Section 14: FUTURE PLAN EVALUATION

INTRODUCTION

The Water Supply and Water Conservation Management Plan was updated in compliance with the minimum planning elements identified in O.C.G.A. §12-5-584. The legislation identifies the need to periodically assess regional progress towards implementation of the specific actions identified in the Water Supply and Water Conservation Management Plan and towards meeting the long-term goal of comprehensive water resources management.

The O.C.G.A. specifically states the following Plan requirements:

> *"[E]stablishment of short-term and long-term goals to be accomplished by the plan and measures for the assessment of progress in accomplishing such goals and plan."*
>
> *"The District shall review …management plan(s) and (their) implementation annually to determine whether there is a need to update such plan(s) and shall report to the director the progress of implementation of its goals…"*
>
> *"…the District shall prepare updated …management plan(s) no less frequently than every five years…"*

The short and long-term water supply and water conservation management goals are summarized in Section 13 in the implementation schedule and the county level summaries in Appendix B. The water conservation measures provide the framework for evaluating implementation of this Water Supply and Water Conservation Management Plan. This section provides an overview of the required plan reviews and plan updates as well as provides a summary of regional progress to date.

PLAN REVIEWS AND UPDATES

There are two types of plan reviews and updates: annual reviews and plan updates that occur every five years. The reviews and updates are an important component of the adaptive management approach for all three of the Metro Water District's long-term management Plans (water supply and conservation, wastewater, and watershed).

> *Adaptive management is a type of natural resource management in which decisions are made as part of an ongoing science-based process. Adaptive management involves testing, monitoring, and evaluating applied strategies, and incorporating new knowledge into management approaches that are based on scientific findings and the needs of society. Results are used to modify management policy, strategies, and practices. (USGS)*

This adaptive management approach recognizes the limitations of current knowledge regarding future situations, and the inevitability of change. These Plans provide a big-picture context for specific actions

based on best available data, and will need to be adjusted as better information or new conditions arise. By design, the short-term management measures are outlined in greater detail than the long-term management measures. Recommendations for the first 5 years are reasonably firm, whereas those beyond 20 years are expected to be refined several times before they are implemented.

ANNUAL REVIEWS

The purpose of the annual plan review is to identify and discuss implementation challenges to determine if there is a need for plan amendments. The evaluation process provides stakeholders an opportunity to discuss concerns about a particular element of the Water Supply and Water Conservation Management Plan. The annual reviews are a reminder that the Plans are adaptable, dynamic, and flexible.

The Metro Water District annual surveys are one component of the annual review. The survey results are compiled into an annual activities and progress report by Metro Water District staff and are available on the Metro Water District website.

As the water conservation component of this Water Supply and Water Conservation Management Plan is critical to meeting future water demands, there is a need to track regional progress in more detail in the future. The Metro Water District will work with the TCC to establish additional methods to track water conservation progress in a consistent manner across the region, as recommended in Section 11.

PLAN UPDATES

Plan updates occur at least every 5 years and take a more holistic look at changed conditions and implementation actions since the last Plan Update. Evaluations of changed conditions for Plan Updates may include:

- Population forecasts and trends
- Water conservation program enhancements
- Identify additional supply sources needed to address demands
- County level summaries located in Appendix B

Undoubtedly, other issues will emerge that merit in-depth consideration in the future. As with existing efforts, future planning work should be open and inclusive, involving all Metro Water District members and stakeholders.

RECOMMENDED ANNUAL REVIEWS AND UPDATES

Table 14-1 displays key items for the Metro Water District to consider in its annual reviews and 5-year updates. It is essential that an updated Plan be prepared no less frequently than every 5 years in order to allow for appropriate adjustments.

TABLE 14-1
Summary of Plan Elements to Be Reviewed and Updated Regularly by the Metro Water District

Key to Actions: ● = Required ⊙ = Recommended ○ = Desirable ✱ = Automatic Plan Review Trigger

Plan Elements	Annual Reviews		Five-Year Update	
	Review	Update	Review	Update
Metro Water District Plan recommendations	●	○	●	⊙
Education & Public Awareness Programs	●	⊙	●	⊙
Watershed mandatory local management measures	●	⊙	●	⊙
Local conservation pricing	●		●	
Local water conservation programs	●	⊙	●	⊙
Recommended Metro Water District actions	●	⊙	●	⊙
Recommended actions for state agencies	○		●	
Related Metro Water District and State Plans (Water Supply/ Long-term Wastewater/ Watershed, etc)	○		●	⊙
Local septic system programs	○		●	●
Local sewer system operation and maintenance programs	○		●	
New population and demand forecasts			●	●
Funding trends	●		●	
Special Triggers for Plan Reviews *Note: Any of these actions should trigger an automatic review of their implications for Metro Water District Plans, and needed Plan modifications. Additionally, the status of any of these pending actions should be monitored routinely.*				
State-wide Comprehensive Water Management Plan resource assessments or guidance	✱	○	●	●
Georgia EPD policy or permit requirement changes	✱	○	●	●
Georgia EPD guidance on ACF and ACT basins modified	✱	○	●	●
Georgia EPD permit action on water withdrawal, reservoir or discharge (issued/denied/modified)	✱	○	●	●
Court rulings on general standards or district-specific cases (e.g. discharges to Lake Lanier)	✱	○	●	●
Legislative action relevant to Plans	✱	⊙	●	●
Major policy action by Metro Water District Board	✱	○	●	●
New reservoir permit actions	✱	○	●	●
Major change in Georgia DHR regulations on septic systems	✱	⊙	●	●
Major change in Georgia EPD policies or regulations	✱	⊙	●	●
Major change in GEFA or federal funding levels or policies	✱	○	●	●

PLAN ACCOUNTABILITY

Municipalities have a high level of accountability for implementing the Water Supply and Water Conservation Management Plan's mandatory management measures through the Georgia EPD audit process. Georgia EPD auditors conduct a thorough review of the local programs and procedures to determine consistency with the Metro Water District Water Supply and Water Conservation Management Plan. Communities must substantially comply with the Metro Water District plan provisions in order to modify or obtain new water withdrawal permits, wasteload allocations, GEFA loan funding, or the renewal of MS4 stormwater permits. Overall, this system has worked well to ensure implementation of the provisions of all three Metro Water District plans.

MEASURING PROGRESS

Over the past five years, the Metro Water District has tracked progress through surveys completed by local water providers summarized in the Annual Activities and Progress Report.

The Metro Water District Board indicated a need to establish and collect more detailed data on water use and conservation metrics to gage progress. The Chairman established a Board working group to initiate discussions on metrics and benchmarking for the water conservation program. The Board working group and the TCC developed metrics and benchmarks that water providers need to report annually to the Metro Water District. Metro Water District staff will develop a survey form for this purpose and collect overall water use metrics to report annually.

OVERALL WATER USE METRICS

Overall water use metrics to be tracked:

- Overall system water use for the Metro Water District overall and for each system.
    - Need a 10 year period and need to factor in weather
    - Withdrawals and returns
    - Water withdrawn/produced
    - Peaking factor and summer average and winter average
- Overall per capita use
- Single Family Overall Indoor Per-Account Use (winter average and total)
- Multi-Family Overall Indoor Per-Account Use, if possible

Overall water use and per capita use can be derived from water withdrawal and production data that Georgia EPD collects. The per account single-family and multi-family usage would depend on billing data available for systems. Multi-family accounts may not be available and special study would be required to determine multi-family per account estimate. Billing data would have to be collected, estimates of winter usage would have to be made and estimates would have to be determined. The methodology for collecting this information needs additional research.

MEASURING THE WATER CONSERVATION PROGRAM

All water conservation program measures are currently required unless provided for otherwise.

5.1 - Conservation Pricing:

Report/Measure:

- Collect data to determine how closely rate structures for each water system relate to recommended rate structure in the Metro Water District Plan. Data needed includes each water system's rate structure, residential winter average use and number of customers billed in each tier. Data may need to be collected bi-annually in concert with the rate survey. Coordinate with GEFA Rates Survey and based on GEFA's methodology report water systems that have an "effective" conservation pricing structure.
- Collect data on whether historical use information is reported on bills.

Benchmark:

- Minimally implement Metro Water District's recommended residential rate structure
- 100% of residents billed by conservation pricing rate structure
- 100% of residents with irrigation meters billed at 200% of the first tier rate or higher by 2010
- Minimally implement uniform rates for commercial
- Water providers should categorize customers by class including single-family residential, multi-family residential, commercial, industrial and institutional. If billing systems are not capable of this, water providers should make sure the next upgrade of their billing system is capable.
- Water providers should provide information on historical use on bills. If billing systems are not capable of this, water providers should make sure the next upgrade of their billing system is capable.

5.2 - Replace Older Inefficient Plumbing Fixtures:

Report/Measure:

- Report estimated number of homes with inefficient toilets, number of rebates/replacements per year, cost of rebated/replaced toilets to the water system and customers and Metro Water District staff will estimate water saved.

Benchmark:

- 100% of rebates/replacements are 1.28 gallons per flush toilets by 2014

5.3 - Pre-Rinse Spray Valve Education:

Report/Measure:

- Report on number of food service accounts. Document contact with each restaurant/food service provider and number of brochures distributed. Each water system should report number of food service accounts that have low flow 1.6 gpm pre-rinse spray valves. Develop methodology and Metro Water District could potentially estimate water savings.

Benchmark:

- Outreach to 100% of restaurants/food service providers

5.4 - Rain Sensor Shut-off Switches:

Report/Measure:

- Report on status of policy/checklist and number of new irrigation systems each year

Benchmark:

- Requirement in building code

5.5 - Sub-meters in New Multi-Family Buildings:

Report/Measure:

- Report on number of new multi-family buildings built and whether sub-meters were installed.

Benchmark:

- 100% of new multi-family buildings have sub-metering

5.6 - Assess and Reduce Water System Leakage:

Report/Measure:

- Fill out and turn in AWWA Water Audit Software every year and report ILI index, real losses, apparent losses, and authorized unbilled water use.
- Report goal and steps taken to reduce water loss and results such as number of leaks detected and repairs and water saved as a result.

Benchmark:

- Water providers are required to adopt the IWA water audit method and conduct the audit annually.
- Water providers are required to implement practices to reduce water loss.
- Water providers should set their own reduction targets and specifically identify how they will meet those targets.

5.7 - Conduct Residential Water Audits:

Report/Measure:

- Report number of residents that received audit and number of self-audit forms provided

Benchmark:

- Target 25% of highest water using residential accounts and target pre-1993 homes

5.8 - Distribute Low-Flow Retrofit Kits:

Report/Measure:

- Report number of kits distributed and contents of kits

Benchmark:

- Target highest water using residents and pre-1993 homes

5.9 - Conduct Commercial Water Audits:

Report/Measure:

- Report number of commercial water users, how many targeted, number of audits (including those performed by P2AD) and, where available, savings achieved from specific audits.

Benchmark:

- Target 25% of highest water using commercial accounts

5.10 - Implement Education and Public Awareness Plan:

Report/Measure:

- Report education/outreach and public participation/involvement activities

Benchmark:

- Water providers should have a water conservation education and outreach program.
- Water systems with population under 50,000 are required to implement 2 education/outreach activities and 2 public participation/involvement activities.
- Water systems with population over 50,000 are required to implement 3 education/outreach activities and 3 public participation/involvement activities.
- By 2015 and every five years thereafter, water providers and local government should assess and adjust their program(s) as needed.
- By 2010, the Metro Water District in coordination with the appropriate technical coordinating committees should develop and distribute educational materials related to efficient water use for pools, spas, pressure washing and non-commercial car washing.

5.11 - Install High Efficiency Toilets and Urinals in Government Buildings:

Report/Measure:

- Report how many government buildings, fixtures that have been retrofitted and resulting water saved.

Benchmark:

- 100% of local government buildings by 2020

5.12 – Require New Car Washes to Recycle:

Report/Measure:

- Report on new car washes and recycling systems

Benchmark:

- 100% of in-bay and conveyor car washes built in or after 2010 will recycle water

Other possible topics for water systems to report on include:

- Describe reuse projects
- Describe unique things they did that year regarding water conservation
- Data on school water use by school system and private schools. The data could be broken down by elementary, middle and high schools in each school system and the data collected could include number of students, number of faculty and staff, total water use per school system, per-capita student water use.

CONCLUSIONS

While the performance will be reported annually by the responsible entities, the final measure of implementation success will be the longer term, demonstrable trends of:

- Development of local water supply plans that are consistent with this Water Supply and Water Conservation Management Plan;
- Reallocation of Lake Lanier and Allatoona Lake, and permitting of new reservoirs currently in the permitting process;
- Implementation of the water conservation program;
- Planned indirect potable reuse of reclaimed water;
- Heightened public awareness and community support through an effective public education and awareness program;
- Availability of adequate funding of infrastructure intended to meet the growth needs of the Metro Water District; and
- Progress on improving surface water quality.