

## Section 1: INTRODUCTION

The Wastewater Management Plan prescribes strategies and recommendations for the effective management of wastewater flows in the rapidly growing Metropolitan North Georgia Water Planning District. Management of wastewater flows is necessary for protecting the region's limited water resources and ensuring adequate water supply, wastewater assimilative capacity, compliance with water quality standards, and support of designated uses. The Plan builds upon existing efforts by outlining adequate treatment facilities and capacities for forecasted 2035 flows.

### THE METRO WATER DISTRICT

The Metropolitan North Georgia Water Planning District (Metro Water District) was created by the Georgia General Assembly in 2001 (O.C.G.A. §12-5-572) to serve as the water planning organization for the greater metropolitan Atlanta area. The Metro Water District's purpose is to establish policy, create plans and promote intergovernmental coordination of water issues in the District from a regional perspective.

The Metro Water District includes fifteen counties (Bartow, Cherokee, Clayton, Cobb, Coweta, DeKalb, Douglas, Fayette, Fulton, Forsyth, Gwinnett, Hall, Henry, Paulding, and Rockdale counties) as well as 91 municipalities partially or fully within these counties (Figure 1-1). The Metro Water District also has seven authorities which provide water, sewer and/or stormwater services. Table 1-1 provides a list of the local jurisdictions that make up the Metro Water District. The Metro Water District's plans and policies work to protect water resources in the six major river basins that these jurisdictions cross, including the Chattahoochee, Coosa, Flint, Ocmulgee, Oconee and Tallapoosa River Basins (Figure 1-2).

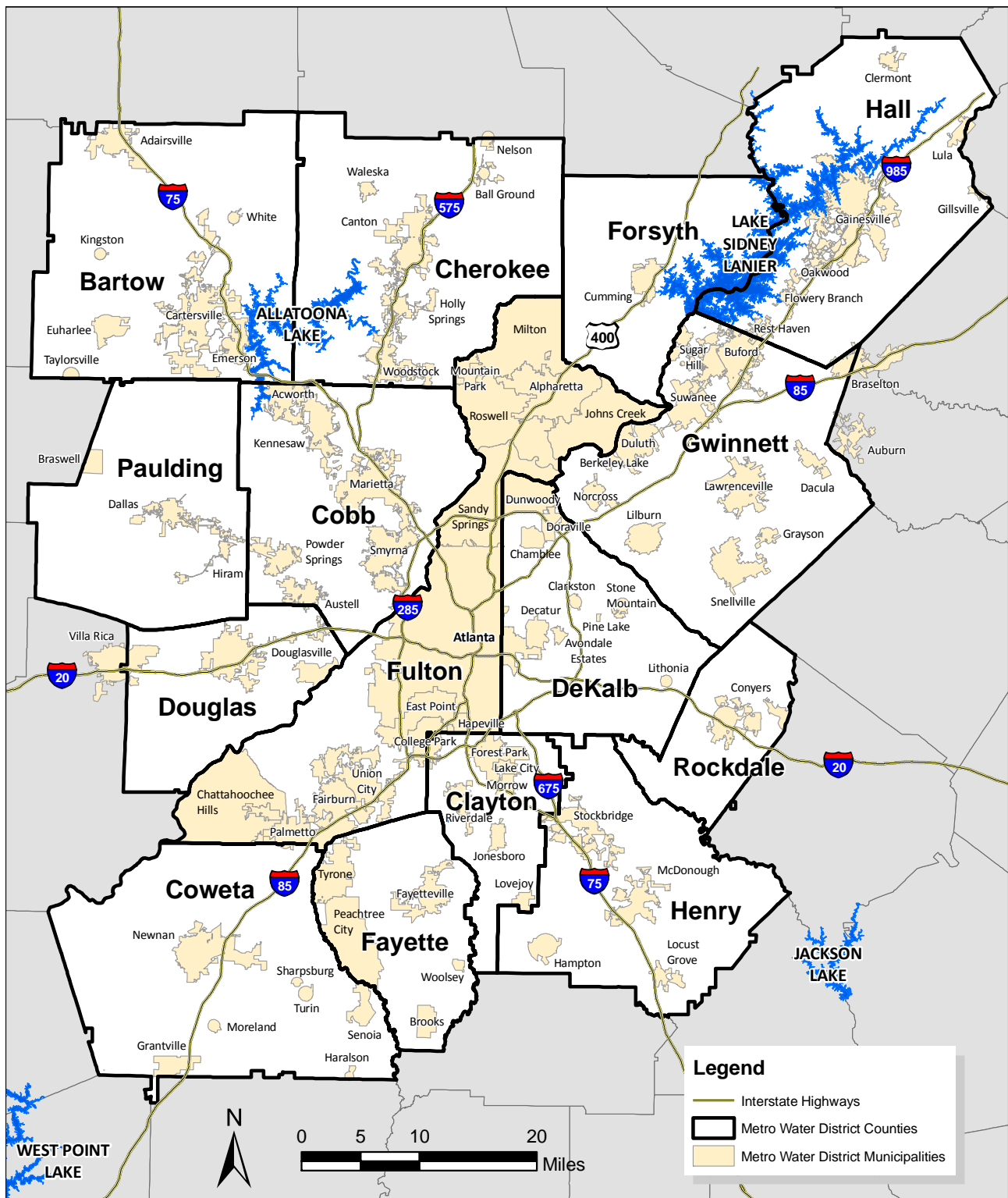
With the adoption of the Georgia State-wide Water Management Plan by the Georgia General Assembly in 2008, the Metro Water District is now one of eleven regional water planning councils in the state, and will continue to work within the integrated framework of state water resources planning.

### REGIONAL WATER RESOURCES PLANS

The Metro Water District enabling legislation mandated the development of three long-term regional plans to address the water resources challenges: water supply and conservation, wastewater management and watershed protection and management. The first plans were completed and adopted in 2003 and have been actively implemented by local jurisdictions in the Metro Water District over the last five years.

This document, the **Wastewater Management Plan**, lays out the requirements and framework to meet future demands for wastewater treatment while maintaining water quality standards for waterbodies within the Metro Water District. It includes specific tasks and milestones for implementing these recommendations for local governments as well as regional and state agencies.

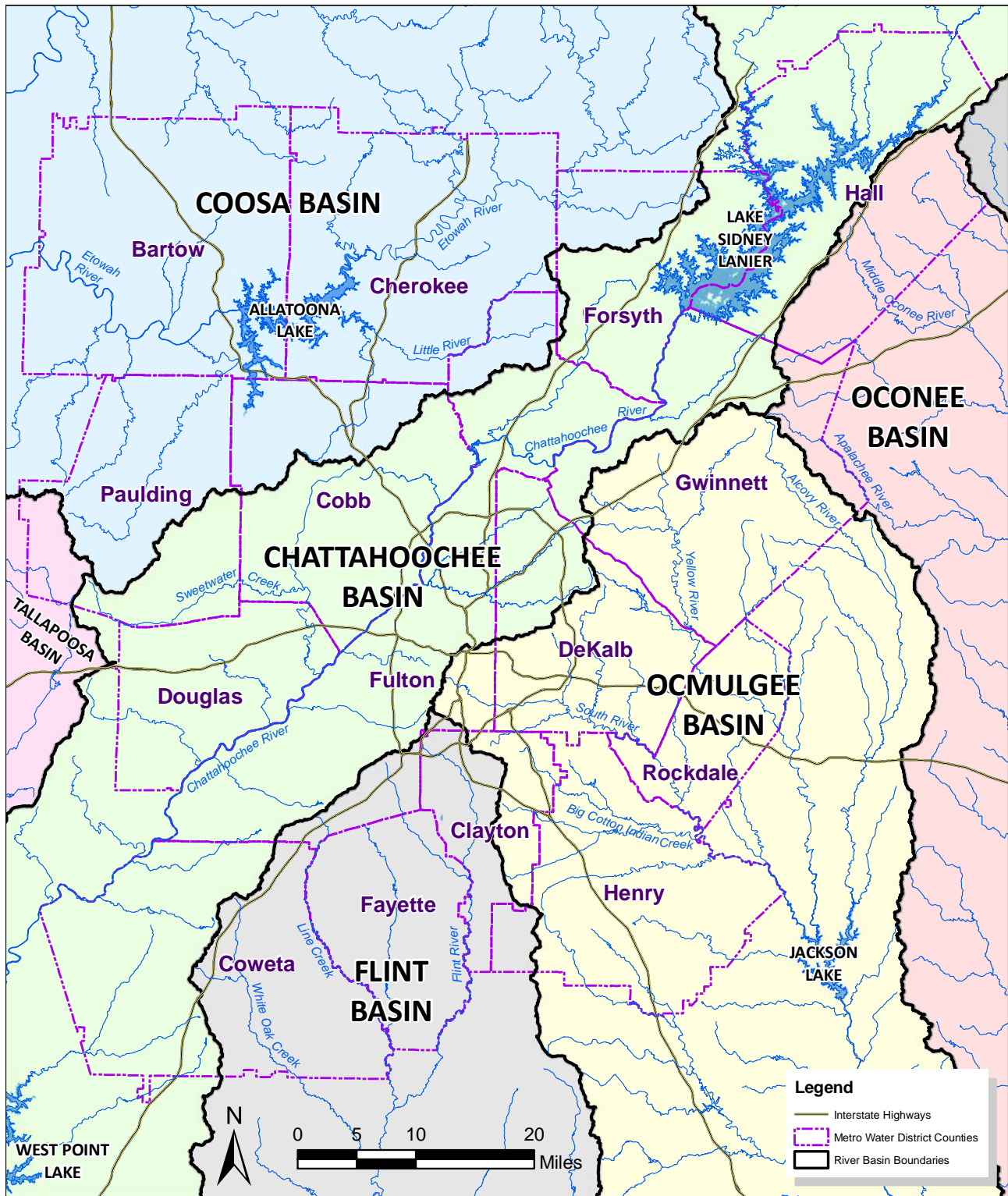
FIGURE 1-1  
Metro Water District Area



**TABLE 1-1  
Metro Water District Local Jurisdictions**

<b>Counties</b>				
Bartow County	Coweta County	Forsyth County	Henry County	
Cherokee County	DeKalb County	Fulton County	Paulding County	
Clayton County	Douglas County	Gwinnett County	Rockdale County	
Cobb County	Fayette County	Hall County		
<b>Municipalities</b>				
Acworth	College Park	Grantville	McDonough	Smyrna
Adairsville	Conyers	Grayson	Milton	Snellville
Alpharetta	Cumming	Hampton	Moreland	Stockbridge
Atlanta	Dacula	Hapeville	Morrow	Stone Mountain
Auburn	Dallas	Haralson	Mountain Park	Sugar Hill
Austell	Decatur	Hiram	Nelson	Suwanee
Avondale Estates	Doraville	Holly Springs	Newnan	Taylorville
Ball Ground	Douglasville	Johns Creek	Norcross	Turin
Berkeley Lake	Duluth	Jonesboro	Oakwood	Tyrone
Braselton	Dunwoody	Kennesaw	Palmetto	Union City
Braswell	East Point	Kingston	Peachtree City	Villa Rica
Brooks	Emerson	Lake City	Pine Lake	Waleska
Buford	Euharlee	Lawrenceville	Powder Springs	White
Canton	Fairburn	Lilburn	Rest Haven	Woodstock
Cartersville	Fayetteville	Lithonia	Riverdale	Woolsey
Chamblee	Flowery Branch	Locust Grove	Roswell	
Chattahoochee Hills	Forest Park	Lovejoy	Sandy Springs	
Clarkston	Gainesville	Lula	Senoia	
Clermont	Gillsville	Marietta	Sharpsburg	
<b>Authorities</b>				
Cherokee County Water and Sewerage Authority		Douglasville-Douglas County Water and Sewer Authority		
Clayton County Water Authority		Henry County Water and Sewerage Authority		
Cobb County-Marietta Water Authority		Peachtree City Water and Sewerage Authority		
Coweta County Water and Sewerage Authority				

FIGURE 1-2  
Metro Water District Major River Basins



The 2003 Long-term Wastewater Management Plan planning process evaluated a wide spectrum of management measures to develop a comprehensive regional wastewater management program. The plan lays out the requirements and framework to meet future demands for wastewater treatment while maintaining water quality standards for waterbodies within the Metro Water District. Updating flow forecasts to meet future demands for wastewater treatment while maintaining water quality standards for waterbodies within the Metro Water District. The communities within the Metro Water District have worked aggressively over the past five years towards implementation of these management measures.

The Metro Water District also prepared two other plans which together with the Wastewater Management Plan represent an integrated and holistic approach to water resources planning and management. The **Water Supply and Water Conservation Management Plan** provides the framework for meeting local water supply demands over the planning horizon. It calls for intensive water demand management and an aggressive water conservation program. The plan includes recommended supply sources and facilities for the Metro Water District, as well as the sizing of water treatment plants required to meet local demands. The **Watershed Management Plan** details strategies and recommendations for both effective watershed and stormwater management and water quality protection. It includes specific tasks and milestones for implementing these recommendations for local governments as well as regional and state agencies.

## PLAN IMPLEMENTATION

The Metro Water District, the Georgia Environmental Protection Division and local governments all play important roles in implementing the water resources plans as illustrated in Figure 1-3 below. The Metro Water District develops the plans, which are implemented by local jurisdictions. Georgia EPD enforces the plans' provisions through its permitting process. All local jurisdictions within the Metro Water District are required to comply with the plans in order to obtain new or expanded water withdrawals or wastewater discharges, renewal of NPDES municipal stormwater permits, or any Georgia Environmental Facilities Authority (GEFA) grant or loan funding.

**FIGURE 1-3**  
Metro Water District Plan Development and Implementation



### IMPLEMENTATION PROGRESS

The 2003 Long-term Wastewater Management Plan has been successful in providing a strategy for wastewater treatment facilities that can meet stringent permit limits and protect the water quality in and downstream of the Metro Water District. Local wastewater providers are developing strong asset management programs that include collection system maintenance and rehabilitation programs to address aging systems and reduce the likelihood of sanitary sewer overflows. Local wastewater providers and local governments are identifying and managing septic system critical areas to improve long-term viability of this onsite wastewater treatment option. Local wastewater providers continue to make improvements to treatment technologies to improve the quality of wastewater effluent and protect receiving water bodies.

### Wastewater Management Strategies

Local wastewater providers, key stakeholders, and the Metro Water District have made significant progress in implementing specific wastewater management strategies, including:

- Construction of new wastewater treatment facilities and decommissioning of less efficient facilities
- Completion of operational changes at Georgia Power's McDonough Plant and Yates Plant to reduce the heat load to the Chattahoochee River
- Construction of Gwinnett County's F. Wayne Hill water reclamation facility which will discharge high quality effluent to Lake Lanier
- Conversion of land application system (LAS) to constructed treatment wetlands in Clayton County that augment drinking water supplies
- Substantial completion of the City of Atlanta's Clean Water Atlanta Initiative combined sewer separation projects and sewer treatment projects, improving water quality in the Chattahoochee and Ocmulgee basins

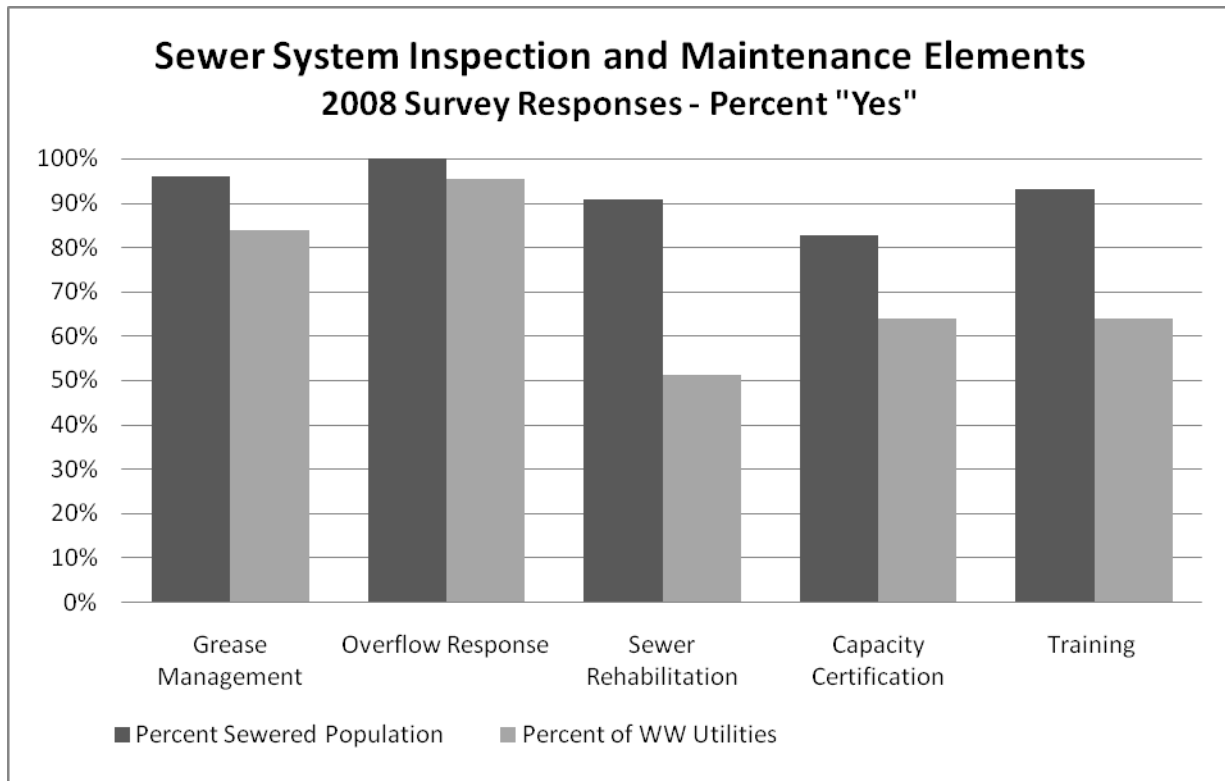
### IMPLEMENTATION SURVEY

In addition to the implementation of the specific strategies above, the results of a survey conducted in 2008 demonstrate additional progress toward implementation of the 2003 Long-term Wastewater Management Plan. The survey results showed significant commitment from local jurisdictions in implementing required and optional measures.

### Sewer System Inspection and Maintenance Elements

The 2003 Long-term Wastewater Management Plan provided recommendations for minimum elements to be included in a wastewater collection system inspection and maintenance program. Of the forty-six jurisdictions representing 95% of the Metro Water District's wastewater service areas population that responded to the survey approximately 90% have implemented a sewer system inspection and maintenance program as is summarized in Figure 1-4.

**FIGURE 1-4**  
Sewer System Inspection and Maintenance

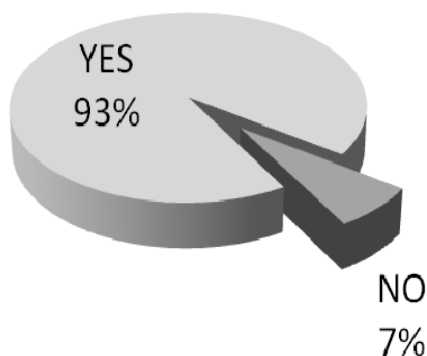


**Local Wastewater Planning**

Wastewater master plans typically address local and site-specific issues related to wastewater collection, wastewater treatment, reuse, and effluent and biosolids management. Local wastewater providers should develop and update local plans as necessary to address changing local conditions and to remain consistent with the Wastewater Management Plan.

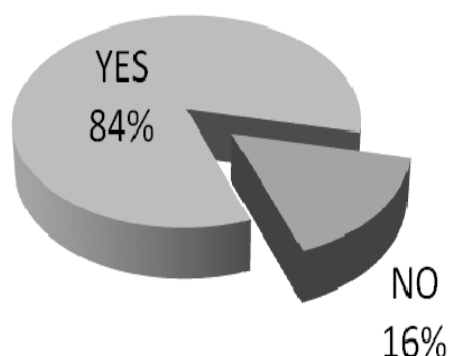
The following figures show progress that has been made at the local level for developing wastewater master plans and planning for future sewered and unsewered areas.

**FIGURE 1-5**  
Current Local Wastewater Master Plan (by percent of population)



**FIGURE 1-6**

Plan for Future Sewered and Unsewered Areas (by percent of population)



### Septic and Private Wastewater Systems

Proper planning for the use of septic systems and private wastewater systems is critical for protecting both the environment and public health. Local planning efforts should include alternatives for the disposal of pumped septage, and a policy for private wastewater systems.

Of the forty-six jurisdictions representing 95% of the Metro Water District's wastewater service areas population that responded to the survey:

- Over 90% have developed a local plan for the disposal of septage generated within their jurisdiction at local treatment plants or have identified alternative disposal locations
- Forty-two of the forty-six respondents, or approximately 91%, have developed a policy for private wastewater systems

## PLAN DEVELOPMENT

### PLANNING PROCESS

The Metro Water District enabling legislation requires that “the district shall prepare an updated long-term wastewater management plan no less frequently than every five years after finalization of the initial plan.” (O.C.G.A. §12-5-583(c)). In conjunction with updates to the Water Supply and Water Conservation Management Plan and Watershed Management Plan, this Plan is an update of the initial 2003 plan.

The Metro Water District utilized an integrated planning effort similar to that used to develop the original plans in order to build consensus for long-term regional water resources management solutions. The Metro Water District water resources plans are the result of a collaborative effort between the Metro Water District's local jurisdictions, the Georgia EPD, and numerous stakeholders.

### PLANNING PARTICIPANTS

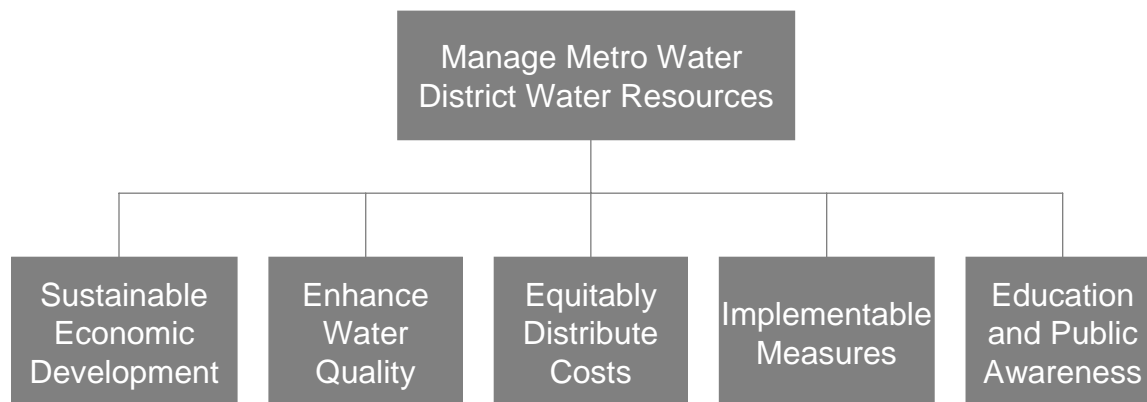
As envisioned by the Metro Water District's enabling legislation, the planning process includes the Metro Water District Governing Board, a Technical Coordinating Committee (TCC), six Basin Advisory Councils (BAC), Georgia EPD, planning staff from the Atlanta Regional Commission and technical consulting firms.

- **Metro Water District Board:** The 26-member Metro Water District Governing Board is the decision-making body which includes representatives from the local jurisdictions as well as citizen members.
- **Technical Coordinating Committee (TCC):** The TCC is comprised primarily of local government officials and staff from counties, cities, and authorities in the Metro Water District, and provides planning and policy support in the areas of water supply and conservation, wastewater management, stormwater and watershed management, septic systems, and education and public awareness.
- **Basin Advisory Council (BAC):** The BACs are comprised of basin stakeholders including water professionals, business leaders, environmental advocates and other interested individuals and parties. Six BACs represent the Chattahoochee, Etowah, Flint, Oconee, Ocmulgee river basins and the Lake Lanier basin. The BACs advise in the development and implementation of policy related to basin-specific issues and provide input on plan content to the Governing Board, TCC and Metro Water District staff.

### POLICY GOALS

The Metro Water District planning process was driven by policy goals agreed upon by all planning participants and adopted by the Governing Board in 2002. These policy goals (shown in Figure 1-7) served as guideposts and helped ensure consistency of purpose for the three plans.

**FIGURE 1-7**  
Metro Water District Policy Goals



### PLAN UPDATE FOCUS

Since their adoption in 2003, the Metro Water District plans have become valuable tools for protecting and preserving water resources. For the plan update process, there were a number of objectives developed in conjunction between Metro Water District staff, TCC and BAC's. For the Wastewater Management Plan these included:

- Revisiting and updating issues, policies and recommended regulatory changes
- Updating flow forecasts to meet future demands for wastewater treatment while maintaining water quality standards for waterbodies within the Metro Water District

- Placing a stronger emphasis on the integration of the wastewater management, water supply and conservation, and watershed management plans
- Maximizing returns to surface waters where possible and minimizing interbasin transfers
- Providing more flexibility in plan implementation dates and capacities in Appendix B to reduce the need for minor plan amendments
- Outlining a long-term implementation schedule for public wastewater treatment
- Providing for comprehensive, local wastewater planning to establish future sewer service areas
- Providing strategies and recommendations for effective wastewater management, including septic and on-site systems

### KEY CHANGES TO THE PLAN

In this plan update, there are a number of important changes from the original 2003 Long-term Wastewater Management Plan. These changes include:

- Updating the 2003 long-term wastewater forecasts to reflect 2035 population and employment forecasts
- Recognition that small, well-run wastewater treatment systems may be more energy efficient and therefore consolidation of treatment facilities is not recommended for all small facilities
- Increasing the focus on local planning, especially related to septic systems, decentralized systems, wastewater systems, and their linkage to local land use planning
- Increasing the emphasis on indirect potable reuse as a way to enhance and extend the use of water resources in the Metro Water District in the future

The implementation section (Section 12) was revisited and now provides simple, one-page implementation summaries for each responsible entity. The one-page view is helpful for local program budgeting and planning, as it distinguishes between the development of new programs and ongoing implementation. In order to successfully implement the required action items in this plan, a wider range of funding sources have been included for local consideration.

## PLAN OVERVIEW

### ORGANIZATION OF THE LONG-TERM WASTEWATER MANAGEMENT PLAN

The Wastewater Management Plan is organized as follows:

- **Section 1: Introduction** – Provides a brief history of the Metro Water District along with a summary of the successes and challenges from the 2003 plan. This Section also provides an introduction to the Plan.
- **Section 2: Existing Wastewater Management** – Provides an outline of the existing facilities within the Metro Water District. The summary includes a listing of existing wastewater treatment facilities including private decentralized systems and septic systems by county.
- **Section 3: Wastewater Flow Forecasts** – Provides the methodology for forecasting wastewater flows for the 2035 planning horizon. This methodology includes existing wastewater treatment facilities as well as septic systems.

- **Section 4: Wastewater Management Issues** – Summarizes the major District-related issues surrounding the planning of future wastewater treatment capabilities and capacities.
- **Section 5: Planning Considerations** – Outlines the evaluation criteria used to assess the variety of alternative approaches to managing wastewater considered in the development of the Metro Water District Plans.
- **Section 6: Planned Wastewater Treatment Facilities** – Provides an overview of both the proposed wastewater treatment infrastructure that will be in place in 2035 and their respective capacities.
- **Section 7: Wastewater Collection System Inspection and Maintenance** – Provides the minimum elements required when establishing or maintaining a wastewater collection system inspection and maintenance program and an alternative for meeting the requirements of this Section.
- **Section 8: Septic Systems and Decentralized Systems** – Discusses management recommendations for on-site sewage management systems serving a single family residence as well as recommendations to better manage the use of larger private decentralized systems that treat wastewater generated by more than one property or residence.
- **Section 9: Local Wastewater Planning** – Provides and discusses the actions required to implement the recommendations associated with local wastewater master plans.
- **Section 10: State and Regional Recommendations** – Provides an overview of State and regional policy recommendations to further implementation of wastewater best practices in the Metro Water District.
- **Section 11: Education and Public Awareness** – Provides an overview of both the Metro Water District’s regional education and public awareness program and requirements for local education and public awareness.
- **Section 12: Implementation Plan** – Summarizes the implementation actions for State, regional, and local wastewater providers in the 15-county Metro Water District.
- **Section 13: Future Plan Evaluation** – Provides a summary of the short and long-term wastewater management goals and an overview of the required plan reviews and plan updates.
- **Appendix A: Index** – Provides locations in the report addressing requirements for the Wastewater Management Plan.
- **Appendix B: County Level Summaries** – Outlines the schedule for expanding wastewater facility treatment capacities in the Metro Water District including capital and non-capital programs specific to each county.

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