

Memorandum

To: Suwannee-Satilla Regional Water Planning Council

From: Rick Brown and Brian Keel, CDM

Date: 11/12/10

Subject: Council Meeting 8 - Summary

This memorandum provides the meeting summary of the Suwannee-Satilla Regional Water Planning Council Meeting 8 (CM8), held on October 27, 2010 at Wiregrass Technical College in Fitzgerald, Georgia.

1) Welcome and Introductions/Recap CM 7/Approve Agenda/Approve CM7 Summary

Chair Darvin Eason called the meeting to order and asked Scott Downing to welcome the Council. Scott welcomed the Council and also introduced Jeff Lewis, the General Manager of Fitzgerald Utilities, and asked Mr. Lewis to add some opening remarks. Mr. Lewis welcomed the Council and indicated the City was happy to be hosting this meeting. The Chairman also introduced special guest attendees from the Suwannee River Water Management District (SRWMD) in Florida.

Chairman Eason provided an overview of the agenda and kicked off the meeting. Chairman Eason asked the public to introduce themselves and then asked the PC to proceed with the first agenda item. The PC asked for approval of the CM 7 Summary; Mike Edgy moved for approval, second by Scott Downing and Council unanimously approved the summary. Next the PC asked for approval of the agenda; Scott Downing moved for approval, second by Gordon Rogers and Council unanimously approved the agenda.

The location and possible dates for Council Meeting 9 and 10 were discussed. The PC suggested December 8 in Douglas and January 12 in Adel (originally suggested Douglas but in honor of our Chair the location was changed to Adel); Council approved the proposed dates and locations.

The PC then provided feedback that was received regarding CM 7; 100 percent of those providing feedback found the meeting to be extremely useful.

The Chairman and PC then gave a recap of the October 6th Joint Meeting in Macon and thanked all those that were able to attend and especially those Council members that served on panels. The Chairman indicated that for the first time he heard representatives from the Metro North District asking for help. He also mentioned that the Coastal Georgia Council is considering treating stormwater and injecting it into the aquifers.

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.

CM - Where will the additional funding come from?

PC - Funding will be a major challenge and some different ideas have surfaced starting with recommending that existing funding sources such as the Georgia Environmental Finance Authority Funds should be stabilized and "refunded". Council should provide any suggestions they may have for new funding sources or ideas.

CM - Doyle and Gordon both participated in panels and did a very good job. It was a great meeting to learn more about each Council.

The meeting continued with an overview of the following objectives for Council Meeting 8:

- 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

2) Selection of Draft Management Practices

The PC initiated a discussion of draft management practices and handed out a Draft Management Practices table. The PC emphasized that the handout is a DRAFT product of the previous Council work and the recent work of the Council's Management Practices Subcommittee.

The PC explained the goal of the morning discussion is to start a big picture discussion of practices and by afternoon to try to reach consensus on the practices that should be included in the plan. Once this overview is complete we will then get into details of gap quantities and specific measures to address them later in the day. The PC reminded Council that we want to revisit Vision and Goals between now and next meeting and make sure we're still happy with them.

The PC provided a handout summarizing the management practices by resource (groundwater, surface water, and water quality). The PC highlighted groundwater as a very important resource. There is no groundwater gap in our region, but there is a future need. The PC talked through preliminary recommended groundwater management practices.

CM: What do you mean "continue to develop Upper Floridan"?

PC: Continue drilling wells to supply water from the Upper Floridan Aquifer. Council asked the PC to provide some more specific language to be clearer about this practice

The PC discussed Tier 1-4 conservation practices from the Water Conservation Implementation Plan (WCIP).

CM: This was also spelled out in a memo from Linda.

PC: Yes, and we have a copy of that for everyone here.

The PC handed out the memo from Linda MacGregor.

CM: We should continue to develop the Upper Floridan - this is an important part of our plan. We need to start putting industries where water is. We need to encourage some of the more water-intensive industries to come here where the water is.

CM: How can you continue to promote industry around Atlanta when you don't have water?

CM: We don't have the population workforce here to attract industry.

CM: We have 1,000 people unemployed here now; Coffee County probably has a couple thousand.

CM: Can you explain Tier 3 and 4?

PC: Refer to page 3 of the table of Management Practices under Water Conservation for Tier 3 and 4 for Agricultural practices. These are not "one size fits all" and noted that everyone doesn't have to do each practice 100%.

CM: Are we talking about using these on Groundwater development too?

PC: Yes, good point, we need to make that clear in the table.

CM: We can probably get more money from NRCS and SWCC for conservation.

PC: You hit the nail on the head. We can make a recommendation to the State: Continue to support SWCC programs and work to leverage federal funds to encourage full implementation of water plan.

CM: Also continue the use of incentives.

CM: We see more people signing up than we have money for. If we lobby for money to do that will help improve the level of implementation of these types of practices.

CM: We need to encourage practices but at same time encourage incentives to implement practices.

CM: Encourage them as they are economically viable. You have to have the right economic environment for these incentives. It's very important we include this in the Plan this way.

CM: Encourage voluntary.

CM: I think we're trying to say we don't want to develop practices that conflict with and detract funding from existing SWCC programs and funding.

CM: Within the 40-year planning horizon, irrigation technology will make today's practices obsolete. Encourage development of better efficiency irrigation. Center pivots will become obsolete, maybe in 10 years, maybe 20. We need to look at the big picture.

CM: Subsurface irrigation is being implemented now. We can work in harmony with practices we're already doing with NRCS.

PC: That's great, but we can't leave it as saying "we're already doing that". Our Plan has to show how we're going to make it better. If we're implementing conservation, we need to quantify how much saving/demand reduction we can expect and what that will do to help close the gap. We understand we don't want to hurt ourselves with recommendations that turn into negative impacts to the end users, but we have to work within the goal of having some level of quantifiable practices.

CM: Don't make practices mandatory; educate people to why they should do this.

CM: Sounds like we need to maybe push back. People at the Stripling Center Irrigation Research Park say there's probably 10-15% additional savings from full implementation of existing irrigation technology. Talk to those researchers and confirm this savings, and if we fully implement that adjust these gaps to show us what we'd save. Put some numbers to it.

PC: Since surface water demand is on a node basis, it's easy to quantify. This is the level of specificity we want to go to and then have "benchmarks" to monitor progress.

CM: Implementation is not automatic. People have to actually use this technology.

CM: Strike "eliminate" from "use of high pressure systems" on the list and use a different word. Some systems have to use high-pressure.

PC: We need to identify where additional data and refinements are needed. Our Subcommittee said to focus on gap frequency, duration, and severity. They also feel we need additional information on agricultural consumptive use. Not all agree with 100% consumption. They also see the need for additional information on dual source of supply and timing of irrigation use from ponds.

CM: It was clear at Macon Meeting that there was support for restoration of wetlands, and additional research is needed and there is potential opportunity between the Altamaha, Suwannee-Satilla, and Coastal Councils for 319(h) grant funding opportunities.

Next the Council and the PC discussed additional water supply practices.

CM: Some other Councils have the same ideas for improving flows in the smaller drainage basins.

CM: We need to consider moving land application systems to point source discharges.

CM: I agree, I don't see this in the management practices list. This needs to be included as a water quantity and quality management practices.

CM: I would also like to propose we consider an inter-basin transfer from the Altamaha River to headwaters of the Little Satilla: the Rayonier plant effluent. This will help flows at Atkinson.

CM: On these conservation BMPs such as conservation tillage, we need to give consideration to incentives and other programs that they be user friendly. Don't want the solution to become the problem. In order for water users to utilize these practices they need to be user friendly.

CM: I've been involved in a program at NRCS for 6 years. Within that time we now have to prove everything that we do with documentation and it's time consuming. Next problem we ran into was yield loss on peanuts by not tilling the land. This year we got a burrowing bug that cost us 200 dollars per ton on peanuts. I'm not saying do away with this program, but we need to be flexible and try not to put so much burden for documentation on farmers that have so many other things to do. Now the program is costing me more money than it's saving me and I can't get out of it.

CM: Flexibility is critical.

CM: We need to work it out so programs don't take so long to implement. Paperwork and permits take time... we need to streamline the process for farmers.

CM: We had substantial conversation about BMPs on County dirt roads. This is a big issue in the Satilla basin. We need to expand Management Practices from Forestry for design and maintenance of dirt roads. There are several BMPs for this. In Brantley County there are no BMPs being implemented for dirt roads.

CM: Every time the river comes up it blows out roads and the County brings in truckloads of dirt to fix the roads. We put riprap and surge stone to stabilize them.

CM: A major issue I see is County dirt roads are only 30 feet wide or less... not much room for a ditch with vegetation. If you try to get a right-of-way to implement these you need a wider swath and have to buy it from adjoining land owners.

CM: I just want to get this on the list.

3) Quantification of Gaps and Needs

The PC then presented a detailed overview of the quantification of gaps and needs and distributed a handout with this information. Time was spent discussing surface water

gaps at the nodes in the region and the difference between withdrawal and consumption. The PC explained the handouts, which contained graphs showing the volumes of gaps at each node and how various management practices could be used to fill those gaps. The PC also discussed the frequency, severity, and duration of gaps over the period of record and the seasonal variation of surface water gaps from agricultural irrigation.

There was a discussion of whether Council needs to fill 100% of gaps at a node or is it sufficient to select a breakpoint gap that is a more manageable volume and still captures the majority of gaps over the period of record. The PC explained that the Subcommittee likes this approach but that EPD has not given official approval and that it is important to close gaps over time and that may provide the flexibility to allow more understanding of the larger infrequent gaps.

The PC also presented results of a nutrient "hot spot" analysis that was conducted to identify land uses in the region that contribute the highest concentrations of nitrogen and phosphorus in stormwater runoff. Non-point source pollution management practices to address nutrient loads were discussed.

CM: Including the percent land cover may be misleading because we know we have a lot of forest cover but these lands are not really a major source of nutrients.

CM: Are the nutrient naturally occurring? If they are then we cannot be expected to address what is natural.

PC: Yes they do occur in the soil and organic matter. We have indicated that the sources are not specific to a human induced activity.

CM: I do not like the way some of the forest practices are listed here because they are not really applicable to how the BMPs are implemented.

PC: Good comments we are trying to show that it will take a combined effort of forestry, urban and agricultural BMPs. We will work with the subcommittee to develop better language.

4) Energy Forecast

The PC presented an overview of the energy forecast methodology and results. This was the last forecast to be completed due to the complexity of the topic and the timing to develop a methodology that incorporates information on planned energy facilities and longer term forecasting. Similar to the municipal and industrial forecasts, this forecast

used an Ad Hoc group of power providers to provide data and help peer review the forecast information.

The PC highlighted that the forecast has several scenarios:

- 2 - Power generation needs scenarios that include: 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: Why weren't projects included if they were planned?

PC: The forecast included planned projects that are most certain going forward, such as those that have applied for permits.

The PC pointed out that maximizing power production from a plant is not necessarily the most efficient way to operate the plant.

CM: What about potential surface water withdrawals for energy where we don't have gap information? The Ocmulgee is in our region but we have no nodes on this river in our Region.

PC: Council can still consider if future energy might come from withdrawals in the region.

CM: A proposed plant would withdraw from the Ocmulgee in Ben Hill County.

PC: Since this facility has not applied for an air quality permit it was not included in the 2017 forecast, but that does not mean that it will not be built to meet the unmet statewide demand by resource in our region. There are areas where there are available surface water supplies in our region.

5) Guest Presentation by Mr. David Stills and Mr. John Dinges of the SRWMD

Mr. David Stills and Mr. John Dinges of the SRWMD gave a presentation on water supply planning in their District. Mr. Dale Jenkins and Mr. Carlos Heard from the SRWMD were also present.

53% of the Suwannee River basin is in Georgia. We are connected by the River and we share many common interests and have similar values. The District depends on agriculture for economic stability. Outside influences contribute to water resources problems in the District.

Groundwater feeds springs in the District; groundwater is our surface water, there is no difference. Our springs may go dry at Dr. Kennedy's sustainable yield limits. Georgia and South Carolina have been working together for years, why can't we do the same thing with Florida and Georgia? I think it would be good to build on your and our planning efforts to address our gaps in a cooperative manner.

In Florida, environment is ranked equally with human needs. State water law changes every year.

In Tampa, there was a \$180M project to build a 25 MGD desalination plant in Tampa (\$18M year total O&M). It feeds a 15 Billion gallon reservoir (\$275M). It is needed to fill a gap.

In South Florida there is a \$20B everglades restoration project. Pump station energy costs to operate are more than annual Suwannee River WMD operating budget.

Kissingen Springs in south west Florida was a natural spring in the late 1800's that is dried up now.

For a long time people in the region thought the Suwannee District has the most springs and an endless water supply. Springs in the district provide approximately 70% of flow in our rivers. We manage our surface water and groundwater as the same resource. We realize your geology may be different but we see affect down here.

There are 33 Magnitude 1 springs in the State of Florida, 21 in the Suwannee River WMD. Magnitude 1 spring discharges 100 cfs or more.

White springs in North Florida also dried up. The groundwater flow divide has encroached upon the District in the northeast part of district, which has lost approximately 20% of the groundwater contributing area in the District. We see major withdrawals in the Jacksonville area.

CM: This is a pressure problem, not a quantity problem. You relieve pressure on the system and it no longer wells up in the spring.

CM: Camden County only shows 3 MGD on your map. A paper mill there withdrew 20 MGD in 2000 (year of map). It no longer withdraws but it's incorrect on your map.

SRWMD: We don't have good data for Georgia. We also don't have good data on Ag uses in our district. This is the only water use in our district that is not metered. We use a telemetry system on 20% of our Ag uses that use 80% of Ag water to estimate these uses.

When we assess water supply, we look at what the demand of water will do to the water resource. If you predict it will do harm, you have to establish a planning region to identify alternative supplies. We predict an overall groundwater use of 995 MGD from the Upper Floridan by 2030.

EPD: Is aquifer storage and recovery used in Florida?

SRWMD: Yes, in southwest Florida.

CM: Can you speak to that?

SRWMD: Yes, at the end of the presentation.

We have groundwater gaps in each of our Water Service Planning Regions and we are looking at how to address groundwater gaps with surface water. We cannot pump any more groundwater in some of our areas.

All our systems are very flashy... there is a limited amount of time when you can pull off surface water to fill reservoirs... where do you store it? Storage costs money.

The St. John's River WMD withdrawals are impacting groundwater levels in the Suwannee River WMD and potentially Georgia.

PC: What advice would you offer Council based on what you heard this morning?

SRWMD: On the Ag side, we need to be efficient with our water use. More and more efficient water use patterns due to technology. You can use conservation as lowest hanging fruit but it won't get you all the way there.

CM: Speak to land ownership. Major land ownership in south Georgia is by private land owners.

SRWMD: We've looked at conservation easements in lieu of fee simple and we own a significant amount of land. Conservation Easement allows Ag land to keep doing what they're doing but you're making sure there's not more development or concrete put on that land. It protects land for recharge and water resource enhancement.

We also take a non-structural flood management approach... if you live on the river you're going to flood and we're going to let it flood.

CM: Can you talk about naturally occurring nutrients?

SRWMD: There are very low levels of naturally occurring nitrogen in groundwater. We have lots of areas high in nitrates. We don't meet these standards at the GA-FL line for water coming into FL. Phosphorus isn't an issue with us but nitrogen is. Nitrogen levels in some of our springs have ramped up from 0.5 mg/L to 6 mg/L over the last 30 years.

CM: Regarding Dr. Kennedy's assessment of sustainable yield in the Upper Floridan aquifer, I sense some tension there. We based our gap analysis on this.

SRWMD: We're not here to influence your decisions. Dr. Kennedy used a 30-foot drop and 40% reduction in baseflow as sustainable yield parameters. Based on pressures in our springs we don't think these limits are sustainable. I caution you on using this science. Municipalities can use reuse. Send wastewater from municipalities to Ag users. Be cautious. If you can't sustain development with your water resources, don't continue development.

CM: If you had to do this over again, could you make your protection dollar go further with a conservation easement approach versus fee simple approach?

SRWMD: Yes.

CM: Can you go back and take fee simple land and make a conservation easement?

SRWMD: Yes, we are starting to do this now.

We need to tax bottled water going out. It's classified as a food source and there is currently no tax on food source. When we issue permits, users can't harm springs. We have 2.6 MGD allocated to bottling plants (this is not actual pumping, it's an allocation).

CM: Do you issue permits for bottling plants?

SRWMD: Yes.

CM: In Brooks County, a hauling outfit got permission to build a bottling plant without trucking.

SRWMD: The Water Management Districts have exclusive permitting authority for water.

CM: There are other locations in the US where states are charging royalties on bottled water.

SRWMD: We have a policy that we won't allow trucking of water.

EPD: Do Ag permits have a term limit?

SRWMD: Yes. They are based on quantity based on 2-year and 10-year drought analysis of crop needs.

EPD: Have you had a situation where someone bought lots of land and applied for a large Ag irrigation permit and you do the evaluation and determine the amount they're requesting is not available and you had to deny it? Do you have the ability to deny the user what they ask for?

SRWMD: Yes. Normally what will happen is the user will tell us what crop they want to grow, such as corn, which is the highest water-using crop. Then we do the analysis to determine what amount is needed.

EPD: Regarding a potential lawsuit with EPA over nutrient standards, if you have a suit and a stay is not issued and you issue Ag permits prior to any stay being issued, do you have to put those standards on your Ag permits prior to getting a stay?

SRWMD: We have a call tomorrow at the Governor's office to discuss this... we don't know what's going to happen. Florida is probably not going to take the position that we're exempt. If Ag is part of the problem, it's going to have to be part of the solution. WMDs really only do water quantity. Department of Environmental Protection issues permits for water quality for operations such as waste management and fertilizer application.

CM: How are you funded?

SRWMD: 10% from ad velorum tax. The rest comes from grants and loans from the State of Florida and the Federal government. The other 3 districts get the majority of their funding from ad velorum tax. We had a \$55M budget last year. We are the poorest district.

EPD: EPD's budget this year is \$14M.

CM: At the mouth of the Suwannee, are you getting pushback from the oyster, crab, and shrimp industry?

SRWMD: We monitor flow in the Suwannee to make sure we don't move the salinity line. We haven't seen decreases in submerged aquatic vegetation or decreased flows that cause problems.

CM: How do you maintain minimum flows?

SRWMD: Permitting.

CM: Do you give grants to help people maintain compliance?

SRWMD: If the State gives us money there are strings attached to it and it's already allocated to certain uses (property acquisition, management, etc.). Federal money is all FEMA money for floodplain mapping. Only ad velorum funding has no strings attached. Once we spend down our current land purchasing funding I don't think we'll be buying any more land.

CM: This is lessons learned.

SRWMD: Funding comes from land transfer tax from every time land is purchased in State. The Legislature divides this funding out to WMDs.

CM: We tried this in Georgia, but business people, farmers, etc... not everyone bought into how they wanted the money used.

SRWMD: People don't value water as a resource until they turn on the faucet and nothing comes out.

CM: We're dealing with the problem of how do you take all this complex information and create something that EPD will approve that doesn't hurt people in the region.

CM: What is the makeup of your board as far as occupations?

SRWMD: Cattleman, optometrist, Attorney, CPA, forestry land manager, clam farmer, engineer, banker.

Council thanked the District for coming and providing an informative presentation.

6) 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.

7) Selection of Draft Management Practices

The Council returned to the discussion of Management Practices where they left off in the morning session.

CM: Regarding surface water impoundments relating to Ag irrigation, I still have difficulty understanding how surface water farm ponds maybe contributing to surface water gaps. When we start irrigating in April, ponds are full, rivers are at low flow condition, and there is not much rain. Impoundments are on upstream reaches: what matters is the flow that the dams prevent from going down that reach. It does not matter how much water from that pond you use to irrigate. The Council member provided a

schematic of the flows into and out of farm ponds and discussed conceptual ideas about how to better quantify the effects of farm ponds.

PC: Yes you are correct that the hydrology has changed. Unless the ponds are at capacity they intercept water that would otherwise make it to the stream and then the river. So yes the resource assessments show that low flow periods have been affected. The question for Council is that knowing that we may be at or exceeding the resource capacity what should be done about it? Should future surface water withdrawal permits be affected by this fact? Should we recommend EPD continue to issue surface water permits when we know we have very low flow conditions that may not always sustain our rivers? What should we consider for existing surface water uses?

CM: I'm concerned that we're making decisions to use more groundwater and the Suwannee River WMD comes and tells us they don't have enough groundwater. Jacksonville is talking about taking more water out of St. Mary's River.

PC: Using more groundwater is one option but can we discuss the Council's recommendations for future surface water withdrawal permits?

CM: We can't talk about that exclusively.

CM: This is an unlikely scenario. Everyone knows rivers are going to go down and you can't pump out of a dry stream. Another question is what if an applicant wants to build a pond and fill it from surface water when there is not a low flow condition?

EPD: You could recommend they fill the pond from groundwater. Right now we're close to 50/50 surface water/groundwater sources to fill ponds in our region.

PC: Also due to Gulf Trough some folks can't get groundwater. Dr. Hook actually used source of supply water data for the Ag forecast.

The Chairman suggested the representative from the Management Practices Subcommittee walk Council through the Management Practice list and get Council's opinion (good or bad) on each practice. Subcommittee Member Gordon Rogers led Council in a discussion of each practice. Council discussed edits and modifications to several of the practices listed in the preliminary table handout and requested that the work be refined by the subcommittee in preparation for CM 9. Major points of discussion are highlighted below.

Groundwater:

- Continue to drill wells and use water from the Upper Floridan and other prioritized aquifers.

- Incentivize land use practices that protect recharge areas of Upper Floridan, recognizing some recharge areas are outside the Suwannee-Satilla Region. By incentivize Council means tax breaks, conservation easements, fee simple transactions, a whole toolbox to prevent pavement.
- Gather additional data on aquifer sustainable yield metrics.

Surface Water Quantity:

- Confirm the frequency, duration, severity, and drivers of surface water gaps; and identify significant causes of more frequent low-flow conditions in these surface water systems (i.e., climate, changing hydrology, etc.).
- Additional study is needed to characterize the role of ponds and dams on upstream reaches and the effect of changing hydrology on surface waters in the region.
- Develop additional information on agricultural consumptive use estimates.
- Management practices should be voluntary. That is, they should be encouraged and incentivized but not mandated.
- Return flow management can be used to help restore flows to surface waters. This includes modifying discharge locations of some wastewater treatment plants and converting land application systems to point source discharges. This could also involve stormwater management and consideration of aquifer storage and recovery (ASR) if deemed feasible and appropriate.
- Inter-basin transfer may be a feasible option at two locations in the region.

Surface Water Quality:

- Provide incentives to preserve hydrologic function of existing wetlands.
- Maintain streamside management zones and buffers.
- Support Georgia Soil and Water Conservation Commission and Georgia Forestry Commission BMPs and education programs.
- For urban areas consider model ordinances and resources such as the Coastal Stormwater Supplement to the Georgia Stormwater Manual.
- Additional water quality monitoring and data collection.

8) Water Plan Development

The PC provided a review of the status of the Plan drafting and review. The final draft of the Plan is due to EPD on January 31, 2011.

9) Local Elected Official Comments

There were no local elected official comments.

10) Public Comments

Lisa Tomlin, Provost of Wiregrass Technical College: We hope you enjoyed good hospitality here and we were honored to have you here. We're happy to extend an invitation for a campus tour to anyone that's interested. As a gift please take a reusable water bottle from us. Ms Tomlin providing some gift bags to the Council in appreciation of their visit to the College.

Al Browning: From attending the meeting in Waycross and this one, I know you have a hard task. Water quality needs to be in the Plans. Public education is one of the most important aspects of a water program. There are inexpensive ways to implement water quantity and quality education.

11) Wrap-up and What to Expect Next Meeting

The Council agreed to hold the next meeting in Douglas on December 8th, 2010. The Chairman suggested holding CM10 in Adel. The PC explained that the purpose of the next Council meeting is to finalize Council's selection of Management Practices. The meeting was adjourned.

cc: Cliff Lewis, EPD

Suwannee-Satilla Regional Water Council
 Council Members Attendance List

| Suwannee-Satilla Council Members | | 10/27/2010 |
|----------------------------------|----------------------|------------|
| 1 | Joseph L. Boyett | |
| 2 | Earl Brice | X |
| 3 | William L. Brim | |
| 4 | Hanson R. Carter | X |
| 5 | Carroll H. Coarsey | X |
| 6 | Ben Copeland | X |
| 7 | Scott Downing | X |
| 8 | Eugene Dyal | |
| 9 | Darvin Eason | X |
| 10 | Michael E. Edgy | X |
| 11 | Greg C. Evans | X |
| 12 | Greg Goggans | |
| 13 | Jim Hedges | |
| 14 | Alva Joseph Hopkins | X |
| 15 | Donald A. Johnson | |
| 16 | John Wesley Langdale | X |
| 17 | Joe Lewis | |
| 18 | R.R. Rusty McCall | |
| 19 | Donald H. McCallum | X |
| 20 | Dan Raines | X |
| 21 | Scotty Raines | X |
| 22 | S. Gordon Rogers | X |
| 23 | Jay Shaw | |
| 24 | Frank G. Sisk | |
| 25 | Andy Stone | |
| 26 | Grady M. Thompson | X |
| 27 | Doyle Weltzbarker | X |
| 28 | James R. Willis | X |
| 29 | Jackie Wilson | X |

Totals 18

Suwannee-Satilla Regional Water Council
 Public Attendance List

| Public Attendee | | 10/27/2010 | Representing |
|------------------------|----------------------|-------------------|--|
| 1 | Rich Batten | X | South Georgia Regional Commission |
| 2 | Al Browning | X | Browning Environmental |
| 3 | Luke Crosson | X | GSWCC |
| 4 | John Dinges | X | Suwannee River Water Management District |
| 5 | Russ Dorman | X | Tifton |
| 6 | Mary Gazaway | X | GA EPD |
| 7 | Brittney Foster Hull | X | Packaging Corporation of America |
| 8 | Carlos Herd | X | Suwannee River Water Management District |
| 9 | Dave Hetzel | X | Tifton |
| 10 | Dale Jenkins | X | Suwannee River Water Management District |
| 11 | Jeff Lewis | X | Fitzgerald Utilities |
| 12 | George Martin | X | GPC |
| 13 | David Mauldin | X | GA Farm Bureau |
| 14 | Tom Putnam | X | Langdale Industries |
| 15 | Bryan Snow | X | GA Forestry Commission |
| 16 | David Still | X | Suwannee River Water Management District |

Totals 16