Georgia's
# State Water Plan

Upper Oconee Council Meeting 11 Agenda
September 14, 2011
Legislative Chambers at Georgia Military College
201 Greene St., Milledgeville, GA

***Objectives:***

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| 1) Review substantive comments received on Final Draft of Upper Oconee RWP<br>2) Vote on final changes that will be included in the Final Upper Oconee Regional Water Plan |

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| 9:30 - 10:00 a.m. | Registration |
| 10:00 - 10:15 a.m. | Welcome and meeting overview |
| 10:15 - 10:30 a.m. | Brief summary of general comments |
| 10:30 - 11:30 a.m. | Review and discuss comments specific to the Final Draft of the UO RWP |
| 11:30-12:30 p.m. | Lunch |
| 12:30-1:00 p.m. | Review (and vote on) an errata sheet summarizing suggested changes to be made in the final UO RWP |
| 1:00-1:30 p.m. | Discuss Next Steps for Implementation |
| 1:30-2:00 p.m. | Public Comments and Wrap Up |

**Georgia Department of Natural Resources**
Environmental Protection Division, Watershed Protection Branch
4220 International Parkway, Suite 101, Atlanta, Georgia 30354
Linda MacGregor, P.E., Branch Chief
404/675-6232
FAX: 404/675-6247

August 23, 2011

Mr. Richard Bentley, Chairman
Upper Oconee Water Planning Council
221 N. Wayne Street
Milledgeville, Georgia 31061

RE: EPD Comments on Upper Oconee Initial Recommended Regional Water Plan

Dear Chairman Bentley:

I want to thank you for your timely submittal of the Upper Oconee Regional Water Planning Council's initial recommended regional water plan for EPD's review. In addition to EPD's review of your Council's plan to determine if it is consistent with the requirements of the State Water Plan, the rules for regional water planning and guidance adopted pursuant to those rules, EPD has provided, and just completed, a forty-five day public notice and comment period for all ten initial recommended regional water plans.

This letter serves to transmit EPD's comments arising from EPD's review of your Council's plan, as well as public comments. This letter highlights those additional measures necessary to complete your Council's recommended plan by September 30, 2011, to make it consistent with the provisions of the rules for regional water planning and guidance adopted pursuant to those rules. Please continue to coordinate with Kevin Farrell and Ted Hendrickx as the Council finalizes its Regional Water Plan.

Please ensure that:

- The Council's final recommended Regional Water Plan clearly conveys that water conservation practices were considered as priority practices to address gaps between forecasted demand and the capacity of a surface or groundwater source. Details of how this was accomplished should be documented in the plan and/or associated technical documents as described in EPD's Detailed Guidance for Evaluating Practices to Manage Demand issued on September 21, 2010. The State Water Plan specifically highlights water conservation as a priority management practice to be implemented to help meet water demand in all areas of the state.

As required by Georgia's Comprehensive State-wide Water Management Plan, all public comments received that are relevant to the Council's regional water plan should be considered by the Council, and any changes to the plan deemed necessary should be made prior to submittal of the Council's final recommended regional water plan.

EPD looks forward to receiving the Upper Oconee Regional Water Planning Council's final recommended regional water plan, revised as called for in this letter, by September 30, 2011. Once the plans are submitted, EPD will determine if the plans are consistent with the State

Water Plan and rules and guidance for regional planning, and will either adopt the recommended regional water plan as submitted or adopt the recommended regional water plan with conditions.

Let me reiterate my appreciation for the Council's time and efforts to develop a meaningful Regional Water Plan for the Upper Oconee Water Planning Region. As reflected in nearly all of the public comments, with this set of regional water plans, Georgia has taken important and meaningful strides toward the continued sustainable management of our State's precious water resources.

Sincerely,

Linda MacGregor, P.E.
Branch Chief
Watershed Protection Branch

Copy: Doug Baughman, CH2MHill
Kevin Farrell, Georgia Environmental Protection Division

# General Comments on All Regional Water Plans

| Name | Organization | Date | Comment Topic Areas |
|---|---|---|---|
| Les Ager | Citizen | 6/23/2011 | • Primarily comments on the Middle Ocmulgee Region.<br>• Comments on MP Selection Process.<br>• Late delivery of the RAs to the Council.<br>• Use of the 2001 DNR Board Instream Flow policy assumption in the Resource Assessments (RAs) without analyzing alternative flow regime scenarios and without acknowledging that many existing water withdrawal permits (57%) don't have a minimum downstream flow requirement.<br>• Number (too few) and location of planning nodes.<br>• Concerned about the effects of the RWP and MPs on diadromous fishes and sensitive migratory aquatic species. |
| Sara Barczak | Southern Alliance for Clean Energy | 6/23/2011 | Provides review comments of the October 29, 2010 Energy Forecast TM. |
| Tanya Blalock | Georgia Power Company | 6/23/2011 | • The RWPs do not consistently anticipate energy sector water needs at the regional level past 2020.<br>• The RWPs do not recognize that competing regulatory and policy requirements may increase energy water consumption over time.<br>• The RWPs have the potential to create varying standards across the state for water withdrawal permitting.<br>• The RWPs do not fully recognize the existing requirement for, and implementation of, water conservation and drought contingency plans.<br>• Recommends against using actual water use versus permitted use in future resource assessments.<br>• Water resources are vital to GPC's core business activities, including hydropower generation; concern over their consideration as future sources of water.<br>• GAEPD should require that a flexible approach be taken in implementing RWP MPs.<br>• Clarify the future role of the RPCs and how their activities will be coordinated.<br>• The RWPs should clarify that only Tier One water demand MPs are mandatory at this time. |

## General Comments on All Regional Water Plans

| Name | Organization | Date | Comment Topic Areas |
|---|---|---|---|
| Sally Bethea | Collective Georgia Riverkeepers (Georgia River Network, Chattahoochee, Satilla, Flint, Coosa, Ogeechee, Altamaha and Savannah) | 6/30/2011 | • Lack of integration among the RAs.<br>• Deficiencies in the RAs.<br>• Comments on the population projections, economic growth projections and the responsibilities of the GA OPB.<br>• Lack of supporting technical and scientific documentation to fully assess the RAs. |
| Georgia Water Coalition Partners | Georgia Water Coalition | 6/23/2011 | • Supports Studies and Recommendations from one or more RWPs and ongoing funding of the RWP process.<br>• Request at least one meeting entirely devoted to the public and their feedback / comments; balanced public representation on Councils and subcommittees.<br>• Continuing concern that RPCs do not have the authority to issue binding policies for regional water management.<br>• Reconsider regional planning boundaries to better reflect the natural watershed boundaries, the Coastal Region eliminated and Metro North Georgia redistributed to the appropriate watershed-based Councils.<br>• Improper assumptions concerning thermoelectric power and water use.<br>• Concerns with use of high-growth only forecasts and demand considerations.<br>• Concerns with scientific assumptions – planning nodes selected for analysis were less than helpful, use of only 7Q10 instream flow assumption in the surface water RAs (update 2001 policy).<br>• RA results for the “regulated” segments do not recognize the regulatory / statutory barriers to changing the flow regimes in these federal and non-federal systems.<br>• Questions assumptions used in the aquifer modeling.<br>• Interstate considerations such as out of state but in watershed water uses. |

## General Comments on All Regional Water Plans

| Name | Organization | Date | Comment Topic Areas |
|---|---|---|---|
| Gregory Jones | Georgia Industry Environmental Coalition | 6/23/2011 | • Notes that the 2001 DNR Interim Instream Flow Policy is not applicable to intermittent agricultural withdrawals or groundwater users and recommends adopting the Policy using contemporary streamflow data, the last 10 – 20 years for determining minimum instream flows for unregulated streams.<br>• Requests that the State require that all RWPs include a commitment to being closing whatever verified "streamflow" gap may exist at the downstream boundary of the region.<br>• Add language clarifying that septic tanks and LAS are not 100 percent consumptive and that this was a "simplifying and conservative assumption".<br>• Notes that the RWPs are unsuitable for specific permitting purposes due to the lack of credible data as well as the modeling and associated assumptions used.<br>• Concerned that the 11 different RWPs have not been integrated. |
| Katie Kilpatrick | Georgia Water Alliance | 6/23/2011 | • Recommends language for GAEPD to include in each RWP regarding its use to guide permitting and that the Division retains the legal authority for individual permitting decisions.<br>• Use of unimpaired flows versus 2001 DNR Board policy in Resource Assessments; the RAs and RWPs should definitely state use of unimpaired flows was for general planning purposes only.<br>• Establish ongoing future role for the RPCs and diverse (not just local gov't monies) dedicated funding source.<br>• Each RWP should have reasonable benchmarks to measure progress, document how it is reported and a minimum level of progress.<br>• GAEPD should develop and publish a plan for integrating the 11 different RWPs in to one State Water Plan to assess how they meet future state-wide goals. |
| Ross King | Association of County Commissioners (ACCG) | 6/23/2011 | • RWP Implementation (Linkages to GAEPD permitting process)<br>• Use of unimpaired flows versus 2001 DNR Board policy in Resource Assessments.<br>• Creation of a dedicated (State) funding source to support implementation and future planning. |

## General Comments on All Regional Water Plans

| Name | Organization | Date | Comment Topic Areas |
|---|---|---|---|
| Shelly Lakly | Nature Conservancy | 6/23/2011 | • Use the Scientific and Engineering Advisory Panel to ensure future RAs are fully verified and validated.<br>• Recommends revisions to the state instream flow policy<br>• Recommends GAEPD follow a watershed-based permitting framework using future RAs, limit use of existing RAs due to their limitations.<br>• Establish ongoing future role for the RPCs, a funding source and tie to rule-making.<br>• GAEPD should require Tier 3 WC MPs at a minimum, analysis of maximizing return flows prior to new reservoir construction. |
| Roger Martin | Chattahoochee RiverWarden | 6/23/2011 | • Primarily comments on the Middle Chattahoochee Region.<br>• Reconsider regional planning boundaries to better reflect the natural watershed boundaries.<br>• Make adoption of the Georgia Stormwater Management Manual mandatory. |
| Steve McCullers | Cobb County Water System | 6/23/2011 | • Supports Comments submitted by the Metro North Georgia WPD on 6/22/2011.<br>• Recommends adoptions of Metro District WC MPs statewide. |
| Larry McSwain | Citizen | 6/30/2011 | • Supports instream flows to protect aquatic resources and recreation.<br>• Supports more aggressive nonpoint source MPs and TMDL implementation.<br>• Concerned that the lack of timely and accurate data from GAEPD and the PCs limited the RPCs in their development of the RWPs. |
| Mitch Reid | Alabama Rivers Alliance | 6/23/2011 | • Reconsider regional planning boundaries to better reflect the natural watershed boundaries.<br>• Set environmental flows as a baseline parameter. |

| Responses to Stakeholder Comments Specific to the Upper Oconee Regional Water Plan | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Comment ID** | **Name** | **Organization** | **Date** | **May 2011 UO RWP Page** | **Individual Comment** | **Individual Response** | **Related RWP Edit?** |
| 1a | Ben Emanuel | Altamaha Riverkeeper | 6/23/2011 | 4-2, Section 4-1, Table 4-1 | Implications of Forecasted 2010 Population versus Actual 2010 Census Data (Barrow, Walton, Jackson each ~ 9% greater than actual 2010) as well as the reasonableness of some projections in light of current economic conditions. | Comment acknowledged. The forecasts were based on the best contiguous information for the State available at the time; the forecasts will be revisited as part of the 5-year RWP update process. | No |
| 1b | Ben Emanuel | Altamaha Riverkeeper | 6/23/2011 | 4-3, Section 4-1-1, Table 4-2 | Questions 2010 actual versus forecast demands based on discrepancy in Athens-Clarke County municipal demand forecast (Table 4-2: 18.39 MGD v. ACC 4/2011 Mtg: 13 MGD). | Comment acknowledged. The UO RWP 2010 water demands were calculated using the 2009 USGS Water Use Report (2005 adjusted per capita) and the OPB population projections while it is likely that the ACC is a current observed – actual - number. Additionally, the RWP demands also included groundwater and self supplied, as well as municipal surface water. The forecasts will be revisited as part of the 5-year RWP update process. | No |

| Responses to Stakeholder Comments Specific to the Upper Oconee Regional Water Plan | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Comment ID** | **Name** | **Organization** | **Date** | **May 2011 UO RWP Page** | **Individual Comment** | **Individual Response** | **Related RWP Edit?** |
| 1c | Ben Emanuel | Altamaha Riverkeeper | 6/23/2011 | NA | While discussed, the RWP outputs do not emphasize the importance of habitat protection and ecological sustainability for species such as the Robust Redhorse. | Comment acknowledged however the RWP does recommend MPs such as stream buffer protection and comprehensive land use planning that target habitat protection. | No |
| 1d | Ben Emanuel | Altamaha Riverkeeper | 6/23/2011 | NA | Supports the expansion of existing reservoirs over construction of new ones. | Comment acknowledged. | No |
| 1e | Ben Emanuel | Altamaha Riverkeeper | 6/23/2011 | 6-5 | Add WC MP to further encourage and incentivize residential and commercial plumbing retrofits. | Comment acknowledged; the Water Stewardship Act (2010) addresses incentivizing retrofits. | No |
| 1f | Ben Emanuel | Altamaha Riverkeeper | 6/23/2011 | | If recommending water re-use, include further study of the effects of pharmaceuticals, antibiotics, hormones, etc on water supplies. | Comment acknowledged. | No |
| 1g | Ben Emanuel | Altamaha Riverkeeper | 6/23/2011 | 6-3 | Discussion of the interaction between WS and WC MPs, i.e. implementation of the WC MPs could lessen the need for some of the WS MPs. | Comment accepted, narrative of RWP changed as noted on the errata sheet. | Yes |

| Responses to Stakeholder Comments Specific to the Upper Oconee Regional Water Plan | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Comment ID** | **Name** | **Organization** | **Date** | **May 2011 UO RWP Page** | **Individual Comment** | **Individual Response** | **Related RWP Edit?** |
| 2a | Tanya Blalock | Georgia Power Company | 6/23/2011 | 3-5 | Add discussion of why Lake Jackson standards have been applied to Lakes Sinclair and Oconee. | Comment accepted, narrative of RWP changed as noted on the errata sheet. | Yes |
| 2b | Tanya Blalock | Georgia Power Company | 6/23/2011 | 7-30 | Does not concur that any of the MPs that call for the tightening (via the elimination of exemptions) of existing erosion and sedimentation requirements are needed to meet regional goals. | Comment accepted, narrative of RWP changed as noted in the errata sheet. | Yes |
| 2c | Tanya Blalock | Georgia Power Company | 6/23/2011 | 4-9 and 4-10 | Suggested revisions to power plant water consumption narrative, which apply to CNG as well. | Comment accepted, narrative of RWP changed as noted on the errata sheet. | Yes |
| 2d | Tanya Blalock | Georgia Power Company | 6/23/2011 | ES-6 | Executive Summary – RWP does not address how nutrient concerns in Oconee and Sinclair could affect future water withdrawals from these lakes as contemplated in the RWP. | Comment accepted, narrative of RWP changed as noted in the errata sheet. | Yes |

| Responses to Stakeholder Comments Specific to the Upper Oconee Regional Water Plan | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Comment ID** | **Name** | **Organization** | **Date** | **May 2011 UO RWP Page** | **Individual Comment** | **Individual Response** | **Related RWP Edit?** |
| 2e | Tanya Blalock | Georgia Power Company | 6/23/2011 | 2-3 | RWP should note that Lake Sinclair = 15,330 acres and Lake Oconee = 19,050 acres. | Comment accepted, narrative of RWP changed (for Oconee) as noted on the errata sheet. | Yes |
| 3a | Bryce Jaeck | City of Madison | 6/29/2011 | Water / Wastewater Supplemental | Add water withdrawals for Bostwick, Buckhead and Rutledge to Morgan County | Comment acknowledged; Permits for these entities were not included in the original database received for analysis and there was no response to several attempts to contact David Nunn, City Manager. Reference to them will be added as part of the 5-year RWP update process. | No |
| 3b | Bryce Jaeck | City of Madison | 6/29/2011 | | Add note explaining the difference between the forecasted 2010 Population versus Actual 2010 Census Data. | Comment acknowledged; please refer to the Population and Employment Summary at http://www.upperoconee.org/pages/forecasting/population_and_employment/index.php, prepared by the Georgia Office of Planning and budget. | No |

| Responses to Stakeholder Comments Specific to the Upper Oconee Regional Water Plan | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Comment ID** | **Name** | **Organization** | **Date** | **May 2011 UO RWP Page** | **Individual Comment** | **Individual Response** | **Related RWP Edit?** |
| 3c | Bryce Jaeck | City of Madison | 6/29/2011 | Review and Summary of Existing Plans Supplemental | Add reference to the City of Madison's Final Watershed Protection Plan, 10/21/2010. | Comment acknowledged, reference will be added to the corresponding review and summary of existing plans conducted as part of the 5-year RWP update process. | No |
| 3d | Bryce Jaeck | City of Madison | 6/29/2011 | | Requests a GIS link providing all GIS data used in the RWP. | GAEPD | No |
| 4 | John Colberg | Georgia Forestry Commission | 6/20/2011 | 6-15 | Concerned that country dirt roads are a major contributor to sediment in the UO that are not discussed or addressed in the MPs. Recommends adding reference to the Georgia Better Back Roads publication in the UO RWP. | Council. Comment accepted, narrative of RWP changed as noted on the errata sheet. | Yes |
| 5 | Jennifer Dees | Town of Braselton | 6/13/2011 | | Requests that Braselton be removed from the Metro North Georgia WPD and assigned to the UO region due to their primary use of groundwater and participation in the UO RWP process. | GAEPD | No |

| Responses to Stakeholder Comments Specific to the Upper Oconee Regional Water Plan | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Comment ID** | **Name** | **Organization** | **Date** | **May 2011 UO RWP Page** | **Individual Comment** | **Individual Response** | **Related RWP Edit?** |
| 6a | Zippy Duvall | Georgia Farm Bureau | 6/17/2011 | 7-4 | Concerned about requiring use of variable rate irrigation systems in water limited areas. | Comment acknowledged; MP WC-6 is currently written to encourage use of these systems while requiring use is only noted as a long-term action to be considered after additional stakeholder input as part of the 5-year RWP update process. | No |
| 6b | Zippy Duvall | Georgia Farm Bureau | 6/17/2011 | 7-18 | Concerned about preservation of private property rights in regards to stream buffers. | Comment acknowledged. | No |

# Errata Sheet of Proposed Changes Resulting from Stakeholder Comments

| Corresponding Comment ID | May 2011 UO RWP Page | Redlined Narrative from May 2011 UO RWP |
|---|---|---|
| 1g | 6-3 | Conservation also helps ensure responsible use of a public resource and can reduce the need for, or delay, implementation of potentially costly water supply MPs. |
| 2a | 3-5 | There are no established chlorophyll a or nutrient (total phosphorus and/or total nitrogen) standards for Lake Oconee or Lake Sinclair. Therefore, results for chlorophyll a, total nitrogen, and the total phosphorus loading for these lakes were compared to the standards for Lake Jackson. |
| 2b | 7-30 | Consider modifying (limiting), as appropriate, the extent of exemptions found in O.C.G.A. § 12-7-17 regarding the Erosion and Sedimentation Control Act. |
| 2c | 4-9 and 4-10 | Certain types of power plants ~~consume~~ utilize water and others do not. "Waterless" power plants include wind turbine and most solar photovoltaic systems. These plants made up about 1 percent of the total energy generated in 2001 in the United States (EPA, 2001). Thermoelectric facilities (powered by fossil fuels, nuclear, or geothermal energy) are the ~~The two~~primary ~~major~~ types of power plants that consume water for cooling. ~~are hydroelectric and thermoelectric (powered by fossil fuels, nuclear, or geothermal energy)~~.<br><br>Once-through cooling systems use water to ~~cool the~~ condense~~r~~ ~~water~~steam. River or lake water is passed through a heat exchanger to condense steam, the condensed steam ~~exiting condenser water~~ is pumped back through the steam cycle, and the cooling water is returned to its source. ~~Water consumption at the power plant is minimal, if not zero, because the cooling water does not directly contact the air.~~ Although the consumptive water use is minimal at the power plant, the amount of water withdrawn from the river or lake is significant. However, the once-through cooling water is ~~only used for a short time before being~~immediately returned to the source. |

## Errata Sheet of Proposed Changes Resulting from Stakeholder Comments

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|---|---|---|
| | | Closed-loop cooling systems were designed to minimize the amount of water withdrawn and / or to minimize the heat rejected to the receiving river or lake. Closed-loop systems ~~The condenser water~~ also use water for cooling to condense the steam but ~~exchanges heat with~~ the ~~cooling water in a~~ heat is rejected through evaporation in a ~~exchanger, but the water is then recycled between a~~ cooling tower ~~and a heat exchanger~~. The cooling water is pumped in a closed loop between the cooling tower and the condenser heat exchanger; makeup water is required to replace the water that evaporates. ~~During the recycling process, the cooling water evaporates and there has to be a constant water supply to account for the consumed water.~~ This system consumes much more water than once-through systems because the entire energy exchange is through evaporation of the water, but they ~~. These systems~~ withdraw less water because less water is needed ~~the only water used is~~ to make up the evaporated portion~~; however, they consume more water~~. |
| 2d | ES-6 | Additional nutrient controls will be required to protect drinking water supplies, ~~the~~ recreational activities on the lakes, and the associated economic benefits for the Region. Nutrient controls will also be required to meet the pending numeric nutrient criteria. |
| 2e | 2-3 | From the junction of the North and Middle Oconee Rivers, the Oconee River flows for about 20 miles to the northern end of Lake Oconee, a ~~21,000~~19,050-acre reservoir formed by Wallace Dam. |
| 4a | 6-15 | Add the following sentence to the end of WQ-2 Description / Definition of Action cell: Consider implementation of the *Better Back Road Manual* recommendations for dirt road maintenance, drainage improvements, stabilization and erosion control (GA RC&D, 2009). |
| 4a | 7-17 | Add the following sentence to the end of WQ-2 Short-term Actions cell: Consider implementation of Better Back Roads program. |

# Errata Sheet of Proposed Changes by Original Page Number

| Corresponding Comment ID, if applicable | May 2011 UO RWP Page | Redlined Narrative from May 2011 UO RWP | |
|---|---|---|---|
| | iv | AG | Agricultural Water Withdrawal (Permittee Category) |
| | | CST | Construction Stormwater (Permittee Category) |
| | | DNR | Department of Natural Resources |
| | | GAEPD | Georgia Environmental Protection Division of GADNR |
| | | GC | Golf Course Water Withdrawal (Permittee Category) |
| | | IND | Industrial Water Withdrawal (Permittee Category) |
| | | INDST | Industrial Stormwater (Permittee Category) |
| | | INDWW | Industrial Wastewater (Permittee Category) |
| | v | µg/L | micrograms per liter |
| | | MS4 | Municipal Separate Storm Sewer System (Permittee Category) |
| | | MU | Municipal Water Withdrawal (Permittee Category) |
| | | ~~MUST~~ | ~~Municipal Stormwater~~ |
| | | MUWW | Municipal Wastewater (Permittee Category) |
| | | OSSM | On-Site Sewage Management System |
| | | UST | Underground Storage Tank (Permittee Category) |
| | | WC | water conservation (Management Practice Category) |
| | | WQ | water quality (Management Practice Category) |
| | | WS | water supply (Management Practice Category) |
| | | WW | wastewater (Management Practice Category) |

## Errata Sheet of Proposed Changes by Original Page Number

| Corresponding Comment ID, if applicable | May 2011 UO RWP Page | Redlined Narrative from May 2011 UO RWP |
|---|---|---|
| | vi | ~~The authors~~GAEPD and CH2M Hill gratefully acknowledge…<br><br>Added to table:<br><br>W. David Bennett Milledgeville Baldwin, Chairman<br><br>Richard McSpadden Bogart Oconee, Vice Chair |
| | ES-1 | …of the Region's water over the next ~~50~~ 40 years.<br>• Water Conservation—Responsible use of ~~a~~ public resources. |
| | ES-2 | Eleven~~Ten~~ full council meetings were held to develop the Regional Water Plan between February of 2009 and September of 2011~~over a 24-month period~~. |
| | ES-3 | …79 percent of the total (CDM, 2010). |
| | ES-5 | Heading change in Table ES-2: *For more details s~~S~~ee:*<br><br>Notes change in Table ES-2: potential existing or future gap |
| | ES-6 | Based on the evaluation of the Resource Assessments and future ~~demands~~consumption, there were only limited gaps in meeting future water demands in the Region primarily due to the storage (reservoirs) available in the basin. Future water ~~demands~~ consumption in the northern portion of the basin (Athens-Clarke, Barrow, Jackson, and Oconee Counties) will result in gaps in 2050 without implementation of additional Management Practices for water supply and conservation.<br><br>In counties with no identified potential gaps, needs, or shortages at the Resource Assessment level within a particular category, the MPs were selected to align with the Region's visions and goals. |

## Errata Sheet of Proposed Changes by Original Page Number

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|---|---|---|
| | 1-3 | This Regional Water Plan prepared for the Upper Oconee Water Planning Region by the Upper Oconee Regional Water Planning Council describes the regionally appropriate water management practices to be employed in Georgia's Upper Oconee Water Planning Region over the next ~~50~~ 40 years. |
| | 1-4 | It established the 10 regional water planning councils illustrated in Figure 1-1, including the Upper Oconee Council, and provided a framework for regional planning.<br><br>The Regional Water Plans were ~~are being~~ prepared following the consensus-based planning process outlined in Figure 1-2, which integrated~~requires~~ the input of regional water planning councils, local governments, and the public. GAEPD ~~is~~ oversawe~~eing~~ the planning process and, along with partner agencies, provided~~ing~~ support to the councils. The primary role of each council wasi~~s~~ to develop a Regional Water Plan and submit it to GAEPD for approval. The Council ~~has~~ coordinated its efforts… |
| | 2-1 | Section Summary Box: ~~*Its total population was an estimated 579,873 in 2010.*~~<br><br>Narrative: The Region is approximately 5,000 square miles in size and ~~includes 13 counties and 62 municipalities, including the unified government of Athens-Clarke County. The Region~~ had an estimated… |
| 2e | 2-3 | From the junction of the North and Middle Oconee Rivers, the Oconee River flows for about 20 miles to the northern end of Lake Oconee, a ~~21,000~~ 19,050-acre reservoir formed by Wallace Dam. |
| | 2-3 | While primarily centered on the Upper Oconee River basin, the region also includes portions of four other ~~The Region contains portions of five~~ river basins ~~: Oconee, Ocmulgee, Ogeechee, Savannah, and Altamaha,~~ as shown in Figure 2-1. Section 3 describes the Region's water use classifications and impaired waters. ~~The first three of these rivers eventually drain to the Altamaha, which empties into the Atlantic Ocean, as does the Savannah River. Section 3 describes the Region's water use classifications and impaired waters.~~<br><br>…Wallace Dam, a pumped-storage project. |

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|---|---|---|
| | 3-2 | As shown in Figure 3-1, surface water is the predominant source of water in the Region. In 2005, water withdrawals from surface water and groundwater sources to supply the four major water use sectors totaled approximately 1,249 million gallons per day (MGD) on an annual average daily (AAD) basis (Fanning and Trent, 2009). The annual average daily (AAD) value is the total amount of water withdrawn in a year from surface and ~~grown~~ground water sources divided by 365 days.<br><br>Figure 3-2 shows the surface water ~~use~~ withdrawal by major water withdrawal~~use~~ sector. Thermoelectric energy production is the largest water withdrawal~~use~~ category (94 percent), followed by municipal withdrawal~~use~~ (4 percent). The majority of the water withdrawn in this Region is ~~used~~ for energy production at four in-stream hydropower plants and one thermoelectric facility; however, water consumption at the hydropower plants is negligible, because most of it is returned to its source (Fanning and Trent, 2009).<br><br>Figure 3-3 shows groundwater withdrawal~~use~~ by major ~~water use~~ sector.<br><br>The main groundwater supply sources for the Region are the Cretaceous ~~rock~~ and Crystalline rock aquifers.<br><br>Figure 3-4 shows that the leading method for treating wastewater is by facilities with point source discharges including energy production. In contrast to Figure 3-4, i~~I~~f energy production returns are excluded, a significant portion of the municipal wastewater generated in the Region is treated by private onsite treatment systems (45 percent), such as septic tanks, in areas where public collection systems are unavailable. |
| | 3-3 | Figure 3-1: added (ADD) to the heading<br><br>Figure 3-2: Removed reference to footnote b<br><br>Figure 3-4: replaces 0% with <1%, added reference to footnote b<br><br>Footnotes: e – data Source: Georgia EPD ~~approved~~ existing permit database |

## Errata Sheet of Proposed Changes by Original Page Number

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|---|---|---|
| | 3-4 | The~~y~~ Resource Assessments determined the capacity of water resources to meet demands for water supply and to accommodate corresponding wastewater discharge needs without unreasonable impacts.<br><br>…each Resource Assessment can be found on the GAEPD State Water Planning website.<br><br>GAEPD recognizes that waters in the Coastal Plain may have naturally occurring low DO (less than 5mg/L); |
| 2a | 3-5 | There are no established chlorophyll a or nutrient (total phosphorus and/or total nitrogen) standards for Lake Oconee or Lake Sinclair. Therefore, results for chlorophyll a, total nitrogen, and the total phosphorus loading for these Lakes were compared to the standards for Lake Jackson. |
| | 3-5 | The majority of the modeled stream segments in the Upper Oconee basin appear to have "good" to "very good" available assimilative capacity for DO under critical conditions. See Figure 5-11 in Section 5.3 for more information about these assimilative capacity categories. However, initial baseline modeling results indicate~~-~~that the North Oconee River near Athens, ~~and~~ the Oconee River downstream of the confluence of the Middle Oconee and North Oconee Rivers had exceeded their available assimilative capacity. T~~ and~~ hat segment of the Oconee River downstream of the confluence of Turkey Creek in Laurens County~~ have exceeded their available assimilative capacity~~. A small segment of Buffalo Creek and smaller tributaries such as Barrow, White Oak, and Keg Creeks are also exceeding their assimilative capacity. Facility upgrades and permit modifications have since addressed these assimilative capacity issues in the Oconoee River as shown in Figure 5-4. These modeled exceedances ~~are~~ may be due to discharges from secondary treatment plants into low-flow streams.<br><br>This could be due to point source nutrient loadings from the Athens and eastern metro Atlanta areas as well as loadings from agricultural sources (GAEPD, 2010b).<br><br>Minimum in-stream flows are based on ~~GAEPD~~ DNR policy, existing federal policy, or existing Federal Energy Regulatory Commission (FERC) license requirements.<br><br>The Region is part of the Oconee-Ocmulgee-Altamaha River basin which ~~. This basin~~ includes six planning nodes, or points where in-stream flow was estimated (see Figure 3-5); three of these nodes are located along the Oconee River. No gaps were predicted under current withdrawal and discharge conditions. |

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| | 3-7 | The Groundwater Availability Resource Assessment estimates the sustainable yield for prioritized groundwater resources based on existing data.<br><br>GAEPD developed a regional numerical groundwater model to estimate sustainable yield in the Upper Floridan of south-central Georgia and the eastern ~~Caostal~~ Coastal Plain of Georgia and the Cretaceous aquifer system; a water budget approach developed for a basin within the Crystalline rock aquifer system was used to estimate sustainable yield in this part of the Region.<br><br>Based on the analyses, the combined Coastal Plain aquifer systems, including areas outside the Region, currently support approximately 667 MGD of pumping with a sustainable yield ranging from 1,066 MGD to 1,229 MGD in total. Conservative estimates (low yield and high agricultural use) project approximately 45 MGD in additional yield available in 2050 ~~W~~within the Coastal Plain, the Cretaceous aquifers between Macon and Augusta, which serve Washington, Wilkinson, and Laurens Counties, as well as areas outside the Region, which have a sustainable yield ranging from 347 MGD to 445 MGD~~additional available yield based on existing usage~~. Within the Cretaceous aquifer system, approximately 100 MGD is pumped from the Providence aquifer and 24 MGD is pumped from the Eutaw-Midville aquifer (GAEPD, ~~2010a~~2011).<br><br>Although there are potential sustainable yield limitations in the Crystalline rock aquifer systems that locally serve portions of Athens-Clarke, Jackson, Barrow, and Oconee Counties, data analysis indicates that there is ~~an~~ a limited amount of additional ~~0.5 MGD of~~ groundwater available ~~in a dry year (2007)~~above its current use, assuming that conditions are similar to those in the Piedmont Study basin (GAEPD, 2010a). |
| | 3-9 | Figure 3-6 shows the locations of the impaired stream segments within the Region based on the 2008 listings, the most recent year for which mapping data were available at the time of plan development.<br><br>Lakes are also monitored as part of the 303(d) process and are listed as “not supporting” if sample results indicate they do not meet State water quality standards. A small portion (650 acres of 12,509 acres, or 5 percent) of Lake Sinclair near the intersection of Putnam, Baldwin, and Hancock Counties was included on the impaired streams list, because water temperatures exceeded the State’s water quality standard for that parameter.<br><br>Change to Source in Table 3-2: Source: ~~Georgia~~ GADNR, 2011. ~~Comprehensive Wildlife Conservation Strategy~~ |

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| | 3-12 | The WRD also manages the fisheries of Lake Rutledge in Morgan County, Bear Creek Reservoir in Jackson County, and the Hugh M. Gillis Public Fishing Area in Laurens County~~, two of the Region's many streams, lakes, and municipal reservoirs that are enjoyed year-round by anglers and other outdoor enthusiasts~~. |
| | 4-1 | Water demand and wastewater flow forecasts and the Resource Assessments described in Section 3 form the foundation for water planning in the Region and serve as the basis for the selection of the MPs discussed in Sections 6 and 7. |
| | 4-2 | Although the assumed plumbing improvements lowered future per capita water use rates, the total municipal water demand increases significantly from 2010 to 2050 (73.5 MGD to 163.9 MGD) as a result of population growth. |
| | 4-3 | Figure 4-1 shows the municipal water demand forecasts for the Region; the demands in this forecast do not include major publicly supplied industries which were included in a separate forecast. |
| | 4-4 | These forecasts were calculated based on the expected municipal water demand as described in Section 4.1.1 and adjusted for outdoor water use (which does not require wastewater treatment) and inflow and infiltration (I/I).<br><br>Figure 4-5: Notes: Municipal water demands include residential, commercial, ~~and~~ small industry, institutional, and military bases.<br><br>These forecasts were calculated based on the expected municipal water demand as described in Section 4.1.1 and adjusted for outdoor water use (which does not require wastewater treatment) and inflow and infiltration (I/I). Inflow is the water discharged into the sewer system from roof and foundation drains, springs and swampy areas, manhole covers, cross connections from storm sewers, catch basins, storm water, surface runoff, or drainage. Inflow varies rapidly with rainfall conditions, with flows rising and falling within minutes or hours of a severe storm event. Infiltration is the water entering a sewer system from groundwater, through defective pipes, joints, connections, or manhole walls. Infiltration is relatively constant over a period of days, weeks, or even months as high groundwater conditions persist. |

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| | 4-5 | Change to Notes in Table 4-3: Municipal wastewater flow forecasts do not include major industrial sources that treat their water in municipal facilities, these industrial flows are included in the industrial wastewater forecast (see page 4-6).<br><br>Estimated flows to centralized treatment were modified to include an estimated 20 percent I/I which is an engineering industry standard; this . ~~The~~ I/I estimate was kept constant throughout the planning period, unless specified differently through feedback from individual water systems. |
| | 4-6 | In summary, municipal wastewater demand in the Region is forecast to increase from 67 MGD in 2010 to 152 MGD in 2050. Of this amount, 2 percent will be treated by LASs and ~~45~~ 58 percent by systems with point source discharges. While s~~S~~eptic systems currently treat approximately 61 percent of the municipal wastewater generated in the Region, this is . ~~The percentage of septic systems is~~ expected to decline overall to 40 percent by 2050 as a result of additional areas being served by centralized sewer (point discharge), but remain relatively steady in counties with lower population density.<br><br>Figure 4-2: Notes Values represent forecasted annual average daily (AAD). |
| | 4-7 | Industrial wastewater flow forecasts were estimated for each sector by multiplying the industrial water demand forecast described in Section 4.2.1 by the ratio of wastewater generated to water used for each industrial sector.<br><br>Figure 4-3: removed reference to municipal demands. |

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| | 4-8 | The future irrigation needs for crop production were developed by the University of Georgia's National Environmentally Sound Production Agriculture Laboratory (NESPAL). Based on the acres irrigated for each crop, these forecasts provide values for~~a range of~~ irrigation water use as expected for ~~under~~ dry, ~~medium~~average, and wet ~~climate conditions~~years. Each year's projection includes a wet year, a normal year, and a dry year because planning must allow for the range of weather conditions that might reasonably be encountered in future years.<br><br>Table 4-4 summarizes agricultural water demands for the Region over the planning period assuming a ~~.~~ forecasted 75 percent probability level for irrigation ~~requirements~~ (a 75 percent probability level for irrigation ~~requirement~~ is larger than a 50 percent probability level for irrigation ~~requirement~~).<br><br>Figure 4-4: Notes Values represent forecasted annual average daily (AAD). |
| | 4-9 | Change to Notes in Table 4-4: [a] Forecasted agricultural crop water demand is based on the ~~P~~75 percent scenario (in MGD).The non-crop demand is not forecasted, and is comprised of golf courses, livestock, and nurseries.<br><br>Certain types of power plants ~~consume~~ utilize water and others do not. "Waterless" power plants include wind turbine and most solar photovoltaic systems. These plants made up about 1 percent of the total energy generated in 2001 in the United States (EPA, 2001). Thermoelectric facilities (powered by fossil fuels, nuclear, or geothermal energy) are the ~~The two~~primary ~~major~~ types of power plants that consume water for cooling. ~~are hydroelectric and thermoelectric (powered by fossil fuels, nuclear, or geothermal energy)~~. |

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| 2c | 4-9 and 4-10 | Certain types of power plants ~~consume~~ utilize water and others do not.<br><br>Once-through cooling systems use water to ~~cool the~~ condense~~r~~ ~~water~~steam. River or lake water is passed through a heat exchanger to condense steam, the condensed steam ~~exiting condenser water~~ is pumped back through the steam cycle, and the cooling water is returned to its source. ~~Water consumption at the power plant is minimal, if not zero, because the cooling water does not directly contact the air.~~ Although the consumptive water use is minimal at the power plant, the amount of water withdrawn from the river or lake is significant. However, the once-through cooling water is ~~only used for a short time before being~~immediately returned to the source.<br><br>Closed-loop cooling systems were designed to minimize the amount of water withdrawn and / or to minimize the heat rejected to the receiving river or lake. Closed-loop systems ~~The condenser water~~ also use water for cooling to condense the steam but ~~exchanges heat with~~ the ~~cooling water in a~~ heat is rejected through evaporation in a ~~exchanger, but the water is then recycled between a~~ cooling tower ~~and a heat exchanger~~. The cooling water is pumped in a closed loop between the cooling tower and the condenser heat exchanger; makeup water is required to replace the water that evaporates. ~~During the recycling process, the cooling water evaporates and there has to be a constant water supply to account for the consumed water.~~ This system consumes much more water than once-through systems because the entire energy exchange is through evaporation of the water, but they ~~. These systems~~ withdraw less water because less water is needed ~~the only water used is~~ to make up the evaporated portion~~; however, they consume more water~~. |
| | 4-12 | Figure 4-6: Notes Values represent forecasted annual average daily (AAD). |
| | 4-13 | Figure 4-8: Notes Values represent forecasted annual average daily (AAD). |
| | 5-1 | Section Summary Box: *For groundwater availability, t~~T~~he combined Coastal Plain aquifers will start experiencing a gap in 2040 under dry conditions.* |
| | 5-2 | Added reference to Figure 5-1: Source: GAEPD, 2010a. |

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| | 5-3 | These potential gaps are relatively small, approximately 69 MGD, compared to the overall yield of the aquifers (between 868 to 982 MGD).<br><br>Changes to Table 5-1:<br><br>Cretaceous Aquifer Between Macon and Augusta,<br><br>Forecasted Groundwater Demand (MGD) in 2050 for the Cretaceous: ~~302~~303<br><br>Forecasted Groundwater Demand (MGD) in 2050 for Combined Coastal Plain Aquifers[c]: ~~(~~1,~~610~~160~~)~~<br><br>Add Footnote: [c] Also includes yield from Claiborne aquifer which is located outside of the Region.<br><br>Figure 5-2 illustrates the results of the future groundwater Resource Assessment for the combined Coastal Plain Aquifers, which also includes yield from Claiborne aquifer is located outside of ~~in~~ the Region. |
| | 5-4 | The water quantity Resource Assessment modeling and future availability projections are based on the ability to meet and sustain a flow regime at the planning nodes that will support water quality and downstream aquatic resource communities. |
| | 5-5 | Changes to Figure 5-3: Milledgeville Node text box - No gap due to existing reservoir storage. Mount Vernon Node text box - No gap due to existing reservoir storage. |
| | 5-6 | Any future use of this storage capacity for water supply purposes would have to be negotiated and approved by Georgia Power, GAEPD and FERC. |
| | 5-7 | Changes to headings in Table 5-4: 2010 Forecasted Municipal Water Demand (AAD) [a,c,] 2050 Forecasted Municipal Water Demand (AAD) [a,c] |

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| | 5-8 | These tributaries include: Briar Creek in the Lake Oconee watershed and (an unnamed tributary of) Big Indian Creek, Glady Creek, Grady Creek, Shoal Creek, and White Oak Creek in the Lake Sinclair watershed.<br><br>However, GAEPD has applied a standard of 20 micrograms per liter (µg/L) chlorophyll a to lakes in adjacent planning areas; |
| | 5-9 | Footnote for Figure 5-4:<br><br>Source: Georgia Environmental Protection Division, 2010.<br>Notes: The results shown are based on municipal and industrial facilities at their full permitted levels.<br><br>Very good: ≥ 1 mg/L available DO (that is, above DO standards)<br>Good: ~~< 1.0 and ≥~~> 0.5 mg/L to 1.0 mg/L DO available ~~DO~~<br>Moderate: > 0.2 mg/L to < 0.5 mg/L DO ~~< 0.5 and ≥ 0.2 mg/L~~ available ~~DO~~<br>Limited: ~~< 0.2 and ≥ 0 mg/L~~ > 0.0 mg/L to < 0.2 mg/L DO available ~~DO~~<br>No assimilative capacity: ~~<~~ 0 mg/L DO available ~~DO~~<br><br>~~Note: The results shown are based on municipal and industrial facilities at their full permitted levels.~~ |
| | 5-13 | ~~Table 5-6 compares the permitted agricultural water withdrawal limits in each county with the 2050 forecast agricultural water demand. For all counties the expected agricultural water demands for 2050 are less than the permitted agricultural water withdrawals, meaning that no shortages are anticipated. It should be noted that shortage or surplus estimates were calculated by comparing the maximum pumping capacity indicated in the permit with the forecast annual average agricultural demands. The complete list of the agricultural permits for this Region is included in the supplemental document titled *Agriculture Water Demand Forecast for the Upper Oconee Region*, which is available on the Council website.5F[1]~~<br><br>Delete Table 5-6. |

[1] ~~http://www.upperoconee.org/pages/our_plan/index.php~~

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| | 5-14 | Table 5-~~7~~ 6 summarizes the counties occurring upstream of planning nodes with potential water resource gaps or infrastructure needs or shortages ~~by County~~ from the previous subsections to help guide the appropriate selection and application of MPs in Sections 6 and 7.<br><br>Changes to headings in new Table 5-6: ***For more details se~~Source~~e:, Section 5.1 Table 5-2, Section 5.2Table 5-4, Section 5.4 Figure 5-4***<br><br>Changes to notes in new Table 5-6: "Yes" indicates that there is a potential gap or need/shortage in the indicated county or a water quality issue. |
| | 6-3 | After reviewing the Resource Assessments, each subcommittee provided initial feedback on the types of MPs already being implemented, local needs, and the feasibility of local implementation of MPs to address potential resource or infrastructure gaps or shortages. Tables 6-1(a) to 6-1(d) identify the MPs adopted by the Council for implementation.<br><br>Figure 6-2 illustrates the process used to consider these tiered practices during selection of the Water Conservation MPs listed in Table 6-1(a)(GAEPD, 2009). |
| 1g | 6-3 | Conservation also helps ensure responsible use of a public resource and can reduce the need for, or delay, implementation of potentially costly water supply MPs. |
| | 6-4 | Reference in Figure 6-2 from 2009 to: GAEPD, 2010d. |
| | 6-5 | Move from WC-6 to WC-5 Description / Definition of Action cell: Link to the Georgia Golf Course Superintendents Association BMP Program. |
| | 6-7 | Of the 13 counties in the Region, 3 counties are associated with ~~have~~ potential groundwater resource supply gaps, 4 counties ~~have~~ are upstream of planning nodes with potential surface water supply resource gaps, and 4 counties have needs in their water supply infrastructure, as described in Section 5. |

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| | 6-9 | [1]Goals were given the following acronyms during the MP ranking and selection process:<br>CR: Conservation and Reuse – Promote alternatives and technologies that conserve, reuse, return, and recycle water within the Region<br>BP: Balance Priorities – Ensure that MPs balance economic development, recreation, and environmental interests<br>ES: Educate Stakeholders – Educate stakeholders in the Region on the importance of water quality and managing water as a resource including practices such as water conservation and increased water efficiency<br>DA: Data Management – Encourage the development and provision of easily accessible data and information to guide management decisions<br>WQ: Water Quality – Identify programs, projects, and educational messages to reduce nonpoint source pollution to protect water quality in lakes and streams<br>RS: Revenue Strategies – Recommend innovative strategies (water, sewer, and/or stormwater) that provide sufficient revenues to maintain a high level of service while promoting water conservation and efficiency<br>WS: Water Supply – Identify and plan measures to ensure sustainable, adequate water supply to meet current and predicted long-term population, environmental, and economic needs<br>WW: Wastewater<br>WC: Water Conservation[1] ~~See Table 6-1(a) for goal acronyms~~ |
| | 6-12 | [1]Goals were given the following acronyms during the MP ranking and selection process:<br>CR: Conservation and Reuse – Promote alternatives and technologies that conserve, reuse, return, and recycle water within the Region<br>BP: Balance Priorities – Ensure that MPs balance economic development, recreation, and environmental interests<br>ES: Educate Stakeholders – Educate stakeholders in the Region on the importance of water quality and managing water as a resource including practices such as water conservation and increased water efficiency<br>DA: Data Management – Encourage the development and provision of easily accessible data and information to guide management decisions<br>WQ: Water Quality – Identify programs, projects, and educational messages to reduce nonpoint source pollution to protect water quality in lakes and streams<br>RS: Revenue Strategies – Recommend innovative strategies (water, sewer, and/or stormwater) that provide sufficient revenues to maintain a high level of service while promoting water conservation and efficiency<br>WS: Water Supply – Identify and plan measures to ensure sustainable, adequate water supply to meet current and predicted long-term population, environmental, and economic needs<br>WW: Wastewater<br>WC: Water Conservation[1] ~~See Table 6-1(a) for goal acronyms.~~ |
| 4a | 6-13 | Add the following sentence to the end of WQ-2 Description / Definition of Action cell: Consider implementation of the *Better Back Road Manual* recommendations for dirt road maintenance, drainage improvements, stabili and erosion control (GA RC&D, 2009). |

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| | 6-14 | Under MP WQ-8:<br>Implement practices such as:<br>• ~~(1)~~ Measures to minimize stormwater runoff through site planning (conservation subdivisions and other practices) and land use planning.<br>• ~~2)~~ Stormwater system inventory and maintenance.<br>• ~~3)~~ Preventing pollutants from reaching stormwater systems through good housekeeping or illicit discharge detection programs.<br>• ~~4)~~ Public education.<br>• ~~5)~~ Capital programs to develop BMPs, regional ponds, and other watershed practices. |
| | 6-15 | [1]Goals were given the following acronyms during the MP ranking and selection process:<br>CR: Conservation and Reuse – Promote alternatives and technologies that conserve, reuse, return, and recycle water within the Region<br>BP: Balance Priorities – Ensure that MPs balance economic development, recreation, and environmental interests<br>ES: Educate Stakeholders – Educate stakeholders in the Region on the importance of water quality and managing water as a resource including practices such as water conservation and increased water efficiency<br>DA: Data Management – Encourage the development and provision of easily accessible data and information to guide management decisions<br>WQ: Water Quality – Identify programs, projects, and educational messages to reduce nonpoint source pollution to protect water quality in lakes and streams<br>RS: Revenue Strategies – Recommend innovative strategies (water, sewer, and/or stormwater) that provide sufficient revenues to maintain a high level of service while promoting water conservation and efficiency<br>WS: Water Supply – Identify and plan measures to ensure sustainable, adequate water supply to meet current and predicted long-term population, environmental, and economic needs<br>WW: Wastewater<br>WC: Water Conservation [1]~~See Table 6-1(a) for goal acronyms~~ |

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| | 7-1 | Once adopted, this Regional Water Plan will be used to:<br>• Guide permitting decisions by GAEPD.<br>• ~~Guide the awarding of Section 319(h) Nonpoint Source Implementation Grant funds from GAEPD.~~<br>• Guide the awarding of State grants and loans from the Georgia Environmental Finance Authority (GEFA) for water-related projects.<br>And this plan can help inform and g~~G~~uide other GAEPD programs such as the awarding of Section 319(h) Nonpoint Source Implementation Grant funds. ~~from GAEPD~~. |
| | 7-2 | Table 7-1(a) lists implementation details for the 12 Water Conservation MPs selected by the Council and detailed in Table 6-1(a).<br>Each community will need to evaluate all the practices to determine which are appropriate for it to implement. Communities with Resource Assessment gaps or infrastructure needs/shortages are strongly encouraged to implement these Water Conservation practices to address these water resource issues. |
| | 7-3 | Replaced ~~MUST~~MS4 throughout Tables 7-1(a) to 7-1(d) for WC-4, WC-9, WQ-6, WQ-8, WQ-9, |
| | 7-7 | Change within Table 7-1(a) Notes: [a] Permittee Categories of Responsible Parties have the following acronyms and refer to the entities who may have permits of various types through GAEPD:… ~~MUST~~MS4: Municipal Stormwater |
| | 7-8 | Table 7-1(b) lists implementation details for the 7 Water Supply MPs selected by the Council and as indicated in Table 6-1(b). |
| | 7-9 | Changes to Initial Implementation cell of WS-4:<br>Consider developing (or revising) a local Water Master Plan to:<br>• Include a ~~40~~30-year planning horizon. |

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| | 7-11 | Table 7-1(c) lists implementation details for the 7 Wastewater MPs selected by the Council and as described in Table 6-1(c). |
| | 7-16 | Table 7-1(d) lists implementation details for the 12 Water Quality MPs selected by the Council and as described in Table 6-1(d). |
| 4a | 7-17 | Add the following sentence to the end of WQ-2 Short-term Actions cell: Consider implementation of Better Back Roads program. |
| | 7-29 | Revision under Coordination in Table 7-3: Topic areas from Table 7-~~2~~ 1 could include: public education program, water conservation goals regional residential and commercial water audit program materials, golf course water management, grease management, CMOM, general stormwater management and stream buffer protection. |
| | 8-1 | The benchmarks prepared by the Council and listed in Table 8-1 will be used to assess the effectiveness of implementation and to identify changes that need to be addressed during the 5-year Regional Water Plan update anticipated to occur by~~in~~ 2017. |
| | 9-1 | The following references were added to the Bibliography:<br>GAEPD. 2010d. (September 20). *Detailed Guidance for Evaluating Practices to Manage Demand.*<br>GAEPD. 2011. (March 1). *Supplemental Modeling conducted for the Cretaceous and Claiborne Aquifers.*<br>Georgia Resource Conservation and Development Council (GA RC&D) and Watershed Services, Inc. May 2009. Georgia Better Back Roads Field Manual.<br>U.S. Environmental Protection Agency. (USEPA). 2001. *Preliminary Data Analysis Using Responses from the Detailed Industry Questionnaire: Phase II Cooling Water Intake Structures*.<br>USEPA. 2002. *Total Maximum Daily Load for Temperature in Lake Sinclair, GA.* |