

To: Middle Chattahoochee Water Planning Council

From: Jim Hawkins, Black & Veatch and Robert Osborne, Black & Veatch

cc: Tim Cash, Assistant Branch Chief, GA EPD

Subject: Meeting Summary: Council Meeting 4 on November 11, 2009

The council meeting was held on November 11, 2009 at the University of West Georgia. The list of attendees is attached. In addition to these minutes, all the presentations (slides) discussed in this meeting will be posted on the Middle Chattahoochee web portal (<http://www.middlechattahoochee.org/>).

Welcome and Introductions

Council Chair Matt Windom stated that a quorum was present. Matt welcomed attendees and thanked everyone for attending. Alan Bell provided the invocation. Next, Matt allowed members of the public to introduce themselves. The public sign-in sheet is included as an attachment.

Matt reviewed an overall process schedule and commented that the council has a lot of decisions going forward. Matt reviewed the meeting's objectives which included:

- 1) Approve the Public Involvement Plan
- 2) Learn about the Metro North Georgia District and ongoing resource assessments
- 3) Plan for joint meetings to receive resource assessments
- 4) Establish Council Vision and Goals
- 5) Continue agricultural, municipal and industrial water forecasting discussion
- 6) Discuss WDCP outline and management practices

Matt reviewed the items on the agenda and asked if there was consensus on the agenda. There were no comments and the agenda was approved by consensus.

Matt asked if there any comments or changes for the Council Meeting 3 meeting minutes. There were no comments and the meeting minutes were approved by consensus.

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Welcome and Introductions

Matt Windom discussed that the Governor formed a Water Contingency Task Force as part of overall response to Judge Magnuson's July ruling regarding Lake Lanier and that one of the strategies includes contingency planning, which is the focus of the task force (other actions include Appeal, Negotiations, Congressional Reauthorization, as directed by Judge Magnuson in ruling).

The Task Force is comprised of over 80 business, environment, and government leaders; Coca-Cola Enterprises Chairman and CEO John Brock and Tim Lowe of Lowe Engineers are serving as co-chairs of the task force. Matt said they met for first time on October 7th and will hold 2 more meetings and present recommendations before January 2010 legislative session. Council Member Gerald Greene commented that the legislature may end up getting involved.

Matt Windom emphasized that this task force was looking for feedback.

Jim Hawkins then discussed the Council's next steps which includes the following:

- EPD will issue the preliminary results of the baseline resource assessments in mid-January.
- Water and wastewater forecasts have been under development throughout 2009.
- These data and information effort will allow regional leaders to have the best available information to identify the most appropriate water management practices for their regions.
- This information will ultimately lead to the creation of Water Development and Conservation Plans that will guide permitting in each region.

Public Involvement Plan

Jim Hawkins discussed changes incorporated into the Public Involvement Plan based on the Council's discussion from Council Meeting 3. These included adding permit holders and non-permitted water users for agricultural application for agricultural stakeholders. Jim asked the Council if there were any other stake holders that needed to be mentioned. Council Member Alan Bell asked if Florida or Alabama should be included. After some discussion, no additional changes to the stakeholder list were made.

Gerald Greene asked about how public comments that come in through the website are handled. It was noted that this feature should be added to the public website. Jim and Matt will discuss with Tim.

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Matt asked if there was consensus that this plan reflects the Council's desires. There were no comments. Matt noted that there was consensus and the Public Involvement Plan was adopted.

Metro North Georgia District Presentation

Matt Windom introduced Matt Harper who is the program manager of the Metropolitan North Georgia Water Planning District. Matt Windom explained that Matt Harper will be providing background about the District and provide more information about the recent plans that were adopted in May.

Matt Harper addressed the Council about the plans of the Metropolitan North Georgia Water Planning District (Metro District). The Atlanta Regional Commission (ARC) staffs the Metro District. Mr. Harper's slides will be available through the Council's web portal.

The Metro District was created in 2001. Its board has 16 elected officials and 10 citizen members. The District adopted its first set of water plans in 2003 (water supply, wastewater, and watershed protection). EPD conditions permits and GEFA conditions funding based on the guidance of the Metro District plans. Inclusion of a project in the plans does not guarantee permitting by EPD.

A permittee that is not in compliance with the plans might be able to receive a "good faith" letter to indicate that it has a timeline for compliance, but that it is not yet fully in compliance.

The Metro District is prohibited from transferring water into the district. It can transfer water within the Metro District. Matt Windom asked if there can be amendments to the plans. Matt Harper said there were over 30 amendments just for wastewater plants.

A council member asked about what was the per capita assumption for the forecasts. Matt said it was 151 gallons per capita and included all uses (aka such as residential, industrial, etc.)

Matt said the Metro District cannot meet future demands with aggressive conservation. The water supply plan includes 12 conservation measures. In this update of the plan (adopted 2009), premium pricing for irrigation water, larger rebates for high-efficiency toilets, and minimum education requirements were added to existing conservation requirements. The newly updated plan will use less water than the 2003 plan. It aims for a 20% reduction in per capita use by 2035.

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The Metro District operates a regional toilet rebate program, and some jurisdictions operate their own toilet rebate programs within the district. Since 2008, 26,000 toilets have been replaced through the rebate programs in the Metro District.

The Metro District plans consider septic tanks to be 100% consumptive. They use a standard of “measurable” return flow. If the return flow cannot be measured, it is assumed to be consumptive. Matt discussed septic use and commented that septic use will decrease in the future. There will be greater emphasis on local wastewater management plans.

The Council had several questions and comments for Mr. Harper which included the following:

Question: Is there any specific attention being paid to leaking?

Response: Matt discussed the issues regarding unbilled water and the language in the plans that promote water audits. Matt said there was a commitment in the region to fix leaks.

Question: Council Member Alan Bell asked about storm water issues in Atlanta.

Response: Matt Harper said the City of Atlanta is under a consent agreement and they are working on fixing the problems.

Question: Council Member Joe Maltese asked how the District determined how much water they needed to leave in the basins.

Response: Matt said these numbers came from EPD. Tim Cash with EPD noted that supply includes all the sources not just Lake Lanier and Altoona

Question: How many people are on the District staff?

Response: Matt said there was one other person beside him.

Question: Do you have any enforcement responsibilities?

Response: Matt said no.

Regional WDCP Outline

Jim Hawkins led off, noting that the State Water Plan (Section 14(7)) lays out required principal elements of Regional Plans. He said that the Regional Water Development and Conservation Plan table of contents will be out soon.

In practice the plans will describe the water resources, water users, local governments and education and implementation partners in each region. They will include forecasts through 2050 of population, and domestic and commercial water use and include comparison of these forecasts with the water resource assessments for each region.

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Jim noted some things that Council Members need to consider which include the following:

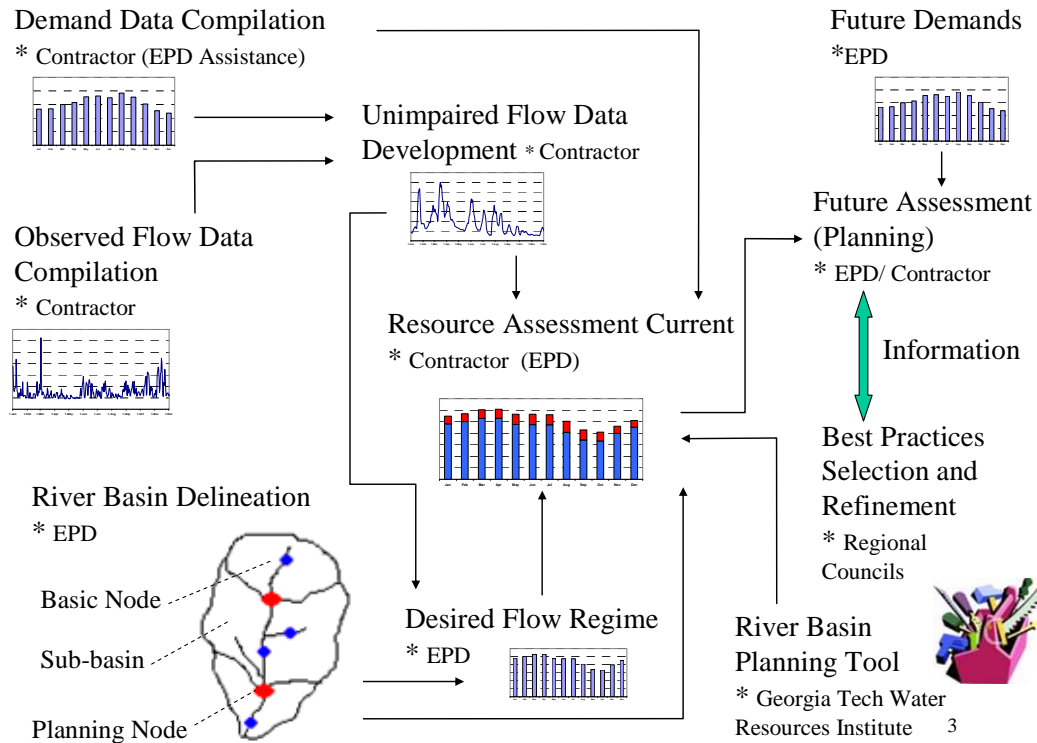
- Plans elements are a mix of EPD-provided information and Council-led products
- “Audiences” for Plans?
- Fulfillment of Regional Vision and Goals?
- Maps, figures, tables
- Council member expectations
- “Extra elements” beyond the minimum
- The Planning Contractors are currently working on materials for introductory Plan sections
- Council input necessary for:
 - Refining Plan element details
 - Review of draft Plan sections

Jim finished by saying that both the Plan “Table of Contents” and draft introductory Plan elements will be presented at CM5

Resource Assessments

Next, Matt said the Council would hear about the on-going resource assessments. Dr. Wei Zeng is leading the surface water availability assessment. At this meeting, Dr. Zeng was present to address the approach to the surface water availability assessment.

Dr. Zeng distributed several map hand-outs. These hand-outs are available through the Council’s web portal. The outline describes the modeling approach being used in the assessment. In summary, the assessment is considering: How much water we are using? How much water Mother Nature has given us? How much water can we reliably use without compromising the needs of downstream users and in-stream flow needs? Next, Dr. Zeng reviewed the graphic below which shows the various elements of the modeling process.



Dr. Zeng explained the development of estimates for “unimpaired flows”. An “unimpaired flow” is what you would have with no human activity in a river system. To estimate unimpaired flows, the team is looking at withdrawals, discharges, and reservoir operations and removing these effects from the USGS data on flows from 1939 to 2007. He said that for water use, good data only goes back to the 1990s, and so estimates had to be made for historical use back to 1939. He said that reservoir operation data dating back to 1939 is available.

Wei Zeng discussed the maps that were distributed. These maps showed the planning nodes in the model and the users and discharges of water in each segment. These maps will be made available on the website.

The Council Members had the following questions:

Question: Is 7Q10 considered mother nature’s natural flow?

Response: No. 7q10 is what we used for wasteload allocation.

Question: how is the flow determined for an unimpaired portion that also includes a regulated flow from a reservoir?

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Response: This is a bit trickier. Dr Zeng said he uses the minimum release from reservoir and adds a portion of the unregulated flow.

Question: Who determines the desired flow regime?

Response: The desired flow regime is the desired flow at key points along the riverine portion of the ACF. The flow targets are based on many factors including natural flows, yields, historic low flows, downstream flows needs and, statutory requirements. No one entity determines all these factors however EPD sets forth an interpretation of the criteria for modeling, management and policy purposes.

Question: What happens with the Flint will affect us?

Response: We have a USGS model that captures the interaction between groundwater and surface water and that will be incorporated into our model

Question: Explain the difference basic and planning nodes?

Response: Planning nodes are the nodes that the resource assessments will be based on

Question: Do you have any non-Georgia demands incorporated into the models?

Response: Yes, data from South Carolina and Alabama were both incorporated.

Planning for Joint Meetings

Council Chair Matt Windom led this discussion. He noted the primary objective of the joint meetings is to provide Council members with a working knowledge of the resource assessments, both the process and the results. The working knowledge will facilitate understanding of the resource assessments and allow planning to move forward with Gap Analysis and Management Practices Selection.

Matt noted the following agenda for the first joint meeting:

- Welcome and Charge to Meeting Participants (15-30 minutes)
- Resource Assessment Presentation and Discussion: Ground Water (~90 minutes), Surface Water Quantity (~90 minutes) and Surface Water Quality (~100 minutes)
 - Overview of Methodology and Assumptions
 - Results Specific to the Basin; Crosses planning council boundaries
- Future steps and wrap up (20-45 minutes)
- Technical Discussions Open House (stations for each resource assessment) (60-120 minutes)

Matt passed around a sign-up sheet for the individual Joint Meetings and encouraged member attendance.

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CM3 Evaluation Results

Council Chair Matt Windom next reviewed Council Meeting 3 evaluation results. He said all of the respondents (87%) felt that the meeting provided ample explanation of the goals and timeframe of the regional water planning process and helped them understand their roles and responsibilities as council members. He also said council member reported the council meeting was extremely useful for 53% of the respondents, and 40% of the respondents found it to be somewhat useful.

All the Council Members who responded to the evaluation (100%) have used the regional council web site. He then reviewed the following feedback shown in the two slides below:

Council Member Evaluation Feedback

Question <i>Council meeting rating for...</i>	Excellent	Good	Fair	Total count
Completing the initial regional vision	86%	7%	7%	14
Planning for joint meetings	7%	80%	13%	15
Overview and status update on the resource assessments	14%	71%	14%	14
The introduction of municipal and industrial water demand forecasting methodology	7%	80%	13%	15
The presentation of final agricultural forecasts	67%	20%	13%	15
The introduction and overview of management practices	13%	50%	25%	8



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Council Member Evaluation Feedback

Question <i>Understanding of...</i>	Completely	Pretty well	Barely	Total count
The purpose of the joint meetings	13%	87%	0%	15
The purpose of the resource assessments	29%	64%	7%	14
The purpose of the agricultural forecasts and how they were developed	27%	53%	20%	15
The purpose of the municipal and industrial water demand forecasts and how they will be developed	7%	80%	13%	15
The purpose of the management practices and how they will be determined	11%	78%	0%	9



Vision and Goals

Our vision is that our descendants have safe, clean and abundant water to meet their needs in the Middle Chattahoochee Region; seeking to accomplish that through reasonable efforts in cooperation, education, and preservation.

Our goals are as follows:

Political - The plan will provide the technical basis to help resolve the issues pertaining to water resources management and competing interests.

Uncertainties – The plan will provide guidance for effective policies and appropriate actions during drought, economic uncertainty, regulatory or political influences, and affects of climate variability.

River System – The Apalachicola-Chattahoochee-Flint (ACF) river systems are unique asset within the region. The management of the rivers and their uses (hydropower, navigation, water quality, water supply, flood control, fish and wildlife, recreation and cooling water for nuclear and coal fired power plants) are vital to the region. The plan

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may recommend adjustments to the management directives and uses of the river systems in order to achieve a balance of future water requirements within the region.

Land Use Changes – The plan will acknowledge the increasing tax value of land and resulting trends: increasing urbanization, fewer natural forests, and decreasing agricultural land. However the plan will seek to encourage agricultural land and forest land conservation by providing for their water requirements.

Water Balance – The plan will provide a better understanding of water balance and consumptive use and clearly define returns to surface water, the need for storage, and provide guidance for the increasing trend for groundwater usage.

Population – The plan will address the water needs for an increasing [resident] population as well the increased transient population at such locations as Fort Benning.

Quantity and Quality – The plan will establish the necessary goals to achieve water quality and quantity throughout the Middle Chattahoochee basin.

Conservation / Green – The plan will encourage forest, agriculture and open land and habitat preservation. It will also encourage alternative energy sources, water conservation, and increased protection of habitat and natural resources.

The finalized vision and goals is posted on the website.

Agricultural Water Use Forecasts

Jim presented an update to the Agricultural water use forecasts. Jim noted that some livestock, dairy, poultry, and nursery agricultural water-uses are not captured in the current Agricultural Water Demand Forecast (AWDF). Members of these sub-threshold water-use sectors (<100,000 GPD) feel they are not represented in Georgia's water planning efforts and believe their exclusion diminishes their economic importance to Georgia

Although EPD does not permit (regulate) majority of sub-threshold agricultural water-uses (< 100,000 GPD), Sub-threshold users seek inclusion in Georgia's water planning efforts without becoming regulated. Two meetings held to discuss issues relevant to these water users: September 30 and October 16.

Data shared by these representatives will be presented to councils by EPD and other partners. Data will be presented to Councils at Council Meeting 5. Jim stated that Councils will then decide whether sub-threshold agricultural water-use will be included in their plan'

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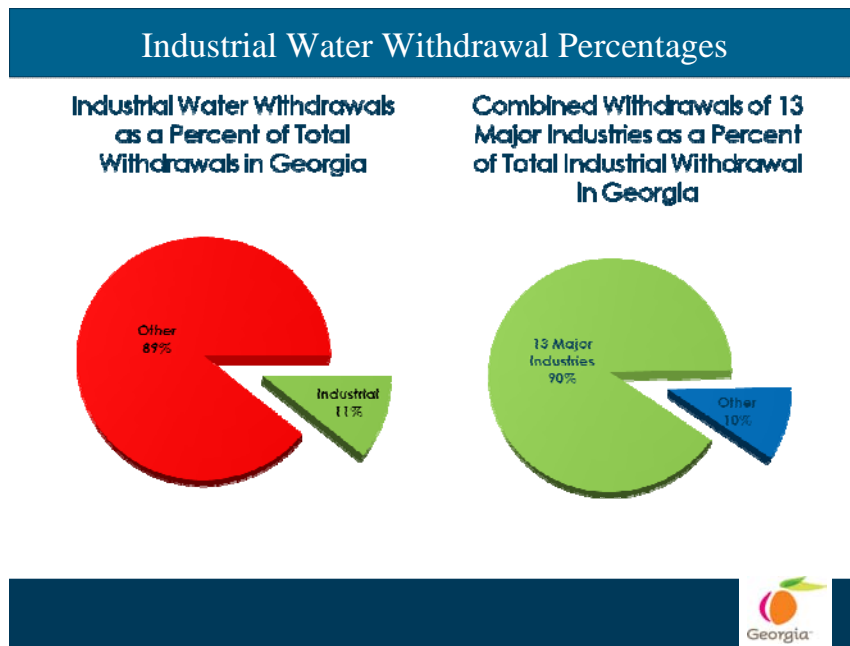
Municipal and Industrial Water Use Forecast

Robert Osborne explained that there were four major forecasting modules which included:

- **Agricultural** – Major forecasts complete; evaluating if/how to incorporate smaller use/unpermitted sectors
- **Energy** – Forecasts under development with assistance from power/energy companies
- **Municipal** – Includes residential, commercial, and light industrial water use
- **Industrial** – Major water using industries

Robert explained that he will be mostly focusing on the industrial forecasts today. These forecasts are based on the continuation of current trends and practices into the future. Robert emphasized that these forecasts form the basis for regional water planning, not for making individual permit decisions

Robert presented the following graphs which showed industrial water withdrawal as a percent of the total withdrawals in Georgia and the combined withdrawals of the 13 major industries as a percent of the total industrial withdrawal in Georgia.



Robert said that water use by NAICS category increases at the same rate as NAICS employment (growth estimates competed by CVI0G). However, If NAICS employment decreases, then NAICS water use remains the same. Robert presented the results.

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Differences between the forecasts will be discussed with industry representatives. Robert said current forecasts are being shared with the industry ad hoc group and public (via website).

After Robert presented the preliminary industrial forecasts, he then discussed the municipal water forecasts. EPD plans to re-convene 'expanded' regional ad hoc groups to further refine county and municipal gpcd's and transient population considerations in early December. Preliminary municipal water forecasts will be developed in January of 2010 with a 'presentation of preliminary forecasts' meeting (early February, '10).

Robert presented the water per capita values for each county in the Middle Chattahoochee region. Afterwards, Steve Davis discussed the regional ad hoc group and how important it is to provide data if needed for these forecasts.

Management Practices

Jim Hawkins explained that the initial effort to begin selection of management practices is scheduled to occur at Council Meeting 5 and at future meetings

Jim explained management practices are the following:

- Help meet the regional vision and goals
- Can be employed to ensure that there is sufficient water (surface and groundwater quantity) and assimilative capacity (surface water quality) to sustainably meet future needs
- Management practices can increase resource capacity and/or adjust forecasted demands (i.e., water efficiency measures)

Management practices should address multiple regional needs as shown in the slide below.



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Jim explained that the gap analysis will determine the difference between the available resource (i.e., supply) and the sum of needs/demands. This gap can be defined both geographically and by water use type (surface water quantity and quality; ground water quantity)

Jim outlined the next step with Management Practices which were as follows:

- Based on regional vision and goals; alternatives to address current and future needs within available resource
 - Resource Assessment Models – Available *January 2010*
- Initial discussion, selection, and refinement – *Council Meetings 5, 6, and 7*
- Based on resource model evaluation are gaps closed/future needs met? Are regional goals met?
- Finalize selection by *December 2010*

Local Elected Officials and Public Comments

Next, the Council provided time for local elected officials and the general public an opportunity to address the council. There were no elected officials or members of the general public who spoke.

Wrap-Up and What to Expect Next Meeting

The Council selected March 10 for its next meeting, which will be held at a location to be determined, possibly in Lagrange.

Council Meeting 4 Evaluation

At the conclusion of the council meeting, the members completed an evaluation form on the meeting and the meeting was adjourned.

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Attachment 1:

**Middle Chattahoochee Water Planning Council
Council Meeting Attendance – November 11, 2009**

Council Members

Alan Bell
Paul Chappell
Steve Davis
Larry Dillard
Phillip Eidson
Gerald Greene
Gardiner Garrard
Joe Griffith
Bill Heath
Jimmy Knight
Harry Lange

Joe Maltese
Aaron McWhorter
Ken Penuel
Denney Rogers
Walter Rosso
Jimmy Thompson
Don Watson
Matt Windom
Jim Woods
Robie York

Council Members Not In Attendance

Jimmy Bradley
Larry Clark
Thomas Ellis
Bill Gregory
Jeff Lukken

Gordon Moss
Randy Simpkins
Robert Watkins
Michael Yates

Planning Consultants

Jim Hawkins, B&V
Robert Osborne, B&V
Mark Masters, GWPPC

Kristin Rowles, GWPPC
Nils Thompson, LBG

Georgia EPD

Tim Cash, Assistant Branch Chief
Bill Morris

Georgia State Agencies

Joe Krewer, GA Department of
Community Affairs