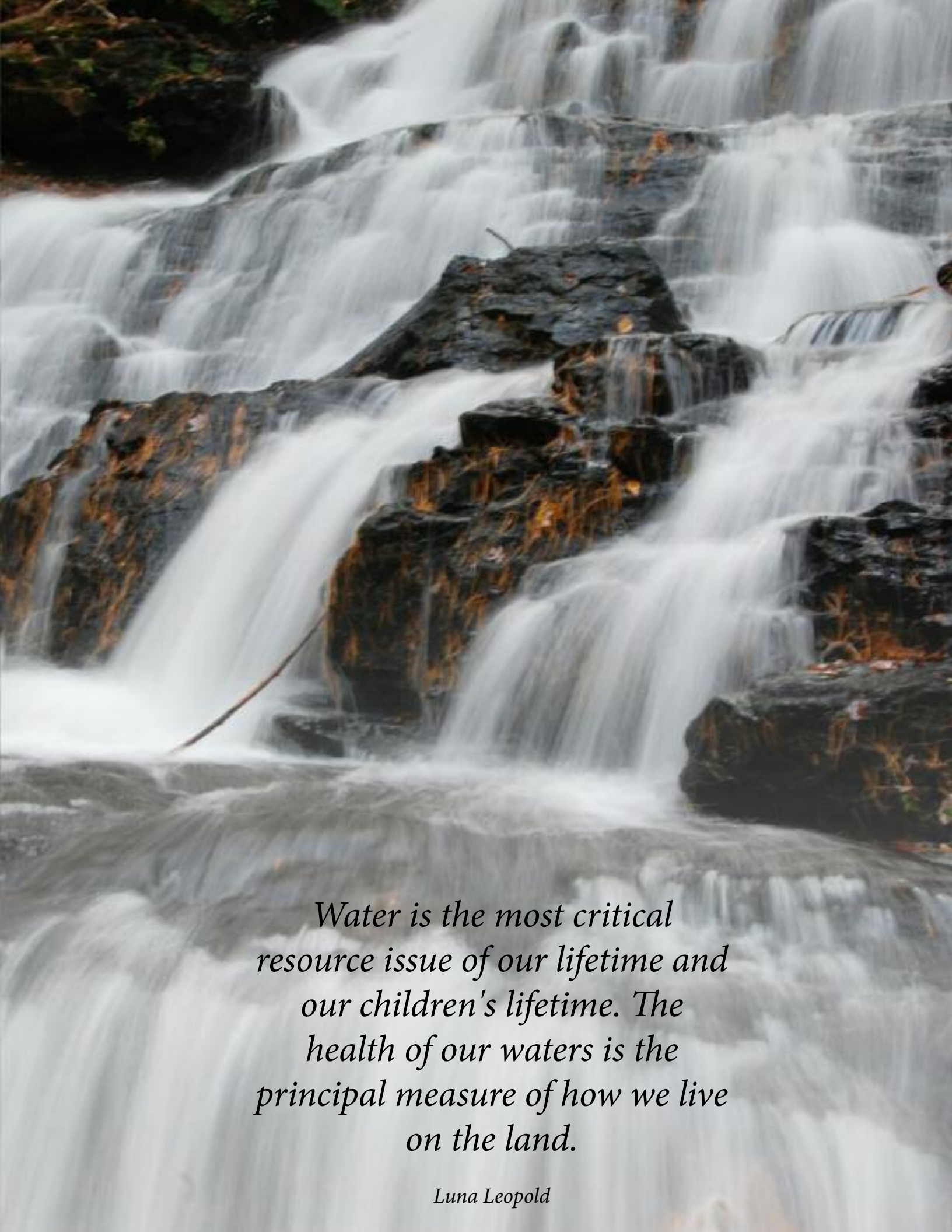




2015 Report:
Recommendations for a
Healthy Water Future



*Water is the most critical
resource issue of our lifetime and
our children's lifetime. The
health of our waters is the
principal measure of how we live
on the land.*

Luna Leopold

2015 Report: Recommendations for a Healthy Water Future

GWC MISSION STATEMENT

The Georgia Water Coalition's mission is to protect and care for Georgia's surface and groundwater resources, which are essential for sustaining economic prosperity, providing clean and abundant drinking water, preserving diverse aquatic habitats for wildlife and recreation, strengthening property values, and protecting the quality of life for current and future generations.

The Principles Defining the Georgia Water Coalition's Work and its Recommendations are:

A. The surface waters and groundwater of Georgia are public resources to be managed by the state in the public interest and in a sustainable manner to protect natural systems and meet human and economic needs.

B. Effective water management requires ongoing, rigorous evaluation and planning that is:

- (a) transparent and informed by citizen input;
- (b) based on watersheds, river basins, and aquifers;
- (c) informed by the best available scientifically sound data;
- (d) reliant on uniform, consistently applied, and enforceable standards; and
- (e) implemented, enforced, and adaptively managed.

C. Waters shared among all users within a river basin must be apportioned equitably to meet reasonable needs and assure the long-term sustainability of the natural systems on which those water supplies depend.

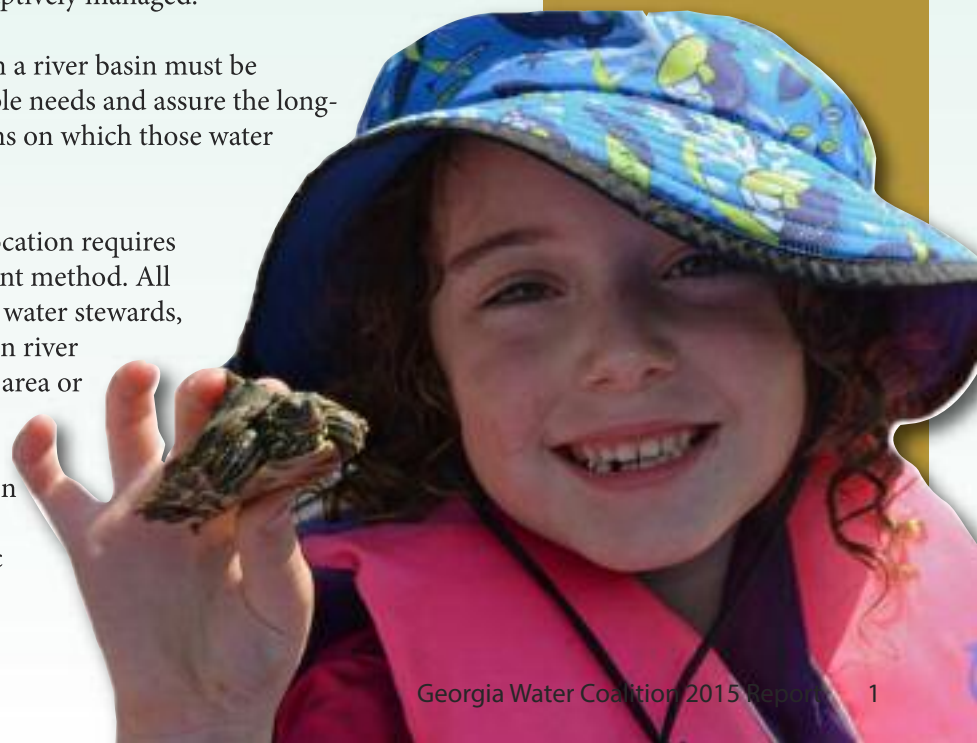
D. Effective water management and allocation requires conservation as the primary management method. All Georgians must strive to become better water stewards, both for those living elsewhere in a given river basin and those living in a downstream area or adjacent state.

The members of the Georgia Water Coalition work collaboratively and transparently with other Coalition members to achieve specific goals based on the above principles.



The Georgia Water Coalition

**A coalition of more
than 220
organizations from
around the state
working to ensure
enough clean water
for all Georgians.**



INTRODUCTION

Smart water management is key to allowing economic development and conservation to exist side by side. The goal of the Coalition is to find a sustainable solution to Georgia's water crisis that addresses the needs of agriculture and business and contributes to public health, while maintaining the integrity of Georgia's natural systems.

Over the past ten years, the Coalition has grown to include over 200 organizations, representing well over a quarter of a million Georgians and encompassing conservation organizations, farmers, homeowners and lake associations, business owners, sportsmen's clubs, professional associations, and religious groups. The Georgia Water Coalition continues to speak out and provide information about the importance – even critical nature – of prudent statewide water management. The Georgia Water Coalition effort benefits all Georgians because it asks our leaders to make responsible decisions about how to best protect our finite water resources – now and in the future.

The following recommendations, representing a consensus of the Georgia Water Coalition, are an essential part of establishing sustainable water management in Georgia for the next 100 years. This is the seventh such report of the Georgia Water Coalition since 2002, reflecting actions taken during the last General Assembly and more recent events in the state.

These recommendations should be implemented as appropriate by the Governor, the General Assembly, the Board of Natural Resources, the Environmental Protection Division (EPD), the Georgia Environmental Finance Authority (GEFA), other relevant state agencies, the regional water councils, local governments, and water utilities. The Water Coalition stands ready to work in collaboration with any entity or leader who shares these goals and wishes to implement these commendations.

Did you know?

The upper Coosa River basin, covering 5,000 square miles of North Georgia and Northeast Alabama, is the most biologically diverse river basin in North America with 30 different aquatic species, like the federally protected Etowah darter, that are found no where else in the world.



THE RECOMMENDATIONS

- 1** Maintain water as a public resource, not a private commodity to be sold or traded. 4
- 2** Restore and protect healthy natural systems, which are essential for human and environmental well-being and economic prosperity. 7
- 3** Provide future generations with a heritage of plentiful clean water because water is an essential resource. 12
- 4** Make clean water a statewide priority. 14
- 5** Ensure that water conservation and efficiency are the cornerstone of water supply planning. 18
- 6** Establish common sense water management policies. 21

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Cover photos courtesy of Hank Ohme

Photo courtesy of Joe Cook



Recommendation

1

MAINTAIN WATER AS A PUBLIC RESOURCE



Photo courtesy of Joe Cook

Georgia must maintain water as a public resource in order to protect current and future generations' property values and designated water uses, including fishing, boating, enjoyment, and wildlife. Our rivers and aquifers are not a commodity to be used or polluted by the highest bidder.

A. Maintain citizens' rights to effective notice, administrative review, and judicial review of all permit decisions and other water policy decisions.

The public plays an important and complementary role in the enforcement of Georgia's environmental laws. Permitting decisions can have significant impacts on our water resources. Our citizens must be ensured participation through effective and meaningful notice and comment for permitting decisions and review of these decisions, before harm occurs.

B. Enact a permanent statewide moratorium on aquifer storage and recovery (ASR).

Aquifer storage and recovery should not be used for water supply or flow augmentation in Georgia. Aquifers do not abide by political lines and the full effects of ASR on overall aquifer water quality have yet to be determined. Particular concerns include environmental risks, safety, viability, and affordability. Furthermore, ASR can lead to unfounded assertions of property rights in the recovered water that may run counter to Georgia's riparian system of water regulation.

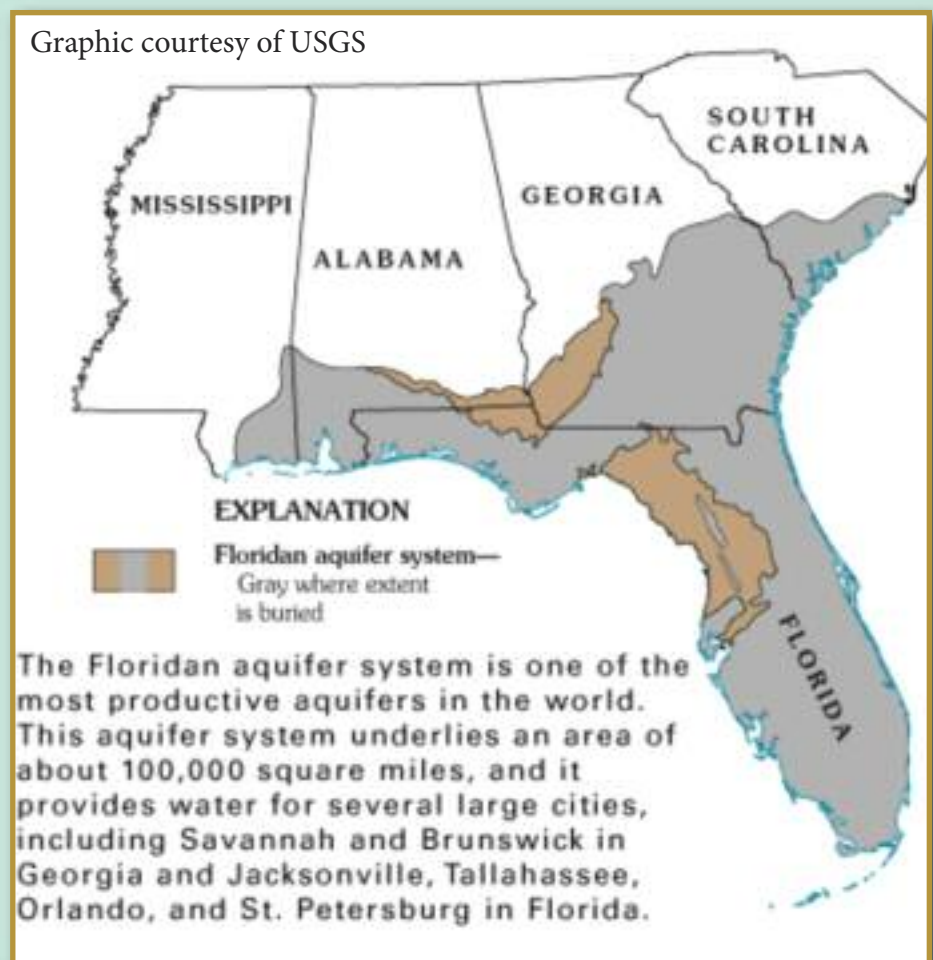
15 Year Ban on Aquifer Storage and Recovery Allowed to Expire in 2014

Some say the solution to meeting Georgia's water needs lies beneath our feet in the Floridan Aquifer. By injecting water from rivers and streams (and other sources) into it during times of water abundance, these water speculators believe they can retrieve it during times of water scarcity. This practice known as Aquifer Storage and Recovery, or ASR, is in reality a risky business. In numerous places throughout the United States, ASR experiments have contaminated groundwater and proven to be colossal wastes of money. Many of these wells have been abandoned due to dangerously high levels of arsenic or the inability to recover the "stored" water. Even more unsettling is the uncertainty of who might own the water once it's put into an aquifer.

The pristine Floridan Aquifer supplies hundreds of thousands of people with drinking water, as well as for industrial and agricultural purposes. It is because of this importance that, in 1999, a ban was placed on ASR in 11 coastal Georgia counties. The

moratorium had been extended by the Georgia Legislature until 2014, when the Senate Natural Resources Committee Chair refused a committee vote...thereby allowing the ban to be lifted. To protect Georgia's most pristine sources of drinking water, the Georgia General Assembly should draft and adopt legislation that prohibits aquifer storage and recovery projects.

Graphic courtesy of USGS



GEORGIA

C. Prohibit water pollution trading in Georgia.

There is no evidence that water pollution trading will work in Georgia. Water pollution trading, also known as water quality trading, creates a cap-and-trade system that allows a regulated entity to buy pollution credits instead of reducing pollution at its own facility. Such trading schemes may create pollution “hot spots” and result in trading over long distances within a watershed. Combined with a lack of enforcement, these schemes defeat the purpose of improving water quality within a specific watershed and undermine the intent of the Clean Water Act. Additionally, water pollution trading must never be used to introduce water markets or water withdrawal permit trading in Georgia.

D. Acknowledge that private water supply reservoirs are contrary to the public resource doctrine.

Private water supply impoundments and large amenity lakes restricting stream flows can result in monopolizing water resources to the detriment of the downstream public. Allowing public entities to contract with private companies for water supply projects threatens the doctrine of water as a public resource in Georgia. Instead of maintaining our state waters for the benefit of all Georgians, privatizing water supply projects would encourage private companies to make a profit by selling the rights to use Georgia’s water.

E. Protect Georgia’s groundwater from private pollution.

Georgia should prohibit groundwater contamination through injection of wastewater (treated or untreated) and toxic leaching. The state should also insure consistency and compliance with all applicable state and federal regulations concerning groundwater integrity and quality.

E. Protect Georgia’s buffers from destruction and exploitation.

Buffers adjacent to all waters of the state are protections with both ecological and economic value for those waters and their dependent communities and wildlife.

70,150 Miles of Streams

425,000 Acres of Reservoirs and Lakes

429,924 Acres of Coastal Marshlands

4.5 Million Acres of Freshwater Wetlands

265 Species of Fish

165 Species of Freshwater Mussels and Snails

10 Million Georgians Who Need Clean Abundant Water



Photo courtesy of Joe Cook

Recommendation

2

HEALTHY NATURAL SYSTEMS



Photo courtesy Joe Cook

Healthy natural systems are essential for human and environmental well-being and economic prosperity.

A. Develop and implement a comprehensive plan for headwaters protection.

The majority of Georgia's fourteen river basins have their headwaters in Georgia. Safeguarding these headwaters, including springheads and stream buffers, is vital to the protection of water quality, water quantity, and the health of our aquatic resources. Protecting water quality upstream can save money downstream. Focus should also be on minimizing segmentation of protected stream reaches, and encouraging better headwaters protection in neighboring states with headwater reaches that impact Georgia (such as the Savannah River).

B. Adopt and implement a final instream flow policy that protects natural seasonal flow patterns, including during drought conditions.

Georgia's existing "interim" instream flow policy has now been in place for more than a decade and is inadequate. The state should adopt a final instream flow policy that restores, maintains, and preserves natural seasonal flow patterns for streams and rivers including during drought conditions. The finalized flow policy should minimize the biological disruption caused by barriers to flow for all waters — for water quality, ecology, and economic benefits, including recreation. The final policy should be science-based, protective of instream needs, and should account for seasonal flow variations and drought. Until a final policy is developed, site-specific instream flow studies should be required of all new projects including reservoirs that have the potential to alter natural stream flow. The results of these studies should be used to establish flow requirements downstream of such projects and be made publically available.

C. Protect Georgia’s free-flowing stream and river segments from dams, and minimize the impacts of existing impoundments on Georgia’s river systems.

Georgia’s remaining free-flowing streams and stream segments are vital for people and wildlife of Georgia. Therefore, the state should consider the construction of reservoirs and dams only as a last resort for water supply. When evaluating whether to construct new reservoirs and dams, the state should first consider water conservation and efficiency, as well as optimizing operations of existing impoundments and expansion of existing reservoirs in order to minimize further impacts to rivers and streams. Georgia should prohibit the construction of water supply reservoirs for private uses such as amenity lakes for residential developments. EPD should promptly initiate rulemaking on reservoir permitting that was outlined in the 2008 Comprehensive State-wide Water Management Plan. Furthermore, a comprehensive Environmental Impact Statement which evaluates impact of the entire river basin should be prepared for every new reservoir project in Georgia.



D. Minimize the adverse impacts of power plants on Georgia’s waters.

Coal-fired and nuclear power plants withdraw and consume significant amounts of water from our waterways and are the largest water-use sector in the state. Water that is not lost through evaporation is heated and discharged back into streams, resulting in warmer, oxygen-depleted water that harms ecosystems. Coal-fired power plants emit mercury, sulfur dioxide, nitrogen

Coal Ash in Georgia

What is Coal Ash? Coal ash is a by-product of burning coal to generate electricity. Coal ash is highly toxic and contains arsenic, mercury, cadmium, chromium, lead, selenium and zinc. The ash can be stored in a dry and a wet manner. There are **forty-one** active and inactive coal ash impoundments—including twenty-nine coal ash lagoons—in Georgia that may threaten clean water. Two of Georgia’s impoundments have a “high hazard” rating and ten are considered “significant hazards” at risk of collapsing. At least one of these sites has already failed, and another site is home to an unlined lagoon containing at least 5,000,000,000 (billion) gallons of toxic coal ash. Visit [**Southeast Coal Ash Waste**](#) for more details.

oxide, and other toxins, which are deposited in our streams and consumed by the fish and shellfish which many people eat. Residue coal ash ponds leak harmful toxins into our waterways and pose significant risk, as evidenced by recent catastrophic coal ash pond failures and spills around the region. The state should enact and enforce protective coal ash disposal regulations. Additionally, new energy supply options or technologies that are less water-intensive should be researched and developed before new water-intensive power plants are permitted. Old, inefficient, dirty power plants in Georgia should be retired, and water budgets should be established and made public for all thermoelectric plants.

E. Protect, restore, and thoroughly clean up groundwater resources and aquifer recharge areas.

The state must protect, restore, and remediate groundwater resources, including significant recharge areas, concentrated recharge areas, and aquifers, by increasing legal and regulatory protections and enforcing existing laws and regulations. The state should broaden and enforce restrictions on land activities above aquifer recharge areas. Contaminants should not be allowed to enter aquifers through these areas. The state should expand its monitoring and assessment of groundwater resources throughout the state, and should specifically focus on increasing our understanding of the relationship between groundwater and surface water. The state should also increase protections for private wells. The state must provide sufficient funding for meaningful enforcement, and create and apply effective penalties when groundwater resources are contaminated.

F. Preserve and restore vegetated buffers adjacent to all of Georgia's state waters, including small streams, freshwater wetlands, coastal marshlands, floodplains, and reservoirs.

Natural buffers protect water quality, filter stormwater, provide flood control, prevent erosion, preserve native flora and fauna, and serve as wildlife habitat. Implementation of vegetated buffers should be strengthened and enforced to reflect the value of all of these functions and to reflect scientific understanding of what is needed to protect water quality. The state must enforce buffer regulations uniformly and minimize the granting of variances. The state must provide sufficient funding for meaningful enforcement, and create and apply effective penalties that include buffer repair and restoration when violations are committed. The state also



Did You Know?

There are 18 fossil-fuel-fired and nuclear-powered electric generation plants along Georgia's rivers. More water is pumped from Georgia's waterbodies to produce electricity than is removed for any other use—nearly fifty percent of Georgia's total water use. According to Georgia's Environmental Protection Division these facilities permanently remove about 187 million gallons a day (MGD) from Georgia's rivers—enough water to daily supply the cities of Augusta, Savannah, Columbus, Macon, Albany and Rome.

Georgia Power's Plant Bowen in Euharlee, GA. (AP Photo/The Daily Tribune News, Dayton P. Strickland/FILE)

should provide financial incentives for the creation and retention of green infrastructure, including riparian buffers, wetlands, floodplains, living shorelines, and other pervious green space, which are cost-effective means of enhancing both water quality and quantity and preventing floods.

G. Improve state protection of Georgia’s salt marsh ecosystem by regulating activities that affect the marsh.

Georgia’s coastal salt marsh ecosystem provides a nursery for commercially and recreationally valued species of fish, shellfish, and other wildlife; provides an important buffer against storms, flooding, and erosion; filters and breaks down pollutants; and provides a recreational resource that is vitally linked to the state’s economy. Protections shall take into consideration not only in-marsh activities and their cumulative impacts, but also wetlands functions and other upland activities, including stormwater management, both adjacent to the marsh and up- gradient, that impact the salt marsh.

State and federal agencies should better regulate and restrict long docks and bulkheads on Georgia’s coast. Long docks can stretch for hundreds of yards into the marshes and often alter or kill marsh vegetation. Likewise, bulkheads can drastically alter natural tidal and flow patterns. Protection of Georgia’s salt marsh ecosystem is particularly important in light of climate change, drought, sea level rise, hurricanes, and other ongoing threats to vital habitat corridors.

H. Ensure protection of freshwater wetlands and restore degraded wetlands.

Georgia’s freshwater wetlands recharge aquifers, improve water quality, filter pollutants, provide flood control, and serve as habitat for wildlife. Protections for, and restoration of, freshwater wetlands, including the use of buffers, should reflect the value of all of these functions. Public and professional educational efforts regarding wetlands soils, hydrology, and vegetation need additional attention in school and continuing education curricula. Additionally, federal Section 404 permits must adequately provide for wetland mitigation requirements, and these requirements need to be enforced.

I. The state should comprehensively monitor and report accurate information on water quality issues affecting public health.

The state should comprehensively monitor and report accurate information for each river basin on water quality issues affecting public health, making such information promptly available via print and electronic media and at places where the public regularly uses the waters of the state or seeks information about those waters. Local emergency responders must also receive timely information about water quality threats.

Did You Know?

Georgia has more coastal marshlands than any other eastern state. We have 33% of the remaining salt marsh on the east coast.



A proliferation of long docks along coastal Georgia’s marshes has altered the marsh ecosystem and lowered its productivity.

Buffering Our State Waters

Georgia's Erosion and Sedimentation Act (the Act) was passed in 1975 to "strengthen and extend the present erosion and sediment control activities and programs of this state." O.C.G.A. 12-7-2. The Act establishes within it a set of Best Management Practices (BMPs) to prevent sediment from contaminating our state waters. One of the BMPs is a provision requiring the establishment of a 25-foot buffer to be "measured horizontally from the point where vegetation has been wrested by normal stream flow or wave action..." O.C.G.A. 12-7-6(b)(15)(A).

The buffer provision of the Act is problematic. First, many state waters (like freshwater wetlands, saltwater marshes, and low flowing streams) do not have a clear "point where vegetation has been wrested." Second, the state of Georgia has inconsistently enforced the buffer provision for waters without wrested vegetation. While the Georgia Environmental Protection Division has historically required a buffer to protect coastal salt marsh the agency has not required a buffer along the banks of fresh water bodies without wrested vegetation.



Photo courtesy of Center for a Sustainable Coast



Photo courtesy of Chattahoochee Riverkeeper

In response to challenges over the inconsistent enforcement of the buffer provision, on April 22, 2014, the state repealed its policy to require the buffer alongside coastal salt marsh. As a result millions of acres of wetlands in Georgia are left unprotected. The Georgia General Assembly is the only entity capable of permanently providing equal buffer protection to the waters of Georgia. Limiting language must be deleted, and the General Assembly must adopt provisions that clarify that the buffer BMP must be used to protect all state waters.

Recommendation

3

CLEAN WATER FOR FUTURE GENERATIONS



Photo courtesy of Charles Seabrook

Our future generations are due a heritage of plentiful clean water because water is an essential resource.

A. Before investing in new water supply sources, use existing water supplies more efficiently and aggressively manage the demand for water to reduce the burden on taxpayers and avoid future capital costs and protect Georgia’s natural water systems.

The Georgia Water Stewardship Act of 2010 began to put the state on a path to enhanced water conservation, but it is only a start. The state must continue to enact and implement policies promoting water conservation, efficiency, and reuse by all sectors and encourage all private efforts to conserve and avoid wasting water. For example, Georgia can use the standardized leak audits required by the Water Stewardship Act to reach or exceed the national average for leak detection and elimination in municipal water delivery infrastructure. Georgia’s public water systems should strive to account for all water managed, meaning there should be 0% unaccounted-for water, and the systems should put programs into place that will ensure that less than 10% of water is lost to leaks by 2020-2025. The water-efficient fixtures for new construction required by the Water Stewardship Act should be expanded to include retrofits to existing homes, businesses,



Purple pipes indicate treated wastewater transported for reuse purposes. Photo courtesy of Brown and Caldwell.

institutions, and industries. Municipalities should be encouraged to further increase water efficiency and conservation by adopting standards more stringent than the Water Stewardship Act requires. The Governor's Water Supply Program should prioritize, encourage, and fund water-efficiency and conservation projects rather than reservoirs, ASR, or other more inefficient, destructive, and expensive projects.

B. Strengthen existing interbasin transfer (IBT) regulations by making the State Water Plan criteria mandatory.

Current Department of Natural Resources (DNR) regulations provide that prior to issuing new surface water withdrawal permits for interbasin transfers, EPD should consider twenty-two criteria, including, for example: the quantity of the proposed withdrawal and stream flow of the donor basin, the current and future water needs of the donor basin and receiving basin, protection of water quality in the donor and receiving basins, the distance of diversion, connection between surface water and groundwater in the donor basin, and the cumulative impacts of current and proposed IBTs in both basins. The DNR regulations need to be revised, or appropriate legislation needs to be adopted, to ensure that consideration of all IBT criteria is mandatory, not discretionary.

The state should also establish strict guidelines for grandfathering existing IBTs of water to include the following: The volume, end use, percentage of consumptive use, basin of origin, and basin of receipt of all existing IBTs shall be explicitly incorporated into the water withdrawal permits associated with those transfers upon the renewal of such permits.

C. Drought planning and management must be proactive, focus on all sectors and users, and be science-based, objective and non-political.

Georgia has experienced water supply shortages exacerbated by population growth and drought conditions, including four droughts in the last ten

years. Drought and water supply planning must become permanent, year-round activities for state and local government. Local governments should maintain the ability and discretion to implement stricter drought-related regulations and management practices than the state's regulations and practices as appropriate to reflect local conditions.

D. Manage the use of septic systems and land application systems as appropriate to reduce the consumptive uses of surface water.

In areas of greater population density, the use of septic systems is increasingly problematic because water is not returned directly to its source, thus reducing river flows and lake levels. Many of these areas could be served by sewer lines. Policies to promote and incentivize such conversions should be developed.

E. Recognize that desalination is not a viable water supply alternative for Georgia.

Pollution byproducts of the desalination process are destructive to marine ecosystems and the economies that depend on them. Desalination discourages conservation and other more responsible water supply alternatives. The process is extremely expensive, both in the production of potable water and the transportation of that water to a destination. Production of desalinated water requires the consumption of large amounts of energy and fresh water, which essentially negates any anticipated benefit.

F. Fully fund and make use of scientifically-based water resource assessments.

The General Assembly should provide adequate funding for thorough, science-based, and objective assessments of all surface and ground water resources in Georgia, including monitoring. These assessments must then be used to guide planning that conforms with natural watershed boundaries and resource limitations.

Recommendation

4

CLEAN WATER IS A STATEWIDE PRIORITY

Photo courtesy of One More Generation



Clean water must be a statewide priority.

A. Provide adequate funding for EPD and the Georgia Coastal Resources Division to fulfill their permitting, monitoring, and enforcement missions.

The state should provide adequate funding for permitting, monitoring, enforcement, staffing, and restoration, including the attainment of Total Maximum Daily Loads (TMDLs). The state should derive needed funds for such activities by proposing a constitutional amendment to require the dedication of fees generated by programs administered by EPD or any of its divisions. Additionally, the state should take advantage of all federal funding opportunities for water quality monitoring and volume or flow research.

B. Protect water quality through expanded, comprehensive monitoring.

In order to protect our waters, the state needs comprehensive monitoring at appropriate sampling sites to provide data on existing water quality. The state should invest in water quality monitoring that is comprehensive both in frequency of monitoring and the number of sites that are monitored. Polluters should be held fully accountable for violating water quality rules and creating water quality impairments.

The state should work with federal agencies, like the U.S. Geological Survey, and encourage and solicit voluntary monitoring by citizens and businesses for supplemental information until complete state-level monitoring is in place. The state should have a preference for neutral third-party monitoring and should not rely on data from dischargers conducting self-monitoring.

Georgia's Adopt-a-Stream program should maintain the current high Quality Assurance/Quality Control standards and should be used by EPD as a reliable alert of potential violations. Data from other citizen monitoring efforts should be used to alert EPD of potential violations. All monitoring data should be published in print and online for the public.

C. Increase enforcement of all permits and regulations.

The state must provide consistent and rigorous enforcement of laws and permits related to erosion, sedimentation, stormwater control, and point sources including more effective use of stop work orders and a decrease in reliance on consent orders to obtain nominal 'compliance' while existing pollution continues. The state must increase the educational requirements of enforcement and inspection personnel through the annual appropriation of all the monies generated by user fees for these purposes. EPD should provide additional oversight of local authorities in enforcing the erosion and sedimentation laws, and assert its position as the ultimate authority under the Erosion and Sedimentation Act and any Clean Water Act General Permits for stormwater discharges. EPD should increase its field and office staff to achieve full capacity to regularly inspect permitted municipal and industrial sites with land application systems and point source discharges, and to respond to citizen and other complaints of illegal or other damaging discharges. Best Management Practices (BMPs) must be used to restore and maintain a site's original hydrological and ecological function. Natural BMPs should be prioritized over engineered BMPs.

D. Clarify and strengthen permitting for land application systems and related waste disposal.

Land application systems can have significant adverse effects on both water quantity and quality in Georgia. There is currently confusion over what constitutes a land application system, as opposed to a septic system or the land disposal of septic tank waste. Through rulemaking and guidance, EPD should clarify its definition of land application systems, differentiate these systems from related septic disposal systems, and clearly identify the permitting and operation requirements for each type of system, including transport of septic waste. Permits must meet all state and federal requirements and must be strictly enforced.



Photo courtesy Chattahoochee Riverkeeper

Did You Know?

The Chattahoochee River, at 436 miles, is Georgia's longest river, and it supplies drinking water to 4 million people, about 40% of Georgia's population.

E. Strictly regulate new and existing septic systems.

To serve as effective wastewater management tools in areas of less dense development, septic systems should be properly sited, maintained, and cleaned regularly to remain functional and to protect water quality. EPD, the Department of Human Services, and local boards of public health should execute aggressive studies of the location and use of septic systems in areas of concern, such as the coastal plain and high-density metropolitan areas. Septic systems in these areas should be monitored more stringently than those in other locations. Such regulation should include minimum pump-out schedules and plans for progressive elimination of septic systems if it is found that natural systems are overburdened. In addition to regulation, citizens must be educated as to the proper maintenance of septic systems.

F. Strengthen water quality standards by tailoring them to be protective and reflective of the diversity of water resources in Georgia.

Georgia is home to an amazing and valuable diversity of swamps, creeks, streams, rivers, natural lakes, reservoirs, and estuarine and marine waters. A one size-fits-all set of physical, chemical, and biological standards has not and will not serve the needs of restoring and protecting these valuable water resources. EPD has made important strides toward tailoring standards to unique water bodies, and Georgians need to support and continue this important work.

G. Strictly regulate Confined Animal Feeding Operations (CAFOs) and other agricultural discharges, to include improvement of those regulations and prevention of any rollbacks.

The state's current regulation of and monitoring program for CAFO discharges into Georgia waters is insufficient to protect water quality. EPD must ensure that Georgia CAFOs are properly permitted, monitored, and closed to prevent large quantities of animal waste from polluting our state's water resources and regulations should not be rolled back.

H. Strictly regulate sludge disposal.

If handled improperly, sewage sludge disposal near waterways can impair water quality and threaten human health. Land

Hog CAFO Lagoon Spills Waste into Chattahoochee River

In November 2013, a two-acre lagoon at an abandoned hog farm in north Georgia was intentionally breached.

Six million gallons of old bacteria-laden hog waste spilled into Mossy Creek, a tributary to the Chattahoochee River.

Georgia's DNR Environmental Protection Division issued a \$7,500 fine for the intentional spill, which was likely far less than the amount of money the pond owner would have been required to spend to properly dispose of the waste.



Photo courtesy of Chattahoochee Riverkeeper

application of sludge must be strictly monitored and regulated by EPD to prevent excess sludge from running off into state waters and impairing water quality.

I. Expand and improve emergency response capacity within EPD.

Adequate funding and staffing of EPD’s emergency response program is critical to ensure that unauthorized discharges and water quality threats are dealt with promptly and in a way that protects human and ecological health. The state must have a clear procedure in place for responding to water quality emergencies and should initiate a rulemaking to articulate this procedure. The public and local emergency responders should be promptly notified of any emergencies impairing water quality and threatening public safety. Inefficient coordination between state agencies can delay effective response to emergency situations.

J. Streamline and improve the triennial review with EPA and EPD.

Georgia’s triennial review is a crucial time for the public to be able to weigh in on the state of rivers and streams. The state needs to better publicize this opportunity and act on the recommendations provided by those who experience water quality problems firsthand.

Toxic Legacy Pollutants Threaten Health of Satilla River and Southeast GA Communities

Toxic plumes of groundwater and contaminated soils from decades of improper waste disposal occur within the boundaries of at least three old industrial sites in South Georgia’s City of Waycross. Situated adjacent to several neighborhoods, this legacy pollution hotspot is drained by subsurface infiltration, streams and canals that flow through the city to Tebeau Creek and on to the Satilla River, providing multiple avenues for local residents to come in contact with contaminated soil, air and water. Exposure to these poisonous chemicals is quite likely to have affected the health and wellbeing of the local residents. Many suffer from a variety of unexplained illnesses and worry about their drinking water, property values and exposure in the creeks where they fish and swim.

Evaluation of the cumulative effects of the toxins, regardless of their sources, on the health of the community and natural systems is essential and needed, as is testing of soil, air and water in residential areas to determine the extent that toxins have migrated into local waterways and neighborhoods. Nearby Brunswick, GA is home to additional toxic legacy sites. The legacy groundwater pollution in South Georgia serves as an example of lack of oversight and response by the state to detect pollutants and provide timely response with remediation, thorough testing and analysis to protect both ecological and human health.



Recommendation

5

WATER CONSERVATION AND EFFICIENCY



Efficient water use must be the cornerstone of Georgia’s water supply planning. Water conservation has positive impacts on state and local economies and the environment.

A. Implement incentives and consumer education to encourage maximum efficiency by all water users. The state should score water providers based on national and state best conservation and efficiency practices, as well as withdrawal return rates. The state should publish these scores and link system improvement funds and new withdrawal and reservoir requests to scores and progress towards reaching efficiency goals.

The State of Georgia should provide and publicize incentives to encourage entities to achieve full compliance with all applicable laws and regulations and to voluntarily implement plans to reduce environmental impacts to water resources. Such incentives should bring innovative conservation technologies to Georgia. All water rates and bills need to be designed so that they plainly promote fairness,

transparency, conservation, and simplicity to and for water users. Rates that promote the use of excess water for any reason must be eliminated. Water rate structures should promote conservation and efficiency while allowing utilities a reasonable return on infrastructure investments.

B. Include a cap in water withdrawal permits on the amount of water consumed through withdrawal, transmission, and distribution.

Conservation plans should be included as enforceable provisions of new, renewed, or modified water withdrawal permits. The state should require all permittees to maintain standardized records of their use of surface water and groundwater and make these records publicly available on the EPD’s website. No increase in existing water withdrawals should be permitted until the impact on the resource is known and the applicant has met specific

conservation and efficiency goals. New permittees and those renewing permits should be required to use the most water-efficient technology available. The state should consider amending permits that historically use less water than authorized by the original permit in order to keep water in streams, rivers, and lakes to provide for potential reallocation for other uses if resources allow.

C. Promptly issue rules that implement water efficiency strategies.

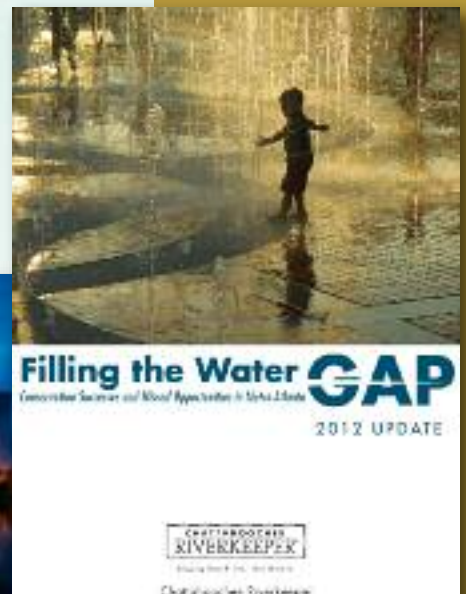
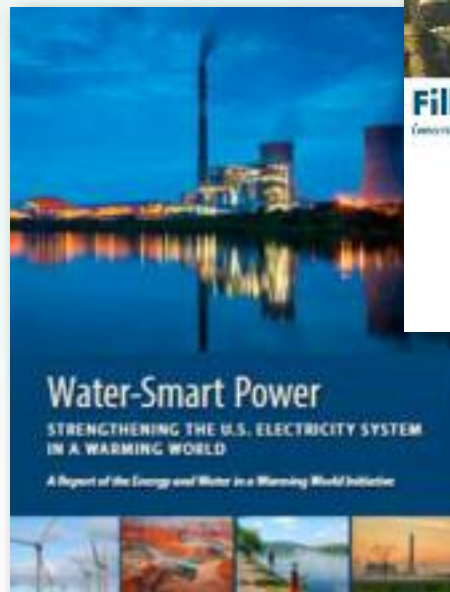
The state should issue rules that implement the Water Conservation Implementation Plan, the recommendations of the Governor’s Water Contingency Task Force that have not been codified, strategies listed in EPA guidance on reservoirs, and recommendations offered by Georgia Water Coalition members (e.g., “[Hidden Reservoir](#),” “[Money Pit](#),” and “[Filling the Water Gap](#)”). Rules should include interim and permanent water conservation and efficiency requirements for all water user sectors. These goals and benchmarks should have numerical targets and associated timelines to reach these targets. The rules should be enforceable and not just “guidance” from the state.

D. Promote energy efficiency and conservation measures that minimize water usage.

When needed, advance new energy options or technologies that are less water-intensive than traditional energy supply sources. Current energy production is extremely water-intensive. Georgia needs to publicly recognize the connection between energy and water. The state needs to provide and promote incentives for both water and energy efficiency.

E. The State should finalize its drought management plan and supplement downstream flows during drought with conserved volume.

Georgia has experienced several historic droughts over the past ten years. In 2012, over half of Georgia experienced extreme drought, with no official recognition by the state. The state must finalize its drought management plan with particular attention to the procedure for declaring a drought and actions to conserve water while the state is in severe drought conditions.



Additional Resources:

[“Filling the Water Gap: Conservation Successes and Missed Opportunities in Metro Atlanta”](#) (Sept. 2012), Chattahoochee Riverkeeper

[“Water-Smart Power: Strengthening the U.S. Electricity System in a Warming World”](#) (2013), Union of Concerned Scientists

F. Site design and landscaping decisions should be based on water efficiency goals, zoning, and impervious surface limits.

Local governments and the state should promote water efficient landscaping, particularly in times of drought. All landscaping should be designed to reduce water consumption and increase infiltration.

G. The State should complete the water auditing process and implement reconciliation of the audit figures, corrective actions, and state funding for local governments and authorities.

Georgia should set a goal of 10% maximum leak rates for all utilities, along with enforceable benchmarks and timelines to reach those goals. The state should provide funding assistance and incentives to utilities in pursuing these actions, which will help sustain existing water supplies.

H. The Georgia Water Coalition will be more intentional about developing relationships with water utilities and providers around the state.

Coalition members will work to educate utilities concerning the importance of water efficiency and conservation, and will work to identify funding sources for these measures.



Recommendation

6

COMMON SENSE WATER POLICIES



Middle Oconee River in Drought
Photos courtesy Ben Emanuel



Middle Oconee River - normal flow.

Establish common sense water management policies.

A. Allow regulation of withdrawals of surface water and groundwater of more than 10,000 gallons per day as local conditions require.

Georgia's current system of water withdrawal regulation is inadequate to ensure enough clean water remains in our rivers and aquifers. The current permitting threshold of 100,000 gallons per day allows numerous users to have significant adverse impacts on flow volumes while escaping any permitting requirements. Lowering the regulatory threshold to 10,000 gallons per day will allow for minimization of the cumulative impacts from multiple withdrawals that currently affect Georgia's waterways, while still allowing most water users to avoid regulation. Lowering the permitting threshold will also incentivize technologies that use less water and provide more accurate information on how a resource is being used.

B. Standardize the criteria for issuance, amendment, or denial of both surface water and groundwater withdrawal permits for all proposed uses.

All water withdrawal permit applications should be publicized and include public participation prior to making a decision about whether to issue a permit. All withdrawal permits issued by EPD should be subject to review and modification by the agency for reallocation and protection of instream flows and aquifer yields, including water conservation and efficiency requirements. The Groundwater Use Act and the Water Quality Control Act should be amended to authorize the EPD Director to grant or deny applications for agricultural permits under the same standards applicable for other uses and to include water conservation requirements.

C. Link permits to compliance and river conditions, particularly watershed, flow, and drought conditions.

Water withdrawal and wastewater discharge permit renewals should not be granted to facilities that are not in compliance with their current permit unless a conditional renewed permit contains a specific, enforceable plan to bring the permittee into compliance within the shortest practicable time period.

New and renewed permits must be evaluated in light of low flows resulting from drought and the project's effects on a particular watershed. Permit standards should reflect the best results that can be achieved to protect natural resources using the most practicable available technology with an ultimate aim of eliminating discharge of all pollutants.

When permits are violated, polluters must pay appropriate penalties for abusing the water resource, including the value of ecological damage, and the costs of damage assessment, enforcement, and environmental compliance.



Photo courtesy of Hank Ohme

Water Withdrawal Permits in Georgia

2014 Non-farm Surface Withdrawal Permits	302
2014 Non-farm Ground Water Withdrawal Permits	513
2013 Farm Water Withdrawal Permits	<u>22,352</u>
Total Water Withdrawal Permits	23,167

Source: GA EPD Watershed Protection Branch

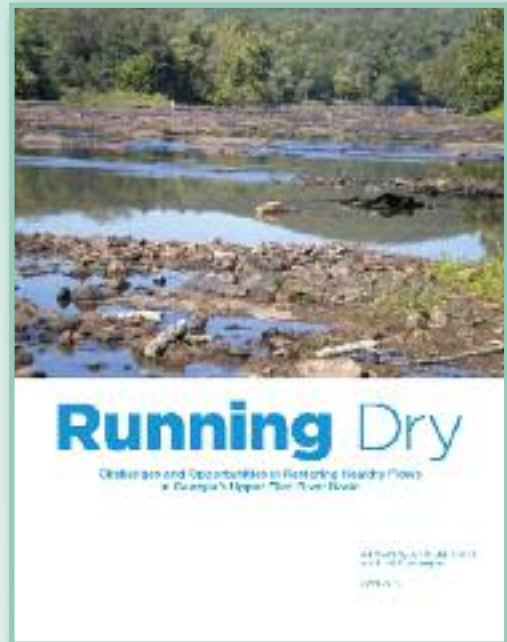
D. Manage water consumption through reporting, incentives, and/or regulation.

Water consumption, meaning water that is withdrawn and not returned to its source, should be reported to EPD and the public as a requirement of all water withdrawal permits. Monitoring should be accomplished by the use of meters. Use of annual average data in characterizing consumptive uses should be discouraged, as it masks the impacts on river systems during low-flow periods.

Running Dry: Low Flows Affect the Economy, Property Rights, and Quality of Life for Georgians

In much of Georgia—throughout both the Piedmont and the Coastal Plain—our rivers and streams are overdrawn by a multitude of water withdrawals that deplete their flows. Georgia’s Flint River basin, unfortunately, provides the perfect example of this problem. In the Piedmont south of Atlanta, the Flint’s headwater tributaries are overtaxed by a variety of strains. Heavily impacted by urban sprawl, wetland loss and numerous manmade ponds and lakes on feeder streams, the upper Flint’s waters are also in high demand for public water supply, landscape irrigation and other uses. Relative to the flow of the streams in this area, large volumes of water can be withdrawn under state-issued permits, and less than one third is timely returned. The result? In drought years, the Flint’s scenic shoals largely dry out, reducing fish habitat and putting an early end to the boating season. Major upper Flint River feeder streams have run completely dry in recent droughts.

In the lower Flint basin of Southwest Georgia, large stream systems such as Ichawaynochaway Creek, Kinchafoonee/Muckalee Creeks and Spring Creek suffer from similar low-flow problems that arise from different uses, but the same causes. Here, water over-withdrawals from streams



Visit

www.AmericanRivers.org/RunningDry
to see the report.



and from underground aquifers (due to the region’s geology) cause dramatic drops in streamflow. Much of this pumping takes place in order to irrigate the productive farmland of the Dougherty Plain. And, although farm water use efficiency has been on the rise, more and more water is drawn from the lower Flint River system and its associated aquifers with each passing year. Very little is returned. Some streams in this region now run dry even in non-drought years, and during those same wet years, most exhibit flows that would have been considered ‘drought’ flows in a previous era. Like the streams of the upper Flint River, these streams and the many people who depend on them would be far better protected if Georgia had meaningful streamflow protections in place. With no flow goals for low, medium, or high water years, Georgia and Georgians are suffering grave damage to the economy, property rights, and public uses.

E. Find ways to make enforcement more effective.

The state should fund periodic independent performance audits of the environmental programs administered by the EPD, GEFA, the Georgia Soil and Water Conservation Commission, and the Department of Agriculture to identify where enforcement can be improved and to institute and fund the recommended improvements. Local Issuing Authorities should not be the only entities to designate state waters and thus what waters are unregulated. Such designations should be subject to oversight and challenge from EPD and the public. The state can strengthen enforcement by improving use of technology, providing educational opportunities for Local Issuing Authorities, removing impediments to enforcement at the state and local level, and encouraging exploration of alternative agencies for enforcement of various environmental laws.

F. Allow development only where adequate water supplies and assimilative wastewater capacity exist.

Georgia has seen record economic and population growth over the last two decades. A large portion of that development has occurred in North

Georgia, near the headwaters of several major Georgia rivers. North Georgia is now experiencing water supply shortages as a result of that growth and a series of severe droughts. Continued extensive development is anticipated in the northern and coastal regions of the state, parts of which do not have adequate water supplies or capacity to assimilate wastewater. Comprehensive plans should require, as a first step before consideration of any other factors, assurances of adequate and permanent water supply and proof of the ability of streams receiving wastewater to assimilate the waste and support a healthy ecosystem for fish and wildlife. Stormwater and groundwater effects of development should also be fully considered in comprehensive plan reviews.

G. Require better state and federal analysis of cumulative impacts on water resources where appropriate.

State and federal water management policies, including permitting decisions, should include consideration of more than just direct, individual impacts from one development or permitting decision. The cumulative impacts of multiple development projects, permits, or uses can affect water quality in ways not apparent from evaluating a single project in isolation.



Appendix I

REPORT ON THE GEORGIA WATER COALITION: A POWERHOUSE FORCE FOR GEORGIA'S WATERS

By Beth Millemann, Environmental Consultant

June 2014

A long-time funder of The Georgia Water Coalition (GWC) recently assessed the efficacy of its environmental program funding. The assessment revealed that the resources invested in the GWC over the last twelve years have created a powerful statewide force for Georgia's waters. The GWC is an exceptional leader on critically important water issues within the state of Georgia and the southeastern region. Since its formation in 2002, the Coalition has accrued a track record of successes that establish it as a state powerhouse, and a highly effective voice on water management and conservation issues.

The Coalition addresses what the U.S. Environmental Protection Agency has called "one of the most critical natural resource issues facing the United States and the world: managing the supply and availability of water." Georgia is blessed with more than 70,000 miles of streams and rivers, nearly a half-million acres of lakes, and 4.5 million acres of freshwater wetlands. However, this abundance is threatened by poor management that places Georgia's water resources, and the many human uses of them, at risk.

By combining astute political savvy with scientific and legal expertise, the GWC has become an effective and respected voice on Georgia's complex water issues. Its extensive membership and supporters bring considerable clout to disputes over water management. The breadth of interests reflected in the Coalition enables it to engage on a variety of water topics. From its beginnings as a coalition of four organizations, the GWC now includes more than 200 groups whose members hail from many walks of life: sportsmen, conservationists, business owners, civic groups, religious organizations, farmers, homeowner and lake associations, and others. The groups are active throughout the state, bringing geographic diversity to the Coalition as well as multiple interests.

Through the GWC, many interests work together to tackle critically important water issues in the state legislature, within state agencies, and in communities around Georgia. Over the past dozen years, the GWC has been a leader in important efforts to better manage, conserve and protect Georgia's waters. The following is a sample of the GWC's significant accomplishments:

- **Keeping Georgia's waters a public resource.** The Coalition led efforts to defeat legislation in 2003 that would have privatized Georgia's water resources and led to the marketing and sale of water to the highest bidder. The GWC has worked hard to repel subsequent attempts. In 2014, the GWC helped block a version of the "Flint River Drought Protection Act" that would have allowed the state to assert title to a significant amount of Georgia's waters, infringing on property rights and affecting the availability of water for multiple uses.
- **Responding to emergencies that threaten public health and Georgia's waters.** For years, the GWC has highlighted the need to improve the state's emergency response capability when rivers, streams or lakes are threatened by pollution. The massive pollutant spill and fish kill on the Ogeechee River in 2011 catapulted the need for better emergency response into the public limelight. The GWC worked hard to inform the media and citizens about threats to public health and the environment from polluting spills and other emergencies, and it authored and promoted a bill to improve the Environmental Protection Division's emergency response program. This important bill passed the state legislature and became law in 2014.

- **Promoting wise management of the state's waters.** The ways in which water is used, managed and conserved in Georgia directly affect the state's population, natural environment, tourism and outdoor recreation industries, and agriculture, to name just a few of the interests affected by water use. For a decade, the GWC has promoted comprehensive and enforceable state-wide water planning as a prudent, economically important and environmentally vital action. The Coalition was a leader in securing legislation mandating creation of the "Georgia Statewide Water Management Plan" in 2004, and continues to work hard on the law's implementation. The GWC is an important voice in calling for improved environmental protection provisions and conservation requirements within the state plan. Without forward-looking planning, Georgia's waters are at direct risk from over-use and mismanagement that could result in dire impacts.
- **Protecting Georgia's waters from massive hog farm operations.** In 2013, the state proposed to exempt major hog operations from basic pollution reduction requirements. These massive industrial hog operations generate huge amounts of waste: an industrial hog farm with 12,500 hogs can generate as much waste as a city of 50,000 people. The GWC successfully repelled efforts by the state to allow industrial hog operations to avoid basic pollution restrictions, thereby helping to better protect human health and the environment.
- **Educating the press and public about pivotal water issues.** Every year, the GWC releases its acclaimed "Dirty Dozen" report that highlights water pollution and management issues at a dozen sites around Georgia. The report generates significant press coverage and public interest in the health of waterways across the state. In addition to the "Dirty Dozen" report, the GWC also conducts media and citizen outreach around important water issues as they arise throughout the year.
- **Bringing together many interests in common cause.** The GWC is a forum in which people from all walks of life gather. Sportsmen and business leaders, civic groups and faith-based organizations, conservationists and town associations, all join together to promote wise management of Georgia's waters. In a time of divisiveness and political polarization, the GWC stands as an example of how people with different backgrounds and viewpoints can agree and work together on shared concerns.

Water issues will continue to be critically important in Georgia in the coming years. Water use intersects with other human activities such as energy production, agriculture, forest management, and urban and suburban growth, while water availability is critical to healthy and productive ecosystems. How the state manages its waters is important locally and regionally, and sends a powerful message nationally.

The GWC provides a unified, informed and effective voice on water issues within Georgia. It has become a model for educated citizen engagement. It has an impressive track record of accomplishments, and it continues to identify and work on water issues of utmost importance to Georgia's human and natural worlds.

Appendix II

Georgia Water Coalition Partners

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ABAC Forestry and Wildlife Club
AKO Environmental Consultants, LLC
Albany Georgia Audubon Society
Altamaha Riverkeeper
American Cane Society
American Fisheries Society – Georgia Chapter
American Rivers
American Whitewater
Anthony W. Park & Associates, LLC
Apalachicola Riverkeeper
Appalachian Education and Recreation Services -
Len Foote Hike Inn
April Ingle Consulting
Association of Water Treatment Professionals
Athens Grow Green Coalition
Athens Land Trust
Atlanta Audubon Society
Atlanta Water Gardens, Inc.
Atlanta Whitewater Club
Azalea Park Neighborhood
Bee Natural, Inc.
Berkeley Lake Homeowners Association
Bike Athens
Blue Heron Nature Preserve
Broad River Outpost
Broad River Watershed Association
BSA Troop 1134
Burnt Fork Watershed Alliance
Camden County Land Trust
CCR Environmental
Center for a Sustainable Coast
Central Savannah River Land Trust
Chattahoochee Hill Country Conservancy
Chattahoochee Nature Center
Chattahoochee Riverkeeper
Chattahoochee River Warden
Chattooga Conservancy
Cherokee Transitions Green
Citizens for Clean Air and Water
Citizens for Environmental Justice
Clean Coast
Clear Rivers Chorus
Coastal Environmental Organization of Georgia
Coastal Estuary Protection Association
Coastal Georgia Travel
Cochran Mill Nature Center
Compassion in World Farming
Concerned Neighbors of Wayne County
Conserve America
Coosa River Basin Initiative
Coosawattee Watershed Alliance
Creative Earth
Cumming Garden Club
DeKalb County Soil & Water Conservation District
Druid Hills Garden Club
Earthkeepers & Company
Earth Ministry, NW Unitarian Universalist
Congregation

East Atlanta Community Association
Ens & Outs, Unitarian Universalist
Congregation of Atlanta
Environment Georgia
Environmental Community Action, Inc.
Environmental Defense Fund- SE Region
Ewing Irrigation - Covington
Fall-line Alliance for a Clean Environment
Fall Line South Field Institute
Flint Riverkeeper
Forest Guild
Fox Environmental
Friends of Barber Creek
Friends of Georgia, Inc
Friends of McIntosh Reserve
Friends of the Apalachee
Friends of the Chattahoochee
Friends of the Savannah River Basin
Friends of South Newport River, Inc.
Garden Club of Georgia, Inc.
Garden*Hood
Georgia Bass Chapter Federation
Georgia Canoeing Association, Inc.
Georgia Coalition for the People's Agenda
Georgia Coalition of Black Women
Georgia Conservancy
Georgia Forest Watch
Georgia Interfaith Power and Light
Georgia Kayak Fishing
Georgia Lakes Society
Georgia Land Trust
Georgia Onsite Wastewater Association
Georgia Poultry Justice Alliance
Georgia River Fishing
Georgia River Network
Georgia River Survey
Georgia Rural Urban Summit
Georgia Wildlife Federation
Georgia Women's Action for New Direction
Glynn Environmental Coalition
Graci's Garden Center
Greening Forward
GreenLaw
Harrison Design Associates
Highchem America
Hiwassee River Watershed Coalition
Hydro Logical Solutions, LLC
Imke Lass Photography
Initiative to Protect Jekyll Island
Interface, Inc.
Izaak Walton League of America- Greater
Atlanta Chapter
J. Galt & Associates
Jackson Lake Homeowners Association
Junior Bass Busters
Keller Williams Realty, Lanier Partners
Krull and Company

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Lake Allatoona Preservation Authority
Lake Blackshear Watershed Association
Lake Hartwell Association
Lake Homeowners Alliance
Lake Oconee Property Owners' Association
Lake Oconee Water Watch
Lake Yonah Association
LAND Architect Studio
League of Women Voters of Georgia
Litter Control, Inc
Little Mountain Water Association
Little Tennessee Watershed Association
Live Thrive Atlanta
Lula Lake Land Trust
Lumpkin Coalition
McIntosh High School Adopt-A-Stream
Melaver McIntosh
Middle Chattahoochee River Stewards
Minds Eye Scenic Arts/Knottalotta Entertainment
Mountain Park Watershed Preservation Society
National Wildlife Federation
Neighborhood Planning Unit – W Atlanta
New Echota Rivers Alliance
NOCRAP (Newly Organized Citizens Requesting
Aquifer Protection)
Norris Lake Community Benefits Corporation
North American Native Fishes Association
North Georgia Trout Online
Nuclear Watch South
Oceana
Oconee River Land Trust
Off Grid Expeditions & River Guardians
Ogeechee Audubon Society
Ogeechee Riverkeeper
Okefenokee Adventures
One Entertainment Productions
One Hundred Miles
One More Generation
Paddle4Tomorrow
Patagonia Atlanta
Peter McIntosh Photography
Phillips Seafood
Presbytery of Greater Atlanta
Rabolli Environmental, Inc.
Rain Harvest Company, Inc.
Richmond Hill Garden Club
Ryan Taylor Architects
Sapelo Sea Farms
Satilla Riverwatch Alliance & Satilla Riverkeeper
Santee-Nacoochee Community Association
Savannah-Ogeechee Canal Society, Inc.
Savannah Riverkeeper
Savannah Tree Foundation
Save Lake Oconee's Waters (SLOW)
Save Our Rivers, Inc.
Scenic Georgia, Inc.
Sierra Club- Georgia Chapter
Silentdisaster.org
Small Carpenters at Large
Snake Nation Press, Inc.
Solomon's Minds
Soque River Watershed Association
South Atlantans for Neighborhood Development
South Fork Conservancy
SouthEast Adventure Outfitters
Southeast Green
Southeastern Horticultural Society
Southeastern Natural Sciences Academy
Southern Alliance for Clean Energy
Southern Conservation Trust
Southern Environmental Law Center
Southern Wings Bird Club
Southface Energy Institute
South River Watershed Alliance
SouthWings: Conservation through Aviation
Spring Creek Watershed Partnership
St. Marys EarthKeepers, Inc.
Storm Water Systems
Surfrider Foundation - Atlanta/Georgia Chapter
Sustainable Atlanta
Tallulah River Watershed Protection Committee
The Concerned Citizens of Shell Bluff
The Dolphin Project
The Erosion Company (TEC)
The Nature Conservancy
The Original Rainwater Pillow
The Outside World
The Rain Barrel Depot
The Rain Saver
The Victor Firm, LLC
The Wilderness Society
Trout Unlimited - Georgia Council
Turner Environmental Law Clinic
Unicoi Outfitters
United Nations Association – Atlanta
Upper Etowah River Alliance
Upper Oconee Watershed Network
Upper Tallapoosa Watershed Group
U.S. Green Building Council, GA Chapter
U.S. Green Building Council – Atlanta Branch
U.S. Green Building Council – Savannah Branch
Watershed Alliance of Sandy Springs
Wayne Morgan Artistry
West Atlanta Watershed Alliance
West Point Lake Advisory Council
West Point Lake Coalition
White Oak Hills Neighborhood Association
World Wildlife Fund
WOWash
WWALS Watershed Coalition
Yellow Bluff Plantation
Yellow River Water Trail

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Appendix III



Leadership Team

Chattahoochee Riverkeeper	Greenlaw
Coosa Basin Initiative	Ogeechee Riverkeeper
Environment Georgia	One Hundred Miles
Flint Riverkeeper	Satilla Riverkeeper
Garden Club of Georgia	Savannah Riverkeeper
Georgia River Network	Sierra Club
Georgia Wildlife Federation	Southern Environmental Law Center

222 Organizations
www.gawater.org

Appendix IV

TENNESSEE

River Basins of Georgia

Georgia Department of Natural Resources
Environmental Protection Division

