



Georgia's
State Water Plan

**Regional Water Development and
Conservation Plan Review and Revision
Middle Ocmulgee Regional Water
Planning Council
March 1, 2017**

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Middle Ocmulgee Council Meeting 4

Objectives:

- 1) Review Regional Water Plan Deliverables
- 2) Review Updates to Regional Water Plan Sections
- 3) Discuss Approach and Timelines for Remaining Regional Water Plan Updates

9:00 - 9:30 am	Registration
9:30 - 9:45	Welcome and Introductions <ul style="list-style-type: none">• Approve Meeting Minutes from November 17, 2016 Individual Council Meeting• Approve Meeting Agenda• Schedule for Remaining Regional Water Plan Updates
9:45 - 10:15	Regional Water Plan Deliverables <ul style="list-style-type: none">• Demand Forecast Technical Memorandum• Updates to Regional Water Plan Sections
10:15 - 10:45	Review Process to Update Management Practices
10:45 - 11:00	Break
11:00 - 11:45	Review and Discuss Management Practices
11:45 - 12:30 pm	Lunch
12:30 - 1:30	Continue Review and Discussion of Management Practices
1:30 - 1:45	Break
1:45 - 2:30	Finalize Review and Discussion of Management Practices
2:30 - 2:45	Wrap Up/ Next Steps/ Council Meeting 5 Preview
2:45 - 3:00	Public Comments/ Local Elected Official Comments
3:00	Adjourn

Middle Ocmulgee Council Meeting 4

Approve Meeting Minutes

Memorandum

To: Middle Ocmulgee Regional Water Planning Council

*From: Ted Hendrickx, Georgia Environmental Protection Division
Michelle Vincent, Jacobs*

Date: December 22, 2016

*Subject: Middle Ocmulgee Regional Water Planning Council Meeting 3
Regional Water Plan Review and Revision Process
Draft Meeting Summary (subject to Council review and approval)*

This memorandum provides the meeting summary of the Middle Ocmulgee Regional Water Planning Council Meeting 3, held in the afternoon of November 17, 2016 at the Oconee Fall Line Technical College in Dublin, Georgia. A Joint Council Meeting was held for the six eastern Regional Water Planning (RWP) councils (Altamaha, Coastal Georgia, Middle Ocmulgee, Suwannee-Satilla, Savannah- Upper Ogeechee and Upper Oconee) from 10 AM to 4 PM. The Middle Ocmulgee RWP Council held a brief individual council meeting during the afternoon portion of the Joint Council Meeting. This memorandum provides a summary of the items discussed at the individual Middle Ocmulgee RWP Council meeting that was held from approximately 1:15 PM to 2:30 PM.

Remaining Schedule

- Draft updated Plans completed before March 31
 - Input from Council during today's meeting
 - Further work/edit with Subcommittee, if necessary then back to full Council
 - Schedule either Council meeting or Conference call sometime March 24-29 for final plan review
- Public Notice period: March 31 – May 15
- Updated Plans finalized in June

Forecast Technical Memorandum Review

- Introduction
 - General Methodology
 - Population Update
- Municipal Water Forecasting
- Municipal Wastewater Forecasting
- Industrial Forecasting
- Agricultural Water Forecasting
- Energy Water Forecasting
- Regional Summary

Section 3 Review

3. Water Resources of the Middle Ocmulgee Water Planning Region

REGIONAL WATER PLAN



Section 3. Water Resources of the Middle Ocmulgee Water Planning Region

This section discusses current major water uses in the region, based on reported water withdrawals from 2010-2005, and results from the baseline Resource Assessments developed by EPD. In addition, a summary of current ecosystem conditions and instream uses are provided in this section.

3.1. Major Water Uses in the Region

Major water use and water returns are summarized for the Middle Ocmulgee Region based on data compiled by USGS in the report 'Water Use in Georgia by County for 2010 and Water-Use Trends, 1985-2010'. In

The Middle Ocmulgee Water Planning Region used 197213 million gallons per day of surface and groundwater for water supply in 2010-2005. There is generally abundant water supply for long-term growth of the region. Baseline Resource Assessments indicated that 9392 percent of the streams evaluated have sufficient assimilative capacity for dissolved oxygen, and existing nutrient standards are being met in Lake Jackson and its tributary watersheds. Efforts to improve impaired streams will need to

Section 4 Review

Section 4. Forecasting Future Water Resource Needs

This section presents the regional water and wastewater forecasts for ~~10-year intervals from 2010–2015~~ through 2050 for four water use sectors: municipal, industrial, agriculture, and thermoelectric generation. Detailed descriptions of the methodology and data used to generate the forecasts can be found in *Technical Memorandum – Municipal and Industrial Water and Wastewater Forecasts (April 2016)*.

The Middle Ocmulgee Region's annual average daily (AAD) water demand is projected to increase ~~38~~ **36** percent over the planning period, from ~~22550~~ MGD in 2015 to ~~3046~~ MGD in 2050. The region's wastewater generation will increase ~~3162~~ percent, from ~~12755~~ MGD in 2015 to ~~166251~~ MGD in 2050 on an AAD basis, requiring ~~significantly~~ more treatment and disposal into the region's

4.1 Municipal Forecasts

Municipal water demand forecasts include water supplied to residences, commercial businesses, small industries, institutions, and military bases. The forecasts are closely tied to the population projections for the counties within the Middle Ocmulgee Region (Table 4-1). The Governor's Office of Planning and Budget developed the population projections for the entire state, in accordance with state law. These projections were adopted by EPD for this planning process.



Table 4-1: Population Projections by County

County	2015 ¹	2020 ²	2030 ²	2040 ²	2050 ²	Difference ³ (2015 - 2050)	% Change ⁴ (2015 - 2050)
Bibb	155,778	158,072	160,506	160,526	159,124	3,347	2%
Butts	23,718	24,600	26,073	27,034	27,881	4,163	18%
Crawford	12,453	12,285	11,629	10,589	9,408	-3,045	-24%
Houston	152,213	163,444	185,016	205,265	224,438	72,225	47%
Jasper	13,759	14,144	14,764	15,093	15,460	1,701	12%
Jones	29,024	30,141	32,084	33,262	34,259	5,235	18%
Lamar	18,233	18,908	20,395	22,121	24,161	5,929	33%
Monroe	27,516	28,888	31,725	34,417	37,452	9,936	36%
Newton	106,470	116,855	140,095	165,913	195,320	88,850	83%

Section 5 Review

5. Comparison of Water Resource Capacities and Future Needs

REGIONAL WATER PLAN



Section 5. Comparison of Water Resource Capacities and Future Needs

This section summarizes the potential water resource management issues for the Middle Ocmulgee Water Planning Region. The potential gaps – areas where future demands exceed the estimated capacity of the resources – were determined by comparing the Baseline Resource Assessments (Section 3) with the water demand and wastewater flow forecasts (Section 4). These potential gaps in specific counties will be addressed through the water management practices identified in Section 6.

5.1. Groundwater Availability Comparisons

The *Groundwater Availability Assessments* (as of July 2010 and revised January 2011, EPD) estimated the potential range of sustainable yield for each of the prioritized aquifers, based on the models developed for the respective aquifers. The future conditions Resource Assessment evaluated the potential for groundwater capacity to meet the projected 2050 demands across the water planning regions. The assessment concluded that supplies from the Crystalline-Rock, Upper Floridan and Cretaceous Aquifers are generally sufficient in meeting the forecasted groundwater demand from areas with access to these aquifers.

There is no predicted surface water or groundwater availability shortage in the Middle Ocmulgee Region; however, water supply infrastructure will be needed to meet projected 2050 demands in several rapidly growing counties. Major potential future water quality issues include:

- *additional treatment capacity for fast growing counties*
- *limited assimilative capacity for some stream segments in the southern part of the region*
- *high nutrient loadings predicted in Lake Jackson and its tributary watersheds, including contribution from point source discharges from counties in the Metro North Georgia Water Planning District*
- *existing stream impairment (46 percent of streams in the region not supporting their designated uses)*
- *Management of OSSMS (septic systems) in rural areas*

Section 5 Review

Table 5-53: Summary of Potential Water Resources Issues by County^{1, 2}

County	Municipal Water Permitted Capacity Need ³	Municipal Wastewater Permitted Capacity Need ³	Water Quality - Assimilative Capacity Issues ⁴	Existing Impaired Streams ⁵ Streams ⁴
<i>Source</i>	<i>Table 5-1</i>	<i>Table 5-2</i>	<i>Figure 5-3</i>	<i>Figure 3-7</i>
Bibb			Yes	Yes
Butts		Yes		Yes
Crawford	Yes	Yes	-Yes	Yes
Houston	Yes	Yes	Yes-	Yes
Jasper	Yes	Yes	Yes	Yes
Jones		Yes		Yes
Lamar		Yes	-Yes	Yes
Monroe				Yes
Newton	Yes	Yes	Yes	Yes
Peach			Yes	Yes
Pulaski			Yes	Yes
Twiggs			Yes	Yes

Notes:

- 1) "Yes" indicates a predicted capacity need or the existence of impaired streams or assimilative capacity issues.
- 2) No surface water or groundwater availability shortage is predicted for the Middle Ocmulgee Region for the ~~40-year~~ planning period
- 3) Permitted capacity need is based on the comparison of permitted municipal capacity versus 2050 forecasted demand
- ~~4) Treatment upgrade may be required in these counties based on EPD's Water Quality Resource Assessment (as of July 2010)~~
- ~~5) Impaired streams based on 2008-2014 303d list published by EPD~~

Process to Update Management Practices



- Categorize Current Management Practices Today
 - Keep As-Is
 - Edit
 - Delete
 - Add New
 - If time, revise language for edited Management Practices
- Determine process to finalize full set of revised Management Practices to present to the Council for approval

Break

10:45 AM – 11:00 AM

Review and Update Management Measures

Table 6-1: Water Management Practices Selected for the Middle Ocmulgee Planning Region			
Action(s) Needed	Issues to be Addressed	Description/Definition of Action	Keep, Delete, Edit – Notes
WATER DEMAND MANAGEMENT PRACTICES			
GOALS ADDRESSED: 1 (maximize existing supply), 4 (water efficiency), 7 (better planning and management)			
GAP ADDRESSED: no regional gap			
PRIORITY MANAGEMENT PRACTICES			
WD1-Implement Tier 1 Water Conservation Practices and Other SB370 Requirements	Overall demand reduction and management (municipal and industrial) in all areas of the region	<p>Tier 1 water conservation practices include those required by SB370 (Water Stewardship Act of 2010) and those anticipated in upcoming state-rule making. Water providers will be required to:</p> <ul style="list-style-type: none"> • Conduct water loss audit and report results to EPD using International Water Association standards and practices • Demonstrate progress toward Tier 1 water conservation goals and practices (non-farm water withdrawal permittees) in annual water conservation plan progress report <p>Local governments will be required to:</p> <ul style="list-style-type: none"> • Adopt ordinance restricting outdoor watering between the hours of 10am and 4pm (with some exemptions) • Amend local building codes to require submetering for all newly constructed multi-unit residential, industrial and retail buildings • Amend local building codes to require high efficiency plumbing fixtures (1.28 gal/flush) in all new construction • Amend local building codes to require high-efficiency cooling towers in new industrial construction <p>EPD and existing agricultural withdrawal permittees will need to evaluate and comply with new requirement regarding classification of existing agricultural water permits by status (active, inactive, and unused permits)</p>	<p>Identified in 2014 Review. "Sub-metering has not been added to common construction code. Will need to be revised."</p> <p>See updated language (potentially) for WD1, WD2, and WD4</p>
WD2-Evaluate/Encourage Tier 2 (Non-Farm) Water Conservation Practices	Demand reduction and management, as required by non-farm permit conditions or future amended rules	<p>Tier 2 water conservation practices include basic water conservation practices that will be addressed in upcoming state rule-making, but not required of permit applicants. Municipal and industrial (including thermoelectric production facilities) water withdrawal permit holders may be asked to demonstrate progress toward water conservation goals or water efficiency standards.</p> <p>Note for WD1 and WD2: The full list of specific Tier 1 and Tier 2 conservation goals and demand management practices recommended by the Middle Ocmulgee Council can be found in <i>Technical Memorandum - Demand Management Practices (May 2011)</i></p>	

Approach to Updating Management Practices (Section 6)

1. Review 2017 Gaps/Goals
2. Update Management Practices

Approach to Updating Management Practices

1. Review 2017 Gaps/Goals
2. Update Management Practices

Approach to Updating Management Practices

Adopted Goals *(as adopted by the Council 9.22.10)*

1. Maximize existing water supply sources to the extent practicable.
2. Support the protection of natural stream integrity and the recreation it provides.
3. Promote sufficient water supply for the region.
4. Promote efficient use of water.
5. Promote properly managed wastewater discharges and beneficial reuse.
6. Support the reduction of non-point source pollution by advocating better land management practices.
7. Support planning and management of water resources to maintain a healthy economy and ensure a high quality of life and to protect our natural resources.

Gap Review

Groundwater

- No groundwater resource shortfalls expected over planning horizon

Surface Water- No Surface water gaps predicted

- Water Demand (off stream needs) and Flow Regime (instream needs as specified by the Corps' Water Control Plan) can be fully met by available water and storage
- Agreement allowing storage use will have to be reached with reservoir owners

Surface Water and Groundwater Availability

Management Practices

Water Demand Management

- Conservation practices
- Better planning and management

Water Supply Management

- Storage, such as reservoirs
- Infrastructure such as water treatment plants and system interconnections
- Water Master Plans

Education

- Educational materials targeting different audiences

2011 Water Demand Management Practices

WD1 - Implement Tier 1 Water Conservation Practices and Other SB370 Requirements

Keep, Edit, or Delete

WD2 – Evaluate/ Encourage Tier 2 (Non-Farm) Water Conservation Practices

Keep, Edit, or Delete

WD3 – Promote Full-Cost System Accounting

Keep, Edit, or Delete

WD4 – Evaluate/Encourage Tier 3 & Tier 4 Agricultural Water Conservation Practices

Keep, Edit, or Delete

2011 Water Supply Management Practices

WS1- Develop/Update Local Water Master Plans

Keep, Edit, or Delete

WS2 – Investigate Impacts of Metro Area Discharges

Keep, Edit, or Delete

WS3 – Existing Surface Water Reservoir Storage

Keep, Edit, or Delete

WS4 - Evaluate New Surface Water Storage Reservoirs

Keep, Edit, or Delete

WS5 – Investigate New Groundwater Sources

Keep, Edit, or Delete

WS6 - Evaluate System Interconnections for Water Supply

Keep, Edit, or Delete

2011 Water Supply Management Practices

WS7 - Expand Existing Water Treatment Plant

Keep, Edit, or Delete

WS8 - Construct Water Treatment Plant (New)

Keep, Edit, or Delete

WS9 - Promote and Evaluate Beneficial Reuse

Keep, Edit, or Delete

Anything Missing?

2011 Educational Initiatives

ED1 - Develop Regional Educational Program and Materials for Localized Implementation

Keep, Edit, or Delete

Anything Missing?

Lunch

11:45 AM – 12:30 PM

Surface Water Quality/Assimilative Capacity

Gap Review

Water Quality

- Assimilative capacity for DO appears to be generally improving compared to Round 1
- Additional permitted treatment capacity may be needed in fast growing counties to meet demands
- Additional wastewater planning and monitoring needed to address limited assimilative capacity in several stream segments
- All counties in region have impaired streams included on 303(d) list.

Management Practices

Water Quality: Enhanced Water Quality Standards and Monitoring Management Practices

- Better/coordinated planning
- Improved monitoring programs
- Upgrading Treatment facilities

Water Quality: Enhanced Pollution (Non-Point Sources) Management Practices

- Tools to reduce stormwater impacts
- Restoration and protection
- Septic system/Industrial/LAS management

Education

- Educational materials targeting different audiences

2011 Water Quality Management Practices

WQ1 - Develop/ Update Local Wastewater Master Plans

Keep, Edit, or Delete

WQ2 - Adopt and Coordinate Statewide, Regional and Local Water Quality Monitoring Programs

Keep, Edit, or Delete

WQ3 - Upgrade Existing Wastewater Treatment Facilities

Keep, Edit, or Delete

WQ4 - Construct Advanced Wastewater Treatment Facilities

Keep, Edit, or Delete

WQ5 - Promote Coordinated Environmental Planning

Keep, Edit, or Delete

2011 Water Quality Management Practices

WQ6 - Evaluate Constructed Treatment Wetlands (Beneficial Reuse)

Keep, Edit, or Delete

WQ7 - Reduce Runoff from Impervious Surfaces

Keep, Edit, or Delete

WQ8 - Adopt Ordinances and /or Incentive Programs to Protect Sensitive Land

Keep, Edit, or Delete

WQ9 - Encourage Total Maximum Daily Load (TMDL) Implementation

Keep, Edit, or Delete

WQ10 - Develop/ Implement Watershed Assessment/ Protection Plan Measures

Keep, Edit, or Delete

2011 Water Quality Management Practices

WQ11 - Implement Watershed Improvement Projects

Keep, Edit, or Delete

WQ12 - Decrease Use of Land Application Systems (LAS) in Urban Areas

Keep, Edit, or Delete

WQ13 - Decrease Use of On-Site Sewage Management Systems (OSSMS)/Septic in Urban Areas

Keep, Edit, or Delete

WQ14 - Develop Commercial/ Industrial Pollution Prevention Programs

Keep, Edit, or Delete

WQ15 - Develop and Implement Stormwater Public Education and Outreach

Keep, Edit, or Delete

WQ16 - Adopt Stormwater Management Standards for New Development for Rural Areas

Keep, Edit, or Delete

2011 Water Quality Management Practices

WQ17 - Develop/Update Local Stormwater Master Plan

Keep, Edit, or Delete

WQ18 - Include and implement septage disposal options

Keep, Edit, or Delete

WQ19 - Establish a Stormwater Utility

Keep, Edit, or Delete

WQ20 - Evaluate Water Quality Trading

Keep, Edit, or Delete

WQ21 - Encourage Forest and Dirt Road Best Management Practices (BMPs)

Keep, Edit, or Delete

Anything Missing?

2011 Priority Educational Initiatives

ED1 - Develop Regional Educational Program and Materials for Localized Implementation

Keep, Edit, or Delete

ED2 - Promote Coordinated Environmental Planning

Keep, Edit, or Delete

Anything Missing?

Break

1:30 PM – 1:45 PM

Implementing Water Management Practices (Section 7)

- 7.1 Implementation Schedule and Roles of Responsible Parties (Will change as Management Practices change)
- 7.2 Fiscal Implications of Selected Management Practices (No Changes)
- 7.3 Alignment with Other Plans (Changes to reflect coordination with Metro, if necessary)
- 7.4 Recommendations to the State (Council change, if necessary)

Middle Ocmulgee Council Meeting 4

- Wrap Up
- Next Steps
- Council Meeting #5 (or conference call)



Georgia's State Water Plan

Public Comment Period

- Please limit comments to 3 minutes total
- Council encourages written submission of comments as well

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Thank You!

Questions? Comments? Need
More Information?

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