

## Section 1: INTRODUCTION

The Water Supply and Water Conservation Management Plan provides regional water demand forecasts that include the effects of water conservation and identifies adequate future water supplies in the 15-county Metropolitan North Georgia Water Planning District. The Water Supply and Water Conservation Management Plan prescribes strategies and recommendations for effective water supply management. The Plan builds upon existing efforts to meet the overall goal of protecting water supply in and downstream of the region.

### 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 15 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 Chattahoochee, Coosa, Flint, Ocmulgee, Oconee and Tallapoosa River Basins (Figure 1-2).

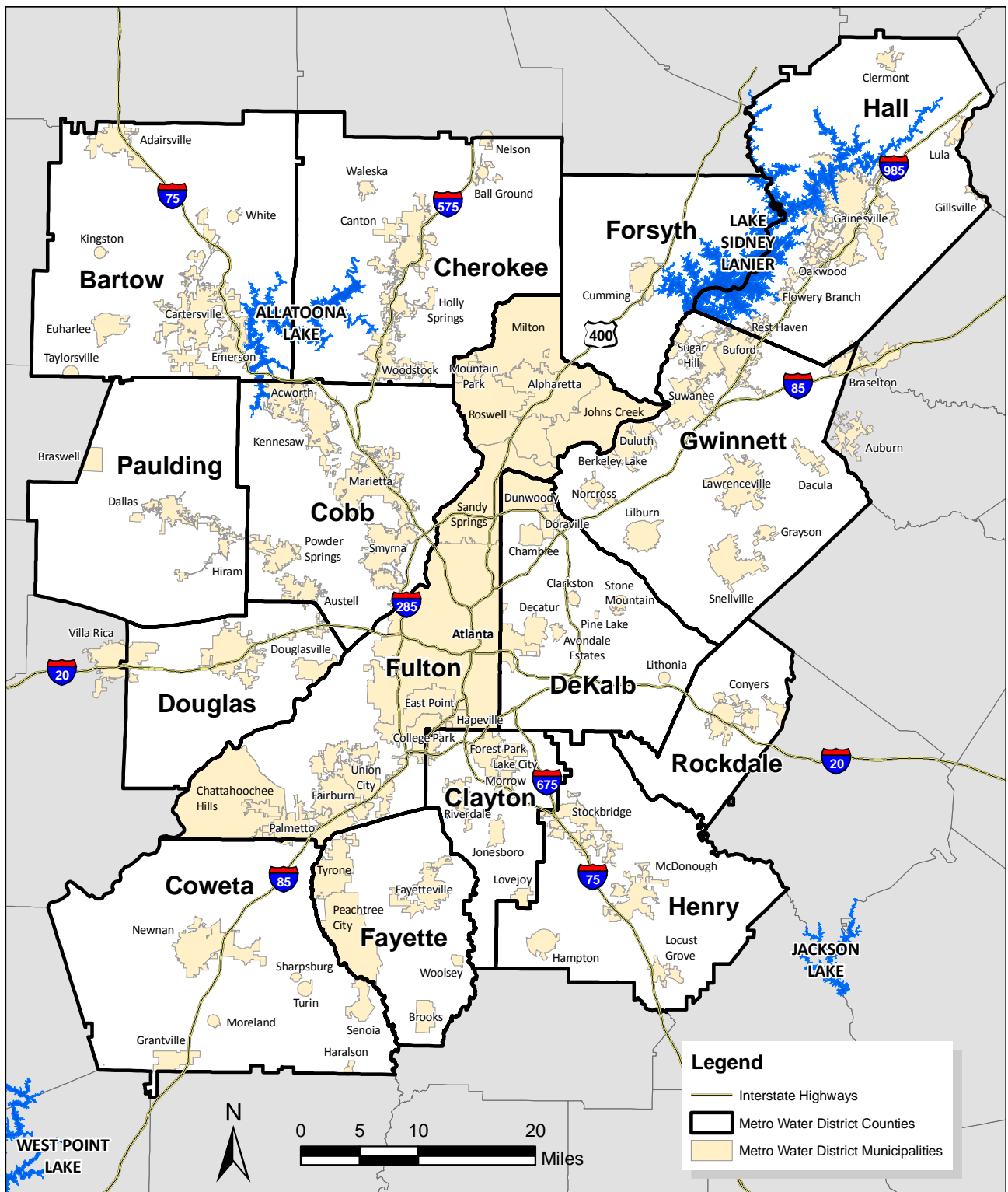
With the adoption of the Georgia State-wide Water Management Plan by the Georgia General Assembly in 2008, the Metro Water District is now one of eleven regional water planning councils in the state, and will continue to work within the integrated framework of state water resources planning.

### 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 water 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 Metro Water District's **Water Supply and Water Conservation Management Plan**, details strategies and recommendations for effective water supply management and conservation. It includes the specific tasks and milestones for implementing these recommendations for both local governments as well as state and regional agencies.

FIGURE 1-1  
Metro Water District Area



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

**Counties**

|                 |                |                 |                 |
|-----------------|----------------|-----------------|-----------------|
| 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     |                 |

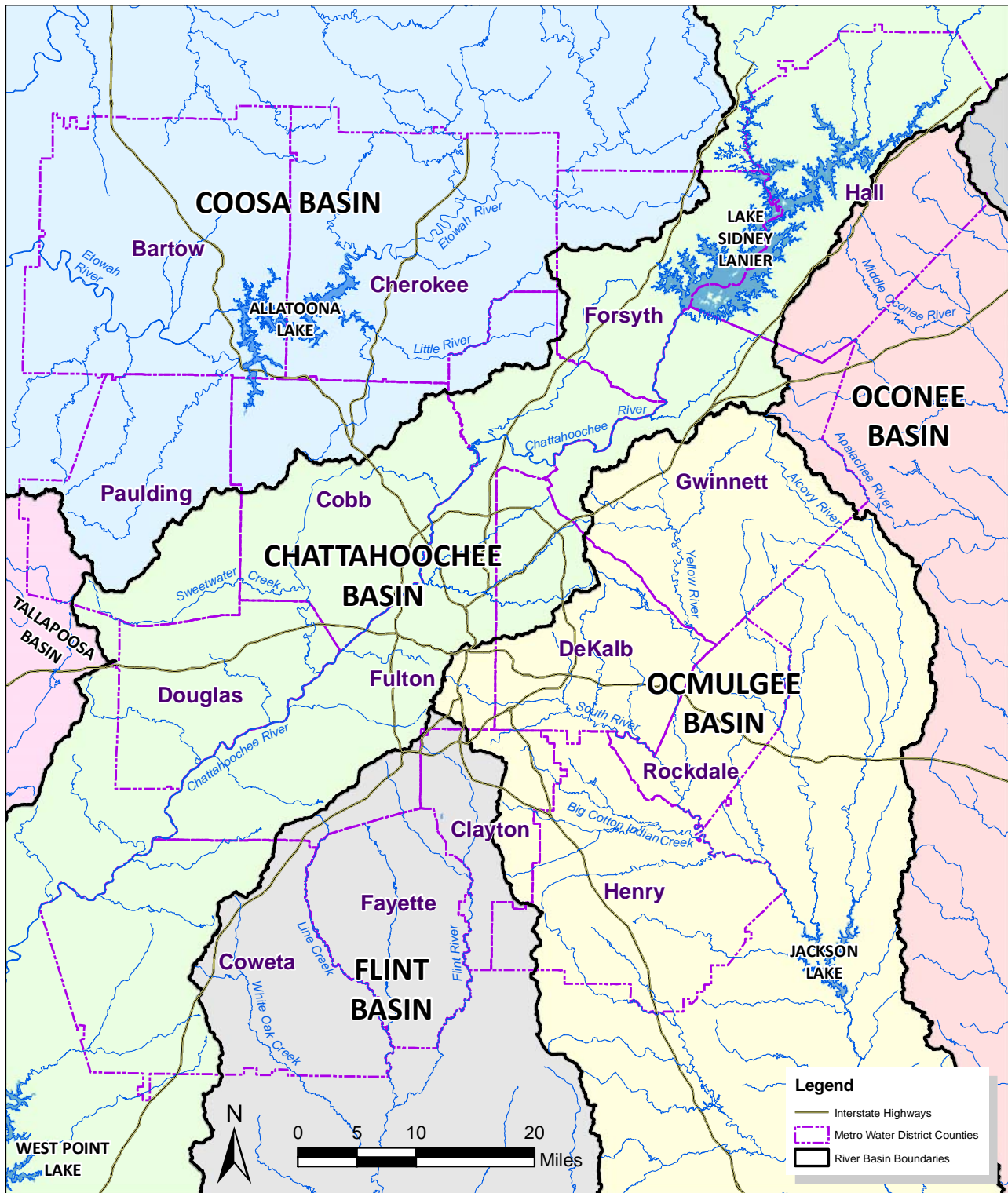
**Municipalities**

|                     |                |               |                |                |
|---------------------|----------------|---------------|----------------|----------------|
| Acworth             | Clermont       | Gillsville    | Marietta       | Sharpsburg     |
| Adairsville         | College Park   | Grantville    | McDonough      | Smyrna         |
| Alpharetta          | Conyers        | Grayson       | Milton         | Snellville     |
| Atlanta             | Cumming        | Hampton       | Moreland       | Stockbridge    |
| Auburn              | Dacula         | Hapeville     | Morrow         | Stone Mountain |
| Austell             | Dallas         | Haralson      | Mountain Park  | Sugar Hill     |
| Avondale Estates    | Decatur        | Hiram         | Nelson         | Suwanee        |
| Ball Ground         | Doraville      | Holly Springs | Newnan         | Taylorville    |
| Berkeley Lake       | Douglasville   | Johns Creek   | Norcross       | Turin          |
| Braselton           | Duluth         | Jonesboro     | Oakwood        | Tyrone         |
| Braswell            | Dunwoody       | Kennesaw      | Palmetto       | Union City     |
| Brooks              | East Point     | Kingston      | Peachtree City | Villa Rica     |
| Buford              | Emerson        | Lake City     | Pine Lake      | Waleska        |
| Canton              | Euharlee       | Lawrenceville | Powder Springs | White          |
| Cartersville        | Fairburn       | Lilburn       | Rest Haven     | Woodstock      |
| Chamblee            | Fayetteville   | Lithonia      | Riverdale      | Woolsey        |
| Chattahoochee Hills | Flowery Branch | Locust Grove  | Roswell        |                |
| Clarkston           | Forest Park    | Lovejoy       | Sandy Springs  |                |
|                     | Gainesville    | Lula          | Senoia         |                |

**Authorities**

|  |   |
|--|---|
| 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 Water Supply and Water Conservation Management Plan planning process evaluated a wide spectrum of water conservation measures to develop a comprehensive regional water conservation program. The selected measures established a program that calls for intensive water demand management and aggressive water conservation. 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 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 Water Supply and Water Conservation Management Plan represent an integrated and holistic approach to water resources planning and management. 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. The **Wastewater Management Plan** sets forth strategies for comprehensive wastewater management efforts to meet future needs across the Metro Water District. The plan outlines a long-term implementation schedule for public wastewater treatment. It also provides for comprehensive wastewater planning to establish future sewer service areas and calls for more intensive management of privately owned septic systems.

## PLAN IMPLEMENTATION

The Metro Water District, Georgia EPD and local governments all play important roles in implementing the District’s water resources plans as illustrated in Figure 1-3 below. The Metro Water District develops the plans which are implemented by local jurisdictions. The Georgia Environmental Protection Division (Georgia EPD) enforces the plans’ provisions through its permitting process. All local jurisdictions within the Metro Water District are required to substantially comply with the plans in order to obtain new or expanded water withdrawals or wastewater discharges, renewal of their 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



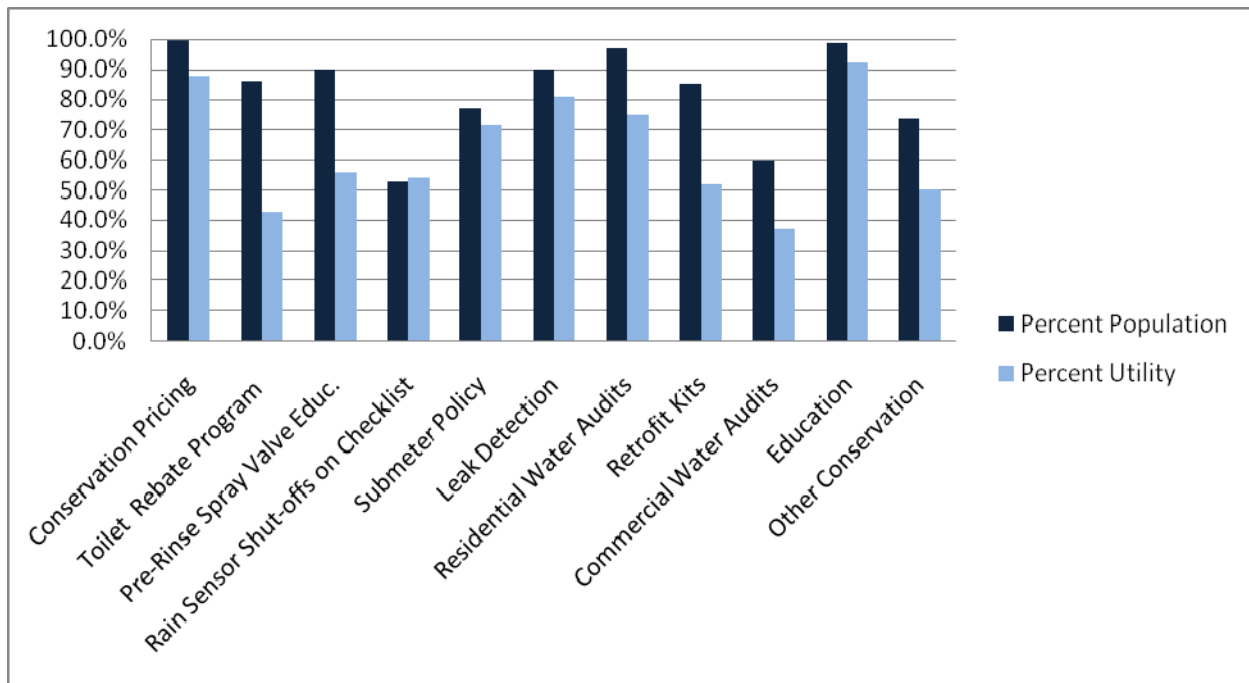
## IMPLEMENTATION PROGRESS

### Water Conservation Program

An aggressive water conservation program was developed for the 2003 Water Supply and Water Conservation Management Plan. The Metro Water District is the only major metropolitan area in the country with more than 100 jurisdictions implementing a long-term comprehensive water conservation program that is required and enforced. The water conservation program is essential for meeting future water supply demands in the Metro Water District. Implementation of the ten measures adopted in 2003 has been very successful.

To gauge regional progress, the Metro Water District surveyed local water providers in the fall of 2008 on the status of implementation of key plan measures. Fifty-two water providers representing 96% of the Metro Water District’s population responded to the survey. The survey responses regarding water conservation are summarized in Figure 1-4. Results are displayed as both the percent of population served by a water provider implementing each measure and by percent of water providers that are implementing each measure.

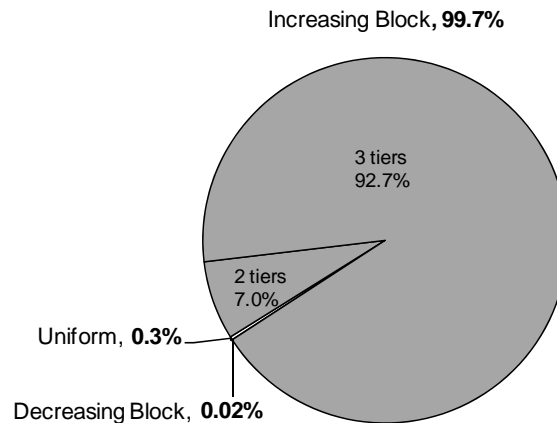
**FIGURE 1-4**  
**Water Conservation Measures Implementation – 2008**



All Metro Water District water providers are required to adopt a multi-tiered conservation rate structure. In October 2008, the Metro Water District published the 2008 Water and Wastewater Rate Survey which was based on a detailed survey of local water and wastewater providers in the Metro Water District regarding water and wastewater rates. The survey received 100% participation from Metro Water District water and wastewater providers. The conservation pricing statistics in Figures 1-4 and 1-5 are based on the results of the 2008 Metro Water District Water and Wastewater Rate Survey. The water and wastewater rate survey results found that over 99% of the District’s population is served by

increasing block or tiered water conservation rates, with 92.7% served by 3 or more tiers and 7% served by 2 tiers.

**FIGURE 1-5**  
**Water Rate Structures by Population Served**



All Metro Water District water providers are required to adopt a program to replace older, inefficient toilets by 2009. Many water providers are ahead of the implementation schedule and are already implementing programs. In March 2008, the Metro Water District kicked-off its regional toilet rebate program to retrofit older, inefficient toilets. The program offers rebates to single-family residential customers of participating water providers that own or rent homes built before 1993. The Metro Water District provides administrative support services for the 13 participating water providers. In addition, eight other water providers had a local rebate program in 2008 to replace older, inefficient toilets. These programs rebated over 17,800 toilets in 2008, which will save over 300,000 gallons of water per day.

### Water Supply Strategies

The Water Supply and Water Conservation Management Plan includes a framework for water supply facilities and strategies for resource management. Local water providers and Metro Water District have made significant progress in implementing specific water supply strategies, including:

- Intensification of water conservation efforts;
- Construction of four new reservoirs;
- Sharing of water resources through interconnections for reliability; and
- Reclamation of water by indirect potable reuse through Lake Lanier.

Local water management plans and emergency plans are needed to support the water supply strategies. The results of the 2008 implementation survey of local water providers show that 96% of the Metro Water District's population is served by local water providers with current long-range local water management plans and 79% of the Metro Water District's population is served by a local water provider that has a current emergency water plan.

### Education and Public Awareness

Since the adoption of the 2003 Water Supply and Water Conservation Management Plan, the Metro Water District has provided many technical workshops. Some of the water conservation workshop topics have included water conservation pricing, residential water audits, finding and fixing leaks, commercial water audits, assessing and reducing water loss, water efficient landscaping, xeriscaping, rain gardens, rain barrels, Project WET conserve water educator training, water festivals and other educational topics. In addition, the Metro Water District provided the first training in the country on the American Water Works Association's Water Audit Software in September 2006 to local water providers in the Metro Water District.

The Metro Water District works with the Technical Coordinating Committees and Basin Advisory Councils to develop educational material for the local water systems' customers, such as the Do-It-Yourself Household Water Assessment, the Low-Flow Pre-Rinse Spray Valve brochure, the Landscape Irrigation Watering Guide and the Maintenance Guide for Landscape Irrigation Systems. Almost 99% of the Metro Water District's population is served by local water providers that provide education on conserving water.

Other education and public awareness activities include the annual essay contest and media campaign. The Metro Water District has reached out to school age kids through the annual essay contest. Over the last five years, the essay contest has received over a thousand essays from middle school students across the District. Also, the Metro Water District runs a media campaign every year. The Metro Water District partners with a local news station each year to produce and air water conservation public service announcements. In 2006, the Metro Water District and WSB-TV produced and aired a television special called "Our Water, Our Future."

## PLAN DEVELOPMENT

### PLANNING PROCESS

The Metro Water District enabling legislation requires that "the district shall prepare an updated water supply and water conservation management plan no less frequently than every five years after finalization of the initial plan." (O.C.G.A. §12-5-582(c)) The first 5-year update of the Water Supply and Water Conservation Management Plan has been completed in conjunction with updates to the Watershed Management Plan and Wastewater Management 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 for the Metro Water District which includes local representatives from the Metro Water District communities as well as citizen members.

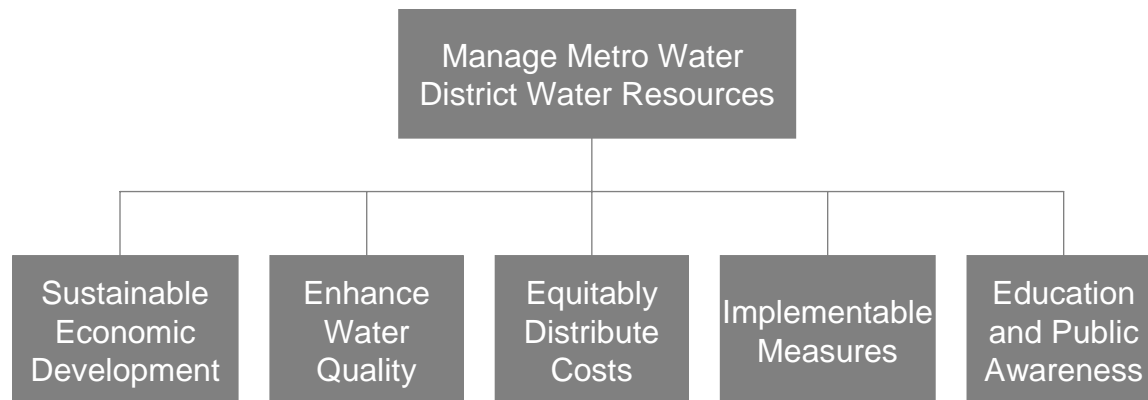
**Technical Coordinating Committee (TCC):** The TCC is comprised primarily of local government officials and staff from counties, cities, and authorities in the Metro Water District, and provides planning and policy support in the areas of water supply and conservation, wastewater management, stormwater 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 groups. 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 Board in 2002. These policy goals (shown in Figure 1-6) served as guideposts and helped ensure consistency of purpose for the watershed, wastewater, and water supply plans.

**FIGURE 1-6**  
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 Water Supply and Water Conservation Management Plan these included:

- Revisit and update key assumptions, forecasts, analytical tools and techniques and integrate with updated policies and regulatory changes.

- Reassess water demand forecasts, taking into account watering restrictions, abnormal weather patterns, and most recent regional population projections.
- Enhance focus on efficiency. Revisit and revise water conservation program as part of the forecasts and then identify sources and facilities to meet needs.
- Provide more flexibility in plan implementation dates and capacities in Appendix B to eliminate the need for minor plan amendments.
- Enhanced focus on water reuse to sustain water supply.

### INTEGRATION WITH STATE WATER PLAN

In 2004, the Georgia General Assembly passed the Comprehensive State-wide Water Management Planning Act to establish a set of policies to govern water management decisions. Following two years of development and public comment, the Comprehensive State-wide Water Management Plan (State Water Plan) was adopted by the Georgia General Assembly on January 18, 2008. The overall goal of the plan is to manage “water resources in a sustainable manner to support the state’s economy, to protect public health and natural systems, and to enhance the quality of life for all citizens”.

Key themes repeated throughout the State Water Plan include: management of consumptive use to ensure present and future opportunities for use of the resource, importance of water conservation, and identification of future water supplies including reservoirs. Several meetings were held with Georgia EPD throughout the planning process to provide consistency with the State Water Plan. Future action items that may affect the Water Supply and Water Conservation Management Plan include creation of rules related to the Water Conservation Implementation Plan (WCIP).

Georgia EPD will establish guidelines and criteria for local plans to be implemented by the Metro Water District and the other planning districts statewide. As the state water planning process progresses, the Metro Water District will evaluate and update its water resources plans and programs as needed to stay in compliance with the State Water Plan guidelines and criteria.

### KEY CHANGES TO THE PLAN

In this plan update, there are a number of changes from the 2003 Water Supply and Water Conservation Management Plan, as amended, including a reorganization of the document. The most notable organizational change involved providing simple implementation summaries for each measure that have more background and implementation guidance than were included in the 2003 document.

Additionally, key elements of updating the 2003 Water Supply and Water Conservation Management Plan include the following:

- Review and update water conservation measures
- Update water demand forecasts
- Update existing and potential water sources
- Extend the planning horizon to 2035
- Ensure compatibility with the State-wide Water Management Plan

As a result of the review of water conservation measures, three of the measures from the 2003 Water Supply and Water Conservation Management Plan, as amended, have been enhanced and two new measures have been added to the Water Conservation Program and are described in Section 5.

## PLAN OVERVIEW

### ORGANIZATION OF THE WATER SUPPLY AND WATER CONSERVATION MANAGEMENT PLAN

The Water Supply and Water Conservation Management Plan is organized in the following sections:

**Section 1: Introduction** – Provides an overview of the Metro Water District, water supply and water conservation management planning process, a summary of the successes of the 2003 Plan, and organization of this Plan.

**Section 2: Existing Water Supply and Treatment Conditions** – Summarizes the current conditions in the Metro Water District, including existing water supplies and water treatment facilities.

**Section 3: Water Demand Forecasts** – Provides the methodology and results for water demand forecasts based on population and employment projections for the Metro Water District.

**Section 4: Water Conservation Analysis** – Summarizes the development and evaluation of water conservation options for the Metro Water District.

**Section 5: Water Conservation Program** – Outlines the water conservation program measures that all Metro Water District communities are required to implement.

**Section 6: Water Supply Sources** – Identifies surface water supply sources for the Metro Water District to meet future water demands and additional water sources that may be needed beyond 2035.

**Section 7: Reuse** – Provides an overview of reuse alternatives, opportunities and challenges in the Metro Water District.

**Section 8: Planned Water Supply Facilities** – Provides an overview of the recommended infrastructure improvements and water system interconnections in the Metro Water District.

**Section 9: Local Water Planning** – Describes the roles and requirements for local water master plans.

**Section 10: Issues** – Summarizes the water supply issues and limitations considered in development of the Water Supply and Water Conservation Management Plan.

**Section 11: State and Regional Policy Recommendations** – Summarizes recommendations for various state and regional agencies to help advance watershed protection in the Metro Water District.

**Section 12: Education and Public Awareness** – Outlines public education and outreach efforts at the regional and local levels.

**Section 13: Implementation Plan** – Includes the specific tasks, milestones, and responsibilities for implementation of the recommended Water Supply and Water Conservation Management Plan. In addition, funding mechanisms for local water providers are provided.

**Section 14: Future Plan Evaluation** – Summarizes metrics for future evaluation of the Water Supply and Water Conservation Management Plan.

### Appendices

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