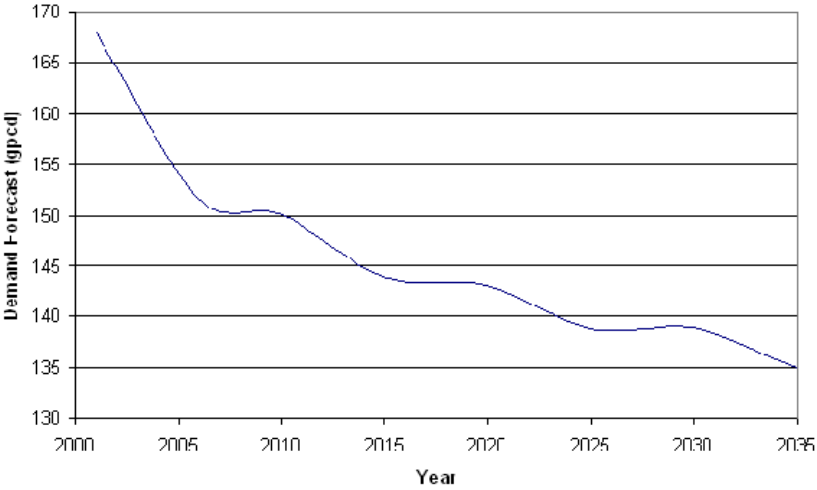


Metropolitan North Georgia Water Planning District
Water Supply and Water Conservation Management Plan Update
List of Changes to Public Comment Draft Plan (December 2008)
Board Approved – April 2, 2009

Section/ Page	Paragraph/Line	Text Change
ES-1	Paragraph 1	Change O.C.G.A. §12-5-571 to read O.C.G.A. §12-5-572
ES-1	Paragraph 2	Change text as shown “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 93 <u>91</u> municipalities partially or fully within these counties.”
ES-1	Paragraph 2	Change text as shown “The Metro Water District also has six <u>seven</u> authorities which provide water, sewer and/or stormwater services.”
ES-4	Under “Water Demand Forecasts”	<p>Change text as shown “The “Demand Side Management Least Cost Planning Decision Support System” (DSS) computer model developed by Maddaus Water Management, <u>which was used for the 2003 Plan,</u> was updated and used to forecast water demands and assess water conservation measures. The model uses current water production and billing data provided by most local water providers, along with population and employment forecasts, to estimate water demands through 2035. <u>The model provides water use for each county by water use sector (single-family, multi-family, commercial, industrial, institutional), splits usage into indoor and outdoor components and further sub-divides indoor use into major end uses (toilets, faucets, etc.). The level of detail increases the accuracy of both the forecasts as well as the anticipated benefits of the water conservation program, because the demand and savings are based on the specific aspects of water use within that county. For example, the replacement of old toilets will conserve more water in a county with older housing stock than in a county with newer housing stock.</u></p> <p>With implementation of the enhanced water conservation program, the projected water demand is estimated to be 1,011 MGD on an average annual daily demand basis. <u>Figure ES-1 shows that this Plan update provides a 20% reduction in per capita demand from 2001 to 2035. The starting point of 168 gallons per capita per day (GPCD) reflects billing data for 2001 collected for the 2003 Plan. The 2006 data shows a 151 gpcd, used in the Plan update. The end point reflects the benefit of the conservation program in the Plan update.</u></p> <p><u>Figure ES-1</u> <u>Metro Water District Overall Per Capita* Water Use Trends (2001 – 2035)</u></p>

		 <p>*Overall per capita = total water demand supplied by public water systems in the District divided by the District's population.</p>
ES-4	Paragraph 3	<p>Change text as shown <u>“Water conservation was considered first in the planning process, prior to looking at new or expanded sources. The water conservation analysis used the DSS computer model to maximize the cost-benefit of the updated water conservation program.</u> The updated water conservation program expands the existing Metro Water District program to further enhance water conservation into the future. The program resulted from an extensive analysis of the current program, evaluation of new methods and measures, and stakeholder involvement. The process yielded a program of water conservation measures that has the potential to reduce Metro Water District water demand up to 13 percent beyond current trends without conservation by the end of the planning period.”</p>
ES-5	Under “Water Conservation Program”	<p>Delete last sentence of first paragraph under this Section and replace remaining text in this section with text as shown “The water conservation measures in this Plan update include and go beyond the measures in the 2003 Plan. This update includes:</p> <ul style="list-style-type: none"> • The 10 water conservation measures from the 2003 plan <ul style="list-style-type: none"> • 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 • 3 of those 10 water conservation measures are strengthened <ul style="list-style-type: none"> • Irrigation meter pricing at 200 percent of the first tier rate • 1.28 gpf toilet rebate program only by 2014 • Minimum local education requirements and optional

		<p>toolbox of examples is provided</p> <ul style="list-style-type: none"> • 2 new water conservation measures are added <ul style="list-style-type: none"> • Install 1.28 gpf toilets & low flow urinals in government buildings • Require new car washes to recycle water”
ES-6	Under “Water Supply Sources”	Change text as shown “By 2035, the Metro Water District’s water demands <u>with the aggressive water conservation program</u> will be approaching 1,011 AAD-MGD with aggressive conservation. ”
ES-6	Under “Water Supply Sources”	Add sentence to end of paragraph “ <u>It is important to note that the benefits of the water conservation program were considered prior to consideration of additional water supply sources.</u> ”
ES-6	Under “Water Supply Sources,” Last Paragraph	Change text as shown “Groundwater use makes up less than 1% of the public water supplies for the Metro Water District and development of future groundwater sources that could provide substantial quantities of water is highly unlikely, due to bedrock geology and existing land use that limits the needed recharge areas. Over the 2035 planning horizon, it is expected that the percentage of groundwater use will remain <u>about constant or decrease.</u> For planning purposes, groundwater supply sources have been factored into the water supply <u>as a source for small towns and as a supplemental source to surface water rather than as a means for meeting forecasted water demands.</u> ”
ES-7	Bullet 2	Add new bullet between existing bullets: <ul style="list-style-type: none"> • “Construct two new storage facilities to drought proof and extend existing supply sources.”
ES-8	Paragraph 1, Sentence 2	Change text as shown “The plan outlines the different types of water reuse as well as a discussion of existing and future applications in the Metro Water District identified to meet the 10% reuse <u>planning standard goal</u> identified by Georgia EPD.”
ES-11	Paragraph 2	Change text as shown “The Metro Water District enabling legislation identified the need to periodically assess regional progress towards implementation of the specific actions identified in the <u>Watershed Management Plan Water Supply and Water Conservation Management Plan</u> and towards meeting the long-term goal of comprehensive water resources management. The <u>aggressive conservation program and action items</u> local management measures provide the framework for evaluating implementation of this plan. <u>The future evaluation includes annual surveys completed by the Metro Water District that will track progress.</u> ”
1-1	Paragraph 2	Change O.C.G.A. §12-5-571 to read O.C.G.A. §12-5-572
1-1	Paragraph 3	Change text as shown “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 93 <u>91</u> municipalities partially or fully within these counties (Figure 1-1).”
1-1	Paragraph 3	Change text as shown “The Metro Water District also has six <u>seven</u> authorities which provide water, sewer and/or stormwater services.”
1-2	Figure 1-1	Remove Corinth as a city; remove Loganville
1-3	Table 1-1	Remove Corinth as a city; remove Loganville
1-3	Table 1-1	Alphabetize the list of cities
1-3	Table 1-1	Add Coweta County Water and Sewerage Authority to the list of Authorities
1-7	Paragraph 1	Change test as shown “In addition, ten <u>eight</u> other water providers had a local rebate program <u>in 2008</u> to replace older, inefficient toilets. These programs rebated over <u>17,800</u> toilets in 2008, <u>which will save</u>

		<u>over 300,000 gallons of water per day.</u> "
1-9	Bulleted List	Add third bullet: <ul style="list-style-type: none"> • "Enhance focus on efficiency. Revisit and revise water conservation program as part of the forecasts and then identify sources and facilities to meet needs."
1-10	New Sub-section	Add text to top of page: "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."
2-1	Paragraph 2, Sentence 2	Change text as shown "The current water withdrawals are based on 2006 local water provider data and reflect the ongoing drought conditions <u>and emergency drought management measures in place in 2006.</u> "
2-2	Table 2-1 header	Change header as shown "Existing Municipal Permitted Surface Water Supplies <u>(2006)</u> "
2-3	Under "Tallapoosa River Basin"	Change text as shown "Lake Fashion (also known as Lake Paradise)"
2-3	Under "Tallapoosa River Basin"	Change text as shown " <u>Cowan</u> Gowens Lake"
2-4	Table 2-2	Change text as shown "Bear Creek Reservoir Proposed South Fulton Water Authority ² Chattahoochee Impoundment on Bear Creek, a tributary of the Chattahoochee River. <u>The permitting process has been initiated with an</u> estimated yield of 15 mgd. Note 2. The service provider for the Bear Creek Reservoir should be resolved through negotiation process or other means before a permit is issued to resolve conflicts with existing service areas."
2-4	After Table 2-2	Insert Section: "PLANNED STORAGE In addition to the reservoirs listed above in Table 2-2, there are two

		<p>projects planned in the Metro Water District that will provide additional storage, but do not provide additional yield. These storage facilities will help drought-proof and extend existing sources and are listed in Table 2-3.</p> <p>TABLE 2-3 Planned Storage</p> <table border="1"> <thead> <tr> <th>Storage</th> <th>Owner/Operator</th> <th>Basin</th> <th>Estimated Size</th> </tr> </thead> <tbody> <tr> <td>Coweta County Sandy Creek Reservoir</td> <td>Coweta County</td> <td>Chattahoochee</td> <td>2.7 BG</td> </tr> <tr> <td>Bellwood Quarry Reservoir</td> <td>City of Atlanta</td> <td>Chattahoochee</td> <td>2.5 BG</td> </tr> </tbody> </table> <p>“</p>	Storage	Owner/Operator	Basin	Estimated Size	Coweta County Sandy Creek Reservoir	Coweta County	Chattahoochee	2.7 BG	Bellwood Quarry Reservoir	City of Atlanta	Chattahoochee	2.5 BG
Storage	Owner/Operator	Basin	Estimated Size											
Coweta County Sandy Creek Reservoir	Coweta County	Chattahoochee	2.7 BG											
Bellwood Quarry Reservoir	City of Atlanta	Chattahoochee	2.5 BG											
2-5	Paragraph 1	<p>Add text as shown “Groundwater sources make up less than one percent of the total available water supply for the Metro Water District; Groundwater is not a significant source of water supply due to the underlying hydrogeologic conditions (fractured bedrock geology). Additionally, groundwater quality across the Metro Water District is widely variable. And may not be suitable for us as drinking water or process water for industries. <u>Groundwater supplies several small towns and is used as a supplemental source.</u>”</p>												
2-9	Table 2-5, Douglas County	Change text as shown for Bear Creek WTP “ 17.36 16.36”												
2-9	Table 2-5, Douglas County	Change text as shown “ <u>Cowan</u> Cowens Lake”												
2-10	Table 2-5, Total PD-MGD and AAD-MGD	Change PD-MGD as shown “ 1136.29 1135.29” Change AAD-MGD as shown “ 710.18 709.56”												
2-11	Table 2-6	Chattahoochee 1,114 1,546 9.58 1,094 1,526 6.65 Total 1,828 2,260 31.34 1,373 1,805 26.47												
3-2	Figure 3-1	Change text as shown “ Water Demand Calculation System Diagram ”												
3-2	Paragraph 1	Change text as shown “For the purposes of forecasting future water demands, the 2006 actual water use data was adjusted as discussed later in this Section to reflect the ongoing drought conditions and <u>suppressed usage due to emergency drought measures in 2006.</u> ”												
3-5	Paragraph 1	Change text as shown “The Metro Water District provided estimates of housing age from the 2000 Census <u>and the 2006 American Community Survey</u> that were adjusted based on a projected replacement rate to more efficient fixtures.”												
3-6	Replace text	<p>Replace text on page as shown “Certain assumptions and adjustments were made to the billing data collected from local water providers in order to account for non-typical weather patterns and for certain data that was not available. General assumptions in the model include the following:</p> <ul style="list-style-type: none"> • The base year for water use forecasts is 2006. However, drought management restrictions in effect during 2006 depressed the normal water use rates. In order to create a representative base year for water demand forecasts, 2006 demands were adjusted to take into account drought management restrictions. The adjustment was based on the last 10 years of weather data looking 												

		<p>at water use during both wet and dry years of record, long-term permanent changes in water use behavior as the result of drought, and the benefits of natural conservation and the Metro Water District’s aggressive water conservation program in reducing historical demand. The difference in per capita demand between the 2006 actual and the 2006 adjusted demand essentially reflects demand suppression resulting from emergency drought response actions, including outdoor water restrictions, which are not reflective of normal water use patterns.</p> <ul style="list-style-type: none"> • Once the per-account unit-based demands for each customer category were established, the number of accounts was used to estimate the total demand for each county. In cases where complete billing data was available, the numbers of accounts were taken directly from the data. • In cases where part or all of the billing data was not available, accounts were either increased from the 2003 Plan model relative to either the increase in population and employment, or the increase in housing units over the 5 year period. • When both production and billing data were available, non-revenue water was estimated as a percentage of production. When this value was not available, non-revenue water was based on percentages in the 2003 Plan. <p>Table 3-2 shows the resulting adjusted base year per capita and per employee uses for residential single and multi-family, as well as other non-residential uses, including indoor and outdoor use.”</p>
3-8	New Paragraph after Paragraph 2	<p>Add new paragraph after paragraph 2: “The top-down analysis also looked at housing stock information to estimate the percentage of water use by plumbing fixtures. The makeup of plumbing fixtures in the Metro Water District was based on housing age (derived from the 2000 census and 2006 American Community Survey) and adjusted with a modest natural replacement rate, shown in Table 3-4.</p> <p>The natural replacement converts existing less efficient plumbing fixtures with more efficient fixtures as they are damaged or due to changes in style. The Georgia plumbing standards ensure that older fixtures are replaced with more efficient fixtures. Over time, the plumbing code will gradually reduce indoor per capita demands, as the percentage of efficient fixtures in homes and buildings increases. This demand, which includes water savings due to efficient fixtures, is referred to as the ‘baseline’ demand.”</p>
3-8	Paragraph 3	<p>Change text as shown “The American Water Works Association Research Foundation (AWWARF) study, “Residential End Uses of Water” provided the initial <u>bottom-up</u> estimates for fixture use frequencies and quantities. <u>Table 3-3 shows the average water end uses and frequency of use factors for a single family account, based on the AWWARF study.</u> These initial <u>end use</u> estimates were <u>compared adjusted</u> in each model to reflect the existing stock of plumbing fixtures in each of the counties, <u>based on the top-down analysis</u>. For instance, counties with a larger percentage of older homes have a larger portion of indoor use attributed to toilet flushing than counties with a higher percentage of new development. After the bottom-up end uses were estimated, they were compared to the estimates made from the top-down procedure. The top-down and bottom-up were adjusted until they matched to assure calibration of the model, <u>with preference provided to the more accurate top-down generated numbers.</u> Table 3-3 shows the</p>

		average water end uses and frequency of use factors for a single family account, based on the AWWARF study.”
3-9	Paragraph 1	Change text as shown “Part of the “Bottom Up” analysis was adjusting the water demands to include the effect of natural conservation due to the State Plumbing Code. Over time, the plumbing code will gradually reduce indoor per capita demands, as the percentage of efficient fixtures in homes and buildings increases. This demand, which includes water savings due to efficient fixtures, is referred to as the ‘baseline’ demand. The Georgia plumbing standards and estimated natural replacement rates for certain end uses are outlined in Table 3-4.”
3-11	After 1 st Paragraph	<p>Insert paragraphs: “The baseline savings in the 2003 WSWC Plan was estimated to be 9%. While a reduced savings is anticipated from progress since 2004 in implementing the conservation plan and plumbing code, the difference between 9% and 5% is worth noting.</p> <p>The 2003 Water Supply and Water Conservation Plan used a base year of 2001 for the water supply and water conservation models. The models used the best available information at that time, and relied heavily on the typical residential water use, as published in the AWWA Research Foundation (AWWARF) Residential End Uses report that shows average residential water uses from 12 American cities in the mid 1990s.</p> <p>For this Plan update, the Metro Water District relied more heavily on fixture stock (inferred from housing age) than the residential end uses presented in the AWWARF Residential End Uses report due to the availability of more accurate local data on housing age and toilet replacement rates. The typical end uses in this report no longer reflect conditions in the Metro Water District; including the relatively new housing stock compared to other cities, the high level of bathroom remodels in the past decade, and the impact of the federal and state plumbing code requirements. For the Plan update, housing stock information provided by the Metro Water District was not adjusted to match the AWWARF study. The makeup of residential toilets in the Metro Water District was based on housing age (derived from the 2000 census and 2006 American Community Survey) and adjusted with a modest natural replacement rate of 1% to 1.5% per year. The current residential water usage profile for the Metro Water District, shown on page 3-3, does not match the AWWARF Report for 12 cities from the mid 1990s. The Plan update water use profile is more reflective of existing conditions in the Metro Water District.”</p>
3-13	Paragraph 1	Add at the beginning of paragraph “The 2050 demand forecasts are provided to initiate consideration of supplies needed outside of the planning horizon. With the cost and time needed to develop new water sources, communities may wish to consider demand beyond the 2035 planning horizon.”
4-1	Paragraph 1	Add new paragraph after paragraph 1 “Water conservation was considered first in the planning process, prior to looking at new or expanded sources. This Section discusses the process for evaluation and selection of the water conservation measures that build on progress from the 2003 Plan. In general, the water conservation program includes the measures that were most cost-beneficial across the Metro Water District. After identifying the water savings resulting from the water conservation program, additional sources and reservoirs

		were considered as discussed in Section 6 to meet outstanding demand.”
4-3	Paragraph 1	Change text as shown “Because of interactions between measures when assembled into a conservation program, each existing as well as potential new measure was modeled <u>individually as well as in packages</u> to assess the overall water savings.”
4-3	Paragraph 2	Insert after second sentence “The DSS model evaluated potential water savings based on conditions specific to each county. Information specific to each county and each water use sector was used to evaluate potential savings for each conservation measure. For instance, the DSS model calculated the savings for pre-rinse spray valve retrofits based on the number and age of restaurants specific to each county as well as the percent of total restaurant use for those devices. Similarly, the DSS model calculated the water savings for toilet retrofits by county based on the number and age of the single-family housing stock as well as the percentage of single-family use of water for toilet flushing. Based on existing information, and forecasted demands, potential savings for each measure were quantified.’
4-9	Bullet 3	Change text as shown “Program C includes all the quantitative measures presented in Table 4-3 <u>4-5</u> .”
4-10	After Table 4-4	Add text as shown “The 13 percent water savings in Table 4-4 reflects only conservation beyond 2006 and does not incorporate total savings since 2001, when the Metro Water District began comprehensive regional water conservation planning. It is anticipated that there will be a 20 percent reduction in per capita use from 2001 to 2035. See the ‘Comparison with 2003 Plan” discussion at the end of this Section for an explanation of how this compares to water saving estimates in the 2003 plan.”
4-11	Paragraph 1	Change text as shown “Table 4-5 <u>4-6</u> presents selected evaluation statistics for the three option packages for each of the Metro Water District’s 15 counties.”
4-13	Paragraph 2	Change text as shown “Figure 4-3 <u>4-5</u> is a graphical representation of how the three option packages would reduce overall water demands in the Metro Water District below the baseline level (which includes <u>natural conservation related to the effects of current plumbing codes</u>).”
4-13	Last Paragraph. Sentence 1	Change text as shown “A <u>Beyond 2006</u> , a total conservation benefit of 13 percent over current water use trends is expected from conservation program B in combination with natural replacement benefits.”
4-13	Last Paragraph, Add at End	Add text as shown “The 13 percent water savings reflects only conservation beyond 2006 and does not incorporate total savings anticipated since 2001, when the Metro Water District began comprehensive regional water conservation planning. It is anticipated that there will be a 20 percent reduction in per capita use from 2001 to 2035. See the ‘Comparison with 2003 Plan” discussion at the end of this Section for an explanation of how this compares to water saving estimates in the 2003 plan.”
4-16	New Section	Insert new Section: “COMPARISON WITH 2003 PLAN The DSS model used for the water conservation analysis for the 2003 Plan as well as for the 2008 Plan Update looks at existing water use and forecasts forward. Many changes have occurred since 2003 in population, water use, drought restrictions, natural conservation due to plumbing code changes, and the Metro Water District’s aggressive water conservation program.

The Metro Water District's first Water Supply and Water Conservation Plan was adopted at the end of 2003. In four short years, the local governments and water providers in the Metro Water District made great progress in implementing the Plan's conservation requirements. This update continues and improves upon the Metro Water District's commitment to water conservation.

This Plan update shows the Metro Water District will use less water and be more efficient in 2035 compared to the 2003 Plan estimates for 2030. With an additional 5 years of growth and development, Table 4-7 shows that both the total consumption and the total per person forecasts are lower as compared with the 2003 Plan.

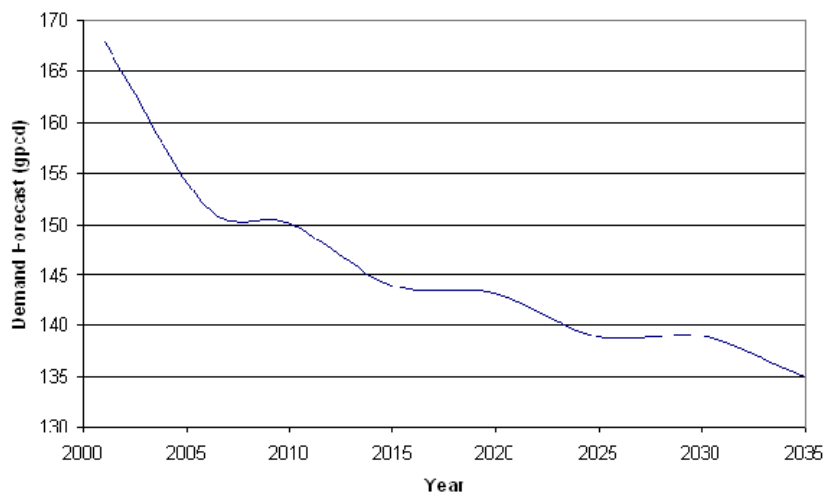
Table 4-7: Comparison of 2003 Plan and this Plan Update

Comparison	2003 Plan (2030 forecasts)	Draft Update (2035 forecasts)
Planned Future Water Demand with Recommended Conservation Program	1,081 AAD – MGD	1,011 AAD – MGD
Future Per-Capita Under District Plan	138 gpcd*	135 gpcd*

*Total gallons per capita per day --This number reflects all the water usage in the District divided by the district's population.

Figure 4-4 shows a 20% reduction in per capita demand from 2001 to 2035 based on implementation of the Plan update. The starting point of 168 gallons per capita per day (GPCD) reflects billing data for 2001 collected for the 2003 Plan. The 2006 data shows a 151 gpcd, used in this Plan update. The end point reflects the benefit of the conservation program in this Plan update.

Figure 4-4
 Metro Water District Overall Per Capita* Water Use Trends (2001 – 2035)



*Overall per capita = total water demand supplied by public water systems in the District divided by the District's population.

The water conservation measures in this Plan update go beyond the measures in the 2003 Plan. This update includes:

- The 10 water conservation measures from the 2003 plan

		<ul style="list-style-type: none"> • 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 <ul style="list-style-type: none"> • 3 of those 10 water conservation measures are strengthened <ul style="list-style-type: none"> • Irrigation meter pricing at 200 percent of the first tier rate • 1.28 gpf toilet rebate program only by 2014 • Minimum local education requirements • 2 new water conservation measures are added <ul style="list-style-type: none"> • Install 1.28 gpf toilets & low flow urinals in government buildings • Require new car washes to recycle water <p>This Plan update identifies future water conservation opportunities based on current water use patterns. This Plan's updated conservation forecasts are based on more accurate data:</p> <ul style="list-style-type: none"> • Updated population and employment forecasts • Housing stock age data reflects increased emphasis local census data and the 2006 American Community Survey which shows our housing stock is younger and more water efficient. • Base year water use data from 2006 provides a lower starting point of 151 gpcd for forecasts versus 2001 data of 168 gpcd used in the 2003 Plan; reducing future water demand forecasts. <p>The availability of better data for the Plan update produces a more robust plan while maintaining the same commitment to water conservation. In fact, comparing the per capita demand from the beginning of the regional water conservation program to the 2035 per capita demand, the Plan update demonstrates a 20% reduction in demand.</p> <p>Figure 4-5 Comparison of Baseline and Plan with Conservation between 2003 and 2009 Plans</p>
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5-1	Bullet 1	Change text as shown “Measure 5.1 – Establish Conservation Pricing”
5-1	Last Paragraph	Change text as shown “ <u>All measures are currently required unless provided for otherwise.</u> The implementation schedule for these water conservation measures is presented in Section 13, Implementation Plan.”
5-2	Action Item	Change text as shown “Action Item 5.1 – Establish Conservation Pricing”
5-2	Paragraph 4	Change text as shown “Table 5-1 provides a guideline for setting <u>effective</u> conservation rates.”
5-2	Paragraph 1	Add sentence to end of paragraph “While rate structures may vary by customer category, decreasing block rate structures are not allowed within the Metro Water District.”
5-3	Paragraph 4	Change text as shown “At a minimum, the rate for irrigation use should be equal to or greater than the third tier <u>200 percent of the first tier rate.</u> ”
5-3	New section	<p>Add new section at end of page: “Billing System Functionality New billing systems could potentially represent a multi-million dollar investment and two-year implementation time-frame for most local water providers. While local water providers in the Metro Water District are not required to update existing billing software, as existing billing software is replaced it should include certain functionality to facilitate conservation. Functionality that should be available in new billing system packages in the Metro Water District include:</p> <ul style="list-style-type: none"> • Ability to sub-divide customers into the following customer categories; single-family residential, multi-family residential, commercial, industrial and institutional. • Include both current and historical water use information on bills. • Include an explanation of the conservation pricing. This information will allow the customer to set goals for water use to avoid the top pricing tier. • Clearly identify the billing units, with preference given towards gallon-based units. Most customers are familiar with gallons as a unit of measure and less familiar with other units. <p>The increased billing functionality overtime will provide water customers in the Metro Water District with more information to make water use choices. Additionally, the proper classification of customer categories will assist with future forecast updates as well as the future evaluation of the benefit of the regional conservation program.</p>

Water Supply and Water Conservation Management Plan
 List of Changes to Public Comment Draft Plan (December 2008)
 Board Approved – April 2, 2009

5-4	Under “Specific Sub-Tasks”	<p>Add a new row and change text, as follows:</p> <table border="1" data-bbox="625 220 1433 457"> <thead> <tr> <th data-bbox="625 220 901 262">Sub-Task</th> <th data-bbox="901 220 1433 262">Description</th> </tr> </thead> <tbody> <tr> <td data-bbox="625 262 901 336">Billing system functionality</td> <td data-bbox="901 262 1433 336">As local water providers replace existing billing systems, they will assess the functionality of new software to facilitate conservation.</td> </tr> <tr> <td data-bbox="625 336 901 457">Review and update pricing</td> <td data-bbox="901 336 1433 457">Periodically review and adjust conservation pricing to respond to changes in demand and ensure sufficient operation and maintenance funds are available. At least every 5 years, review rates specifically for effectiveness of conservation pricing.</td> </tr> </tbody> </table>	Sub-Task	Description	Billing system functionality	As local water providers replace existing billing systems, they will assess the functionality of new software to facilitate conservation.	Review and update pricing	Periodically review and adjust conservation pricing to respond to changes in demand and ensure sufficient operation and maintenance funds are available. At least every 5 years, review rates specifically for effectiveness of conservation pricing.
Sub-Task	Description							
Billing system functionality	As local water providers replace existing billing systems, they will assess the functionality of new software to facilitate conservation.							
Review and update pricing	Periodically review and adjust conservation pricing to respond to changes in demand and ensure sufficient operation and maintenance funds are available. At least every 5 years, review rates specifically for effectiveness of conservation pricing.							
5-7	Paragraph 5	<p>Add to end of paragraph “The Energy Policy Act of 2005 sets the maximum flow rate of pre-rinse spray valves at 1.6gpm. Pre-rinse spray valve education programs will not be required after 2013 since the market will be saturated with low-flow spray valves.”</p>						
5-10	New Paragraph	<p>Add a new paragraph above the last paragraph on the page “Local water providers must establish a goal for the “real” water losses, or those associated with loss through all types of leaks, breaks and overflows on mains, service reservoirs and service connections, up to the point of customer metering. The goal for the real component of water loss will be based on existing water loss, the specifics for the distribution system and the water loss program. The goal for real water loss established by each local water provider will be achieved and/or maintained over the next five years.”</p>						
5-12	Under “Specific Sub-Tasks”	<p>Add the following row:</p> <table border="1" data-bbox="625 892 1433 982"> <thead> <tr> <th data-bbox="625 892 901 934">Sub-Task</th> <th data-bbox="901 892 1433 934">Description</th> </tr> </thead> <tbody> <tr> <td data-bbox="625 934 901 982">Set a goal for real water losses</td> <td data-bbox="901 934 1433 982">Each water system must set a goal for real water losses that will be achieved and/or maintained over the next five years.</td> </tr> </tbody> </table>	Sub-Task	Description	Set a goal for real water losses	Each water system must set a goal for real water losses that will be achieved and/or maintained over the next five years.		
Sub-Task	Description							
Set a goal for real water losses	Each water system must set a goal for real water losses that will be achieved and/or maintained over the next five years.							
5-16	Paragraph 3	<p>Change text as shown “A commercial water audit program includes on-site water audits at commercial, industrial <u>and institutional</u> facilities. Water providers should inform commercial customers of the program and offer the onsite water assessment.”</p>						
5-16	Paragraph 5	<p>Change text as shown “Commercial, Industrial, Institutional (CII) uses are variable and complex. <u>Examples of types of facilities may include but are not limited to commercial and retail centers, office buildings, hotels and motels, coin and card operated laundries, auto service and repair shops, restaurants and fast food, bakery and pastry shops, beverage manufacturers, commercial printers, fuel service stations and convenience stores, vehicle washes, schools, grocers, hospitals, industrial bakers, industrial laundries and dry cleaners, laboratories, metal finishers, paper manufacturers, water features and pools and landscapes.</u>”</p>						
5-19	Paragraph 2	<p>Add bullets:</p> <ul style="list-style-type: none"> • “Add additional emphasis to outdoor watering education including developing educational materials on rainwater harvesting and efficient water use for pools, spas, pressure washing and non-commercial car washing • Provide education on energy and water savings possible through implementing water conservation practices.” 						
5-20	Under “Specific Sub-Tasks”	<p>Change text as follows:</p> <table border="1" data-bbox="625 1669 1433 1759"> <thead> <tr> <th data-bbox="625 1669 901 1711">Sub-Task</th> <th data-bbox="901 1669 1433 1711">Description</th> </tr> </thead> <tbody> <tr> <td data-bbox="625 1711 901 1759">Retrofit fixtures</td> <td data-bbox="901 1711 1433 1759">Replace all toilets greater than 3.5 gpf with HET toilets and all urinals greater than 1.0 gpf <u>by 2020.</u></td> </tr> </tbody> </table>	Sub-Task	Description	Retrofit fixtures	Replace all toilets greater than 3.5 gpf with HET toilets and all urinals greater than 1.0 gpf <u>by 2020.</u>		
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5-21	Under “Specific Sub-Tasks”	<p>Change text as follows:</p> <table border="1" data-bbox="625 1795 1433 1885"> <thead> <tr> <th data-bbox="625 1795 901 1837">Sub-Task</th> <th data-bbox="901 1795 1433 1837">Description</th> </tr> </thead> <tbody> <tr> <td data-bbox="625 1837 901 1885">Adopt a local ordinance or regulation</td> <td data-bbox="901 1837 1433 1885">Require all new drive-through car washes to recycle water <u>by 2010.</u></td> </tr> </tbody> </table>	Sub-Task	Description	Adopt a local ordinance or regulation	Require all new drive-through car washes to recycle water <u>by 2010.</u>		
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6-1	Paragraph 2	Add new sentence after sentence 2 “It is important to note that the savings from the Metro Water District water conservation program were considered first, prior to looking at additional water supply sources.”												
6-2	New paragraph	<p>Add a new paragraph after Figure 6-1: “To meet the 2035 water demands, this Water Supply and Water Conservation Management Plan relies on (1) aggressive water conservation program, (2) maximizing existing supply sources, and (3) new supply sources through new reservoirs. Figure 6-2 shows that the majority of planned future supplies over currently permitted supplies are the result of maximizing existing water supply sources while conservation provides slightly more water than new reservoir sources.</p> <p>Figure 6-2 Comparison of Future Water Supplies to Meet Demands</p> <table border="1"> <caption>Data for Figure 6-2: Comparison of Future Water Supplies to Meet Demands</caption> <thead> <tr> <th>Supply Source</th> <th>Quantity (AAD-MGD)</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>New supply through maximizing existing sources/increasing permits</td> <td>165</td> <td>48%</td> </tr> <tr> <td>New supply through conservation</td> <td>89</td> <td>26%</td> </tr> <tr> <td>New supply through new reservoirs</td> <td>87</td> <td>26%</td> </tr> </tbody> </table>	Supply Source	Quantity (AAD-MGD)	Percentage	New supply through maximizing existing sources/increasing permits	165	48%	New supply through conservation	89	26%	New supply through new reservoirs	87	26%
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6-3	Paragraph 2	Add text as shown “As discussed in Section 2, groundwater use makes up less than 1% of the public water supplies for the Metro Water District and development of future groundwater sources that could provide substantial quantities of water is highly unlikely, due to bedrock geology and existing land use that limits the needed recharge areas. Over the 2035 planning horizon, it is expected that the percentage of groundwater use will remain about constant or decrease. For planning purposes, groundwater supply sources have been factored into the water supply as a source for small towns and as a supplemental source.”												
6-5	Table 6-1, Chattahoochee River Basin	Change row as shown “1 Lake Lanier City of Buford 3.22 3” Change Chattahoochee River Basin Total as shown “907-907.22”												
6-7	Under “Tallapoosa River Basin”	Change text as shown “45 Little Tallapoosa River (Lake Fashion / <u>Cowan Cowens</u> Lake)”												
6-7	Table 6-1, Metro Water District Total	Change Monthly Average as shown “ 1,368.19 1,368.41” Change Annual Average as shown “ 1,140.2 1140.34”												
6-8	Table 6-1	Add the following text to Table: Revise Table Header as shown “2035 Planned Permitted Monthly Average Withdrawal (MGD) ¹⁰ ” Add Note as shown “10. Annual average day equals monthly average divided by 1.2.”												
6-10	Richland Creek	Change text as shown “Paulding County is currently in the permitting												

		stages of a new reservoir on Richland Creek; expected permitted monthly withdrawal is 30 AAD-MGD.”						
6-11	Paragraph 9, Line Creek	Change text as shown “Fayette County has an impoundment on Line Creek, Lake McIntosh, which provides a yield of 8 12.5 AAD-MGD.”						
6-13	Under “Tallapoosa River Basin”	Change text as shown “ Lake Paradise/ Lake Fashion/ Lake Cowan: The City of Villa Rica withdraws water from the main reservoir Lake Fashion (also called Lake Paradise) and the backup reservoir <u>Lake Cowan</u> Cowens Lake . Both reservoirs are located in the Upper Little Tallapoosa River; <u>Lake Cowan</u> Cowen’s Lake is fed by Astin Creek and Lake Fashion is fed by the Little Tallapoosa River.”						
6-16	Figure 6-3	Revise map to include Dog River Reservoir project						
6-17	Table 6-3	Change text as shown <table border="1" data-bbox="625 562 1432 709"> <thead> <tr> <th>Water Supply Sources</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>2 Anneewakee Creek</td> <td>Reservoir on Anneewakee Creek near confluence with Chattahoochee River. Yield is 20 MGD in-stream, 28 MGD off-stream.</td> </tr> <tr> <td>3 Dog River</td> <td>Increase dam height on Dog River Reservoir</td> </tr> </tbody> </table>	Water Supply Sources	Description	2 Anneewakee Creek	Reservoir on Anneewakee Creek near confluence with Chattahoochee River. Yield is 20 MGD in-stream, 28 MGD off-stream.	3 Dog River	Increase dam height on Dog River Reservoir
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6-19	Last paragraph	Change text as shown “Big Cotton Indian Creek: Flows into the Clayton County Water Authority Hooper Reservoir have occasionally been supplemented in the past by pumping water from the Big Cotton Indian Creek at <u>an old low head dam site</u> an old Georgia Power Dam site located approximately 6 miles downstream.”						
8-6	Row 1	Change text as shown “Franklin Smith WTP Cit of Villa Rica Lake Fashion, <u>Cowan</u> Cowens Lake 3”						
8-6	Table 8-4	Change PD-MGD of Buford WTP from 4 to 4.83.						
10-5	Sub-heading	Change text as shown “ <u>Emergency and Drought Planning Issues</u> ”						
10-5	Paragraph 3	Replace first 2 sentences with the following “This Metro Water District plan calls for long term water efficiency which lowers water use over time while not negatively impacting the citizen’s quality of life. Drought planning differs significantly from long term efficiency planning due to the necessity for implementation of emergency measures that can have significant economic and quality of life impacts on the citizens.”						
10-5	Paragraph 5	Change text as follows “ The Drought Management Plan also establishes priorities for competing water use during emergency shortages in the following order: 1. Emergency facilities for essential life support measures 2. Domestic drinking, cooking, washing, and health related purposes 3. Agricultural and industrial uses”						
11-2	New paragraph	Add a new bullets to the end of the page <ul style="list-style-type: none"> • “Return local home rule to local water providers for establishing drought restrictions based on their local conditions and understanding of their water systems. • Offer state tax credits for commercial and industrial retrofit of toilets and urinals, coin operated washers, front loading washing machines, water efficient dishwashers, instant hot water heaters, drip irrigation and advanced irrigation controllers. • Prohibit HOAs from requiring water intensive landscaping or irrigation.” 						
12-7	Top of page	Add bullets: <ul style="list-style-type: none"> • “Add additional emphasis to outdoor watering education including developing educational materials on rainwater harvesting and efficient water use for pools, spas, pressure washing and non-commercial car washing • Provide education on energy and water savings possible 						

		through implementing water conservation practices.”
13-3	Table 13-1, Row 1	Change text as shown “Establish Conservation pricing (irrigation meter pricing established by 2010)”
13-3	Table 13-1, Row 12	Change active implementation to start in 2010 instead of 2009
13-5	Table 13-3	Add 3 implementation action items under Encourage Conservation including return local home rule for drought water restrictions stricter than the State drought response, offer state tax credits and prohibit HOAs from requiring water intensive landscaping or irrigation.
13-6	Paragraph 1	<p>Replace first paragraph with the following: “Cost estimates for the Water Supply and Water Conservation Management Plan are subdivided into three distinct categories; the water conservation measures, infrastructure costs, and programmatic expenses. These cost estimates are shown in Table 3-5.</p> <p>The water conservation implementation costs are an output of the DSS model used to forecast the water savings, and subsequent monetary savings, of the selected water conservation program. These costs reflect the cost to the local water provider in establishing and managing these water conservation programs as well as the cost to the water customer of upgrading or installing technologies. As with estimated water savings, the conservation measure implementation costs will vary based on the specific conditions within each county.</p> <p>Water infrastructure costs include water supply reservoirs, new water treatment plants and expansion of existing water treatment facilities.</p> <p>The cost of reservoir storage is variable and site-specific, making it difficult to provide typical costs for reservoir projects. The costs can vary significantly depending on location, land and relocation costs, siting and permitting, engineering requirements, environmental impacts and mitigation, difficulty of construction, and the type of reservoir constructed (on stream vs. pumped storage).</p> <p>A recent report by GEFA “Georgia Inventory and Survey of Feasible Sites for Water Supply Reservoirs “ dated October 31, 2008 estimated reservoir cost indicated costs ranging approximately 4 to 10 million dollars per MGD. Using this range, an estimated cost of the proposed reservoirs would be \$824 million. A telephone survey in March 2009 by Metro Water District staff to local water systems to obtain costs for recently constructed reservoirs and proposed reservoirs in or near the District showed a range from a low of 0.64 million dollars per MGD to a high of 7.5 million dollars per MGD, with an average cost per MGD of 2.42 million dollars. Using the actual estimates available from this survey and a unit cost of 4 million dollars per MGD where project estimates were not available, the total cost estimate of the proposed reservoirs would be \$389 million dollars. This range is included in the Table 13-4 with the higher of the range included in the total.</p> <p>National information was used for estimating the costs of treatment plant facilities, both for new construction and expansions of existing plants, which reflects the actual costs for dozens of facilities constructed throughout the U.S. Different unit costs were used for plants categorized as small or large. The basis for water treatment infrastructure costs is provided in Table 13-4</p>

		<p>Table 13-4. Unit Cost Estimates for Water Supply Treatment Facilities</p> <table border="1"> <thead> <tr> <th colspan="2">Type of Project</th> <th>Cost per MGD of capacity (in Million \$)</th> </tr> </thead> <tbody> <tr> <td rowspan="2">New Construction</td> <td>Large</td> <td>\$4</td> </tr> <tr> <td>Small</td> <td>\$8</td> </tr> <tr> <td rowspan="2">Expansions</td> <td>Large</td> <td>\$4</td> </tr> <tr> <td>Small</td> <td>\$6</td> </tr> </tbody> </table> <p>Infrastructure costs were calculated by multiplying the unit costs and the county-level facility plans outlined in Appendix B of the Water Supply and Water Conservation Management Plan.</p> <p>Programmatic expenses such as local planning, state and regional policy, and educational program costs were developed based on cost data provided by communities within the Metro Water District and the Metro Water District. The programmatic costs also vary based on population, level of service, local challenges, and other parameters. As these costs are more region specific, local costs were used, as opposed to national costs.”</p>	Type of Project		Cost per MGD of capacity (in Million \$)	New Construction	Large	\$4	Small	\$8	Expansions	Large	\$4	Small	\$6																																																																																																														
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13-6	Table 13-4	<p>Replace Table 13-4 with the following: Table 13-5 Estimated Annual Water Supply and Water Conservation Management Plan Implementation Cost by Program Category</p> <table border="1"> <thead> <tr> <th>Action Number</th> <th>Description</th> <th>Estimated Costs (Note 1)</th> </tr> </thead> <tbody> <tr> <td colspan="2">5.0 Water Conservation Program (Note 2)</td> <td>Cost in million dollars</td> </tr> <tr> <td>5.1</td> <td>Conservation pricing</td> <td>\$48.6</td> </tr> <tr> <td>5.2</td> <td>Replace older, inefficient plumbing fixtures</td> <td>\$131.6</td> </tr> <tr> <td>5.3</td> <td>Pre-rinse spray valve education program</td> <td>\$9.6</td> </tr> <tr> <td>5.4</td> <td>Rain sensor shut-off switches on new irrigation systems</td> <td>\$21.7</td> </tr> <tr> <td>5.5</td> <td>Require sub-meters in new multi-family buildings</td> <td>\$102.5</td> </tr> <tr> <td>5.6</td> <td>Assess and reduce water system leakage</td> <td>\$161.8</td> </tr> <tr> <td>5.7</td> <td>Conduct residential water audits</td> <td>\$4.2</td> </tr> <tr> <td>5.8</td> <td>Distribute low-flow retrofit kits to residential users</td> <td>\$19.5</td> </tr> <tr> <td>5.9</td> <td>Conduct commercial water audits</td> <td>\$39.6</td> </tr> <tr> <td>5.10</td> <td>Implement education and public awareness plan</td> <td>\$36.2</td> </tr> <tr> <td>5.11</td> <td>Install high efficiency toilets and urinals in government buildings</td> <td>\$16.6</td> </tr> <tr> <td>5.12</td> <td>Require car washes to recycle water</td> <td>\$3.3</td> </tr> <tr> <td colspan="2">SUB-TOTAL</td> <td>\$595.3</td> </tr> <tr> <td colspan="2">8.0 Planned Water Supply Facilities (Note 3)</td> <td>Cost in million dollars</td> </tr> <tr> <td>8.1</td> <td>Construct six new water supply reservoirs</td> <td>\$389 - \$824</td> </tr> <tr> <td>8.2</td> <td>Construct six new water treatment plants</td> <td>\$308</td> </tr> <tr> <td>8.3</td> <td>Upgrade 28 existing water treatment plants</td> <td>\$2,272</td> </tr> <tr> <td colspan="2">SUB-TOTAL</td> <td>\$3,403</td> </tr> <tr> <td colspan="2">9.0 Local Water Planning (Note 3)</td> <td>Cost in million dollars</td> </tr> <tr> <td>9.1</td> <td>Develop local master plans</td> <td>\$2.25</td> </tr> <tr> <td>9.2</td> <td>Develop local emergency plans</td> <td>\$1.58</td> </tr> <tr> <td>9.3</td> <td>Source water supply watershed protection</td> <td>\$1.35</td> </tr> <tr> <td>9.4</td> <td>Water system asset management</td> <td>\$1,490</td> </tr> <tr> <td colspan="2">SUB-TOTAL</td> <td>\$1,495</td> </tr> <tr> <td colspan="2">11.0 State and Regional Policy Recommendations (Note 3)</td> <td>Cost in million dollars</td> </tr> <tr> <td>11</td> <td>State and Regional Policy</td> <td>\$0.20</td> </tr> <tr> <td colspan="2">12.0 Education and Public Awareness (Note 3)</td> <td>Cost in million dollars</td> </tr> <tr> <td>12.1</td> <td>Local education program</td> <td>\$2.3</td> </tr> <tr> <td>12.1</td> <td>Regional education program</td> <td>\$1.2</td> </tr> <tr> <td colspan="2">SUB-TOTAL</td> <td>\$3.5</td> </tr> <tr> <td colspan="2">Totals</td> <td></td> </tr> <tr> <td colspan="2">Local water providers and governments</td> <td>\$4,672</td> </tr> <tr> <td colspan="2">Metro Water District</td> <td>\$1.3</td> </tr> <tr> <td colspan="2">Georgia EPD</td> <td>\$0.1</td> </tr> <tr> <td colspan="2">TOTAL</td> <td>\$4,673.8</td> </tr> <tr> <td colspan="3">Notes:</td> </tr> <tr> <td colspan="3">1. 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14-1	Paragraph 1	Change O.C.G.A. §12-5-571 to read O.C.G.A. §12-5-584
14-4	New Section	<p>Add text as shown:</p> <p>“MEASURING PROGRESS Over the past five years, the Metro Water District has tracked progress through surveys completed by local water providers summarized in the <i>Annual Activities and Progress Report</i>.</p> <p>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 reported 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</p> <p>Overall Water Use Metrics Overall water use metrics to be tracked:</p> <ul style="list-style-type: none"> • Overall system water use for the District overall and for each system. <ul style="list-style-type: none"> ○ 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 <p>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.</p> <p>Measuring Water Conservation Program All water conservation program measures are currently required unless provided for otherwise.</p> <p>5.1 - Conservation Pricing: Report/Measure:</p> <ul style="list-style-type: none"> • 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 systems 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

		<p>water systems that have an “effective” conservation pricing structure.</p> <ul style="list-style-type: none"> • Collect data on whether historical use information is reported on bills. <p>Benchmark:</p> <ul style="list-style-type: none"> • Minimally implement District’s recommended residential rate structure • 100% of residents billed by conservation pricing rate structure • 100% of residents with irrigation meters billed at 200 percent 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 is not capable of this water systems should make sure the next upgrade of their billing system is capable. • Water providers should provide information on historical use on bills. If billing system is not capable of this water systems should make sure the next upgrade of their billing system is capable. <p>5.2 - Replace Older Inefficient Plumbing Fixtures:</p> <p>Report/Measure:</p> <ul style="list-style-type: none"> • 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. <p>Benchmark:</p> <ul style="list-style-type: none"> • 100% of rebates/replacements are 1.28 gallons per flush toilets by 2014 <p>5.3 - Pre-Rinse Spray Valve Education:</p> <p>Report/Measure:</p> <ul style="list-style-type: none"> • 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. <p>Benchmark:</p> <ul style="list-style-type: none"> • Outreach to 100% of restaurants/food service providers <p>5.4 - Rain Sensor Shut-off Switches:</p> <p>Report/Measure:</p> <ul style="list-style-type: none"> • Report on status of policy/checklist and number of new irrigation systems each year <p>Benchmark:</p>
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		<ul style="list-style-type: none"> • Requirement in building code <p>5.5 - Sub-meters in New Multi-Family Buildings: Report/Measure:</p> <ul style="list-style-type: none"> • Report on number of new multi-family buildings built and whether sub-meters were installed. <p>Benchmark:</p> <ul style="list-style-type: none"> • 100% of new multi-family buildings have sub-metering <p>5.6 - Assess and Reduce Water System Leakage: Report/Measure:</p> <ul style="list-style-type: none"> • 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. <p>Benchmark:</p> <ul style="list-style-type: none"> • 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. <p>5.7 - Conduct Residential Water Audits: Report/Measure:</p> <ul style="list-style-type: none"> • Report number of residents that received audit and number of self-audit forms provided <p>Benchmark:</p> <ul style="list-style-type: none"> • Target 25% of highest water using residential accounts and target pre-1993 homes <p>5.8 - Distribute Low-Flow Retrofit Kits: Report/Measure:</p> <ul style="list-style-type: none"> • Report number of kits distributed and contents of kits <p>Benchmark:</p> <ul style="list-style-type: none"> • Target highest water using residents and pre-1993 homes <p>5.9 - Conduct Commercial Water Audits: Report/Measure:</p> <ul style="list-style-type: none"> • 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. <p>Benchmark:</p> <ul style="list-style-type: none"> • Target 25% of highest water using commercial accounts <p>5.10 - Implement Education and Public Awareness Plan: Report/Measure:</p> <ul style="list-style-type: none"> • Report education/outreach and public
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		<p>participation/involvement activities</p> <p>Benchmark:</p> <ul style="list-style-type: none"> • 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. <p>5.11 - Install High Efficiency Toilets and Urinals in Government Buildings: Report/Measure:</p> <ul style="list-style-type: none"> • Report how many government buildings, fixtures that have been retrofitted and resulting water saved. <p>Benchmark:</p> <ul style="list-style-type: none"> • 100% of local government buildings by 2020 <p>5.12 – Require New Car Washes to Recycle: Report/Measure:</p> <ul style="list-style-type: none"> • Report on new car washes and recycling systems <p>Benchmark:</p> <ul style="list-style-type: none"> • 100% of in-bay and conveyor car washes built in or after 2010 will recycle water <p>Other possible topics for water systems to report on include:</p> <ul style="list-style-type: none"> • 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.”
B-1	Paragraph 3	<p>Add “Facility capacities listed in Appendix B of the Water Supply and Water Conservation and Long-term Wastewater Plans for each planning period are considered as maximums and that local jurisdictions may plan within and up to that capacity. All new facilities and facility expansions identified in Appendix B are subject to permitting by Georgia EPD and must meet all state standards associated with the necessary permits. Inclusion within this plan does not guarantee a permit, however facilities must be reflected within</p>

Water Supply and Water Conservation Management Plan
List of Changes to Public Comment Draft Plan (December 2008)
Board Approved – April 2, 2009

		Appendix B to initiate permitting discussions with Georgia EPD.”
B-9	Under “Summary of Planned Sources”	Change text as shown “Lake Fashion/ Paradise/Cowan <u>Cowens Lake</u> ”
B-9	Under “Phasing Plan”	For Bear Creek WTP, in the By 2010 timeframe, change ‘5.64 to 6.64.’
B-9	Under “Phasing Plan”	Change text as shown “Villa Rica Franklin Smith WTP (Note 2) Lake Fashion/ Paradise/Cowan <u>Cowens Lake</u> ”
B-9	Under “Capital Improvements”	“The DDCWSA plans to design and construct a flow augmentation project to augment the 7Q10 release from the Dog River Reservoir.”
B-11	Under “Phasing Plan”	For Forsyth WTP, in the By 2010 timeframe, change ‘14.1 to 16.83’ and change ‘28.0 to 30.73.’ In the 2011 to 2015 timeframe change ‘20.0 to 17.27.’
B-12	Non-Capital Programs	Change text as shown “ Other Programs Non-Capital Programs ”; change first sentence to read “The following non-capital programs are specific to Fulton County. These programs are in addition to those that apply to all counties within the Metro Water District. <ul style="list-style-type: none"> • Maintain interconnections with Clayton, Fayette, Coweta, DeKalb, Cobb, and Forsyth and Gwinnett Counties.”
B-13	Line 3 in Phasing Plan	For Buford WTP, in the By 2010 timeframe, change ‘No expansions’ to ‘Expand 2.83’; change 2.0 to 4.83. In the 2011 to 2015 timeframe, change ‘Expand 2.0’ to ‘No expansions’; change 4.0 to 4.83. In the 2016 to 2025 timeframe, change 4.0 to 4.83. In the 2026 to 2035 timeframe, change 4.0 to 4.83
B-13	Line 4 in Phasing Plan	In (county) total capacity, in the By 2010 timeframe, change 227 to 229.83. In the 2011 to 2015, 2016 to 2025 and 2026 to 2035 timeframes, change 229 to 229.83 (three times).
Global		Update Table of Contents
Global		Typos, formatting errors and necessary corrections to maps, charts, tables and graphs based on changes made to text.