

## Memorandum

*To: Altamaha Regional Water Planning Council*

*From: Rick Brown and Katherine Zitsch, CDM*

*Date: 10/28/10*

*Subject: Council Meeting 8 - Summary*

This memorandum provides the meeting summary of the Altamaha Regional Water Planning Council Meeting 8 (CM 8), held on October 28, 2010 at the Sudie A. Fulford Community Learning Center in Swainsboro.

1) Welcome and Introductions/Recap CM 6/Approve Agenda/Approve CM6 Summary

Chairman Brinson Lanier called the meeting to order. The Council was welcomed by Swainsboro Mayor Charles Schwabe. He noted that the meeting is held at the Fulford Community Learning Center, which was a gift from Pete Correll of Georgia Pacific. Mayor Schwabe expressed his appreciation to the Council for their dedication and for investing their time to help plan for our water resources. He asked the Council to enjoy Swainsboro and the region. Swainsboro-Emanuel County Chamber of Commerce President and CEO Bill Rogers also welcomed the Council to Swainsboro. He noted some of the improvements to East Georgia College including the addition of dormitories and sports programs.

The PC thanked Council Member Steve Meeks for the refreshments and arranging the facility. The PC then provided an overview of the agenda and asked for a motion to approve the agenda; motion by Ed Jeffords, second by Gerald Dewitt.

The PC then provided a recap of the Macon Joint Meeting highlighting the following points:

- The meeting was a panel format with 4 panels; focusing on water quality, agricultural water use, water supply needs, local government, neighboring, and state coordination. The meeting was well attended by all Councils with over 50 Council members and about 50 interested public/stakeholders.
- A few themes/key points discussed at the meeting; the meeting provided a good overview of the progress being made by various Councils; many regions do not

have gaps; funding is a major challenge; additional data collection/ improvement, and adaptive management should be the foundational approach to the current and future water plans.

The meeting continued with an overview of the objectives for Council Meeting 8. These included:

- Review current and future conditions resource assessment model results and Selection of draft Management Practices for Regional Water Resources
- Review and discuss Energy Forecasts
- Review and discuss Initial Water Plan Sections
- Discuss and develop targeted outreach to further communicate with, and solicit input from, local governments, water and wastewater utilities, and other key stakeholders
- Review and discuss schedule for completing Regional Water Plan; identify next steps for Shared Resources Discussion

The PC briefly summarized the plans for the next two Council meetings and proposed Vidalia as the location for December 16 (CM 8) and January 11 for CM 9. The PC asked Council members to check those dates and we would finalize them or alternatives at the end of the day.

The Council next address a topic that had been tabled at the last Council meeting. The Council had tabled the topic or revisiting the “fishing” resolution that had been proposed by Len Hauss at CM 6 because he was not at CM 7. It appears that Mr. Hauss may not be able to attend the next few meetings and so the Council wanted to act on revisiting the need for the resolution. A short discussion took place in which Council members expressed support for regional resources, such as fishing, but wanted to make sure that it was in the overall context of all the regional needs and goals. Several Council members noted that it might be better to incorporate the concept of fishing into the vision and goals rather than as a separate resolution and this would allow the proper context. The chair noted that perhaps the Council could change from the original resolution and instead add fish and wildlife concepts to vision and goals.

A suggested revised vision was proposed with the change highlighted in Bold:

The vision of the Altamaha Regional Water Planning Council is to wisely manage, develop, and protect the region’s water resources for current and future generations by ensuring that the Altamaha basin’s water resources are sustainably managed to enhance

quality of life and public health, protect natural systems **including fishing, wildlife and wildlife utilization activities**, and support the basin's economy."

The Council decided to reflect on this language and review it again later in the meeting. The PC then proceeded to the next major agenda item.

2) Selection of Draft Management Practices – PC and Management Practices Subcommittee

It was noted that today's session includes the selection of draft management practices and it was emphasized that the practice are still draft – they can change in the upcoming month or so – but this allows Kevin to relay the draft management practices to EPD so that they can provide initial feedback. The PC handed out a draft list of management practices and noted that the summary should not be viewed as a consensus document from the Management Practices Subcommittee. Some members want general practices and some wanted more specific, etc. The idea was to leave practices on the list to get further discussion from full Council.

A Council member noted that he was worried about "scope creep" and that as things roll out, concerned this will be a prescriptive solution to all sites in the area, some of which we don't have enough data to address. This might be interpreted to fix all streams of all sizes without regard to data. When this is finished, we need a statement that efforts Council engaged in are limited in scope and only to support those gaps identified in the process to date.

The PC provided a broad overview of the condition of regional resources – generally, there are no groundwater gaps on a regional basis for our region. Some of our neighbors aren't quite as comfortable with this conclusion. The Altamaha Region does have some surface water gaps mainly on the Canoochee River, and a small portion of our region has uses associated with gaps on the Alapaha and the Satilla. In addition, there are/may be point source gaps for water quality as well as well as infrastructure gaps (need to expanded facilities before gap occurs). There are some existing non-point source TMDLs

The PC then walked through the document starting with a summary of gaps/forecasted needs: Management practices subcommittee highlights it should be noted that the following is not intended to capture every topic but the general flow of the discussion, The reader should also refer to the management practices handout.

**Continue to develop Upper Floridan.**

CM: Need to add other aquifers and protect other aquifers over the long-term. Water is our asset. Small wells in higher aquifers don't require permits if less than 100,000 gallons per day. Continue to drill wells withdraw and sustainably develop Upper Floridan and other prioritized aquifers and use of other aquifers in the region may be a better way to express this.

**Encourage implementation and adherence to Water Conservation Implementation Plan by local/governments/utilities; Tiers 1 and 2 for M&I; Tiers 3 & 4 for Agricultural (Ag) groundwater use in gap areas.** Continue to do well and implement the plans you have (M&I) and for Ag, practices that will reduce demand.

**Encourage land use practices that protect recharge areas of Upper Floridan.** Most communities also have ordinances that protect groundwater recharge zones.

Discussion - Change to protect aquifer recharge areas and not list a specific aquifer. Department of Community Affairs (DCA) - EPD requirements are not being enforced. Concern that it's broad language. What does "encourage land use practices" encompass? DCA looking at more sustainable development. Move growth where it can be. Concerned about intent of laws enacted being superseded by people that come into the process later. There is nothing we can do to keep people from interpreting what you say to mean something else. What we write and get finally approved, it will be interpreted in many areas. We need to add commentary on what we were thinking when plan is finalized in order to help with this issue. Several Council members commented that they would like to delete: Work with Florida on Florida demands and issues for future monitoring and refine modeling if warranted. Subterranean wedge feature is specific to Camden County. There is also a fault line along our southern region so, we don't affect Florida; recommend deleting this.

**Continue to confirm frequency, duration, and of gaps.**

- Additional data on Ag and consumptive use assumption (100%). CM - We may have overstated the gap. PC - From Dr. Hook's work - he doesn't think he's overestimated surface water use he noted that it may even be found that there is more surface water use as data is refined.
- Improve metering data and assumption on river flow.

CM - need to be sure report language includes what our intent was.

- Collaborate/support research on improvement irrigation efficiency measures and development of lower water use crops.
- Promote practices and educate stakeholders to minimize impacts to surface water associate with existing pumping/use of shallow/surficial aquifers that may impact surface.

CM - In regard to water conservation implementation plan - Tier 3 & 4 conservation practices - many farmers are already doing these things, but there may be some room for additional savings

#### **Additional/alternate water supply sources**

Modify pond operation minimum release in dry/gap years CM - this is not going to happen to get farmers together to change the operation of their ponds. Idea is not just to mandate this but to examine opportunities on an incentivized basis.

Discussion of benefits of Land Application Systems (LAS) CM - incentivize is key improvements to discharge to stream to add that flow to the stream and that could be costly.

#### **Water Quality**

Practices were then discussed that could address point source and non-point source pollution. Best management practices were outlined for urban, Ag, and Forestry BMPs. CM - I have some concern over the way the forestry BMPs are described and this language needs to be changes to be more accurate.

The chair noted that members should review the Georgia Water Conservation Implementation Plan as it has good information on water conservation that is directly applicable to the work that is being completed here. The PC also handed out a memo from Linda MacGregor that describes how the plan could be used as a resource to Councils.

### 3) Council Discussion of Management Practices

Chair - By the end of November, we need the draft management practices generally worded the way we want them worded. If we can get a consensus - majority of us - to submit a plan, it will become a part of the Georgia water plan that will be submitted for approval. The following summary capture the general discussion that occurred between the Council member.

We need to incorporate a statement at the end that there needs to be some sort of an incentive or some sort of payment for some of the plans we are promoting so that local jurisdictions are not saddled with some gap recommendation that they can't fund.

We need to weigh the benefit versus the cost. That needs to be taken into consideration – what will someone need to spend to get a benefit?

How does the Water Conservation Implementation Plan (WCI) mirror the tier 1, 2 and 3 in our management practices handout? The PC migrated the information directly from the WCIP to create the tiers in our draft management practices handout.

Surface water flows in the Ocmulgee, Oconee and Altamaha rivers – there is no gap according to the minimum flow regime, but I request that this Council consider the minimum flow be 50% more than current minimum flow. This is for fishing in these rivers. Otherwise other uses can use that flow and we'd be at 7Q10. There is a need for flows that mimic the historic patterns of our rivers – periods of drought and flood.

Maybe we need statement that we need more research into what the minimum flows should be. Does interim in-stream flow policy provide enough protection or does it need to be stronger?

You can't prevent 7Q10 from happening, you can prevent it from happening all of the time. Part of this was resolved by going to monthly 7Q10 (in 2001). Annual biomonitoring may also be important to better understand adverse impacts? Heading more towards adaptive management [describe previously].

Proposal: Council direct contractor to provide draft language under data collection/improvement or evaluating whether monthly 7Q10 flow criteria needs to be reviewed and other options that may be appropriated from a biological perspective.

Interbasin transfers – already occur in Georgia. This is okay, we just don't want to affect vision and/or goals. The key is that other regions should not divert water at the expense of this region. Just because one location doesn't have gap and another does, deliberately taking water from one location to meet gap at another isn't right.

Want to make sure that folks upstream of us don't take too much and mess it up for us.

If you haven't addressed your local people then the plan will not be well received. The discussion this afternoon highlights the need for more awareness and education rather than more regulations.

4) Additional Outreach Needs

The PC handed out a table indicating entities that have been preliminarily targeted for additional outreach, including major municipalities and water providers in the region. The PC asked Council to review the list and indicate anyone else to whom we should perform additional outreach. The PC also noted it will be important to identify implementation considerations for those entities that will be involved/effected by Council's recommended Management Practices. Council noted it is also important that we do not have our recommendations "put a target" on anyone.

- 5) Election of Vice-Chair. It was noted that Mike Polsky resigned as the vice-chair of the Altamaha Committee, as he has recently moved to Texas. The Chair called for nominations of a new Vice Chair. Sue Sammons nominated Ed Jeffords. Jim Strickland seconded the motion and further motioned to close the nominations. Ed was elected unanimously.

The chair also noted that a couple of the Council alternates have served faithfully while a couple of full Council members have not attended meetings. The chair suggested the Council should treat the alternates as full voting members. Ed Jeffords made a motion to do so and the motion carried unanimously.

6) Quantification of Gaps and Needs

The PC provided a detailed handout of additional information that quantifies regional withdrawals, returns and gaps. Council was reminded that last meeting we reviewed the county by county assessments, but we urged caution in the sense that we need a regional plan. Now we've started a technical memo that takes this more regional approach; summarizes data on aquifer basis and at the surface water planning node. The handout we now have is a start of the tech memo that builds on everything we've given to you before. As you take it home today, we're building our plan based on existing permits and plans. We've quantified know planned permit capacity or projects that we've identified and that helps fill the future need. Surface water planning nodes show withdrawals and returns. Planning is driven by withdrawals - need enough water to meet withdrawal needs. Gaps however are driven by consumption.

The PC then showed the analysis of gaps at Claxton - about 85% of the Claxton gap can be solved with around 1000 acre-feet of water per year (note to Council to help with conversion we will at more information on conversions 1 acre-foot = .33 million gallons per day; so on annual basis the gap is fairly easy to address 1000 acre-feet X .33

MGD/acre-foot = 325 million gallons/365 days = ~ 1 MGD. The challenge is one of timing as the gap typically occurs over a 30-90 day period). The PC is working with EPD to work towards closing most of the gaps but perhaps not every gap. This is because there is some uncertainty in the models and also the benefit versus impact may be much different for the large less frequent gaps; it is harder to close those last 15% of gaps.

The handout shows withdrawals and returns. For example - at Claxton, the consumptive demand is approximately 6.7 mgd. This is an annual consumption volume of about 7,500 acre-feet. Need to consider when the return flows are occurring. You must consider timing. If an entity is returning water at a time when there is no gap, then those returns can't be credited against the gap. If we could save all of the water coming from return flows such as those going to an LAS or with storage in Dec, Jan, Mar and then in July when there was a gap, and then release it all when there is a gap, we could fill that need perfectly.

Chair posed a question for consideration of the group - agriculture is responsible according to this for the biggest gap. When we're talking about gap at Claxton or even at Kings Ferry, when you're saying that ag is responsible for X% of the gap or so many million gallons of water, are you taking into consideration the entire drainage basin or just the river itself? PC - Yes, we take into account the streams and creeks that feed the rivers. Chair - the biggest contributor to the gap is ponds. If I remember right, Dr. Hook in times of drought in the summer when we do have rains, then ponds are capturing 30% of the run-off. Dr. Hook recognized groundwater to pond systems.

One of our goals is to sustainably manage our resources. We have information on the Canoochee that there is a gap. We may encourage future permit holders to look elsewhere for water supplies. They should at a minimum work with EPD to make sure they don't make the gap worse. Or, they should look towards going to groundwater rather than going to surface water.

Need clarification/further research on groundwater -to pond, surface water to pond, and how groundwater supplements the ponds.

Chair noted from Canoochee figure that man started influencing the river. He suggested that's the portion we should consider ourselves with are those times when our practices can have an effect we are not talking about things we can't address due to naturally occurring droughts. There were not many ponds in the 1950s when the 1954/1955 drought occurred. That was naturally occurring.

The PC then highlighted some results of the nutrient modeling – look at hot spots and see what the predominant land use is so we can determine whether the impacts may be human or other. This plays into where we would emphasize more forestry practices rather than more agricultural practices.

CM – I am concerned with how these results could be interpreted. Just because forestry may be a dominant land use in a hot spot that does not imply that forestry is the main source of nutrient loading. This needs to be made clear.

#### 7) Energy Forecast Results

The PC presented the results of the energy forecast. The forecast was developed by EPD and a consultant with input from an energy ad hoc committee. The ad hoc committee was made up of representatives from the power industry as well as GEFA. The goal of the forecast was to evaluate how water resources may be affected by energy needs.

The PC made the following key points:

- Energy production is somewhat unique in that some power generation facilities withdraw water but do not consume large amounts of water; some production methods do have higher consumption rates but overall the consumption on a statewide basis is about 7% of total withdrawal.
- Single pass cooling [condensing steam using a single heat transfer (cooling process)] represents 88% of withdrawal and these facilities withdraw higher volumes than other methods but return most of the water that is withdrawn.
- In the Altamaha region we have evaporative/cooling tower facilities so our region's consumption is higher than the statewide average.

The PC highlighted that the forecast has several scenarios:

- 2 - Power generation needs scenarios that includes: 1) baseline (1.74% growth, following historic trends); and 2) a “reasonable “ high scenario that has energy growing at a slightly higher growth rate (2.14%) than the mean trend.
- 2 - Water Demand scenarios: 1) a scenario that quantifies water demand for planned facilities through 2017 and 2) a scenario that quantifies the additional water demand required if energy production from existing generating capacity is maximized (this scenario does not meet all statewide power needs through the forecast horizon).
- An Alternative Power Needs Scenario to quantify the total regional and statewide water needs to meet forecasted demands through the entire planning horizon.

The PC noted that the criterion used to determine planned facilities through 2017 was based on an accounting of those facilities with a completed Air Quality permit application. It was also noted the energy forecast is regional through 2020 (2017). Beyond 2050 the forecasted need is at the statewide level and has not been distributed to individual regions of the state. The forecast did not specifically distribute water needs between 2020 and 2050 as this would be highly speculative

The PC then highlighted some general guidance to Council and made the following points:

- Even under the 2017 maximum capacity scenario 2050 demands cannot be met.
- The location of any additional energy capacity/generation method beyond 2017 is not known.
- Council can incorporate water withdrawal and consumption information associated with known and planned facilities.
- For energy water demands associated with power production beyond 2017 Council may wish to look at this more qualitatively in terms of understanding the water resource implication if some additional power generation were to occur within the region.

The PC concluded with a summary of the information that will document the energy forecast including: A detailed Technical Memorandum; and Executive Summary; the PPT and presentations to Councils; additional guidance to Council similar to the above bullets; and a template that can be included in the regional plan.

CM - How is the out of state energy both in and out accounted for?

PC- The forecast kept the relative percent in and out of the state constant over the planning horizon.

CM - Which source of energy uses the least amount of water?

PC - It is more driven by the cooling method. Wind and solar are lowest water demand.

CM - If energy was located into our region we might need to have storage because of a few of our regions are close to critical low flow during dry periods.

CM - In Altamaha we do not have some gaps what about the other regions?

PC- Most regions do not have significant gaps other than the Flint and Suwannee-Satilla and some localized areas.

CM - One big alternative would be to consider aquifer storage and recovery as a possible practice.

PC - Yes this is a practice that has been used effectively in several areas including South Carolina.

CM - In the case of Plant Vogel how is the new expansion going to occur?

PC - There will be more capacity added and more cooling.

Public - Council should keep in mind that the Floridan aquifer is a dynamic system and it is moving and there is the potential for contamination from mineral leaching.

PC - You do have to consider treatment and geochemical considerations.

8) Management Practices - Continued

**Groundwater**

The PC suggested that the next step in management practices refinement is to discuss fatal flaws in the management practices as they stand now. The Council provided additional feedback and the general discussion is summarized below.

Groundwater - Add implementing this in all aquifers. Also add words to sustainably develop.

Page 2 - land use practices should include all aquifer recharge areas in our region.

Member concerned about Florida demands as discussed earlier and reemphasized that this should be deleted.

Encourage land use practices - open ended. That's pretty broad.

Continue to monitor and improve - use science to help research - some of these practices (such as ASR) that we've talked about could be a good tool but only if it is done correctly.

**Surface water**

Water conservation - at fourth bullet - minimize or eliminate the use of high-pressure spray guns on fixed and traveler systems. Why change this out if there is enough water to support it? In west Georgia, they've gone to low pressure systems. Encourage efficient use of high pressure spray guns maybe a better way to say this. Energy and other requirements will take care of some of that. If you use a soft hose traveler with a four-inch hose pumping 550 gpm, need to have 120 pounds of pressure at the pump in order to drive it.

Or maybe we should just say "encourage selected use of conservation implementation plan". But we need to give more guidance and specificity than that. Committee should

refine this and how to treat it. Encourage the development and use of the highest efficient irrigation systems available.

Tier 4 – Install end-gun shutoff with pivots is a good idea.

More research into how to water crops for the most efficient use of water. National peanut lab in Dalton has researched this for corn, cotton and peanuts. We could suggest furthering that research and expanding it to other crops.

Modify pond operation for minimum release in dry/gap years – incent the use of surface water impoundments for surface water discharges in times of gap. This should be discussed more by the subcommittee.

Future ponds might encourage folks to drill wells because of additional costs associated with pond construction.

Direct pumping of groundwater to surface water during critical dry periods. Should not be considered unless it is a last resort.

Need some wording on interbasin transfer. Not against it unless it's detrimental to our region. The subcommittee should take this up.

Possible joint reservoir – maybe we need to look at other opportunities in the future for reservoirs. Future research for reservoir developments throughout the area should be a recommended practice.

The only way to sustain the flow in the Canoochee river is to build a reservoir in the headwaters and this would require a study. Look at reservoirs from a surface water recharge perspective, not from a population served. Might be more of them that are shallower. Surface water recharge reservoirs.

Concern over ASR. Suggestion: research the pros/cons of ASR.

Recharge of surficial aquifer is similar to incentives to restore wetlands and historically drained hardwood and other areas.

What is the affect of forestry on nitrogen and phosphorus? A Council member noted that nobody fertilizers forested lands anymore. That used to be big, but companies can't afford to do it anymore.

Better describe “consider measures to promote increased infiltration” and add “stormwater”.

“limit development in floodplain.” Strike this item.

Clarify stormwater practices – retention ponds vs infiltration

Erosion and sedimentation controls during harvesting – mandating this is cost prohibitive and it is not accurately describe so either delete or reword.

In rewording this section it would be good to state it as “Examples include” and then list the other bullets.

Page 8 – clarify streams and rivers instead of ponds and work with the subcommittee on specific language.

Okay on incentives for wetlands for hardwood . . . but not silviculture.

9) Shared Resources

The PC reminded Council of the need to coordinate with other Councils on shared resources and handed out the list of our representatives and the shared resource issues. At this point we may be able to accomplish this mostly with phone calls or other correspondence.

10) Water Plan Development

The PC provided an overview of the comments received from EPD on Sections 1-5 and discussed the preliminary submittal of Sections 6-8. Most of the comments so far were editorial and requested that certain section be shortened.

11) Revisit Vision and Goals

The Council looked over the revised vision statement and generally felt it addressed the points raised by Mr. Hauss. A motion was made by Jim Free to adopt the revised mission statement in lieu of the resolution; second by John Roller. The motion was unanimously approved by Council.

12) Recommendations to the State

The PC highlighted several examples of possible recommendations to the state to help in the implement the findings of the water plan. Examples include: supporting existing

funding programs and programs, additional data collection, and future role of the Council.

CM - Does National Resource Conservation Service and Farm Service Agency do the Ag metering?

GSWCC - The metering program is a state program and it is implemented cooperatively with both EPD and GSWCC.

The Chair noted that he has met with City, County, County Commissioners, and Ag interests to inform them of the work of the Council. By far the Ag interests were the most engaged and interested. The others have so much on their plate they do not have the time to fully engage on the issue unless it impacts them directly.

13) Local Elected Official Comments

There were no local elected official comments.

14) Public Comments

Neil Herring - Addressed the Council regarding the energy forecast and pointed out the planned energy need for water in associated with a plant what would use water from the Upper Oconee. In addition if another plant is approved in Ben Hill might require water from the Ocmulgee. In terms of funding suggestions there have been several funds that legislature has reallocated to other purpose such as the general funds and encouraged Council to consider a Constitutional amendment to dedicate the monies collected from fees to stay allocated to the original purpose for which the fund was created.

15) Wrap-up and What to Expect Next Meeting

The Council agreed to hold their next meetings in Vidalia on December 16 and January 11.

cc: Kevin Farrell, EPD

Altamaha Regional Water Council  
 Council Members Attendance List

Altamaha Council Members		10/28/2010
1	Gary Bell	
2	Randy Branch	
3	Guy Rex Bullock	X
4	James Mark Burns	
5	Gerald A DeWitt	X
6	Will Donaldson Jr.	
7	Cleve Edenfield	X
8	Jim Free	X
9	Randy Giddens	
10	Len Hauss	
11	Edward S Jeffords	X
12	Phillip Jennings	
13	L. Brinson Lanier	X
14	Dan McCranie	
15	Steve Meeks	
16	Greg Morris	
17	Buddy Pittman	X
18	Michael A. Polsky	
19	John E. Roller	X
20	Sue B. Sammons	X
21	Doug Sharp	
22	Paul A. Stravriotis	X
23	Jim E. Strickland	X
24	Dent L. Temples	X
25	Lindsay Thomas	X
26	William G Tomberlin	
27	Michael Williams	
28	Tommie Williams	
29	Russ Yeomans	

*Total*      13

Altamaha Regional Water Council  
Public Attendance List

	<b>Public Attendee</b>	<b>10/28/2010</b>	<b>Representing</b>
1	Deatre Denion	X	GA DCA
2	Don Giles	X	GA Farm Bureau
3	Don Harrison	X	GA DNR - Fisheries Mgmt.
4	Neil Herring	X	GA Water Coalition
5	Rahn Milligan	X	GSWCC
6	Harold Mobley	X	Georgia Power
7	Bryan Snow	X	Georgia Forestry Comm.

*Total*       7