper Chattahoochee Riverkeeper 3 Puritan Mill 916 Joseph Lowery Blvd. Atlanta, GA 30318 404-352-9828 <a href="http://www.chattahoochee.org">www.chattahoochee.org</a>
Southern Conservation Trust 201 McIntosh Trail, Ste. B Peachtree City, GA 30269 770-486-7774 <a href="http://www.sctlandtrust.org">www.sctlandtrust.org</a>	The Trust for Public Land 600 W. Peachtree St., NW Ste. 1840 Atlanta, GA 30308 404-873-7306 <a href="http://www.tpl.org">www.tpl.org</a>	Upper Oconee Watershed Network P.O. Box 531 Athens, GA 30603 <a href="http://www.uown.org">www.uown.org</a>
Southern Environmental Law Center 127 Peachtree St., Suite 605 Atlanta, GA 30303 404-521-9900 <a href="http://www.southernenvironment.org">www.southernenvironment.org</a>	The Wilderness Society, Southeastern Region 112 Krog St., Ste. 26 Atlanta, GA 30307 404-872-9453 <a href="http://www.wilderness.org">www.wilderness.org</a>	West Atlanta Watershed Alliance 2140 Montilly Place College Park, GA 30349 404-216-5759 <a href="http://www.wawaonline.org">www.wawaonline.org</a>
Southface 241 Pine St. Atlanta, GA 30308 404-872-3549 <a href="http://www.southface.org">www.southface.org</a>	Trees Atlanta 225 Chester Ave. Atlanta, GA 30316 404-522-4097 <a href="http://www.TreesAtlanta.org">www.TreesAtlanta.org</a>	West Point Lake Coalition P.O. Box 3677 Lagrange, GA 30241 706-884-5916 <a href="http://www.westpointlakecoalition.org">www.westpointlakecoalition.org</a>
St. Simons Land Trust P.O. Box 24615 St. Simons Island, GA 31522 912-638-9109 <a href="http://www.sslt.org">www.sslt.org</a>	Trees Columbus PO Box 1531 Columbus, GA 31902 706-571-0436 <a href="http://www.treescolumbus.org">www.treescolumbus.org</a>	Women's Action for New Direction (WAND) 250 Georgia Ave SE Ste. 202 Atlanta, GA 30312 404-524-5999 <a href="http://www.atlantawand.org">www.atlantawand.org</a>
Tall Timbers Research Station & Land Conservancy 850-893-4153 <a href="http://www.talltimbers.org">www.talltimbers.org</a>	Turner Environmental Law Clinic Emory Law School 1301 Clifton Rd. Atlanta, GA 30322 404-727-5542 <a href="http://www.law.emory.edu/turnerclinic">www.law.emory.edu/turnerclinic</a>	Zoo Atlanta 800 Cherokee Avenue SE Atlanta, GA 30315 404-624-5600 <a href="http://www.zooatlanta.org">www.zooatlanta.org</a>

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