



Metropolitan North Georgia Water Planning District

# Activities & Progress Report

# 2009





## 2009 Board Members

### Elected Officials

- City of Atlanta – *Hon. Shirley Franklin\**
- Bartow County – *Hon. Matt Santini*
- Cherokee County – *Hon. A. Rick Roberts*
- Clayton County – *Hon. Eldrin Bell\**
- Cobb County – *Hon. Samuel Olens (Vice Chairman)\**
- Coweta County – *Hon. Casey Houston*
- DeKalb County – *Hon. Burrell Ellis\**
- Douglas County – *Hon. Tom Worthan*
- Fayette County – *Hon. Ken Steele*
- Forsyth County – *Hon. Ford Gravitt*
- Fulton County – *Hon. John Eaves\**
- Gwinnett County – *Hon. Charles Bannister\**
- Hall County – *Hon. Tom Oliver*
- Henry County – *Hon. Lorene Lindsey*
- Paulding County – *Hon. David Austin*
- Rockdale County – *Hon. Richard Oden*

### Citizen Members

- William Thomas Craig* – Covington
- Bradley Currey, Jr.* – Atlanta
- Kathryn Dunlap* – Gainesville (Chairman)\*
- Bob Fountain* – Macon
- Jack Elkins* – Hampton
- Birdel Jackson* – Atlanta (Secretary/Treasurer)\*
- Katie Kirkpatrick* – Atlanta
- Gerald Pouncey, Jr.* – Atlanta
- Suzanne Sitherwood* – Atlanta
- Steven Woodruff* – Canton\*

\* Executive Committee



## Message from the Chairman

December 2009

This has been a year of unprecedented water management challenges in metropolitan Atlanta. We began 2009 still contending with a multi-year drought brought on by years of below average rainfall in Georgia. In July, legal issues involving the metro area's primary water source escalated when the court ruled that the Corps of Engineers is not authorized to manage Lake Lanier for water supply. Then, September brought torrential rains and devastating floods to many of our metro communities. Never has Georgia's need for carefully planned, comprehensive water resource management been more vital, and never has the work of the Metropolitan North Georgia Water Planning District been more important.

From its inception in 2001, the Metro Water District has worked hard to ensure that our plans move the region toward best-in-class water resources management and that they can adapt as new information becomes available or as conditions change. While over the years, the board has adopted amendments to address specific provisions of the plans, in May the board was proud to adopt comprehensive updates to the Water Supply and Water Conservation Management Plan, Wastewater Management Plan and Watershed Management Plan. These integrated plans build on the progress achieved through the 2003 plans and are consistent with the State Water Plan. In fact, the Metro Water District plans include requirements that go beyond the current provisions of the state-wide plan for watershed protection, pollution prevention and water demand management.

The District supports the need for additional water supply storage and recognizes that water conservation is an integral part of sustaining our water resources. The new plans include additional management strategies to strengthen the Metro Water District's already aggressive water conservation program. With the revised plans in place, Metro Water District jurisdictions will use even less water and be more efficient.

Water resources have far-reaching effects on our region's public health, economic development and quality of life. Georgia's future relies on the responsible stewardship of limited water supplies, and our citizens have never been more focused on doing their part and finding solutions. The Metro Water District fully supports Governor Perdue and metro Atlanta's leaders as they address the current water crisis and the legal challenges that face our state. It is clear that the water issues in Georgia can only be resolved through cooperation, conservation and careful planning. On behalf of the Governing Board, we appreciate the State's continued support as we strive to reach our shared goals.

Sincerely,



Kit Dunlap, Chairman



The Metro Water District was created by the Georgia General Assembly in 2001 to establish policy, create plans and promote intergovernmental coordination of water issues from a regional perspective in a 15-county area. Under the direction of the Governing Board, Technical Coordinating Committee and Basin Advisory Councils, the Metro Water District remains committed to its central mission – the development of comprehensive regional water resources plans that protect water quality and water supply in and downstream of the region, protect recreational values of the waters in and downstream of the region and minimize potential adverse impacts of development on waters in and downstream of the region.

### Technical Coordinating Committee (TCC)

Local water, wastewater and stormwater staff provide technical guidance in the areas of education, stormwater management, wastewater and septic systems management and water supply and water conservation.

### Basin Advisory Councils (BACs)

Basin Advisory Councils provide input in the development of the Metro Water District's comprehensive plans and policies that guide water resources management in the 15-county metro Atlanta region. Individuals represent a wide-variety of public interests and give local feedback on water management issues affecting six basins: Chattahoochee, Etowah, Flint, Lake Lanier, Ocmulgee and Oconee.

### Reinvigorating the BACs

In 2009, the Metro Water District moved to strengthen the Basin Advisory Councils and provide for greater stakeholder input. Following a new member recruitment drive, a series of three orientation meetings in each basin helped educate the 151 BAC members about the Metro Water District's work and updated plans. In addition to briefings on the plans, the BAC members toured water treatment plants, wastewater plants and stormwater management projects such as rain gardens, green roofs and stream restoration sites.

The revitalized Basin Advisory Councils will continue to meet quarterly in 2010.

**Basin Advisory Council Chairs**

In the fall of 2009 all of the BACs elected a chair for their council.

Chattahoochee BAC Chair – *John Lawrence*  
Lanier BAC Chair – *Val Perry*  
Oconee BAC Chair – *Jill Stachura*  
Flint BAC Chair – *Tim Thoms*  
Coosa/Etowah BAC Chair – *Barry Mansell*  
Ocmulgee BAC Chair – *Vikki McReynolds*



# 2009 Accomplishments

## Plan Update

In May 2009, the Metro Water District adopted updates to its plans for water supply and conservation, wastewater management and watershed protection following nearly two years of data collection, analysis and stakeholder and public input. The plans result from a collaborative effort between the Metro Water District's local jurisdictions, the Georgia Environmental Protection Division (EPD), the Governing Board, TCC, BACs, technical consultants and numerous stakeholders.

The three integrated plans offer metro jurisdictions and state agencies a set of long-term strategies, actions, policies and investments in watershed, wastewater and water supply and conservation management. The updated plans build on the progress made through the 2003 plans and extend the planning horizon to 2035. They place greater emphasis on local planning and intergovernmental cooperation and strengthen requirements for outreach and education activities by local governments.

The Metro Water District has also begun to expand metrics and benchmarks to better track progress toward achieving plan goals. Water providers will report each year their progress toward implementing the water conservation measures included in the plan. Expanded wastewater metrics will be completed in 2010, and watershed metrics will be finalized in 2011. As additional metrics for measuring progress are developed, they will be included in the annual survey and progress report.

## Plan Compliance

The Georgia EPD enforces the Metro Water District plans through its audit process. EPD auditors conduct a thorough review of the local programs and procedures to determine consistency with the Metro Water District Plans. Communities must comply with plan provisions in order to modify or obtain new water withdrawal permits, discharge permits or loans for water and wastewater projects or stormwater permits.

### 2009 Audits

#### *Completed by December 1, 2009*

Acworth · Atlanta · Avondale Estates · Berkeley Lake  
Chamblee · Clarkston · Clayton County  
Clayton County Water Authority · Cobb County  
College Park · Decatur · DeKalb County · Doraville  
Duluth · East Point · Fairburn · Forest Park  
Forsyth County · Fulton County · Gwinnett County  
Hapeville · Jonesboro · Kennesaw · Lake City · Lilburn  
Lithonia · Lovejoy · Marietta · Morrow · Norcross  
Pine Lake · Powder Springs · Riverdale · Smyrna · Snellville  
Stone Mountain · Sugar Hill · Suwanee · Union City

#### *In Progress as of December 1, 2009*

Kingston · Mountain Park



# Water Supply and Conservation

The Metro Water District has led regional efforts to make water conservation a priority. Metro Atlanta is the only major metropolitan area in the country with more than 100 jurisdictions implementing a comprehensive water conservation program that is required and enforced. Tiered water conservation rates have been put in place throughout the region. Toilet rebate programs are in place and ahead of schedule.

## Water Loss

The plan update requires water providers to establish a goal for reducing system water losses, and more than half have already set their water loss goals. Approximately 9,000 leaks were repaired in 2009.

Metro Water District utilities reduce water loss by

- » proactive leak detection programs;
- » prioritizing leak repairs for mains and smaller lines;
- » procedures among departments for timely reports of standing water and potential leaks; and
- » meter calibration or replacement.

## Toilet Rebate Program

A total of 33 jurisdictions offer toilet rebates, either through individual programs or through the Metro Water District's regional program. Since the start of the programs, more than 32,700 old toilets have been replaced at a total cost of \$6.7 million.

## Water Conservation Measures

The water conservation measures in the 2009 update include and enhance measures in the original plan.

### 10 water conservation measures from the 2003 plan

- » Conservation pricing
- » Replace older, inefficient plumbing fixtures
- » Pre-rinse spray valve retrofit education program
- » Rain sensor shut-off switches on new irrigation systems
- » Sub-meters in new multi-family buildings
- » Assess and reduce water system leakage
- » Conduct residential water audits
- » Distribute low-flow retrofit kits to residential users
- » Conduct commercial water audits
- » Implement education and public awareness plan

### Enhancements to original measures

- » Irrigation meter pricing at a minimum 200 percent of the first-tier rate
- » Rebates for only 1.28 gpf toilets by 2014
- » Minimum local education requirements and optional toolbox

### New measures

- » Installation of 1.28 gpf toilets and low-flow urinals in government buildings
- » Water recycling at new car washes

In 2009, the Metro Water District conducted free in-store training sessions at home improvement stores in the Atlanta region. Store associates received information about the Metro Water District's Toilet Rebate Program and a packet containing program information and promotional flyers.



## Water Providers with Toilet Rebate Programs

- City of Atlanta Watershed Department\*
- City of Austell
- City of Ball Ground
- City of Braselton
- City of Buford
- Cherokee County Water & Sewerage Authority\*
- Clayton County Water Authority\*
- Cobb County Water System
- City of College Park\*
- Coweta County Water & Sewerage Authority\*
- City of Dallas\*
- DeKalb County Department of Watershed Management
- Douglasville-Douglas County Water & Sewerage Authority
- City of East Point\*
- City of Emerson
- City of Fairburn\*
- Fayette County Water System\*
- Forsyth County Department of Water and Sewer\*
- Fulton County Department of Public Works\*
- City of Gainesville
- Gwinnett County Water Resources\*
- City of Hapeville\*
- Henry County Water & Sewerage Authority\*
- City of Lawrenceville
- City of Marietta
- City of McDonough\*
- City of Mountain Park
- City of Norcross
- Paulding County Water Department
- City of Powder Springs\*
- City of Roswell\*
- City of Smyrna
- City of Woodstock

\* Participate in the Metro Water District Regional Toilet Rebate Program

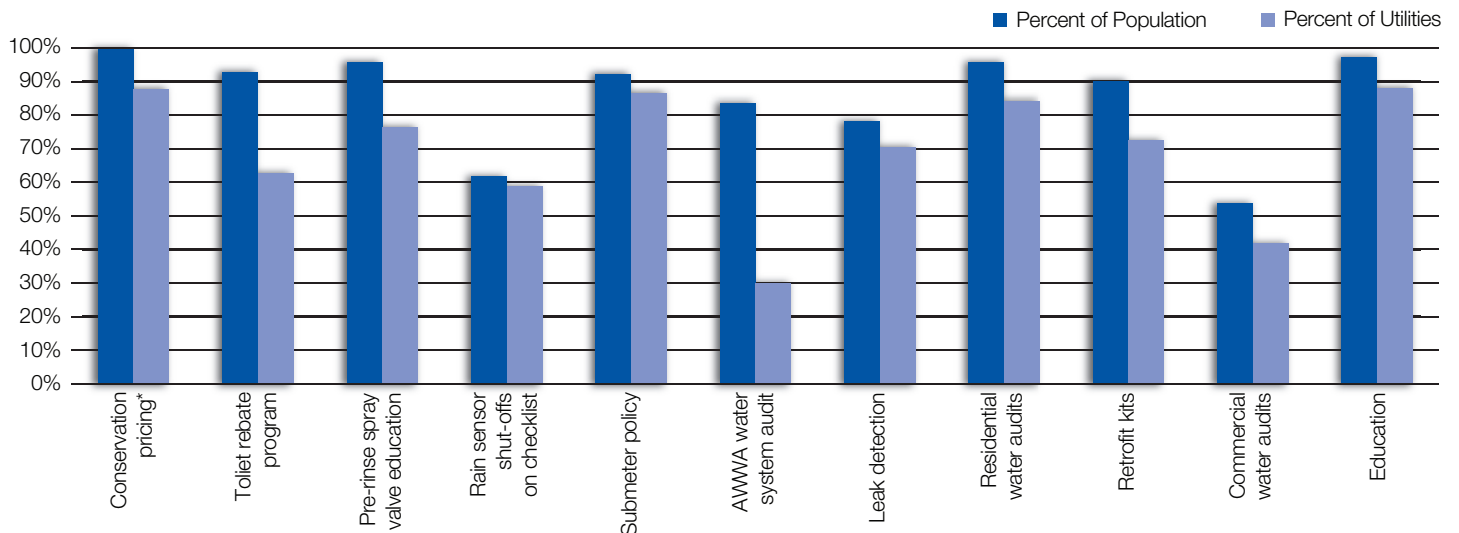
## Conservation Pricing

Conservation pricing means the more you use, the more you pay. This type of tiered rate system was uncommon in the Metro Water District before being required by the District Water Supply and Water Conservation Management Plan. Now more than 99 percent of the population is subject to conservation pricing, according to the 2008 Water and Wastewater Rates Survey.

## Low-Flow Retrofit Kits

A low-flow retrofit kit includes low-flow showerheads and faucet aerators to help residents save water at home. Water systems in the District have given out almost 150,000 retrofit kits.

## Summary of District's Water Conservation Measures Implementation



\*As of 2008

## Update on the Tri-State Litigation Ruling

In mid-July, Judge Paul Magnuson issued an order in the first phase of the litigation involving Georgia, Alabama and Florida concerning water in the Apalachicola-Chattahoochee-Flint (ACF) Basin. The judge took a very narrow view of the legislative history of Lake Lanier and Buford Dam, saying that water supply is not an authorized purpose for Buford Dam and Lake Lanier and that the U.S. Army Corp of Engineers cannot operate the reservoir for drinking water purposes without specific approval from Congress. The ruling allows three years to secure that approval. After that, without Congressional action, operation of the dam reverts to what the judge called "base line" operations of the mid 1970s.

Governor Perdue has outlined a multi-pronged approach to resolving the dispute. First, he has re-opened negotiations with

Florida and Alabama to determine an equitable allocation of the waters in the ACF basin. Second, he is working with the Georgia delegation to introduce legislation to authorize water supply as a purpose for the lake. Third, the state has filed a notice of intent to appeal Judge Magnuson's ruling. Finally, Governor Perdue has appointed a task force to evaluate contingencies for alternate supplies, and Metro Water District Chairman Kathryn "Kit" Dunlap and seven other District board members are serving on the task force.

The Metro Water District is acting as well, working proactively with the water systems directly affected by the ruling to evaluate additional water conservation measures and supply alternatives. The options of the Governor's contingency task force will be included in that evaluation, as the District considers its own recommendations during 2010.



## Drought Declared Over

On March 30, 2009, Georgia's state climatologist David Stooksbury declared the drought in Georgia officially over. Soil moisture and stream flows were near normal, and small and medium-sized reservoirs were full. Georgia EPD lifted mandatory water restrictions for metro Atlanta in June after four months of improved conditions. Heavy rainfall during the summer and fall helped Lake Lanier recover, and in November the lake level reached 1072 feet.





# Wastewater Management

The District's Wastewater Management Plan addresses the management and maintenance of 92 publicly owned wastewater treatment plants, 16,000 miles of sanitary sewer line, more than 450,000 manholes and over 500,000 on-site wastewater management (septic) systems in the District. These requirements are critical in ensuring that local systems have enough capacity to meet future demands and that wastewater discharges do not damage the health of rivers, streams and lakes in the region.

## Wastewater Collection System Inspection and Maintenance

All local wastewater providers in the District must establish or maintain a wastewater collection system inspection and maintenance program. System mapping, maintenance and

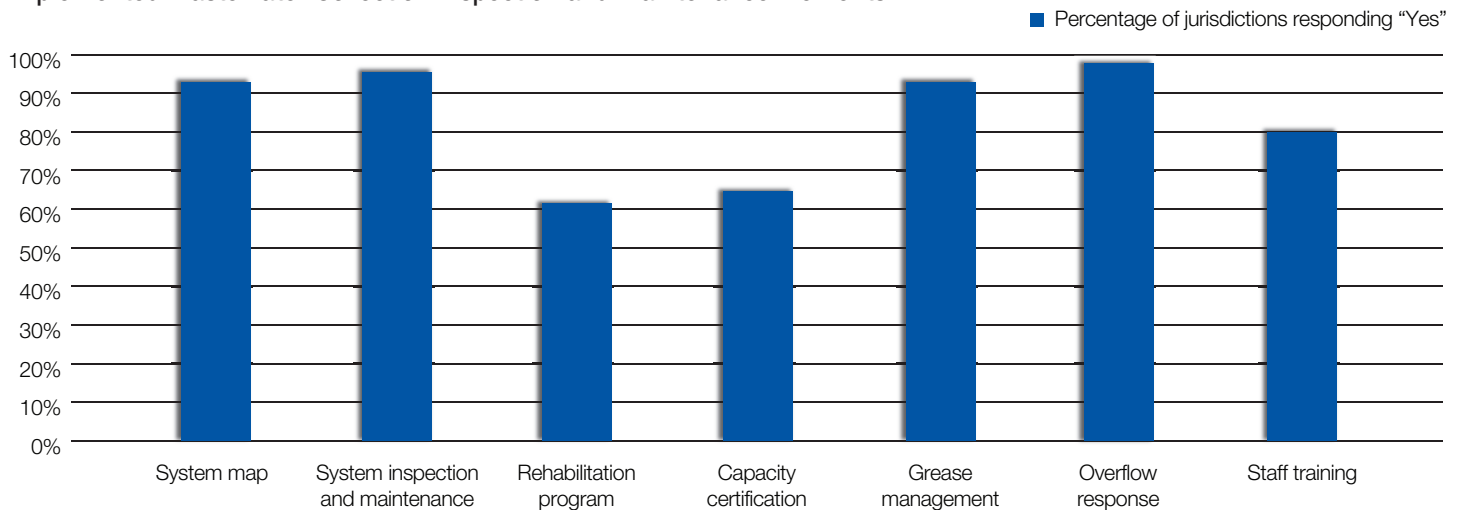
rehabilitation are among the components of such programs. Programs are also designed to ensure adequate system capacity, timely response in the event of a spill or overflow and appropriate staff training.

## Reducing Wastewater Collection System Spills

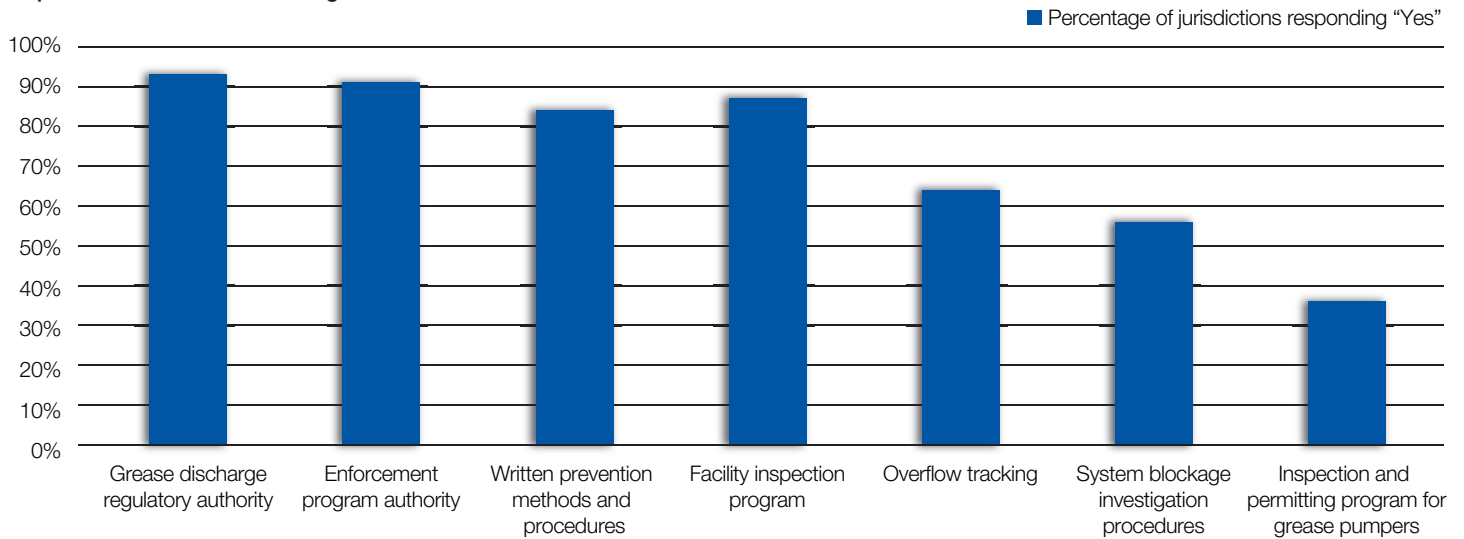
In order to reduce the number and severity of spills, the cause of spills must be known. As reported by local wastewater utilities, the top three most commonly identified causes of sewer spills were grease, debris and damage by tree roots and vegetation.

Since grease in sewer systems is the number one cause of clogging problems and resulting sewer spills, the District's Wastewater Management Plan requires local wastewater

Implemented Wastewater Collection Inspection and Maintenance Elements



## Implemented Grease Management Practices



providers to develop a grease management program. Eighty-seven percent of utilities responding to the Metro Water District's annual survey have implemented one or more of the required grease management program elements.

## Septic Systems and Decentralized Systems

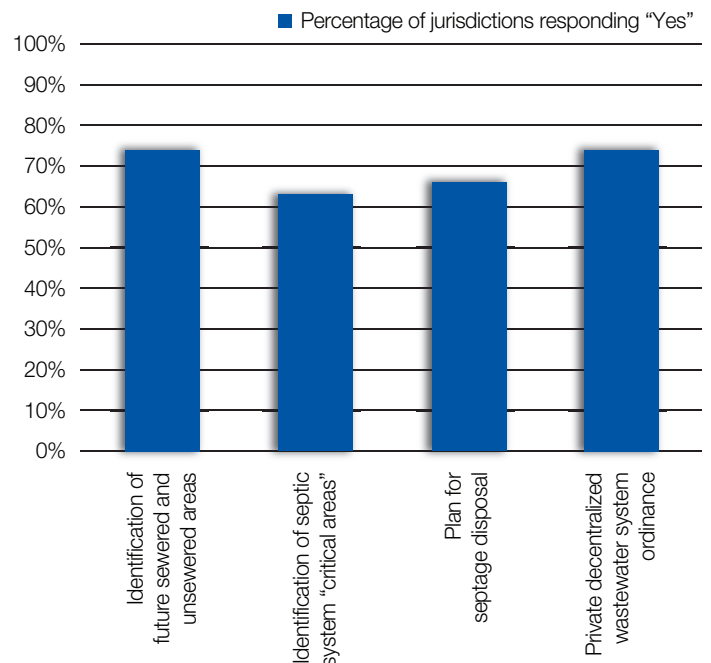
The Wastewater Management Plan provides for continued emphasis on planning, management and maintenance of septic systems, both for single-family homes and for larger systems that serve more than one property. These requirements include identification of future sewered and unsewered areas,

identification of septic system critical areas where their use may not be appropriate, development of a plan for the disposal of septage collected by on-site systems and adoption of a local ordinance to manage the use of private decentralized wastewater systems.

Approximately one-fifth of residential wastewater and one-tenth of all wastewater generated in the District is treated by septic systems. The percentage of wastewater treated by septic systems is expected to decline as population density increases and more sanitary sewer service is made available.



## On-site Wastewater Management





# Watershed Management

The Metro Water District's Watershed Management Plan focuses on protecting water quality, watershed health and aquatic habitats through a number of management measures implemented by local governments. These measures address both stormwater management and land use planning.

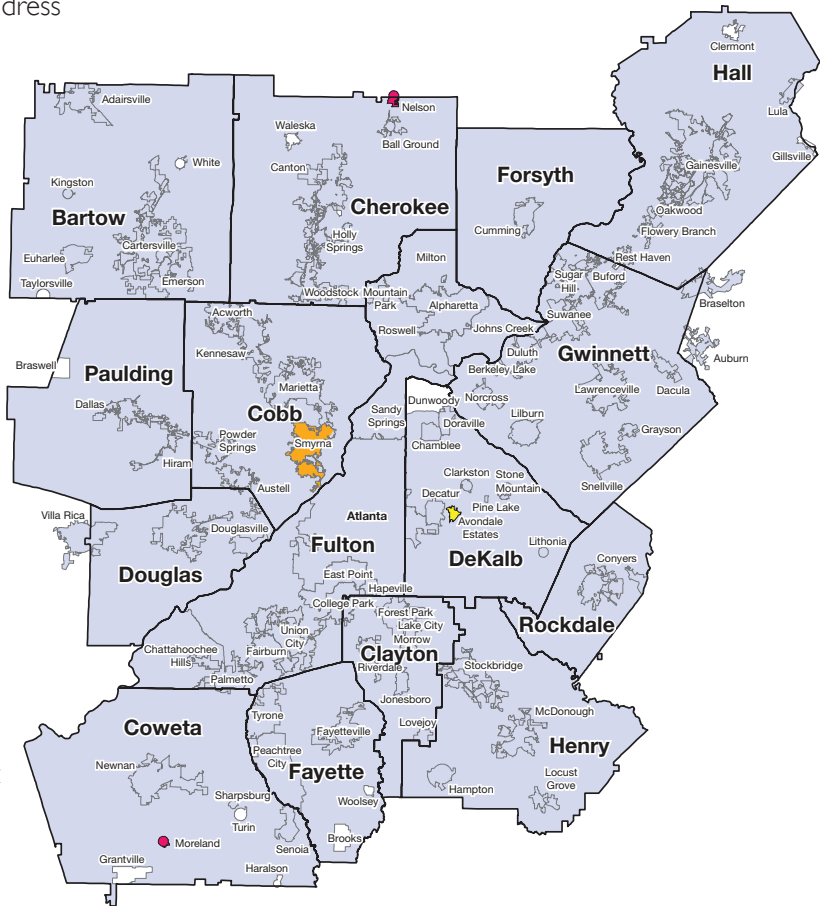
which require all new development to address the impacts of stormwater runoff as well as provide for expanded stream buffers. Localities are also remapping floodplains by looking

The 2009 Watershed Management Plan:

- » Strengthens water quality monitoring programs
- » Establishes ongoing management and maintenance of public and private stormwater facilities
- » Mandates closer coordination between local watershed staff and land use planners related to the local comprehensive plans, floodplain mapping, sewer and septic system issues and greenspace protection
- » Requires pollution prevention programs for local operations
- » Mitigates impacts of land development through development review policies, stormwater design standards and erosion and sediment control

In addition to these and other requirements, a toolbox of optional measures addresses the impact of future growth and development through the protection of greenspace and the use of green infrastructure.

A key requirement of the plan is the suite of model ordinances to protect water quality. Most local jurisdictions have adopted these ordinances



### Implementation of Model Ordinances by Jurisdiction

<span style="display: inline-block; width: 15px; height: 15px; background-color: lightblue; border: 1px solid black;"></span> All model ordinances*	<span style="display: inline-block; width: 15px; height: 15px; background-color: pink; border: 1px solid black;"></span> Two or Fewer Ordinances
<span style="display: inline-block; width: 15px; height: 15px; background-color: yellow; border: 1px solid black;"></span> All model ordinances except floodplain management	<span style="display: inline-block; width: 15px; height: 15px; background-color: white; border: 1px solid black;"></span> No data (did not return survey)
<span style="display: inline-block; width: 15px; height: 15px; background-color: orange; border: 1px solid black;"></span> All model ordinances except illicit discharge	

\*Post-development Stormwater Management, Floodplain Management, Illicit Discharge and Stream Buffer model ordinances

at future development and how that will alter floodplain boundaries. Jurisdictions with stormwater maintenance programs increased from 58 percent to 83 percent since the original plan was adopted. “Good Housekeeping” programs to reduce pollution are now in effect in 90 percent of jurisdictions, up from 43 percent in 2004.

New for 2009 is a provision requiring the implementation of one or more development and land use policies to encourage the protection of greenspace or the use of green infrastructure within the community through such mechanisms as conservation subdivisions, greenspace planning and modifications to local codes to promote green infrastructure practices.



Flooded homes are shown in Mableton, Ga., Tuesday, Sept. 22, 2009. Heavy rains caused flooding in and around the Atlanta area. (AP Photo/John Bazemore)

## Extreme Rainfall and Flooding Impacts North Georgia

This September, north Georgia experienced some of the largest rainfall events and flooding ever seen in Georgia and the Southeast. The heavy rains – in some places almost 24 inches within a 24-hour period – produced stream flows of “epic proportions” according to the USGS. Most of these stream flows and flood stages were so far outside of the existing historical record and probability models, that hydrologists are unable to classify their magnitude and return frequency.

Communities within the Metro Water District were among those hardest hit by the disaster, particularly Cobb, Douglas and Paulding counties. Ten individuals tragically lost their lives. Approximately 16,981 residential homes were impacted according to FEMA, many resulting in a total loss of the structure. Thousands of businesses, schools, churches and other institutions were dramatically impacted by flooding as well. The historic flooding washed out numerous roads and bridges, impacting transportation, and did significant damage to stormwater and drainage infrastructure, water supply intakes, sewer lines and wastewater treatment facilities across the region.

Though the unprecedented rainfall and resultant flooding was unforeseen, the District’s Watershed Management Plan has guided communities to undertake both stormwater and floodplain management programs and policies to help protect lives, property and infrastructure. Through the Model Floodplain Management / Flood Damage Prevention Ordinance, local governments are required to model and map floodplain conditions based on future land use conditions down to 100-acre drainage basins and guide future development based upon these floodplain boundaries. In addition, the District ordinance’s regulatory and building standards are more stringent than FEMA guidelines with the goal of keeping as many new structures out of the floodplain as possible. The Watershed Management Plan also requires District jurisdictions to have an active stormwater asset management program to regularly inspect and maintain critical drainage infrastructure, and to undertake capital improvement for damaged and undersized facilities. In the future, these and other key aspects of the District’s planning efforts will help to minimize the impacts of future rainfall events on the region and its citizens.



# Education and Public Awareness

The Metro Water District continuously works on a regional level to educate the public about water conservation and water quality issues and solutions. The Metro Water District distributes brochures and educational materials to residents and local governments around the 15-county region. The Metro Water District has two public education campaigns, the Clean Water Campaign and Water Use It Wisely. The Clean Water Campaign focuses on water quality solutions, and Water Use It Wisely provides useful water conservation tips.

The Metro Water District provides support to local governments' educational activities by providing educational materials and promoting their events on a regional level. This year local governments focused heavily on water conservation by hosting community events such as workshops and festivals.

## Types of Community Events and Workshops

- » Rain Garden Workshops
- » Rain Barrel Workshops
- » Xeriscaping Workshops
- » Septic System Maintenance Workshops
- » Children's Water Festival
- » WaterSmart Outdoor Education Town Hall Meeting
- » River Cleanup
- » U-Fix It Workshop
- » Household Hazardous Waste Collection
- » Water Wise Festival and many more

Water education is spread through the schools within the District on a regional and local level. The Metro Water District hosts the annual Clean Water Campaign/Water Use It Wisely Essay Contest. The local governments promote the essay contest, but also are active in the schools by providing educational materials and lesson plans to teachers, serving as guests during school events such as career days and environmental related activities and events.

## 2009 Clean Water Campaign/ Water Use It Wisely Essay Contest

Every year the Metro Water District invites middle school students within the region to write about water quality and water conservation issues. The 2009 Clean Water Campaign/Water Use It Wisely Essay Contest was dedicated to Sergeant First Class John C. Beale, a former employee of the Clayton County Water Authority (CCWA) who lost his life serving in Afghanistan. John was an integral part of the CCWA's public outreach efforts and enjoyed speaking to Clayton County students of all ages about the cycle of water, careers in the water industry and preventing stormwater pollution. The Metro Water District Overall Winner was Khoa Nguyen, an eighth grader from Morrow Middle School in Clayton County.

## “I’m In” Water Conservation Campaign

The Metro Water District, Atlanta Regional Commission (ARC), Georgia Environmental Protection Division (EPD) and the Metro Atlanta Chamber of Commerce have partnered to develop a state-wide water conservation campaign to instill a “culture of conservation” in the region and in the state. Beginning in metro Atlanta before it moves out into the state, “I’m In” will provide grassroots educational materials for local water utilities to use as part of their water conservation education and outreach programs that are required as part of the Metro Water District’s Water Supply and Water Conservation Plan. The target audiences for these materials include homeowners, school children and businesses.



## 2009 Financials

The Metro Water District operates on a calendar year budget, with the majority of revenues coming from local government dues (\$782,795) and the State of Georgia (\$250,000). Local government dues were \$0.20 per capita for 2009. Below is a review of revenues and expenses. This accounting includes contract obligations and is subject to adjustments after fiscal year-end close and independent audit.

### Revenues

State Funds . . . . .	\$250,000
Local Dues . . . . .	\$782,795
General Fund Carryover . . . . .	\$287,121
Interest Income . . . . .	\$5,000
District Special Projects Revenue . . . . .	\$113,000
Obligated 2008 Revenue Carryover . . . . .	\$212,000
Miscellaneous (meeting and other fees) . . . . .	\$60,000
<b>Total . . . . .</b>	<b>\$1,709,916</b>

### Expenses

Chairman’s Allowance . . . . .	\$3,000
District Special Projects . . . . .	\$113,000
Public Education . . . . .	\$20,000
Salaries . . . . .	\$305,760
Fringe Benefits . . . . .	\$180,398
Contracts . . . . .	\$50,000
Plan Updates Completion . . . . .	\$192,000
Overhead . . . . .	\$262,525
Miscellaneous Operating . . . . .	\$75,000
Obligated Carryover for 2010 . . . . .	\$320,000
General Fund Carryover for 2010 . . . . .	\$188,233
<b>Total . . . . .</b>	<b>\$1,709,916</b>

## Financial Recommendations for 2010

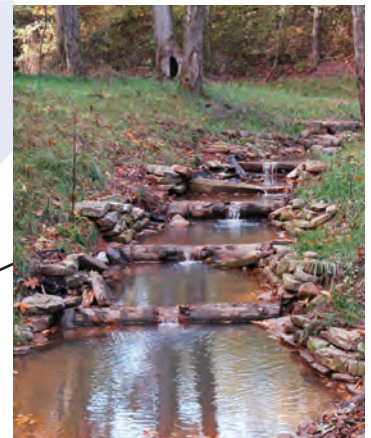
The Governing Board has adopted a budget of \$1,259,795 for 2010, with the majority of revenues coming from local government dues (\$782,795) and the State of Georgia (\$250,000). Local government dues will be \$0.20 per capita for 2010.

# Select Implementation Projects

The Cauley Creek Water Reclamation Facility, located in North Fulton County, provides highly treated effluent to local golf courses, subdivisions, schools and churches for irrigation purposes. To blend with the surrounding agricultural area, the facility was designed to resemble a dairy barn.



Forsyth County's water reuse line runs 11 miles and supplies five schools, a golf course, two parks, a large commercial mall development and several subdivision entrances with non-potable water for irrigation.



Gwinnett County completed a Watershed Improvement Plan in Collins Hill Park to improve stormwater quality. The project involved restoration of a stream channel, retrofitting of a non-functioning stormwater pond and the creation of a new stormwater detention pond.



Clayton County Water Authority's East Jesters Creek restoration project used natural channel design methods to restore approximately 2,000 feet of degraded stream.



Rivers Alive and Henry County Water and Sewerage Authority partner to clean streams in Henry County.



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