Georgia Department of Natural Resources

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MEMORANDUM

TO: Council Members

FROM: Cliff Lewis

Assistant Branch Chief

Satilla, St. Marys, Suwannee & Ochlockonee Basins

SUBJECT: Joint Water Planning Council Meeting

January 28, 2010 Waycross, GA

DATE: February 23, 2010

On January 28, 2010, representatives of five Regional Water Planning Councils met at Waycross College in Waycross, Georgia to review the draft groundwater and surface water availability and draft surface water quality resource assessments developed by the Environmental Protection Division (EPD). The following is a summary of the meeting.

1) Introduction

Mr. Lewis welcomed the attendees and introduced himself. Mr. Lewis also introduced the EPD staff, consultants, and state partner agencies in attendance. Mr. Earl Bryce with Coffee County was also introduced. Mr. Lewis provided an overview of the agenda for the day.

Mr. Lewis introduced Mrs. MacGregor, Branch Chief for the Watershed Protection Branch.

Grady Thompson, Chair of the Suwannee-Satilla Council—The members of the Suwannee-Satilla Basin introduced themselves. Mr. Thompson expressed the importance of looking at the resource assessment results and looking for a complete inventory of the available water resources. The State Geologist stated that we now have a better understanding of our water resources. Mr. Thompson serves on the GEFA board and recounted that the GEFA board recently agreed to forgo half of its budget because of the state's financial challenges. Similarly, the Councils need to forget county boundaries and develop solutions together. Mr. Thompson asserted that water negotiations with Florida or Alabama should not constrain Georgia's needs.

Georgia has needs and concerns as do these states; listening to each other will be important. Mr. Thompson advised that Regional Water Plans should balance water needs for agriculture with other uses. Mr. Thompson thanked EPD for preparing the resource assessments.

John McIver, representative of the Coastal Georgia Council – The members of the Coastal Georgia Council introduced themselves. The Coastal Georgia Council has been blessed with growth, but water is a key to continued growth. Conservation is very important. The Coastal Georgia Council has a significant agricultural industry. The Council is focused on protecting and conserving our natural resources. Chatham County is in the red zone and some communities are in the yellow zone and therefore withdrawals from the aquifer are limited. Limited water withdrawals limit the future opportunities for the region. Mr. McIver looks forward to working with the Coastal Georgia Council and neighboring Councils to manage resources to meet the economic growth needs. What happens on the coast will affect all Georgia. The water usage needs to be planned and controlled to meet the needs.

Randall Starling, representative from the Upper Flint Council – Mr. Starling grew up in Waycross and is glad to be home. The Upper Flint Council extends from Spalding to Crisp Counties and shares groundwater with several of the Council's in attendance. Mr. Starling is a procurement manager for Weyerhaeuser. The Upper Flint Council is very diverse with representatives from forestry, agriculture, municipal water producers, etc. Mr. Starling read the Council's draft vision statement to the group, which was developed by a subcommittee of the Council. Mr. Starling suggested that the Councils work together as a state. Mr. Starling shared information recently learned about water use in Atlanta; their consumptive use (Flint and Chattahoochee) at Lake Seminole only represents 1% of total use at that point. Mr. Starling is concerned about the ongoing negotiations with Florida and Alabama, as the resolution of this will affect everyone. The Upper Flint Council looks forward to working together to benefit the entire state.

Jerry Lee, representative from the Lower Flint-Ochlockonee Council – Council member Steve Sykes introduced himself. Mr. Lee read the Council's vision statement. The Lower Flint is a highly agricultural area. The agricultural water forecasts initially did not include dairy farms and some other portions of agricultural use. EPD and USDA have worked together to include these demand sectors and Mr. Lee appreciates their work. The lesson learned is that Councils must act to protect their region's interests. The groundwater and surface water interactions are very important to the region. The Lower Flint Council is downstream of other Councils and flows into Florida. Mr. Lee is concerned about working with Florida, they have the fastest recharge times but they want guaranteed minimum flows. Understanding the surface water-groundwater interactions will be a challenge for the Council. There are limits to capacity in the Spring River area. Mr. Lee has concerns making decisions using the resource assessments without confidence in the data as computer models have been flawed in the past. Mr. Lee appreciates that the Council needs to continue planning with the available data and tools.

Mr. O.C. Prince, from Alapaha Echols County SWCS – Mr. Prince was disappointed at the low participation from his region. Most of his region's local news is from Tallahassee, Florida and the news stories claim that Georgia is stealing water from Florida. Mr. Prince stated that stealing is a crime and certainly doesn't think the term is appropriate. Mr. Prince hopes that the Regional

Water Plans will protect the fair water usage in Georgia.

Gene Tomberlin, representative from the Altamaha Council – The Altamaha Council members introduced themselves. Mr. Tomberlin read the Altamaha Council vision. Mr. Tomberlin recognized that while all of the Councils have similar goals, water is more available in some regions. The Altamaha River provides significant surface water, but the Council must protect these resources. Many water users in the region rely on the Upper Floridan aquifer for water supply. Sustainability over time is an important consideration. Human activities have changed the resources and the goal should be to maintain the natural environment. The importance of the Altamaha to the natural system is as important as the Okefenokee Swamp. The Altamaha region has not faced significant water challenges in the past, but may in the future. There was a moratorium on withdrawals from the Flint in the past. The Altamaha's goal is to wisely manage water. Mr. Tomberlin asked that upstream communities wisely manage their wastewater treatment discharges to the Altamaha basin. Water availability is important to economic growth, but good water quality in the basin is equally as important.

Mrs. MacGregor provided some brief remarks to put the resource assessments into perspective. The state has used the best tools and has pulled in the best resources to develop these resource assessments. While the data may not be perfect, it is the best. The model tools have been calibrated to existing conditions. The draft baseline assessments demonstrate what you already know; Council members know the existing condition of water resources in their region. The baseline assessments are draft because EPD is requesting comments and questions. The baseline resource assessments will be revised based on the comments received from Council members and the public. The Councils will identify the management practices to protect water resources both today and in the future. During the presentation, EPD will use "model" language. Councils should interrupt EPD for clarification/comment to ensure the material is understood. These joint meetings provide an opportunity to talk with other Councils.

2) Groundwater Resource Assessment

Mr. Lewis introduced Dr. Jim Kennedy, the State Geologist.

Dr. Kennedy provided an overview of the groundwater resources for the region.

Q: Is a lot of the drought data from 2004 and 2005?

A: Yes, the most robust data set during drought was from 2004 and 2005. In some areas EPD used the 1999 and 2000 drought to find the driest month with robust data.

Q: Does EPD know that meters are being put on agricultural wells?

A: Yes, EPD used this meter data where it was available.

Q: Please explain the process for interpolation between real and theoretical wells.

A: The theoretical wells were created by EPD to simulate conditions if wells extracted in areas where there are not currently wells.

Q: For the actual wells, what percentage of these wells did EPD have metered use data available. A: This information will be available in the final reports.

Q: The results reflect the experience of Council members; the community well levels dropped and then rebounded back.

A: Yes. The model was based on real conditions. EPD included the metric for drawdown returning to regular conditions because it was realistic. It is good that EPD has that point of calibration.

Q: Does EPD know where wells with permits are located?

A: Yes. EPD has maps. The Georgia Soil and Water Conservation Commission (GSWCC) is the agency responsible for installing and maintaining these meters. EPD and GSWCC coordinate monthly on these wells. GSWCC is aware of the wells without meters.

Q: In Coffee County when the big users start pumping, private wells go dry. This happens even during wet periods.

A: EPD considered the 30-feet drawdown metric as an unacceptable impact to identify these conditions. Councils may suggest changing the 30-foot metric. Different aquifers will react differently to changes in this metric. A change to this metric will affect sustainable yield.

Q: Several years ago a sod farm installed a number of wells. When they started pumping, the groundwater level declined but eventually stabilized at a new level. Many people needed to lower their wells, but there was a stabilization point.

A: The baseline assessment considered continual lowering of groundwater levels beyond a new base level as an unacceptable result. If the groundwater level stabilized at a new level, this was not considered an unacceptable impact. It is good to calibrate the model based on Council experience.

Q: How deep are the wells in EPD's models?

A: Simulated wells were to various depths depending on the aquifer. Depths of well pumps may vary from 20 to 50 feet below the water level in the well. Often, domestic or other low-use wells are drilled to a depth of 40 feet below the water level.

Q: So if the unacceptable impact is 30 feet drawdown, then there is 10 feet of groundwater left? A: Yes. That is why EPD set that level as a sustainable yield metric.

Q: Is a recharge value of 40% of baseflow typical?

A: Baseflow varies with the geology and the stream. In much of south central Georgia there was no direct recharge from streams to the Upper Floridan aquifer in the sustainable yield simulations because the aquifer is deep and confined. In many areas there are 'gaining' streams, meaning groundwater discharges to the stream and supplements the streamflow. The constraint on recharge from streams was applied in areas where groundwater contributions to streamflow could instead recharge the aquifer. EPD didn't want to overuse recharge available from groundwater discharge to streams so constrained recharge to 40% of stream baseflow to maintain opportunities for surface water use. Some Councils have expressed interest in changing the recharge from baseflow metric.

Q: In the Suwanee-Satilla region, could the percentage of recharge be different for each stream system?

A: Yes. It depends on how the stream system and groundwater are connected. In some cases, the streams drop into a sinkhole. Every part of the state will be different.

Q: Is the cone of depression in the resource assessment model different than in the saltwater intrusion models for coastal Georgia?

A: This model was large scale, dividing the state into grids of 2,000-feet. There are other EPD and USGS models of coastal Georgia that are more refined with a smaller grid (100's of feet). The models that looked at the movement of saltwater plumes were very different from the State Water Plan models. These models are part of the Coastal Sound Science Initiative, which is different than the EPD State Water Plan process.

Q: Other than the consideration of saltwater intrusion, do the EPD models consider recharge and water quality? If there is more recharge, does that mean better water quality? A: EPD did not evaluate groundwater quality, except where the quality constrains usage. Recharge and surface water are related, but the focus for this interaction was on water quantity because of the scale of these evaluations.

Q: Does the model consider impacts to surface water quality due to groundwater usage? A: The stream recharge metric was from literature and is based on protecting the aquatic ecology of the stream. But other than this metric, water quality was not specifically considered. If needed, EPD could look in more detail at certain areas.

Q: How far east does the model extend? Does it extend into South Carolina?

A: The model considered the existing withdrawals in South Carolina within the boundary of the regional Coastal Plain model in South Carolina. The model maintained existing withdrawals and did not increase the withdrawals because these data were not available.

Q: There are concerns that South Carolina will also sue Georgia.

A: EPD could simulate increases in withdrawals from South Carolina (as far as the model extent) if the Council requests this analysis.

Q: The models include the impact from South Carolina, but do they also consider withdrawals in Florida and Alabama?

A: Yes they considered existing withdrawals for Florida and Alabama within the boundary of the regional Coastal Plain model.

Q: If the models do not include future drawdown in Alabama and Florida, do we know how their usage affects us?

A: No, the models did not look at future impacts from increased withdrawals in these states.

Q: Isn't it reasonable to assume withdrawals increase over time?

A: It depends on the location.

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Q: Was similar data developed for other areas in the state?

A: Yes. There were 6-8 simulations for drawdown developed for each area. North Georgia models were different as a result of the differences in aquifers. The presentations and results from the other regions of the state will be available online.

Q: Is it legal to discharge treated wastewater into the ground? As we address our long-term problems, can we consider cleaning stormwater and putting it back into the ground?

A: The process of storing water in aquifers for later withdrawal and use is called aquifer storage and recovery (ASR). There was a statewide moratorium on ASR that sunset on December 31, 2005. In 2003 a moratorium was placed on using ASR in the Floridan aquifer in the counties governed by the Georgia coastal zone management program. This moratorium was to sunset on December 31, 2009 but was extended to June 30, 2014. ASR is an option in the rest of the state. ASR is a water supply management practice in Section 10 of the State Water Plan and is being considered in other regions. There are very specific permitting requirements for use of ASR. Currently, there are test wells being installed in northwestern Georgia to test the feasibility of ASR.

Q: Isn't it true that the limestone in northern Georgia can't store the water for use later?

A: There are people working on this challenge in these areas.

Q: At the GSWCC Conference water roundtable there was a discussion about the Clean Water Act and removing requirements on navigable rivers.

A: That is a surface water question and not related to groundwater.

Q: This was a very technical presentation and not all of our Council members are present to hear the information. Will this be material be presented at each region if requested?

A: There will be a discussion near the end of the day regarding CM#5. Council members can call and we will try to answer questions.

Q: Is the model capable of looking at the surface water impact, even if an unacceptable impact was reached because the drawdown exceeding limits?

A: To a certain degree, yes. The models focused on groundwater, so there were limitations on how surface waters were incorporated into the models. There are more complex methods to model detailed interactions of groundwater and surface water, but such models didn't fit the available schedule and budget for the State Water Plan work.

3) Surface Water Quality Assessment

Mr. Lewis introduced Mrs. Booth to discuss the surface water quality results.

Q: What is the timeline for the data?

A: The discharge data is from 2007 and models were done under 7Q10 high temperature conditions. In some areas the discharges increase stream flow and dissolved oxygen (DO) levels. The creation of flow results in DO levels above state standards in areas where it is expected to be low.

Q: A Council member requested clarification regarding why DO was meeting the standards in some areas and not others.

A: Wastewater facilities are discharging highly treated wastewater to the stream, providing aeration, therefore increasing DO. Councils need to consider how much discharge volume the Council wants in the stream.

Q: If it is treated discharge, isn't it OK?

A: That is a Council decision. If the Council meets the DO standard, then EPD will not limit discharges.

Q: Are the model results for normal conditions?

A: The model results reflect critical conditions. Under critical conditions, there is no flow in the Satilla River. If water is not moving, there is no DO getting into the stream. Therefore, the wastewater discharge is added flow, and moves water adding oxygen to the stream.

Q: Can you provide clarification on the difference between baseline model results and baseline model DO results?

A: With no wastewater discharge, the natural background DO is very low. The discharge adds movement to the water, which increases the DO. This only happens in slow moving waters.

Q: At Waycross in 2007, the plant discharges comprised 60% of the baseflow. During the drought, DO was not impaired, but the model doesn't identify the other impacts caused by these discharges, such as algae.

A: Correct.

Q: Discussing the Brunswick Cellulose dissolved oxygen injection into the stream. Is this something they do all of the time?

A: Brunswick Cellulose inserts dissolved oxygen all of the time during the critical months because they don't know when dissolved oxygen levels will be critical. The amount injected varies each month.

Q: What is the difference between water quality now and 50 years ago that caused the dissolved oxygen injection requirements?

A: The Brunswick Cellulose is a pretty big discharge. Now EPD has the tools to look at DO changes associated with specific land use. EPD identified low dissolved oxygen in harbor areas and asked the industrial discharger to mitigate their discharge.

Q: Is DO higher now regardless of whether flows are high or low?

A: Yes. The DO is higher because the discharger is mitigating their discharge, as required, and meeting the assimilative capacity.

Q: If there were no wastewater treatment facilities discharging to the river, would there be years with low DO? It doesn't hurt to have extra DO, correct?

A: Yes. If water is added to the system (gaining streams) then the DO increases.

Q: Prior to modernization, in dry years, would there have been impacts?

A: Yes.

Comment: But 50 years ago there was also raw sewage into the stream. These had major drainage structures in the 1970's, although there was more flow 50 years ago before these diversions. Streams are now going underground. The streams were healthier when there were controlled forest burns, now leaves are clogging the streams leading to subsurface flow.

Q: Do the models consider treatment levels such as MBR (membrane biological reactor) or SBR (sequencing batch reactor) wastewater treatment plants? If the wastewater plant treats to reuse quality versus a wastewater plant that has not been updated to the standard.

A: EPD will look at it both ways. If a reuse plant is not used during the winter, EPD will model it that way (golf courses).

Q: Why aren't the OAA results presented today? People from these basins are here today.

A: Focus of today's meeting is on different watersheds. EPD will post copies of these presentations online.

Q: Do the results show that discharges are good for the river?

A: The answer depends in part on the level of treatment. In slow moving streams, adding water to the stream adds movement which adds dissolved oxygen.

Q: What about nutrients?

A: Georgia doesn't have a target for nutrients in the estuary. That work is ongoing.

Q: Streams with baseflow that is dominated by wastewater discharges in a blackwater systems today have experienced fundamental changes. There is more scum, the sandbars are changing from white to brown/black, and the fisheries are changing. As part of the planning process, is it appropriate to ask EPD to devote special resources (fiscal/temporal) to a very important part of the state in terms of water quality and flow? Can EPD work with Councils to look at special nutrient standards for these blackwater stystem? Do Councils need to look at restoring flow? Do Councils need to look at something besides DO in these areas?

A: These are very valid points to discuss and the Councils can recommend developing resources as part of their Regional Water Plan.

Q: There have been warnings about changing water quality standards in Florida. Can you explain the nutrient standards and impact on blackwater streams? What is the quickest short-term obstacle to water availability? What is the impact that Florida will have on the region? A: The draft Florida nutrient standards could impact any wastewater discharge. Florida's total nitrogen standard is similar to Georgia's organic nitrogen standard. EPD is concerned that the standard is not scientifically-based. Water chemistry is very different in blackwater streams. Councils are encouraged to read and comment on the proposed rule.

Q: This standard could have an impact on agriculture pretty quickly in south Georgia, correct? A: Yes.

Q: What about the impact in southeast Georgia?

A: The impact is different but the results are way more restrictive in the southwestern portion of

Georgia.

Q: Growth has impacted the estuaries. Moving forward can Councils consider lowering the impact on estuaries or are the models based on maintaining status quo?

A: EPD has to operate within water quality standards. EPD is considering new standards for low DO waters. How the water is managed within those parameters is a Council decision and not determined by EPD.

Q: Over time will the standards change to adapt to growth?

A: No. The water quality standards stay the same.

Comment: There are concerns for smaller communities. If rules and requirements grow, some smaller communities may not be able to grow. The hidden costs to small towns should be considered. There needs to be a balance.

Q: Are the models able to separate the DO impact from wastewater treatment discharges from stormwater sources?

A: Yes. The models can do that.

Q: The stormwater is entering streams faster because there is nothing natural to slow the flows. The regulations in the past have concentrated on point sources and need to look at nonpoint sources.

A: This is a very valid point.

4) Surface Water Availability Assessment

Mr. Lewis introduced Mr. Caldwell to discuss the surface water availability results.

Q: If there is a gap, does that mean that there is no more potential for additional use above that node for withdrawal or input.

A: It is not yet certain what the permitting implications of gaps are. It could mean that additional use is not permitted, or it could mean that if a water use within the area above a node are going to use this resource, they must ensure that the use doesn't exceed a shortfall of some undetermined amount (e.g., preventing consumption that would result in low flows at the node from falling below the flow regime more than 11% of the time.

Q: What should we be more concerned about; the maximum of the shortfall or the average of the shortfall?

A: The average shortfall is probably more representative of conditions; with such a long-term data set the maximum values are daily values that could be outliers.

Q: Should the results really focus on the average in terms of the corresponding flow regime (long-term).

A: The frequency and duration of the shortfall is the most important consideration.

Comment: The Councils may need additional information.

O: Do the model results include flows from 2009?

A: No. The model results do not cover flow conditions beyond calendar year 2007.

Q: Several rivers are exceeding their banks over the past several months.

A: If the period of record were to include flow conditions through 2009, it is likely the numbers of gaps for the period beyond 2007 would probably be lower. The focus of the model results is on the sustainability of the resource during the dry periods, and because recent flow conditions are likely to have been wet (instead of dry) the simulation results would have likely shown few shortfalls.

Q: Can you explain what the red line means?

A: The red line in the graphic represents the streamflow at the node for the lower of the monthly 7Q10 or the actual inflow when there are no withdrawals or discharges in the drainage area above the planning node. The blue line reflects the flows at the node produced by the model with all of the current withdrawals and discharges actually occurring in the area above the node. Those instances where the blue line produces flow below the red line tell us that our current uses during dry periods are forcing stream flows to levels below those that would have been produced by Mother Nature.

Q: When EPD looks at pumping out of the river, is it permitted or actual use?

A: EPD uses the actual pumping and not permitted pumping. This could be very different, depending on situation.

Q: What happens in Florida when the Alapaha River runs underground?

A: All we comment upon, from model results, is what's happening at the planning nodes for which the model runs have been executed. According to the model, existing uses drive the flow at the node to zero approximately 7% of the time.

Q: Is the Alapaha USGS gage still in existence?

A: Yes.

Q: What is being pumped and how is the capacity being used?

A: The consumption is based on evaluating the surface water withdrawals between the node in question and the upstream node.

Q: What are the specific withdrawals?

A: Agriculture is the main water use in this region.

Q: Isn't there one industrial permit but it is not active?

A: Correct, the majority of the withdrawals are agriculture.

Q: On the Altamaha, should the minimum instream flows really be 30Q10 because of water quality standards and slow moving rivers?

A: You are asking if minimum instream flow policy should apply and if 7Q10 is the right

minimum instream flow for these blackwater streams. The Council may consider stricter standards.

Q: The water quantity forecasts are based on what is happening now; and there are no projections like for groundwater, correct? Will there be projections of future use be available before the Councils make decisions?

A: The resource assessments are just one piece of the puzzle. The resource assessments along with the forecasts will provide the foundation for decisions. The Councils will be able to see the demand increasing in the future.

Q: Will the forecasts for water quality and quantity be provided for the future?

A: Yes, that will be coming in the future resource assessments. EPD will model conditions as permits are increased to maximum permit limits. There are differences between the models for groundwater and surface water.

Comment: The focus of this meeting is to talk about how Councils are using water today to set the stage for discussions on how Councils will use water tomorrow. The models reflect a budget and time driven scope of work.

Q: How is the Corps involved?

A: The Corps has responsibility for implementing Section 404 of the Clean Water Act (i.e., issuing 404 permits), managing federal reservoirs on river systems where such reservoirs exist, etc. There aren't any federal reservoirs in the surface water bodies being discussed at this meeting, so there has been no Corps involvement.

Q: In the study basin, EPD didn't reference anything in the "yellow" zone for the Ogeecehee. A: The results for the Ogeechee were presented in Augusta. The presentations will be available online.

Q: There is 70 years of data. Over fifty years ago, a lot of water used to seep into the river channels but the aquifer system is not currently functioning in this manner. The loss of surface water into the lowlands isn't represented in the presentation. The first 30 years water flow from the aquifers into streams is different than the last 40 years of flow. There is concern accepting the flow regime as a starting point moving forward. There has been a loss of naturally lost hydraulic flow that should be reflected in the model.

A: This is great information to provide. These are draft assessment and the Councils can provide information and suggest changes. EPD can investigate this drop in baseflow and adjust the model, if appropriate.

COMMENT: The discussion of the decline in baseflow matches the timeframe associated with the drop in groundwater levels discussed previously. EPD will look at this recommendation and adjust the models as appropriate.

Q: When water demands and flow regime are fully met, can the models calculate the maximum amount that can be withdrawn?

A: For river systems with reservoirs, EPD can stretch the mathematical modeling tool by artificially increasing consumption - to reduce the balance of water in the 'conservation storage

pool' to zero, or determine what the additional withdrawal is when the storage in the conservation pool reaches zero.

Q: There are concerns about interbasin transfers in the Ocmulgee basin. The Oconee basin has additional water and there are concerns about that water being used in other basins.

A: If water is available in the conservation storage pool (again for river systems with reservoirs), the Council can use the modeling tool to answer questions regarding the impact of withdrawals on the waters of the conservation storage pool. For unregulated river systems, the modeling tool can also be used to answer questions regarding the impact of increased consumption on the frequency of dry weather shortfalls at a particular planning node.

Q: Are there other systems in the state with available supply?

A: There are some systems where there are no current gaps.

Q: There are questions about stream flow. If agricultural use has remained consistent and the only increase has been municipal flows; wouldn't these municipal flows have been discharged back to the stream and have replenished baseflow?

A: There are a number of questions to be answered in more detail regarding the change in flows 40 years ago. EPD needs to research this question before answering.

Comment: If a municipality is using more, but discharging as much water back in the stream, there would be no net change, but the streams are dry.

Q: There are several artesian wells that haven't been operated for 30-40 years but changes in the mill operations have caused the tops to blow off. This change is associated with the mill operations. There are complaints of wet yards in addition to the artesian well tops blowing off because the pressure is so great. There are a few calls a month with artesian wells coming back. A: It is important to note that the resource assessment results will be revisited every 5 years.

Q: Does there always have to be a gage upstream of another gage in order to have a planning node because the math is the difference between the nodes? Could the Waycross gage be a planning node?

A: If long-term data are available, the Waycross gage could be a planning node. EPD tried to keep major withdrawals and discharges in the same node.

Q: Can the Council recommend a planning node? It has 70 years of record. A: Yes.

Comment: It is encouraging that the Fargo and Gross gages show there are not surface water availability gaps. It is instructive to compare these results to other gages. The Okefenokee Swamp, one of the largest intact wetland systems, is upstream of those two gages. There are two components to baseflow; an artesian component and a landscape modification component. Protecting intact wetlands is an idea in terms of management practices for addressing challenges in other regions.

Comment: Concerns with interbasin transfers were expressed and some examples throughout the state mentioned. These transfers impact conditions in the basin.

Q: The year 2007 was a very dry year in South Georgia. There were even drier conditions in the 1950's and 1930's. It would be interesting to compare those previous dry times to the 2007 dry time to compare the corresponding loss to the baseflow.

A: That is a good point.

Q: Should Councils be concerned about long-term ecological damage to streams when discharges comprise most of the flow during low flow conditions?

A: The answer depends on who is answering that question. The answer will be different if downstream neighbors (like Florida) are more concerned about water quantity or water quality.

5) Public Comment

Merrill Varn, St. Mary River Management Committee – Ms. Varn encouraged the Councils to set specific water quality and quantity standards for blackwater streams by looking at historical dominant species and ask EPD to compare current and historical data. Ms. Varn encourages the Councils to consider the per capita costs of increased treatment standards on the survival of small towns that depend on these blackwater streams. The St. Mary's River Management Committee opposes interbasin transfers and encourages regional planning that considers the size of the watershed when looking at withdrawals and storage. Ms. Varn encourages growth in rural blackwater regions and warns against transferring water from rural areas to existing growth areas. Ms. Varn encourages the residents to prioritize actions that provide 'quality of life'; Personal water rights may not be as important as regional quality of life. For example residents may choose to endure an ordinance versus allowing other communities to withdraw water for use elsewhere which will drive business out of the town. The St. Mary River Management Committee supports the sturgeon restoration project. Ms. Varn offered to help throughout the State Water Planning process. (Note: a complete version was provided in writing outlined below.)

Chip Campbell- Georgia Co-Chair of the St. Mary River Management Committee – He is attending a meeting in Gainesville, Florida looking at water supply sources for northern Florida. The group has identified the St. Mary's along with the Alapaha and Black Creek as potential supply sources. He informed the group of an upcoming meeting on the topic. The Councils in Georgia should stay informed of these processes. Law students in Georgia and Florida are being told that water law is a growth industry. He commented on the Suwannee sill in the Okefenokee Swamp. He followed the sill and there is no evidence that the sill has had an impact on that small portion of the Swamp. There was a small impact on the Suwanee River by Fargo because the water flowed around sill. Since the sill has been opened, the major change is that Cyprus is germinated on berms that are now exposed because the water level is lower.

Announcement of: Suwannee River WMD – Alachua County Health Department Auditorium; 224 SE 24th Street; Gainesville, FL 32641 on January 29, 2010 at 10am

Written Comments submitted by Merrill Varn:

"I am Merrill Varn with the St. Mary's River Management Committee (SMRMC) a four county, two state quasi-governmental entity formed in 1993. The SMRMC is dedicated to promoting

and protecting the long-term viability of both the environmental and economic resources in the St. Mary's River. The SMRMC would like to:

- 1. Encourage the two regional water councils to set specific water quality and water quantity standards for the southern blackwater rivers by:
 - a. Comparing historical and current data on dominant species in the river
 - b. Defining physical requirements for historical and current dominant species and deciding on components for EPD to model
 - c. Recommending standards based on results of EPD models.
- 2. Encourage the two regional water councils to request that EPD consider the per capita cost of quality and quantity standards and the impact of that cost on the survival of the small towns to prevalent in blackwater river watersheds.
- 3. Encourage the two regional water councils to consider the acreage of the watershed when computing water withdrawals, storage, and transfers to population concentrations. Furthermore, consider encouraging population growth in areas with water as opposed to water transfers to areas with population. Finally consider the possibility of ordinances as opposed to standards and withdrawals.

SMRMC can help by encouraging the rural populations in our basin to understand that ordinances regulating water quality and quantity may be necessary to avoid stringent standards or transfer of water out of our rivers.

SMRMC and its partners including the Sturgeon Restoration Project will be happy to provide whatever data and analysis of that data is possible."

6) Resource Breakout Session

The Council members split into Groundwater and Surface Water (both availability and quality) discussion groups with the resource managers.

7) CM#5

There was a presentation given by Katherine Zitsch, Brian Keel, and Kristen Rowles regarding plans for CM#5.