

# **Georgia Department of Natural Resources**

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## **MEMORANDUM**

**TO:** Regional Water Planning Council Members

**FROM:** Jeff Larson  
Assistant Branch Chief  
Savannah and Ogeechee River Basins

**SUBJECT:** Joint Water Planning Council Meeting  
January 19, 2010  
Augusta, Georgia

**DATE:** February 10, 2010

On January 19, 2010, representatives of five Regional Water Planning Councils met at The Boathouse in Augusta Georgia to review draft groundwater and surface water resource assessments developed by the Environmental Protection Division (EPD). The following is a summary of the meeting:

### **1) Introduction**

Jeff Larson, Assistant Branch Chief for the Savannah and Ogeechee River basins, opened the meeting and presented the day's agenda. He introduced EPD attendees, including Linda MacGregor (Branch Chief, Watershed Protection Branch) Kevin Ferrell (Assistant Branch Chief for the Oconee, Ocmulgee, and Altamaha River basins), Cliff Lewis (Acting Assistant Branch Chief for the Suwannee, Satilla, St. Marys, and Ochlockonee River basins), and EPD technical presenters Dr. Jim Kennedy, Dr. Elizabeth Booth, and Dr. Wei Zeng. Mr. Larson informed the attendees that there will be an opportunity for public comment prior to the Resource Assessment Breakout Sessions later in the afternoon.

Mr. Larson then invited the meeting facilitators, Glenn Coyne (AECOM), Courtney Reich (Ecological Planning Group), and the Regional Water Plan consultant representatives Doug Baughman (CH2MHill), Katherine Zitsch (CDM), and Bill Martello (JJ&G) to each introduce themselves.

Linda MacGregor welcomed the Councils and invited the Council Chairs to introduce

themselves and their Council.

Ron Cross, Chairman of the Savannah/Upper Ogeechee Water Planning Council – Mr. Cross welcomed the various councils to Augusta and introduced his council members.

Ben Thompson, Chairman of the Coastal Water Planning Council – Mr. Thompson introduced the representatives from the Coastal Water Planning Council and presented the Council's Vision. Mr. Thompson recognized that the Coastal planning region is different from other planning regions in that it is the only planning region on Georgia's coast. He stated that the Coastal planning region includes a very diverse set of water users including industrial, agricultural and urban users. He further stated that they deal with a very unique set of issues:

- They are downstream from other water planning regions.
- They are the second fastest growing region in the state.
- They have been addressing saltwater intrusion and limitations on their major regional water supply source for years and, for that reason, many of the Council members have experience with water planning.

L. Brinson Lanier, Chairman of the Altamaha Water Planning Council – Mr. Lanier introduced the representatives from the Altamaha Water Planning Council, and presented their Council's Vision statement. Mr. Lanier noted that their region contains 16 counties and two major waterways. He stated that their region contains a diverse set of water users including industry, municipal, agricultural and forestry.

Gordon Rogers, member of the Suwannee/Satilla Water Planning Council – Mr. Rogers was the only representative from the Suwannee/Satilla Water Planning Council. Mr. Rogers stated that their region also contains the St. Marys River and Okefenokee Swamp. He further stated that their region includes primarily municipal, agricultural, and forestry water users. He distributed the Vision Statement of the Suwannee/Satilla Water Planning Council and expressed their Council's excitement at the prospect of working with other councils. He stated that their region is divorced from their headwaters and tailwaters by the nature of the Council boundaries and that made this joint planning process extremely important.

Pat Graham, Member of the Upper Oconee Water Planning Council – Mr. Graham introduced the representatives from the Upper Oconee Water Planning Council.

Mrs. MacGregor recognized an attendee from Representative Saxby Chambliss' office and passed along "greetings" from EPD Director Allen Barnes. Mrs. MacGregor stated that Mr. Barnes has pledged his commitment to the process.

Mrs. MacGregor quoted the State Water Plan, which says "effective management requires a sound scientific foundation." She noted that water resource assessments are statewide and not subdivided by Council boundaries, however much of the information is collected locally. She stated that Council chairs asked to bring the Councils together to hear the results of the resource assessments. She reminded the Councils that these resource assessments are currently in draft

form and that this is the first time they have been publically presented. She stated that today is just the start of the revision process and that this is not the last time that they will hear the results of the assessments. She also expected that many of the Council members would be hearing about what they already know as it relates to their local resources.

EPD's frame of reference in conducting these assessments is that they are coming from a position of abundance 98% of the time and that you plan for the 2% of the time when this is not the case. While the resource assessments are very technical, the resource managers will try to make the presentations understandable. The presentations include some modeling language, so the Council members were urged to ask for clarifications as needed.

Mrs. MacGregor stated that the best experts were hired to run the models that resulted in the resource assessments to be presented today. Many of the modelers live in Georgia and some work for EPD. She asked the council members to understand that the models may never be "final" but they are useable and it is input from the Council members that makes them useable. She then noted that the scale of the models is statewide and that today we are looking at eastern Georgia. There may be local work that is more detailed and that one of the recommendations in the Regional Water Plans may be to conduct more detailed studies in certain areas of interest. She also recognized that many of the Council members have already been working on regional issues such as the Savannah Harbor DO TMDL and saltwater intrusion into the Upper Floridan Aquifer.

Mrs. MacGregor reminded the Council members that there would be technical meetings in the next few months to discuss the details of these resource assessments. Mrs. MacGregor asked if there were questions from the audience and there were none.

## **2) Groundwater Resource Assessment**

Mr. Larson introduced Dr. Jim Kennedy, the State Geologist for Georgia. Dr. Kennedy then gave a presentation entitled Groundwater Availability Resource Assessment. The following questions were asked during the presentation:

Question (Q): When the high and low end of the sustainable yield was modeled, did it take into consideration future usage in South Carolina?

Answer (A): Dr. Kennedy explained that the sustainable yields only considered increased withdrawals in Georgia and no other neighboring states. However, current usage numbers consider all usage from portions of neighboring states within the regional model boundary including South Carolina, Alabama, and Florida. To date, only increases in Georgia's current usage number have been simulated.

Q: Is the low end of sustainable yield (SY) within the cretaceous aquifer (198 MGD) based on the current usage?

A: Dr. Kennedy stated that the model started with the current baseline withdrawals (124 MGD) and increased withdrawals in that aquifer alone until a metric was reached at 198 MGD.

Follow-Up Question: What happens if you increase withdrawals in all areas in all aquifers at the same time?

A: Dr. Kennedy stated that if you increased all withdrawals in all areas at the same time that you would get different sustainable yields and referenced the next slide in his presentation.

Q: Looking at the sustainable yield when all withdrawals were increased in all areas at the same time, which metric was hit most often?

A: Dr. Kennedy stated that a drawdown of 30 ft. between wells was the metric hit most often, but that, on occasion, the stream flow metric was hit in sections of streams that run through aquifer outcrop areas. He further clarified that this metric dealt with base flow and not total flow.

Follow-Up Question: Was the frequency of hitting the stream flow metric more common in SW Georgia?

A: Dr Kennedy stated that it was more frequent in SW Georgia due to the unconfined aquifer conditions there.

Follow-Up Question: Would it be possible to look at a stream flow metric that was lower than 40% of baseflow?

A: Dr. Kennedy confirmed that this could be done and said that a sensitivity test could be performed with metrics of 10% and/or 20% of baseflow.

Q: Do the baseline water usage figures include South Carolina and Alabama?

A: Dr. Kennedy reconfirmed that the baseline water usage figures do include other states usage figures for portions of the neighboring states within the regional model boundary, but reminded the audience that the sustainable yield currently only includes increased withdrawals in the prioritized aquifer areas in Georgia alone.

Q: If pumping is increased in these other states in the future, will it affect these numbers?

A: Dr. Kennedy stated that it would have an impact on these numbers (i.e. sustainable yield for pumping in Georgia.)

Follow-Up Question: Shouldn't we plan for additional use in these other states?

A: Not necessarily. It depends on where geographically the wells are located. Wells in these states that are close in proximity to Georgia will have a larger impact on sustainable yield in Georgia.

Follow-Up Question: Shouldn't we consider the proximity of future pumping to Georgia in our sustainable yield numbers?

A: Dr. Kennedy stated that this is why EPD is looking for input from the Councils. Mr. Larson further clarified that the presentation today was based on current capacity and that EPD was using the data that they already had to calibrate the models. In order to forecast future need, EPD needs input from the Councils related to future projected needs within their Water Planning Regions to input into the models.

Q: Was the drought information used in creating this model from the most recent drought event,

and was that metric ever hit?

A: Dr. Kennedy confirmed that the most recent drought data was used and that this metric was never hit for the aquifers in question.

Q: I just want to clarify that you are not taking future SC usage into account?

A: Dr. Kennedy stated that this statement was correct and that it was an important point.

Q: Will EPD run into budget constraints and how much time can be devoted to playing with the numbers?

A: Dr. Kennedy stated that it could be worked out and that the issue related to future pumpage in South Carolina is a good example of something that could be looked at. He encouraged the Councils to develop a focused list of additional scenarios to look at. Mrs. MacGregor further clarified that EPD does have budget constraints, but that funding has been dedicated to assessing various future scenarios with this model and that the Councils need to prioritize which future scenarios they want to consider. She also stated that EPD is working with South Carolina to get their future projected groundwater usage figures.

Q: These numbers consider current usage. Has EPD looked at a future scenario based on currently permitted withdrawals?

A: Dr. Kennedy stated that EPD looked at actual usage not permitted usage in order to calibrate the model with real world data. He stated that EPD is currently assessing permitted withdrawals to compare to sustainable yields.

Q: Can the model be used to “hindcast”? Can we look at future scenarios related to stream flow restoration?

A: Dr. Kennedy confirmed that the model could assess restoration scenarios.

Q: What would a 30 ft. drop in the potentiometric surface do to wetlands?

A: Dr. Kennedy said that the 30 ft drop in the water elevation currently under discussion is in confined aquifers, which are not in direct connection with wetlands. There would be very little if any impact.

Q: In areas where there are cones of depression, why are scenarios that allow for recharge not being considered?

A: Dr. Kennedy stated that if you decrease withdrawals in areas with cones of depression you will get some degree of recharge. Dr. Kennedy further stated that the issue be looked into on a much smaller scale, since the model was currently too coarse to address every specific cone of depression.

Q: Did this model incorporate any surface water capture?

A: Dr. Kennedy answered that this model only addressed groundwater.

Q: Did you look at the point in time when the future projected usage exceeds the sustainable yield, i.e. where those lines cross?

A: Dr. Kennedy stated that assessment has not been done yet.

Q: On slide 24 of Dr. Kennedy's presentation, there appears to be a localized issue with the 30 ft. metric being reached near Brunswick, could you explain this?

A: Dr. Kennedy stated that he would have to look at the modeling data specific to that issue. Dr. Kennedy elaborated that those green contours show where the 30 ft contour was first met, not the only place it could have been met. The metric was considered met as soon as the first 30 ft drawdown was observed.

Q: Has this type of modeling been done before and do the results of that study compare to this?

A: Dr. Kennedy stated that the EPD team looked extensively for previous modeling data conducted at a similar scale and could find none other than what was being done in Georgia. Similar modeling has been conducted in Florida and the western US.

Q: Has Georgia been invited to participate in the SC inaugural planning exercise starting this week?

A: Mrs. MacGregor stated that we have been invited and Mr. Larson was planning on going to the meeting scheduled for Thursday, January 21, 2010 in North Augusta, SC.

### **3) Surface Water Quality Assessment**

Mr. Larson introduced Dr. Elizabeth Booth. Dr. Booth then gave a presentation entitled Surface Water Quality Resource Assessments. The following questions were asked during the presentation:

Q: How can the assimilative capacity go directly from blue (very good) to red (non- or exceeded)?

A: Dr. Booth explained that you can have a discharge with a large amount of organics discharged in a blue stream segment and it degrades quickly as it moves downstream. Depending on the length of the modeled segments, you might not see the transition DO levels in the figure. It should be noted that the models provide the average DO in the segment.

Q: Where is the Savannah Harbor segment?

A: Dr. Booth pointed it out on the map.

Q: Why are there un-modeled streams?

A: Dr. Booth explained that streams that had no discharges were not included in the model.

Follow-Up Question: But are some of the un-modeled streams impaired?

A: Dr. Booth stated that if these un-modeled segments were impaired, it would be due to non-point source discharges.

Follow-Up Question: Ray's Creek is impaired and it is not modeled.

A. Dr. Booth stated that it is not on the 303 (d) list.

Follow-Up Question: So the EPD does not have data for some of these streams.

A: Dr. Booth stated that that was true and that there was a call out for monitoring data for streams in Georgia for the 303 (d) list.

Q: Where there is not a point source discharge, how can a stream segment go from blue to yellow?

A: Dr. Booth explained that that impairment could be due to local non point source pollution (NPSP). You often get high BOD and ammonia readings related to agricultural NPSP.

Q: Where does the blue segment transition into the red segment of the Savannah Harbor?

A: Dr. Booth explained that this happened near Hog Marsh Island at the Houllihan Bridge. She also noted that there was a localized orange segment in between blue and red segments.

Follow-Up Question: How do the assimilative capacities in these segments correlate to the upstream dischargers on the Savannah River?

A: Dr. Booth didn't see a direct correlation because there was greater flow released upstream in 2009, but the DO levels in the Savannah Harbor were lower as compared to 2007 data.

Follow-Up Question: But there does seem to be a seasonal trend in the DO data.

A: Yes. Dr. Booth explained that DO levels follow temperature. The higher the temperature the lower the natural DO level.

Q: Does Georgia have a standard for Phosphorus?

A: Dr. Booth stated that Georgia does have total phosphorus standards for six lakes in Georgia but not for rivers or streams.

Follow-Up Question: Why not?

A: Because EPD currently lacks the data necessary to determine what the standard should be. Dr. Booth stated that Georgia was currently working on gathering this data and setting a standard.

Q: Is it possible to find a stream without impairment to use as a control?

A: Dr. Booth noted that lots of streams are monitored in Georgia and that all streams were not necessarily included in the model being presented. She stated that there are lots of waterways that are used as controls and other waterways where the source of the impairment is known and that this can also be useful for comparison.

Follow-Up Question: Can we find a stream without any man made impairments so we know what types of perceived impairments might be natural?

A: Dr. Booth stated that EPD does have some data from streams without man-made impairments.

Follow-Up Question: How much of this impairment is related to things we have no control over?

A: Mr. Larson clarified that the questions were related to how many reference streams did the EPD have in this eco-region. Dr. Booth stated that they really didn't have any reference streams and that required a large amount of data the EPD did not currently have. She elaborated to say that this question was especially valid in areas of blackwater streams where the organics are

naturally high and the DO is naturally low. She recommended that the Councils may want to consider a recommendation for more natural stream monitoring in their Regional Plans.

Q: (Reference slide 5 of Dr. Booth's presentation) In the process of modeling, did EPD consider Dr. Kramer's land use change data to see how things changed over time?

A: Dr. Booth stated that they did look at Dr. Kramer's 2005 land use data and that they will be looking at the future land use and associated changes in impervious surfaces to see how they might affect base flow and nutrient load.

Follow-Up Question: Can you "hindcast" to see how restoration might improve base flow and other impacts?

A: Dr. Booth stated that could be done all the way back to 1970's conditions based on currently available land use data.

Q: If it's premature to try to set nutrient limits, does the EPD have a timeline in mind for when those might be set?

A: Dr. Booth explained that EPD has worked with EPA to develop a Nutrient Limit Development Plan and that the current timeframe sets limits by 2014. She further explained that EPD is looking to see what will happen with the nutrient standards for free flowing streams just established for Florida last week. These limits will affect some of our southern watersheds.

Q: Can you explain the DO limits included on Slide 9 of Dr. Booth's presentation?

A: Dr. Booth explained that in naturally low DO streams you can have a 10% deficit to 3.0 mg/l and a 0.1 mg/l deficit below that.

Q: How will the EPD deal with streams that are currently un-modeled?

A: Dr. Booth explained that many streams may have been addressed by other models, in particular, those streams with a DO impairment. She also explained that some data from tributaries that are not displayed were included in the model and that all available data was used.

Q: Have you modeled streams that had impairments due to beavers?

A: Dr. Booth stated that EPD encountered this situation and found that DO dropped due to the damming of flow. She also explained that this situation was not considered "natural" due to its transient nature. She further explained that while this was not an issue for the assimilative capacity model, it had presented an issue for some TMDLs.

Q: Where there is a sharp differential in assimilative capacity, is it appropriate to say that the upstream segment has good assimilative capacity?

A: Dr. Booth stated that EPD is aware of this issue and that any increase in discharge of organics to the river upstream of the segment with poor assimilative capacity will affect it. She further stated that this issue will be dealt with by the Savannah Harbor DO TMDL Implementation Plan.

Q: Have you compared these modeling results to models created by the Wildlife Resources Division to see if water quality trends correlate with wildlife trends?

A: Dr. Booth explained that the WRD modeling is different and difficult to directly compare, but

the EPD did gather species lists to ensure that protected species were considered in the assimilative capacity model.

Q: Have you increased your monitoring efforts?

A: Dr. Booth stated that EPD is moving their monitoring programs to their District Offices and moving away from the rotating basins monitoring approach. The EPD desires to have more consistent annual monitoring to better evaluate water quality trends and targeted monitoring to address impairments.

Q: How often is monitoring conducted?

A: Dr. Booth explained that monitoring was conducted 16 times a year where fecal coliform was evaluated and that the frequency of sampling will hopefully move to every year in the future. She also explained that as new data is collected and submitted, EPD will incorporate it in these models. She specifically referenced data downstream of new facilities that have come online recently.

Q: Based on the assimilative capacity in the Savannah Harbor, can we assume that no new discharges will be permitted below Thurmond?

A: Dr. Booth cautioned the group not to make this assumption. EPD has already permitted a new discharge to the Savannah Harbor in Port Wentworth. This permit was facilitated by new technology that oxygenated the discharge to acceptable levels. Mr. Larson further explained that data arising out of this new facility will allow EPD to determine what kinds of discharges may be permitted in the Savannah Harbor in the future.

Q: You mentioned secondary treatment ponds. How many of these exist in our region?

A: Dr. Booth stated that there are likely 100s of these ponds with NPDES permits built with 1970's era technology. But she also stated that these were better than what had been there previously and that you couldn't assume that all of them were bad.

#### **4) Surface Water Quantity Assessment**

Mr. Larson introduced Dr. Wei Zeng. Dr. Zeng then gave a presentation entitled Surface Water Availability Resource Assessment. The following questions were asked during the presentation:

Q: Please explain the 7Q10?

A: Dr. Zeng explained that the 7Q10 is the low 7 day average flow that has a probability of 10%. Over the long run, one can expect the 7 day average flow to be lower than this level 1 out of 10 years.

Follow-Up Question: Are you comparing the lowest flow on record to the 7Q10? What does the red line represent?

A: Dr. Zeng explained that the red line represents the 7Q10 or the natural (unimpaired) flow over the last 70 years, whichever is lower.

Follow-Up Question: Are you comparing this to current water use?

A: If natural flow is lower than the 7Q10, we use the natural flow for the flow regime. We then compare this to modeled stream flow with actual consumptive water use. Actual use was based on current use, not permitted use.

Follow-Up Question: If we use the permitted water usage would the modeled stream flow fall even further below the flow regime?

A: Yes

Q: At the Hartwell node, there appears to be no gap between the flow regime and the modeled flow. Is this the case as long as there is water in the conservation pool? If water levels are really low, homeowners adjacent to the lake will be impacted even if it is OK from a modeling perspective.

A: Mr. Larson stated that this was a policy question and not a technical question. In 2007/2008 EPD worked with the Corps to adopt an emergency management plan to address low water levels in reservoirs. Mr. Larson recommends that individual Councils address this issue in their planning process.

Q: Did the current water demand figures include South Carolina?

A: Dr. Zeng stated that the current demand figures include all water withdrawals from these rivers. These figures represent only the current maximum consumptive use because this is a current resource assessment. They do not include future projected demand. EPD is currently working with South Carolina to gather their future water demand forecast and once we have those numbers and the numbers for Georgia, the EPD will perform a future resource assessment using this same process.

Q: If there is a 13% minimum percentage reservoir storage, does that mean we can increase demand by 13% before the conservation pool goes dry?

A: Dr. Zeng stated that it's not exactly that simple, but that number does indicate that the capacity currently exceeds the demand. The future assessment will look at demand for the next 40 years at 10 year intervals and you will be able to see what that does to the conservation pool. Mrs. MacGregor added that the EPD will be performing future resources assessments at all nodes in the model and will input projected future demand into the model to see what happens. Councils will look at the future assessments and determine if demands can be met within the capacities of the resources and if their vision and goals are also met. If not, then they will identify management practices to meet demands and their regional visions and goals.

Follow-Up Question: So will we get to see where future demand meets available capacity?

A: Dr. Zeng stated that is what the future resources assessments will show.

Q: (Reference slide 17 of Dr. Zeng's presentation) Can you discuss the effect the proliferation of impervious surfaces, channelization, and agricultural reservoirs will have on the red curve?

A: Dr. Zeng stated that additional impervious surfaces will cause natural stream base flow to be lower and will also increase the frequency of flash flood events. This would mean that the flow regime would be lower than the 7Q10 more often for longer periods of time. Dr. Zeng was unsure of any effects caused by channelization in the headwaters and stated that he would have

to get back to the group regarding any effects. He added that flow impeded by these ponds is not currently captured by the flow gauges and is therefore not “in play.”

Follow-Up Question: If we undid all of these impacts would it raise the red curve?

A: Dr. Zeng stated that it would cause the natural flow regime to be lower than the 7Q10 less often (less than 7%).

Q: Why is this assessment not based on permitted use? You are misleading this group by presenting this model with current use numbers.

A: Dr. Zeng stated that the model has been created for the Water Planning Councils to use. The presentation today is on the current resources assessment which must use current water use information. If we input permitted water withdrawals it would be fiction. When we do future resource assessments, the Councils will get to see the permitted usage numbers.

## **5) Public Comment**

Mr. Larson opened the meeting up for public comment. The following four people elected to make public comments:

Comment #1: Dr. Judy Gordon is currently performing research on the Shoal Spider Lily at Augusta State University. Dr. Gordon stressed that good data is important for making good decisions. She explained that through her research she has learned that there is very little water quality data in the Shoals area and that it is needed. She recognized that the state has money shortages, but they really need to do more water quality monitoring to fill in the data gaps. Monitoring once every five years is not enough. The work the Water Planning Councils are doing is important and should be fully funded by the State. She also recognized that natural resources protection as well as economic development is important and that the Councils need to recognize that you can't grow forever. She encouraged the group to start thinking about sustainability when deciding how to allocate resources. She cited Atlanta as a cautionary example.

Comment #2: Tonya Bonitatibus is the Executive Director of Savannah Riverkeeper, Inc. Ms. Bonitatibus stated that the Savannah/Ogeechee River Basin cannot be split between states. It is shared by two states and future planning must involve both states. She stated that the Savannah River is listed as the fourth most polluted major river basin in the country and that DO and nutrient data don't tell the full story. She further stated that there are many creeks and streams in Georgia that are not currently monitored by the State and that the Savannah Riverkeeper intends to provide additional data for the 303 (d) list. Without good data, you can't make good decisions. Ms. Bonitatibus recommended that the Councils look at permitted water usage data in their future resources assessments. She also asked that the Councils be aware of: a) the many faulty septic systems that are currently in need of repair and b) that impervious surfaces have an impact and need to be considered by the Water Planning Councils.

Comment #3: Ian Adelman of the Southern Alliance for Clean Energy (SACE) spoke about the connection between energy generation and water use. He expressed concern that the discussions

have not yet included the power generation sector and that this industrial sector has a big impact on water use. Mr. Adelman left fact sheets on the table for the Councils and public to pick up. Mr. Adelman stated that several new power plant proposals, including Vogtle and Sandersville, are a continuation of water intensive energy infrastructure. Mr. Adelman requested that the Councils consider less water intensive energy uses in their plans. This will benefit both water resources and energy production.

A Council member posed the question to Mr. Adelman: What are the less intensive water uses you are referencing?

Mr. Adelman recommended that he contact Sara Barczak at the SACE for more information, and he added that conservation and energy efficiency are their primary recommendations. He also mentioned that there was a report on Wind Energy by Georgia Tech that indicated that Georgia was a good location for offshore wind energy generation.

Comment #4: Steve De Kozlowski with the South Carolina Department of Natural Resources spoke about the work that South Carolina and Georgia have been doing to address water resources issues over the past several years. These issues include saltwater intrusion and water allocation. South Carolina is currently sharing information with Georgia as needed through this process.

A Council member asked if he thought South Carolina would respect decision made by Georgia through this planning process. The same Council member suggested that this process necessitated participation from South Carolina.

## **6) Resource Assessment Breakout Sessions**

After the Public Comment session, the Council members chose one of two breakout sessions to continue discussions on the resource assessments. One breakout session was related to groundwater quantity and one was related to surface water quantity and quality.

## **7) Water Planning Council Contractors Presentation**

Representatives from the three planning contractors, CDM, JJ&G, and CH2MHill, for the five Water Planning Councils gave a presentation entitled Next Steps Discussion. During the presentation, the following questions/comments were made:

Q: When will we have the final OPB (Office of Planning and Budget) population and employment forecasts?

A: We are not sure at this time. .

Q: Are you linking quality and quantity to ensure that you have enough flow to protect water quality?

A: We are looking at the interaction of all of the resources.

Q: Will we have the energy sector information for Council Meeting #5?

A: Yes

Comment (C): The Upper Oconee Water Planning Council requested a presentation on all three resources assessments specific to their district at Council Meeting #5.

C: The Savannah-Upper Ogeechee Water Planning Council was fine with giving a summary of the resources assessments themselves to their council at Council Meeting #5.

C: The Suwannee-Satilla Water Planning Council requested that the same resource assessment presentations (as given at this joint meeting) be given at their Council Meeting #5. If this was not possible, it was recommended that Council members be instructed to go hear these presentations at future joint meetings.

Q: How much trouble will it be to assess permitted versus existing capacity, and is there much of a difference?

A: Sometimes there is a big difference. EPD only started considering current need when issuing permits in recent years. Old permits may be very different from current use.

Q: Can a table be created comparing current use and permitted use?

A: Yes, and this can be presented in Council Meeting #5.

C: South Carolina numbers need to be included in this, too.

Mr. Larson adjourned the meeting.