

Georgia Department of Natural Resources

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November 23, 2009

MEMORANDUM

TO: Council Members

FROM: Kevin Farrell, GA EPD
Doug Baughman, CH2MHILL

SUBJECT: Meeting 4 Summary
Upper Oconee Water Planning Council Meeting

Georgia Comprehensive Statewide Water Management Plan Regional Water Planning

Council Meeting 4 Summary

Meeting Date: November 18, 2009
Location: Old Capitol Building, Milledgeville (Baldwin County)

1) Welcome and Introductions

Oconee County Commission Chair Melvin Davis presided over the meeting in place of Acting Chair Richard McSpadden, who was unable to attend because of work commitments. Davis called the meeting to order and then asked for a moment of silence in remembrance of deceased Chair David Bennett. Afterwards, Davis made some general announcements regarding Council business including the appointment of alternate member Larry Eley as a permanent member and the addition of Jim Luke, of Oconee County, as the new alternate.

Davis then invited Milledgeville mayor Richard Bentley to share a few words on the City and the meeting location. Bentley welcomed his fellow Council members to the community. He touched on the City's history as Georgia's first capital and noted that it was one of only two planned capitals in the country. He also mentioned that the room the Council was meeting in the Old Capitol Building was where Georgia

legislators voted to secede. Bentley spoke of the City's present as well pointing out the two colleges and the Oconee River Greenway that help keep the area vibrant.

Next, Davis outlined the day's agenda, which included a field trip to Georgia Power's Plant Branch as well as voting for a new chair and vice chair to lead the Council. He mentioned that nominations for the positions would be open throughout the day with voting at the end of the meeting and that McSpadden had asked not to be nominated again for a leadership position. Finally, he recognized three of the subcommittees and their members:

- Agricultural Subcommittee – Larry Eley, Terry England, Pat Hardy, Danny Hogan and Bill Ross
- Executive Subcommittee – Richard McSpadden, Pat Graham, Roger Folsom, Richard Bentley
- Media Subcommittee – Linda Gantt

2) Plant Branch Tour

Following the meeting's opening, Council members, EPD and planning contractor staff, and some partnering agency representatives boarded a bus for a field trip to Georgia Power's Plant Branch located in Milledgeville. The goal of the tour was to give the Council a better understanding of the role of water in Georgia Power's operations.

The plant manager and other staff provided an overview of safety measures tour participants would need to take (hard hats, safety glasses, and ear plugs) and explained that it would be a brief tour limited primarily to the impact on water in power generation. The staff then gave several short presentations explaining how electricity is generated and provided some statistics specific to Plant Branch's operations, such as:

- The plant burns 3 million tons of coal annually, which would generate enough electricity to power 342,000 homes
- In 2008, the plant used an average of 1,098 million gallons per day (mgd) of water
- >98% of the water withdrawn from Lake Sinclair is returned

Georgia Power environmental manager Tanya Blalock offered some additional context for water usage in power generation. She noted that consumptive use in power plants is a result of evaporation and cooling and that the cooling tower at Plant Branch was used from May-September. Blalock presented graphs showing that half of surface water withdrawal permits in Georgia are used for power plants, but according to Georgia Power's calculations, only 14% of that was consumptive use. She also mentioned that Georgia Power is working with EPD to

combine energy forecast trends with water demand trends. After the presentations, the Georgia Power staff took questions from the group.

Council Question: How many times does the plant reuse water, e.g. a gallon of water?

Georgia Power Response: Don't have an exact answer, but some water does get reused around the plant.

Council Question: Is that >98% number prior to hitting the cooling tower?

Georgia Power Response: The >98% figure is specific to Plant Branch. All of Georgia Power's plants withdraw 2.4 billion gallons per day (bgd) and return 2.2 bgd. Across the state, they average a 92% return rate. That does include evaporative loss from cooling towers.

Council Question: How does nuclear power plant consumption compare?

Georgia Power Response: It's a little bit higher because water is used for some safety measures. The efficiency is measured differently.

Georgia Power Comment: Georgia Power is spending \$2 billion on scrubbers [to mitigate air pollution], which leads to more consumptive use – an additional 3-4 mgd approximately.

Council Question: What about the coal reserve? How much is there?

Georgia Power Response: Currently onsite at Plant Branch there is a 78 day reserve. Coal is one of the most abundant resources in America and the goal is not to run out. The plant procures its coal from West Virginia and Kentucky. The company is also working to diversify its energy portfolio – adding gas to coal use, looking at nuclear and green energy options.

Council Question: What about the toxicity of coal ash?

Georgia Power Response: Georgia Power does use water to move the ash to the pond and some of the water is reused. While the facility does have a permit for gypsum, it does not use coal ash as a land application. The EPA (U.S. Environmental Protection Agency) has revisited the regulations a number of times and determined that coal ash is not a hazard. However, after [the] TVA [spill], EPA is looking again and is expected to come out with new guidance. Georgia Power conducts quarterly inspections and coal ash can be sold for concrete, road material, etc. Southern Company does have a group looking into beneficial reuse. They are also working within EPA guidelines in looking at options and regulations to gauge impact.

The group then donned their protective gear and broke into two sub-groups to expedite the tour. The tour included walking through the ground floor of the generation facility with stops in the

process control room and the intake area on Lake Sinclair. After the tour, everyone boarded the bus to return to the Old Capitol Building to continue the meeting.

Upon return to the meeting location, Mr. Davis introduced the topic of having a Council member serve as media contact in his or her county for the press release to be distributed by the Media subcommittee after each Council meeting.

3) Agricultural Water Use Forecast

Council coordinator Doug Baughman updated the Council on the agricultural water use forecasts, the process to determine them, and their status. He noted that the a key issue is non-permitted agricultural water demand, i.e. some livestock, dairy, poultry, and nursery water uses are not captured in the agricultural water demand forecast (AWDF). Currently EPD does not permit (regulate) "sub-threshold" water users (less than 100,000 gallons per day [gpd]). Some sub-threshold users feel their economic importance to Georgia is diminished because they are not represented. Baughman noted they want to be included in the state water planning process without being regulated by EPD.

Additional information relayed in the presentation included:

- Some planning councils have formed sub-committees to investigate sub-threshold agricultural water-use
 - Methodology and results of research may be inconsistent if sub-committees are not provided with a structure
 - Two meetings were held to discuss issues relevant to these water users on September 30 and October 16
 - EPD has an extensive list of partners and agricultural experts across the state
- There is a state-sponsored effort that will eliminate data collection inconsistencies among sub-committees of the planning councils but will include them in the effort
- Leaders in the poultry, dairy, and nursery sectors have agreed to provide water use information in their areas
- Data collections will be a “snap-shot” of current data in the agricultural water-use sectors, as opposed to projections of growth
 - This data will be provided to councils by EPD and its partners at the next council meeting
 - Councils will decide whether sub-threshold agricultural water-use will be included in their plan

Cliff Lewis, of EPD, said they hoped to have the analysis of the non-permitted agricultural use online for the council to review prior to the next meeting.

Council member Danny Hogan then provided an update on the agricultural subcommittee's activities. The group held two conference calls regarding the Upper Oconee's approach to non-permitted users. The "zero" estimates at the previous meeting caught many council members' attention and they expressed a desire to get actual numbers. Hogan said he didn't know how the numbers would ultimately be used, but it was better to have a small number than no number at all; he reminded the council that it would be up to them whether or not to include the non-permitted data. Lewis noted that current non-permitted uses represent about 3-5% of total regulated agricultural use. He also clarified that just because EPD is including data on the smaller users, the intent is not to start regulating them. Hogan asked if non-permitted users identified their water source (ground or surface) and Lewis responded that they do to the best of their ability.

Hogan also shared an email from ex-officio member Terry England that featured a resolution adopted by the Savannah-Upper Ogeechee Water Planning Council to exclude the use of interbasin water transfers from council consideration.

There was no public comment on this agenda item.

4) Vision and Goals/Joint Council Meetings

During the working lunch Baughman led the group through a recap of the Council's vision and goals and plans for attendance at the joint council meetings in January 2010.

He reminded the group of the adopted vision statement:

Create a regional plan that focuses on managing water as a critical resource vital to our health, economic, social and environmental well being. Build trusting partnerships with neighboring regions and develop an educated and engaged citizenry that embraces sound water management.

Baughman then touched on finalizing the goals that support the vision statement and the work of the council. He suggested applying the SMART (specific, measurable, attainable, realistic, timely) concept to help refine them and used color coding to show where possible changes could be made. Green denotes a key theme while red shows suggested edits to make goals SMART.

- Promote alternatives and technologies that **conserve, reuse, return, and recycle water** within the Upper Oconee region,
- Ensure that **any new reservoir opportunities <management practices> balance economic development, recreation, and environmental interests,**
- 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,**
- Provide easily accessible real time data and information to guide management decisions, **<may be too specific?>**
- Identify **<Promote>** programs, projects, and educational messages to **reduce non-point source pollution** to protect water quality in lakes and streams,
- Recommend innovative **rate structures** (water, sewer, and/or stormwater) that provide sufficient revenues to maintain a high level of service while promoting water conservation and efficiency,
- Balance water interests (development, agriculture, industry, environment, etc.) within the Upper Oconee region with water quality and water quantity considerations. **<redundant with bullet 2?>**

There was a brief discussion on the goals.

Coordinator Question: Should we define what real time means or remove it altogether?

Council Comment: It should still be included, leave it in.

Council Question: What about the term "rate structure"? Wasn't there something about providing incentives?

Council Comment: We should replace "rate structure" with "strategies"

The revised goals from the discussion are as follows:

- Promote alternatives and technologies that conserve, reuse, return, and recycle water within the Upper Oconee region,
- Ensure that management practices balance economic development, recreation, and environmental interests,
- 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,
- Provide easily accessible data and information to guide management decisions,

- Identify programs, projects, and educational messages to reduce non-point source pollution to protect water quality in lakes and streams, and
- 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.

Discussion then moved to Council members' participation in the Joint Council meetings set for January. Baughman highlighted the objectives for the joint meetings and what attendees could expect:

- 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, with the basic agenda as follows:
 - Overview of ground water resource assessment methodology
 - Overview of surface water quantity resource assessment methodology
 - Overview of surface water quality resource assessment
- The working knowledge will facilitate understanding of the resource assessments and allow planning to move forward with gap analysis and management practices selection.
- Open to all Council members
 - UOC Executive Subcommittee will ensure UOC representation at the meetings Friday, January 22, 2010 in Macon and Tuesday, January 19, 2010 in Augusta.
- These meetings will be open to the public and the public comment period on the Resource Assessments is expected to run from January to April 2010.

Richard Bentley, Jimmy Sanders, and Charles Jordan noted that they will try to attend at least one of the meetings. A reminder about the meetings will be sent to Council at a later date.

There was no public comment on this agenda item.

5) Municipal Water and Wastewater Forecasts

Baughman and Municipal/Industrial Subcommittee member Vince Ciampa led the presentation and discussion on the municipal water and wastewater forecasts. Baughman explained what the forecasts were premised on, gave an overview of the forecast process, and showed the group a basic formula for calculating future water need. This information is summed up as follows:

Forecast Premises:

- Continuation of current trends and practices
- No demand altering management practices
- Water use efficiency unchanged
- Forecasts for use in regional water planning only

Process Overview:

1. Develop preliminary county level per capita use rates (public & self supplied)
2. Refine per capita use rates (*ad hoc meetings and council input*)
 - Water supply (*base year, % self-supplied population, use rate, transient changes, etc*)
 - Wastewater (*return rates, on-site treatment, etc*)
3. Apply Office of Planning and Budget (OPB) population forecasts
4. Generate preliminary water and wastewater forecasts

Future Water Need Formula:



Baughman noted that the region specific factors would likely be collected from municipal water/wastewater experts and outlined some of the factors that affect the per capita water use rate, such as transient populations, base year adjustments, and public vs. self-supply. He then went through a sample per capita water use rate calculation for Clarke County based on 2006 data. The group was furnished with handouts on draft per capita numbers based on USGS and EPD data. Ciampa reviewed the development of these numbers and encouraged Council members to look at their specific county and provide Brian Skeens [planning contractor] with feedback about local conditions. He also mentioned that the population and employment numbers have met with some opposition and that the population numbers are not available. This led to discussion among the Council members, EPD and planning contractor staff.

Council Coordinator: Is there an update on the status of the population numbers?

EPD Response: There have been several conversations between OPB and UGA/CIVOG [Carl Vinson Institute of Government] about the numbers. During the second week of October, OPB was trying to

schedule a meeting with governor and his staff to discuss any modifications. But it is not certain whether or not that meeting took place. The governor's office has said we [EPD] has to use their numbers. (Nap Caldwell, EPD)

Council Comment: If the governor's office says to move forward, is it a done deal?

EPD Response: We can go ahead and use the numbers we have to move forward. (Caldwell)

Council Comment: It'll be a done deal that we have to accept those numbers.

EPD Response: Hopefully the numbers that get presented will be the governor's accepted forecast of what the likely population will be and it would be numbers he would expect other state agencies to use. (Caldwell)

Council Comment: What resources does the governor's office have that would make them reject the numbers?

EPD Response: OPB and the governor's office must have considerations on what numbers they use, but don't know what that is. The governor and staff are sifting through concerns about the numbers presented by OPB and CIVOG

Council Coordinator: The population / employment numbers are important, but it is also important to remember that they will be revisited every five years.

Council Comment: Braselton is experiencing growth, but water comes from Jackson County. Plus the City straddles three other counties. Water users outside of Jackson County should be counted as transient resident and this has been shared with Brian Skeens.

Public Comment: Council members should expect to see variability among the counties in the Upper Oconee basin. [Gary Duck, Athens-Clarke County Public Utility Director]

EPD Comment: Council members should visit the Water Planning web site (click Resource Assessment > Monitoring and Information Management) to see a summaries of the voluminous data found on the USGS site. [Kevin Farrell]

Public Comment: In the exercise looking at the 2006 per capita numbers for Athens-Clarke County, suggested looking at other years as well to capture recent efficiencies.

Council Coordinator: The ad hoc meetings will be driven by the Councils so they need to be interested to make this happen.

EPD Comment: These are envisioned to be much smaller meetings to help facilitate actual feedback. Council members need to recommend a representative (utility person) to participate in these ad hoc meetings. (Caldwell)

Public Comment: What about the availability of the presentations [at the meeting]?

Council Coordinator: Revised presentations will be uploaded to the Council website.

6) Energy/Industrial Water and Wastewater Forecasts

Baughman moved into a presentation on energy/industrial water and wastewater forecasts. He noted that the morning field trip was timely as related to this topic. The basic steps for an approach to determining current and future thermoelectric energy water use will involve:

- Conducting an inventory of current power generating facilities
- Verifying facility location, fuel type (e.g. coal, natural gas, nuclear), cooling system characteristics, operating capacity, total water intake and water consumption
- Analyzing of national and regional trends
- Developing a method to quantify growth rate for future forecasting

Baughman pointed out to the group that a few things to keep in mind are that even though large amounts of water are withdrawn in thermoelectric power production, the total consumption of water is relatively low. The “fuel type” also influences the withdrawal amounts and consumption, and the mix of future fuel types very uncertain. Some other influencing factors include:

- Amount of power needed (function of rate of growth in population and economy)
- Future mix of fuel types (e.g., coal, natural gas, nuclear, biomass, wind, sun)
- Geographic distribution of thermoelectric power water demand
- Primary generation method (e.g., steam turbine, gas turbine, combined cycle)
- Cooling system (e.g., once-through cooling versus closed-loop cooling)

This creates challenges in forecasting such as:

- Establishing credible future relationship between population & gross state product, and energy needs in Georgia
- Credibly envisioning fuel mix likely to be used in Georgia to meet forecasted energy needs
- Determination of geographic placement of fuel types within Georgia

A brief discussion followed this section of the presentation.

Public Comment: Southern Company is meeting with the state to identify what relates to their forecasts regarding siting plants and power generation and there is acknowledgement that there is a correlation with the population. [Tanya Blalock, Georgia Power]

EPD Comment: There is difficulty in predicting future fuel use / mix and this in turn makes forecasting and siting difficult. There is a process for the first 80% of the journey, not the last 20%. [Nap Caldwell]

Council Comment: Have they looked at the potential for cap and trade to influence this forecast?

Council Comment: How does reuse water fit into Georgia Power's plan?

Public Comment: Georgia Power has a prepared a voluntary conservation plan that addresses water resources in siting of plants. [Blalock]

Before Baughman presented the group with some of the preliminary industrial usage numbers, he explained that the forecasts:

- Are based on the continuation of current trends and practices into the future
- Exclude any new management practice that may alter demands
- Are not intended to establish the efficiency of water use
- Serve as a basis for regional water planning, not for making individual permit decisions

He went on to present the major water using industries in Georgia with the reminder that specific industry data would not be presented to ensure confidentiality and that forecasts are based on employment. Baughman also gave an overview of water use in industries specific to the Upper Oconee region. The largest industrial user in the Upper Oconee region is nonmetallic minerals (kaolin). Baughman pointed out that even if an industry's employment is projected to go to 0 in the future, water use is still reserved for industrial purposes. The Council received handouts of all the preliminary data.

Council Comment: There are some strange trends for some of the categories, such as transportation.

Council Coordinator: Recognize that some of the numbers look "off." The planning contractors are still working on them.

EPD Response: EPD is working with representatives of each industry and still refining where there are anomalies. Dr. Dorfman , of UGA, is still ground truth with some of the industrial experts.

Baughman continued the discussion with an update on what has been done to work with industry and what's next in completing the industrial forecasts. EPD held a meeting of industry representatives on August 18, 2009 to gather input. Representatives of the carpet, mining, pulp and paper, and food manufacturing industries provided information relative to future water use in the state for those industries. The industry water forecasts will be compared with information provided by these industries and then the

differences between the forecasts will be discussed with industry representatives. The next steps will be to:

- Share results with the industry ad hoc group and public (via website)
- Solicit any additional input and making modifications where warranted
- Reconfirm results with industry ad hoc group
- Complete forecasts for regional councils

There was no public comment on this agenda item.

7) Review Outline of Water Conservation and Development Plan

Baughman raised the topic of what the Council's Water Conservation and Development Plan will look like once Upper Oconee members start to fill in the specifics for their basin.

The principle elements of the plan will:

- Describe the water resources, water users, local governments and education and implementation partners in each region
- Include forecasts through 2050 of population, and domestic and commercial water use
- Include comparison of these forecasts with the water resource assessments for each region
- Detail recommended regionally-appropriate management practices (based on these comparisons)
- Outline additional data and information needs
- Determine benchmarks for assessing the effectiveness of each Plan

Baughman then listed some items for the Council to consider as it developed the details of the plan, such as:

- 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 next steps include planning contractors creating materials for the introductory Plan sections; Baughman pointed out that this is currently underway. He then outlined how the Council's input would be incorporated. The group will be responsible for refining the Plan element details and reviewing draft sections of the Plan. Between this meeting and the next, it would be crucial for the Council to discuss the Plan's table of contents and be prepared to draft introductory plan elements by CM5. Baughman asked for feedback on the approach to the Plan's development and how that fit the Upper Oconee Council's vision.

Council Question: Can the plan be tailored to the different audiences? For example, will a wastewater engineer be able to easily extract the information needed. (e.g. information for Chamber would be different than for industry)

EPD Response: The table of contents is fairly open, but EPD will expect some basic consistency between Councils.

There was no public comment on this agenda item.

8) Management Practices

The discussion then turned the management practices; Baughman noted that they would have to be region specific. The goal of this agenda item was to help prepare the Council for the upcoming work on management practices as the initial selection effort is scheduled to happen at CM5 and future meetings. The practices will also need to fit within the context of the State Water Plan.

Baughman reminded the Council that management practices are defined as any program or activity that:

- Helps 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
- Can increase resource capacity and/or adjusts forecasted demands (i.e., water efficiency measures)

The Council's role in this activity will be to:

- Define what the 2004 Act's guiding policy means for the region
- Establish specific goals for the region's waters in 2050
- Guide selection of management practices (along with results of forecasts and resource assessments)

Baughman then reviewed the basics of what management practices are, what they seek to accomplish, and how the analysis would guide the Council's selection. Highlights of the presentation were:

- Management practices should address multiple regional needs
 - Stormwater – flood control, water supply, water quality
 - Wastewater – water quality, reuse, return flow management
 - Water Supply – storage, retiming flows, demand management
- Definitions of water resource “gaps”
 - Quantity
 - The difference between the available resource (i.e., supply) and the sum of needs/demands
 - Can be defined both geographically and by water use type (surface water quantity and quality; ground water quantity)
 - Quality
 - The difference between the capacity of receiving waters to assimilate wastewater and the sum of needs/demands associated with the discharge of wastewater
 - Can be also be defined as a portion of a water body that does not meet (or is forecasted not to meet) water quality standards
 - Can be defined both geographically and by water use type (surface water quantity and quality; ground water quantity)
- Identifying and addressing the gap between available resource and need can vary based on:
 - Urgency of water resource need
 - The size and type of gap and need
 - Scale and geographic considerations
- Development of management practices may be complex because of the dynamic process of defining the gap between available resources and needs
- Identification and/or selection of management practices should consider:
 - Existing planning and project activities of water utilities/providers (i.e., are plans in the “pipeline”?)
 - Existing significant and relevant water related studies or plans that identify potential management practices

- Alternatives for areas without existing plans

Baughman also took the Council through some of the conceptual models for management practices and explained that the Council would come up with an appropriate suite of practices. As part of this effort, the group will need to coordinate with local governments and utilities. This will mean finding the answers to some basic questions:

- Are there documented water resource needs in your region?
- What is the source(s) of the documentation?
- What are the existing plans, projects, or studies that should be catalogued?

He then laid out the schedule for selecting management practices. Resource assessment models will be available in January 2010. Council will hold the initial discussion, work through the selection process, and refine the practices at CM5, CM6, and CM7. Final selection will be made by December 2010.

Baughman told the Council that requests for existing information / plans should go to him.

There was no public comment on this agenda item.

9) Election for Upper Oconee Council Chair and Vice-Chair

Davis reviewed the responsibilities of the Chair and Vice Chair as well as the Council's procedures for establishing a quorum necessary for the vote.

Responsibilities of the Chair

- Presides at Council Meetings
- Serves for 6 months
- Works with planning contractor (PC) to set meeting agenda, meeting goals/purpose, and intended results of meeting
- Responsible for "conducting a focused meeting with the help of the PC"
- Works with PC to ensure meeting notices are timely

Responsibilities of the Vice Chair

- Performs the duties of the Chair in the absence of the Chair

- Reviews and keeps written copies of meeting summaries and decisions recorded by the PC
- Becomes Chair in the event the Chair resigns or is unable to serve

The nominations were opened up to those who had initially been nominated for leadership positions at the first Council meeting: Roger Folsom, Pat Graham, and Richard Bentley. However, Folsom and Graham said they had too many responsibilities to accept the nomination at this time but would offer support as members of the Executive Subcommittee to whomever was elected.

Bentley was unanimously elected and then asked Dennis Holder to serve as Vice Chair; his election was also unanimous.

10) Elected Official and Public Comment

Even with public comment solicited throughout the meeting, the floor was opened near the end of the meeting for any additional thoughts. There were no comments from elected officials or the public.

11) Wrap up/Council Meeting 4 Evaluation

Council facilitator Marci Davis encouraged members to complete their meeting evaluations before leaving. Baughman reminded the group that the City of Winder had offered to host a Council meeting and the next meeting was set for March 24, 2010 in Winder. Some members requested a later start time if the meeting were not held in the middle of the basin.

12) Written Comments Submitted to Council

In accordance with the Council's request to receive written comments, two were submitted by the end of the meeting. The comments are recorded as written. Illegible words are noted with a question mark (?). Additional clarification of acronyms, jargon, etc. is noted by brackets [].

1. Gary Duck – Athens-Clarke County Public Utilities Department

Per capita usage can vary greatly between counties based on the customer base.

- Counties such as ACC [Athens-Clarke County] would be expected to have a higher per capita demand based on
 - o UGA

- Two regional hospitals
- Industrial usage

Compared to a county with a customer base that is primarily residential.

2. **Ben Emanuel – Georgia River Network and Altamaha Riverkeeper**

RE: Municipal Forecasts

I suggest that the council be provided multiple years' worth of data on average annual withdrawals for municipalities. Choosing one typical year for its rainfall conditions, etc. is logical but permanent improvements in water efficiency that have taken place in recent years could have an impact on annual averages. For example, the 2006 figure used for Clarke County (18.4 MGD) is higher than average for 2009 by approximately 5 MGD, largely due to efficiency improvements that will be lasting. Using multiple years' data would seem to provide better information.

Meeting Attendees

Council Members Present

- James Andrews
- Charles S. Armentrout
- Richard Bentley
- Hunter Bicknell
- Vincent Ciampa
- Stuart A. Cofer (alternate)
- Jennifer Davis
- Melvin Davis
- Larry J. Eley
- Roger L. Folsom
- Alan Foster
- Linda S. Gantt
- Pat Graham
- Pat Hardy
- Dana M. Heil
- Allen M. Hodges
- Danny Hogan
- Dennis W. Holder
- Charles H. Jordan
- Kevin Little
- Jim Luke (alternate)
- Drew Marczak
- Bill Ross
- Benjamin R. Tarbutton
- Greg Thompson
- Sen. Bill Cowsert (ex-officio)

Council Members Absent

- David Allen (alternate)
- Richard McSpadden, Vice Chair
- Rabun Neal
- Rep. Terry England (ex-officio)

Staff and Planning Contractors

- Kevin Ferrell, EPD
- Ted Hendrickx, EPD
- Nap Caldwell, EPD
- Doug Baughman, CH2MHill
- Heather Dyke, CH2MHill
- Marci Davis, JJG

Partnering Agencies

- Chris Barnes, Georgia Forestry Commission
- Joe Krewer, Department of Community Affairs
- Keegan Malone, Georgia Soil and Water Conservation Commission
- Bob Ragdale, Georgia Farm Bureau
- Patti Lanford, Georgia DNR (Fisheries)

General Public

- Gary Duck, Athens-Clarke County Public Utilities Department
- Ethan Armentrout, Armentrout Roebuck Matheny Consulting Group
- Tom Gehl, Georgia Municipal Association
- Ben Emanuel, Georgia River Network
- Rufus Adair, Eatonton Messenger
- Lyle Lansdell, Resident, Sandersville
- Steve McWilliams, Georgia Forestry Association
- Tanya Blalock, Georgia Power

- Jim Hussey, US Senator Chambliss' Office
- Nancy Bobbitt, US Senator Isakson's Office