Georgia Department of Natural Resources

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M E M O R A N D U M

TO: Coosa – North Georgia Water Planning Council Members

FROM: Rick Brownlow, CH2M HILL

SUBJECT: Council Meeting #2 Summary

Georgia Comprehensive Statewide Water Management Plan
Regional Water Planning

Council Meeting #2 Summary

Meeting Date: June 17, 2009
Location: Dalton Utilities, Dalton, Georgia

1) Welcome and Introductions/Recap Council Meeting 1/Approve Agenda

Chairman John Bennett opened the meeting and welcomed Council members, staff and guests. He then thanked Don Cope for hosting the meeting at Dalton Public Utilities and asked Mr. Cope to make a few comments.

Mr. Cope spoke about the process so far, noting that up until now it had been very process oriented with lots of numbers and details but little discussion of issues and alternative solutions. He discussed the planned trip to Dalton Utilities' land application site (LAS), stating that it would be an opportunity for the Council to see up close how water resources can be managed in a manner beneficial to our communities and the environment.

Chairman Bennett began the meeting with a review of the Meeting Agenda indicating that it had been revised to move the forecasting discussion to 2:00 p.m. to allow EPD staff to be present for the discussion. A motion to accept the revised agenda was made, seconded and approved without opposition.

Mr. Bennett explained that EPD had prepared a questionnaire would be distributed to members to give them an opportunity to help set the priorities for the group and to ask for specific

information they would need to make the best decisions with regard to water resource planning issues in the region. He also explained that Mike Berg, Dawson County Chair, was unable to attend the meeting and asked Brook Anderson of the Etowah Water and Sewer Authority to sit in and speak on Mr. Berg's behalf, but not be allowed to vote. There were no objections from the members present.

Chairman Bennett next turned the meeting over to Planning Consultant Rick Brownlow. Mr. Brownlow discussed some basic housekeeping issues (location of facilities, etc.) and announced that Dr. Becky Champion/EPD would give a short PowerPoint presentation before the tour of Dalton Utilities' LAS site. He then gave a brief recap of Council member evaluation feedback and reminded Council members that all documents would eventually be posted to the program website, but that the site is not yet fully functional.

Mr. Brownlow acknowledged that members are impatient to begin getting into substantive issues, but reminded them that the building blocks of technical information the Council needs to do its work are still being developed and he showed members the planning schedule, noting where they are today and where the more substantive work begins later in the year.

Dr. Becky Champion gave a short presentation that included a review of the Regional Plan Development process. She then explained the basic process of how the Water Resource Assessments will give a picture of current water quantity and assimilative capacity and how recommended management practices would be used to evaluate future water quantities and assimilative capacity.

Dr. Champion concluded the presentation and stated that she would like for the Council to continue field trips; she encouraged members to think of other resources in the region that would be instructive to see and noted that these don't have to be structures or facilities; it will also be useful for members to see pristine areas, such as habitat for endangered species. Future meetings can be held near field trip sites.

Rick Brownlow then announced that it was time to board the bus for the field trip.

2) Management Practices Demonstration (Dalton Utilities Land Application System)

Mark Marlow, Vice President of Engineering at Dalton Utilities, led the bus tour. Mr. Marlow stated that members might see water management ideas and practices on the tour that could help them in their task of developing the plan.

Members observed various facilities used by Dalton Utilities to provide customers with multiple utility services, including telephone, cable, electrical, natural gas, and stormwater treatment. Mr. Marlow was asked whether Dalton Utilities performed any pretreatment and he responded that individual industrial customers performed their own pretreatment. The tour bus crossed the Conasauga River, which Mr. Marlow noted was one of the most biodiverse river systems in the world.

He noted that Dalton Utilities land applies reclaimed wastewater to 9500 forested acres, of which 4600 are sprayfields. There are 19,000 sprayheads and approximately 320 miles of pipe in the system.

Question: How long does the water take to get back to the river after application?
Response: It goes back daily; hard to determine the exact duration of return, but there is a notable decrease in the river level when no spraying is occurring.

Question: What is the percentage of residential vs. commercial waste?
Response: About 60-70% commercial.

Question: Does the chlorine gas affect the environment?
Response: The gas dissolves in water and becomes liquid chlorine. The concentration is about 1 to 2 parts per million, which is about the same as the water distributed at a residence.

Question: Is that strong enough to kill fecal coliform?
Response: Yes, and we test that daily. Our results are usually less than 2 colony forming units (CFUs)/100 milliliters. The standard for the state of Georgia is 23 CFUs/100 ml.

Mr. Cope then commented on the sprayfields, noting that they are hydraulically optimized and managed as a total system. The time and volume sprayed is based on field capacity and weather.

The tour bus then passed a tree harvesting in process, and Mr. Marlow noted that while trees are harvested daily to manage the system, this is balanced with new plantings to take up the nutrients in the wastewater. Mr. Cope explained that the total system is, in essence, a wastewater farm. Wildlife management, especially deer hunting, is another important part of the operation. Mr. Marlow also noted that the Audubon Society visits the Dalton Utilities LAS to observe birds. More than 124 species have been found, and more than 4,000 birds observed, including a bald eagle.

He explained that Dalton Utilities has partnered with P2AD and local industries to decrease the phosphorus and nitrogen content in treated wastewater. Phosphorus has been reduced from 25 milligrams per liter (mg/l) to 6 mg/l. Dalton Utilities is also working with UGA on strategy to further remove nutrients using algae, which can remove up to 90%. A pilot facility is being developed to grow the algae and then use it for biofuel.

Question: What is the lifespan of a LAS? How much is applied?
Response: The span is dependent on the phosphorus load. The current field is likely good for another 20 years, although more nutrient removal may be needed in the future.. About 20-30 million gallons per day (mgd) are applied.

The City of Dalton withdraws 2 to 3 mgd from Tennessee as part of an interbasin transfer; withdrawals are made from Calhoun, Chatsworth and Catoosa as well. There is a 2.65 billion gallon contingency supply. Dalton Utilities is partnered with local industry to conserve water. A yearly fish/mussel survey has been done on the Conasauga River since 1995. Dalton Utilities has also operated the 200-acre Spring Creek wetland since 1996.

Question: How many reservoirs are in Dalton?
Response: Four; all are used for off-stream storage.

Question: Are constructed wetlands used for treatment?
Response: No, the water flows back to the river.

Question: Are there any low lying areas at the LAS attached to wetlands?
Response: There are some wetlands at the site, but Dalton Utilities does not spray on them. Dalton Utilities is not in the business of creating wetlands.

Question: Is the timber harvesting constant?
Response: Yes; 2-3 trailer loads are harvested weekly.

Question: Are the algae ponds planned for consumption of fecal particles?
Response: No, they just are just for consumption of phosphorus and nitrogen. Transevaporation occurs with the vegetation and there are drains for testing to see if the water percolates through the soil and goes back to the river.

Question: During extended rainfall, do you still apply?
Response: We can only apply a limited number of inches per week; the reservoir provides equalization in periods of heavy rainfall.

At this point, the tour ended, and the meeting resumed. Planning Consultant Rick Brownlow opened the meeting and asked whether there were any comments or questions regarding the tour. Council members thanked Dalton Utilities for the tour and congratulated Don Cope on the program. Mr. Brownlow also reminded members to use the survey and its open-ended questions as opportunities to comment on the tour and make specific comments and give feedback on the process.

3) MOA, Operating Procedures, and Rules for Meetings

Next, Mr. Brownlow opened the floor for discussion of suggested changes to the MOA and other documents. He provided answers to several questions the Council had posed to EPD and explained that all changes suggested by the Council had been approved by EPD. He also noted that EPD had offered additional language on the procedure for resignation of WPC chair, vice chair, or member. Specifically, EPD recommended that the operating procedures be revised such that any member wishing to resign should notify EPD instead of the appointing official to streamline the process.

A motion to approve the recommended modification concerning resignation was made, seconded and approved without opposition.

Also discussed were two additional items that were discussed during CM#1 but no specific recommendation was made:

Should term of office be changed from 6 months to 12 months, as some other councils have done?

Members agreed that a 12-month term for council office would be better to maintain continuity, especially since the councils will meet only 4 times per year. One member asked whether the term would run from July to June or from the time the chair was elected. It was agreed that the term would be July to June, with either the old or new chair serving for 13 months if necessary.

A motion to change the term of office for the chair and vice chair was made, seconded and approved without opposition.

Decision Making

The Operating Procedures as written call for a two-thirds majority vote if consensus cannot be reached. During CM#1 the Council discussed this issue at length but reached no specific recommendation. Based on this discussed Mr. Brownlow explained to the Council that another WPC had slightly altered this requirement to specify a process of sequential voting that provided for decision by a simple majority after two efforts to achieve two-thirds majority.

The Council discussed that the two votes would not necessarily have to be taken in the same meeting, and that discussion of the issue might result in some tweaking that would bring the group closer to consensus. Most agreed that a simple majority was not satisfactory, but could be considered as a last resort. There would always be opportunity for redress, and the Council can determine by situation whether to vote again at same meeting or table the issue until later.

A motion to accept the change was made, seconded and approved without opposition.

After the changes were approved, Chairman Bennett asked the Council if they were ready to take action on the MOA, Operation Procedures and Meeting Rules in their present form. A motion was made, seconded and approved without opposition to approve the documents.

Mr. Brownlow announced that MOA signatures would be obtained during the lunch break.

4) Introduction to Agriculture Water Demand Forecasts

Next on the agenda was a presentation and discussion of agricultural water use and demand forecasts. Cliff Lewis, Acting Assistant Branch Chief for the Satilla, Suwannee, St. Marys and Ochlockonee Watersheds, joined the meeting by phone to give the presentation. Mr. Lewis explained that EPD is working with UGA on the agricultural water demand forecast and noted that the information being shared today represents the best projections to provide a scientifically sound planning tool for making decisions. Following the presentation, members were invited to ask questions. Rick Brownlow noted that Greg Sheppard and Keith Gilmer of the Georgia Soil and Water Conservation Commission were present to help answer questions as well.

Question: Will animal husbandry be included in forecasting later?
Response: With respect to poultry, that will be included in industrial forecasting. Although its an agricultural product this water use is general categorized with industrial uses. With respect to livestock, those numbers are included in the forecast but not sub listed as livestock.

Question: Which category are they in?
Response: Forecasts are based strictly on the 5 big crops – corn, soybeans, cotton, peanuts, and

pecans. There are aspects of agriculture, depending on your location, that are more important to some areas in Georgia than others. When you are developing management practices and future growth for your area, you may have vegetables and other produce that are not taken into account that you may have to plan for.

Question: Growout uses a tremendous amount of water. We are asking about farm use.

Response: Poultry is classified as industrial. The State does not classify it as agricultural.

Question: Will processing plants and farm houses be under industrial?

Response: Yes.

Question: Will they be separate categories?

Response: Don't know; we will have to capture this question for further analysis. One caveat to poultry is offered – if the operation is using more than 100,000 gallons, it would be permitted. Most poultry operations fall below that amount.

Comment: The classification of poultry needs to be adjusted because we're looking at the impact for the whole process; poultry is an agricultural process and in order to track dollars and resource use, we need to look at how it's accounted for.

Question: Where there is a large number of farming operations, how are we estimating/accounting for aggregate water use when individual operations are below 100,000 gallons and a permit is not required?

Response: Recreational use, for example, is included in industrial. As far as agricultural forecasting, if below the threshold, it's not going to be included in the forecast. There are different parts of agricultural use more important to certain councils than others; councils must come together and realize what aspects of agricultural are important but not counted in the forecast and determine how to include these in management practices and conservation plans. This is not an all-encompassing picture; it's based on the crops that make up 85% of Georgia's agricultural industry. If your Council/county has other aspects of agricultural not taken into account, you need to use all the resources you can access to educate yourself as the planning continues.

Question: Where would we get that info?

Response: Suggest that the Council can provide specific information needs to Rick Brownlow to pass on to Cliff, and Cliff will help to find the resource. Rick Brownlow added that Dr. Champion will also help give direction on how use is accounted for when it is less than 100,000 gallons.

Question: Who is responsible for forecasting market demand? Who is accounting for how much national/international demand will increase and what share Georgia will get?

Response: The Council will do that.

Question: So, for example, we will decide the market for blueberries?

Response: No, we will have to determine what data we as a Council need and let EPD and UGA know, and research the information. As far as specific crops, we would talk to producers and gather data based on our own initiative.

Comment: Also, when looking at agricultural, we have a large number of farms in Georgia using less than 100,000 gallons. The trend is moving towards more local, more sustainable farms, but that sector of agricultural is growing. Their needs, while not greater than 100,000 gallons per farm, will be essential in making decisions.

Dr. Champion noted that one of the last groups to review the agricultural information was commodity groups. The Council can work with them and with trade organizations to help us determine agricultural forecast needs from a regional perspective because Coosa-North Georgia will be different from areas south of the fall line, and this Council will need that information.

Question: Relating to evaluation of assimilative capacity of water bodies, is the State going to provide any data with respect to nutrient loading from livestock, poultry, food production and other agriculture-related sources?

Response: That is beyond the purview of the demand forecasting but will be part of the water quality assessment.

Comment: As we go forward, we may want to discuss nutrient trading and similar issues; it will be important to develop a particular understanding of that use and loading sector.

Question: What happens to a permit holder who's using less than their permitted amount of water? Do they maintain that permit? Does that potentially reduce the amount available to others?

Response: Permits are not based on allocated volume; they are based on pump capacity. Once a system is turned on, the permit cannot be revoked for non-use. There are also no term limits on permits either, except in the Flint River Basin management plan, which calls for a 25-year limit. Right now, the State cannot revoke a permit because someone is not using all of their permitted capacity.

Question: Can any restrictions be put on withdrawals in times of drought?

Response: Statutes give the Director of EPD authority to place restrictions as deemed necessary. Agricultural users have not been targeted with those restrictions as have others, but the statutory ability to place restrictions rests with the Director.

Question: Can demand forecasts be broken out on a regional basis or just statewide?

Response: We believe they will be done by basin and water planning region; other categories are being evaluated as needed.

Question: Will we receive the information and have an opportunity to review it before 3rd meeting?

Response: The plan is to send it at least 2 weeks prior to the meeting.

Question: Is the difference between water applied and water withdrawn due to leakage or some other factor?

Response: There would be a duplication of water use if you measured what was withdrawn and what was applied since, for example, evaporation isn't accounted for. HB 579 directs GSWCC to measure water applied to crops; the meters on the equipment begin to measure the water at the last point before it hits the field.

At this point, Cliff Lewis signed off.

Comment: We learned at a recent conference in South Georgia that most farmers use center pivot systems. They don't worry about use less than 100,000 gallons because the volume of what these systems apply in a day is enormous and very expensive. Southwest Georgia users protect their right to use these volumes of water.

Comment: The cost to run a pump to pull water from the ground and push it to where it's needed is much greater than if that water were put in storage. A tremendous amount of evaporation occurs on a hot day, so it's counted where it's applied. We need to consider all of it.

Comment: The withdrawal amount is also dictated by weather, so if use is less than 100,000 gallons, it's probably because of rainfall.

Comment: It's still important to capture that sector and include it in the calculations; it's a significant amount.

Comment: Most of our agricultural use here will fall below the 100,000-gallon mark. On a more local level, we will have to mine data out of each county and city because only the local people will understand what's going on within their boundary – how many farms, poultry houses, etc.

Comment: It will be difficult to get all this information because there is more that is not known than is known. How many acres of water are needed to grow pine trees, for example? This data will be hard to get, but it will still be needed.

Rick Brownlow reminded members to keep in mind that this is the first version of the plan and it will be refined over time.

Comment: There is information available on surface water withdrawals. Even though the numbers don't show it, if you look at the map shown, there were dots all over North Georgia. EPD does have records of withdrawals over 100,000 gallons. There are permits out there that people acquired to reserve potential use, e.g., Berry College. Some are rather large, e.g., sod farms, with 2-3 mgd permits. They may not use the permitted amount all the time, but this is an issue for North Georgia more than South Georgia because agricultural use is for non-food purposes – horticulture, grass, shrubbery. When discussing drought conditions, it might not affect us in Rome, but it might in Dawson and Cherokee counties, where sources are not available.

Comment: In the nursery industry, we water to 32 inches or more, but we recycle our water. We use pumping stations and ponds. The major producers, though we might be withdrawing 1 mgd,

are recapturing 80-85%, but that is not taken into account. The amount used is also set based on whether there is rain on a given day. Nurseries are also year-round crops, where row crops are not. This may not be accounted for.

Comment: Small vegetable production is becoming the trend; no permits will be required.

5) Introduction to Resource Assessments

Brian Skeens presented an overview of modeling, and discussed types of models and how they are used. He noted that models are replicas of complex systems, of which watersheds are an example. He also noted how important modeling will be over the next year as understanding of the systems and the various inputs that affect their outcomes increases.

Next, Mr. Skeens presented an overview of the Resource Assessment process. He described the types of resource assessments to be performed and how they will be used.

Question: What is meant by "conservative" with respect to assimilative capacity assessment?
Response: When models are done, there must be a "safety factor" to ensure that the goal – protection of the resource - isn't adversely affected. The safety factor tends toward overestimation to ensure protection of the resource.

Comment: That question leads to how we should interject ourselves into the process. We met with Nap Caldwell about the USGS numbers, and they are way out of line with the reality of withdrawal and use at the power plants. "Conservative" needs to reflect the reality of what/how we use the water resource.

Question: Has the Metro District done any of this modeling? It would be interesting to see their data since they've been working on their plan for 10 years.

Response: There was some water quality modeling done on a limited basis, but not to this extent. Instead of measuring the actual water available, EPD provided a specific number to be use in their planning process. Metro did not go out and do new surface water modeling, for example.

Response: We use models all the time, for every single permit for withdrawal or release. It all goes into a model that tells you what the parameters are to protect that resource and is typically pretty site-specific. The new model will help us look at statewide numbers. When you're modeling on one of the smaller watersheds, the sum of the parts is greater than the whole. The new model will take that into account. As we look at these planning nodes, we can predict what will happen. The marked nodes don't indicate these areas will get more attention, it simply means it is easier to measure where we have long-term data, and the tools and techniques to generate better information.

Question: The assumption going in is that the final product of this plan will be very similar to the Metro District plan, in that it will assign water and wastewater allocation on a municipal and county basis. Is that how this plan will ultimately be generated? If so, how will you disaggregate

those data nodes into a micro level to disaggregate assimilative capacity and water resource availability? It's a long way from the nodes to the watershed level.

Response: We know what is currently being used. Modelers already have that information in the model above those planning nodes; we will be doing projections of future use – withdrawals and discharges – and putting those back into the models at those locations. That will give you future demands and needs at those locations. The model will tell us if that's too much for the resource to handle. As a group, we must come up with what makes most sense to help that reach meet the demand. What changes can we effect? How do we make changes and deal with the resource in that area?

Question: But the plan will ultimately generate a county by county, city by city allocation?

Response: All of these data will be updated every 2 years (population) which is what determines demand.

Question: But today we have a population forecast that will generate a need for a certain quantity of water. In the Metro District plan, there is a chart in each county/city plan that shows what they are allocated. Will this plan generate the same type of table for Coosa/North Georgia?

Response: We can't answer that today, the answer will come in the guidance we receive.

Response: If you follow the specific measurements, it would seem that the conclusion will be specific allocation. The allocations may not go as far as the specifics of facility names, but we could conceivably have allocations by withdrawal within a specific reach.

Question: Then if that is the case, if any of us goes for additional withdrawal or discharge permitted capacity, and if there is not specific basin- or council-wide planning, that permitting phase could take several years to disaggregate out of the Coosa-North Georgia allocation as far as what someone might or might not be granted in terms of withdrawal or assimilative capacity. If you don't have the specific allocations to do that, the process will be much more lengthy and tedious.

Comment: I would like to think that when we are done, we will know how much water is available in this area and that if we go beyond that amount, we need to go and find other sources of water. That might mean water from Tennessee, more wells, etc., but I expect that we should have some reasonable amount of knowledge, starting at the upper end of the basin and moving down, as to what availability and assimilative capacity we'll have. But I don't think we can anticipate that every system represented here will be told what their exact allocation will be. We will have that information by basin, and we will have to think of new management practices (reservoirs, new withdrawal sources, etc.) on that basis.

Further discussion followed on the need for sublevel allocation information, and the following comments were offered:

- The counties are represented for that reason.
- The guidance that is forthcoming will give us the rules and specifics of what will go into the plan.

- There will be some specificity, but it cannot be etched in stone all the way to 2050 because you can't forecast every change. For example, Kia might decide to locate a plant here, and that will result in a shift in population that you will have to adjust for. That is one reason the population and employment forecasts are now being housed within the State and will be tweaked every couple of years.
- You need to understand what your margin of error is at all times from now until 2050. For example, when treatment plants are built, some expansion capacity is built in. You will need to know on at least a 5- or 10-year basis what capacity you might need.

Question: Will the model be run on different possibilities to generate various options?

Response: Our job will be to come up with different options and different inputs to achieve the desired result. We will be able to show the outcome of various alternative and management practices.

The meeting adjourned for lunch.

6) Creating a Regional Vision (continued)

When the meeting resumed, Rick Brownlow asked members if there were any additional questions on resource assessment. There being none, the discussion moved on to the visioning process. Mr. Brownlow asked members to spend time between this and the next meeting coming up with specific ideas and visions, using the "Shelby" visioning exercise provided by UGA. No immediate thoughts/ideas were offered, and Mr. Brownlow informed members that the exercise would be emailed to them.

Question: Can we get drafts of the pre-lunch presentations (Brian's)?

Response: Yes; we can pdf them and send them out. In fact, we will send the presentations from both meetings.

Question: What is the timeframe on the website?

Response: We apologize that it is not yet complete but we are hoping to have it ready soon, perhaps by the end of the week. Rick Brownlow added that once the site is up and running, staff will be responsible for keeping it up.

Members were also asked to update their contact information and indicate if they wanted other individuals to receive mailings.

7) Public Involvement Plan

Next, Rick Brownlow presented an overview of the Public Involvement Plan (PIP). He indicated that the process is using a de facto approach until the formal plan is done and reminded public and elected officials to sign up if they desired to speak. A formal plan will eventually be presented for Council approval.

Question: Will this PI plan just include comments/opinions from the public or will EPD provide an educational process for the public?

Response: There are two distinct issues – one, guidance for how we will incorporate public input into our process, and two, how EPD and the Council will engage the public in the implementation of management practices. The plan will formalize the input of the Local Government Advisory Board and may also include discussion of technical committees and other inputs as the Council deems necessary to operate. Plans will also incorporate dispute resolution.

8) Population and Employment Forecasts

The next presentation, on Forecasting, was introduced via telephone by Kathy Kinsella of the State Office of Planning and Budget, and delivered by Warren Brown of the Carl Vinson Institute of Government (CVIOG) at UGA.

Ms. Kinsella gave the background on OPB's role in the demographic and population projections. She noted that in this round of data gathering, the agencies have sought more local input and scientific rigor. The State contracted with UGA and formed an advisory board to get input on assumptions and the final product. Board members include the Atlanta Regional Commission, EPD, the Northeast Georgia Regional Development Councils (RDCs), the Department of Community Affairs, the Georgia Municipal Association, Department of Transportation, and UGA. They provided comprehensive review in April, gathered additional input via website, and presented preliminary projections to the RDCs for their feedback. The entire process should be complete within next month, with official forecasts ready by end of August. Projections will be used for a variety of purposes, including healthcare facility planning, library funding, K-12 QBE funding, and state water planning. The projections will be updated every 2 years, with ongoing opportunities and channels for input.

Warren Brown then began the presentation. He noted that the State's goal is to give excellent projections and to continuously improve. The next group of projections would be presented in 2011, following the 2010 Census. Feedback has been extremely valuable and already shows changes are needed in methodology and assumptions for Coosa-North Georgia. For example, the original model did not account explicitly for border state employment – Wacker Chemicals, VW plant, etc. He asked that members provide any information they have that might similarly improve the forecasts.

Mr. Brown noted that population projections are typically tied to regional employment output, but part of the growth is due to amenities, such as recreational facilities. This population forecast currently projects growth that the Census would count. However, the Census counts people at their primary residence, not seasonal or secondary, and UGA and OPB believe that the non-employment numbers should be reflected. He also acknowledged that there are places at the fringes of expanding metro Atlanta that are expanding into the south Coosa area. Those also need to be accounted for. UGA/OPB know now that revisions may increase population by more than 100,000 by 2050, but these may still be below what's included in comprehensive plans for

potential growth. Regardless of these factors, the counties must sum to a reasonable state total that can be defended. Right now, they are projecting 30-40 year growth in Georgia to 16-17 million (making Georgia the 5th largest state in the country) from migration and immigration. The question then becomes how to develop county and regional projections that fit within that framework.

Brian Skeens reviewed the Population and Workforce projection slides as the discussion on the UGA/OPB information continued.

Question: You indicated that you may be looking at different methodology to adjust the figures? Can you elaborate? Will there be public comment after that's done? It sounds as if you chose an arbitrary figure of 16 million for 2050 and extrapolated back for historical growth within the county. Was the model calibrated to support that? Should it be recalibrated from a bottom up as opposed to a top down approach?

Response: The methodology will not change, although we will be refining it and adding information. The population and employment projections began in January, and were conducted by Warren Brown and Jeff Dorfman, using the same methodology used by a University of Texas, San Antonio demographer. The population projections looked at births, deaths, migration of Hispanics, non-white Hispanics, black, white and other. Employment projections (with the state population at 22 million by 2040-2050), and looking at historical growth in Georgia (including the explosive growth of the 1990s), showed that Georgia's ability to maintain that rate of growth is unlikely. The number of migrants from other parts of the U.S. will not keep increasing. Georgia will remain highly competitive and attractive to industry and population, and a large number of immigrants will continue coming in. We have high confidence in Dorfman's projections, compared to Census projections and private data vendors' projections, and we used those to come up with reasonable projections of growth. We will continue to make refinements to methodology.

Question: Most people in North Georgia realize that many go to Atlanta to work. Was that taken into account? It seems that the employment figures used in employment and population forecasting should start at metro Atlanta and go north.

Response: The metro region has a smaller population to employment ratio because people are pulled from outside regions to work. The Coosa-North Georgia ratio is higher. This allows the population to grow more than what you'd expect from the statewide average of persons per job.

Question: Has there been any attempt to understand new and emerging technology and job creation? It appears that this was done based on work done now instead of acknowledging that that there will be new jobs, new technology that hasn't existed for 30 years.

Response: True. Trend analysis is not good at identifying abrupt changes. We are taking historical trends, modeling them and projecting them forward. For example, we would not have predicted the current recession, which is the most disruptive event in the study period. We are making adjustments due to that, but this is a very conservative approach. We are not speculating on things that are not currently obvious.

Comment: The problem is people are not available to work – they come here to retire. The graph doesn't present a true picture of jobs to population. There are several communities of people 55 and older who have finished their work life.

Question: Two years ago, all communities started the census process. We should know the data better than anybody. I suggest we get with people in the county and RDCs and look at the information you provided and that you were to turn in, and compare it with what UGA and OPB has put out, and that's the part we contribute. We should fine-tune our region over the state as a whole. I guarantee that all these counties are working to bring in VW and UGA wouldn't know about that. Atlantans work in Chattanooga, and they (UGA) wouldn't know about that. That's part of the information they need from us.

Response: If we're using Census info from 2008, then if those numbers are wrong, we are starting out at the wrong place. The local update of Census addresses – and I'm glad this region is involved – is probably the most important way to get an accurate count.

Question: Employment verification programs in place have shown a 30% reduction in applications since more stringent verification requirements were put in place. Did you use that?

Response: We used Georgia Department of Labor (DOL) data where employers provide data on employment. We made no adjustments to those data.

Question: Every county/city must submit community agenda to DCA for approval. Your numbers are very different from the DCA-approved numbers. How do we reconcile these?

Response: One way is to help us understand the assumptions and hard data that went into those projections. In some cases, County Comprehensive Plans show growth potential if certain things take place; they are not necessarily conservative projections of population growth. If we took the projected number from comprehensive plans, there would be much larger numbers. It may not be a bad way to do a county comprehensive plan should these potentials be realized, but to do a statewide set of projections, I would advise we be more conservative. Also, remember that our charge was for the total of county numbers to equal the state total.

Question: Has anyone explained how your projections will be used with respect to the Water Plan?

Response: We have not done this because how these projections are to be used for water planning purposes isn't material to the work that UGA/CVIOG is performing. Put another way, we need our demographers to do the best objective job they can of developing these projections for a number of purposes (as Kathy mentioned earlier) and not allow their forecasting to be shaded due to the ultimate use of these forecasts.

Question: Much of this has focused on what's in the pipeline now that we have knowledge of, not a 40-year plan. I understand we have to be conservative so that in 2035 Coosa-North Georgia is ready. Mr. Brown thinks perhaps near-term projects can be used to do long-term projections because he knows this process will be redone in 2 years. but we have to project further out than that.

Response: We have not attempted to provide Dr. Brown with information to affect their projections. Their results will be used by a number of state agencies. We are just one agency using the projections that they come up with.

Question: If you look at the 1990-2000 growth spurt, which was an anomaly, and compare your growth rate to that, wouldn't your growth rate look awfully low?

Response: [Mr. Brown referred to the graph called "Coosa-North Georgia Alternative Population Projection Scenarios", provided to members during discussion]: This graph shows 5 different lines of population projection that represent population growth under different migration scenarios. Most comments were that using half the rate of growth from 1990-2000 looked most reasonable, with the regional figure at slightly under 1.1 million. After the adjustments are made, we think this is where the regional total will land. The state total is defensible. The challenge is to make regional and individual county totals add up to the state total.

Question: Which alternative was used for the numbers we were asked to comment on?

Response: We looked at the workforce scenario.

Question: You indicated that you had a higher degree of confidence in the employment projection? Why?

Response: Employment projections are based on a time series; DOL does a census of jobs every 3 months. In contrast, we have an actual count of population once every 10 years. The quality of DOL data is far better. Another reason is that when you look at the Dorfman projection and compare it with other forecasts and projections, we find that we're similar. When population projection is done using the 1990-2000 migration rate, we didn't find any other projection for the region that was that high. The historical trend shows that 1990-2000 was an extraordinary period. In the UT-TX approach, the influx of Hispanics kept compounding itself out into the future. The region may continue to be attractive to Hispanics for employment or other reasons, but the doubling or tripling is not going to take place every decade. If there's a discrepancy between population and employment, we tended to move our numbers closer to what Dorfman's were.

Question: Just given the example of Texas and the Hispanic population, I would caution you to look at legislation just passed and the reduction of migration of Hispanic workers into Georgia over the past 2 years.

Response: Right; so to take 1990-2000 numbers and extrapolate to 2050, we can't even see numbers let alone percentages increasing at that rate. You have to look at the model that assumes immigration from abroad and the influx of Hispanics will continue to flow through this region at that percentage rate. That argument will dampen down population projections.

Question: Are these projections educated guesses, even a "shot in the dark?"

Response: All projections have some level of uncertainty. Having said that, they are necessary components of a planning process so we have to make our be forecast and acknowledge that they will be refined over time.

Question: After the June 30 deadline for comments and adjustments made, will there be another opportunity to review and comment on what's produced and whether our comments have been captured properly?

Response: After all comments are received, the OPB/UGA will present the report to the RDCs and get more comments from them, then finalize the projections. We may not get more public comments, but the data will go back thru the RDCs.

Response: This round of projections will be produced at the end of September and will be available for use and interpretation. This fall, we will conduct a series of daylong workshops in every region of the state to create a better understanding on our part and that of users and planners as to how we arrived at them; we'll also get feedback to use next time around. We want to continue to improve this process. This is probably your opportunity to give us feedback using those forms that were distributed, but if we can communicate in those workshops, we can improve quality for the next round of projections incorporating local knowledge and then another round of public comment on those projections.

Question: It is obvious we will have to use population projections to finalize our plan. Once the 6/30 deadline is met and the figures recalculated, unless someone can document major flaws, I don't see why we can't use the numbers and move on. They can be adjusted as needed in 5 years.

Response: That's one thing to remember, and we understand your concern that we look at long-term, but local decisions will affect us quickly, so we'll use these, let them stand for 2 years, and then begin working on the next set. Hopefully, the state legislature will support the continuation of this process so that we can revisit this in 2 years.

Question: When will RDCs have 2010 Census numbers?

Response: Since it's a short-form questionnaire, it will be much faster. The state totals must be ready to be presented by the Census Bureau by 2010 in order to inform Congressional reapportionment. The head counts (population, population by age, race/ethnic, etc.) have to be delivered by April 2011 to every state and entity – these are at the block level and used for redistricting. So by April 1, 2011, you will have data on size of city, county, community, etc. You may not have age and household data yet. That will come some time in the summer of 2011. We will begin analyzing our numbers out by April 2011.

Question: So your numbers will change?

Response: That will be a new launching point and time to re-estimate net migration and other characteristics to feed into the 2011 projections.

Comment: Remember that this group is to discuss usage and assimilation – these numbers have greater implications to some in this room. The state has invested a lot to get OPB to develop these numbers. These numbers will be looked at by people wanting to locate in your community. Perhaps we should consider that everyone wants to attract new business, so all of these numbers have real value. This explains why people are apprehensive of jumping on numbers that have come from 1990-2000. We don't know where next the next Budweiser plant is going. That's

why the figures must be updated. We have to understand that these numbers have broader meaning than just water and water usage, and we must be diligent in our efforts to ensure they're right. If you use comprehensive plan numbers, you'd be 50% higher. The comprehensive plan assumes that you'll grow at the rate you want, not necessarily what's sustainable. As we move up or down I-75, there could be shifts in growth. We should plan water for the most optimistic projection. What we don't want in North Georgia is to be restricted in our water use. I would advise we use realistic numbers at the high end of the spectrum. I hope water use projections are not based 100% on population growth. We should think of projections as planning tools moving forward, not limiting factors.

Comment: Regardless of the scenario, they're all going up. None are going down. So we have to plan for growth.

Comment: If you prepare for more and you're wrong, that's better than preparing for less and being wrong.

Rick Brownlow indicated that the discussion was complete and that once the numbers are finalized, they would be used for water issues. He noted that technical work would be progressing and the Council would be spending time in subsequent meetings discussing how to use the population forecasts to forecast water/wastewater demand. This is the first step of the water forecasting process. He invited Council members to share feedback forms with members of their communities.

9) Public Comments

The public comment period began.

Denise Wood, Dalton City Council: I want to emphasize that the draft population and employment projections are very critical for more than just water issues. Please make sure that the group goes back and ensures all 18 counties review and have input. As a region, we need to promote more than just water conservation. I represent Mohawk Industries – we've done great things to reduce water use. I also worked with Nap in the statewide plan representing the carpet industry. We also need water storage and augmentation, whether inter- or intrabasin. If we don't push for those things, it will go back to conservation only. Also want to make sure we talk about public input and participation. I don't know what the plan is to ensure more people know about the meetings, but I had to search for public notice on the website. I suggest making the public more aware of meetings. Finally, keep looking out for this region – it's the best one in the state!

10) Action Items

Rick Brownlow indicated that the meeting was almost ready to adjourn for the day. He reviewed the schedule again and indicated that the next Council meeting would likely be in September. Dr. Champion and Mr. Brownlow will confer with the Chair and Vice Chair get possible dates within the next couple of weeks.

Question: Can we recommend not a Monday or Friday?

Response: Noted, but in our earlier survey, Wednesdays and Fridays showed up as the most available dates.

Comment: It's a long drive back to certain parts of Georgia. Where is next meeting to be held?

Response: We are trying to move around the region to accommodate as many people as possible. Someone will always have to drive a considerable distance. The next meeting should be in somewhere in the NE region.

Chairman Bennett asked the attendees to give Don Cope and staff a round of applause for the tour and meeting facilities. Dr. Champion reminded the members to complete their evaluations and include an evaluation of the field trip. She noted that we will share impressions with the other councils.

Chairman Bennett concluded the meeting by noting that we have great expectations for CM#3 and asked the council t keep their focus on North Georgia's potential and not too heavily on projections. Meetings with other councils would be very helpful, especially with Metro North District since they share resources. The Council should be considering Cherokee and Bartow Counties in particular, and should have an idea of what plans they have for Lake Allatoona. Paulding County is looking at building a reservoir to withdraw from the Etowah River and Bartow County and Cartersville seem to have some questions about this facility. Also, before we go too far, we need to have some idea of how Alabama looks at North Georgia, as well as Florida and Tennessee. They are watching us closely to see what we come up with. They come to Rome meetings – very interested in what's happening. We need to have a plan of what use we will make of our water systems; everyone needs to know that what happens on Alabama line with the Coosa, if it doesn't satisfy them, it will be a mess.

Don Cope: We should definitely consider Tennessee as well.

John Bennett: We are probably the only regional council dealing with 2 different states. We also have to deal with the North Metro district more than others because we have more of their counties that are part of our basins. We might need one extra meeting to bring in other states. Maybe we could add a meeting to devote to AL and TN.

Dr. Champion: We have already engaged them in some informal ways.

John Bennett: At our first meeting, there were several high-up AL and TN folks.

Nap Caldwell: They were invited.

David Pennington: Reflecting on the tour, we should also acknowledge that almost everything in this community is paid for by manufacturers. Along with healthcare, manufacturing provides most jobs. So many jobs have gone overseas; if this manufacturing-heavy area of the state doesn't make the point of how important manufacturing is, no one will. And buy carpet on your way out!

There being no further business the meeting was adjourned.

Members Present

1. Brooke Anderson (on behalf of Mike Berg)
2. David Ashburn
3. Irwin Bagwell
4. Kenneth Beasley
5. John Bennett
6. Charlie Bethel
7. Tim Bowden
8. Keith Coffey (alternate)
9. Don Cope
10. Katie Dempsey (ex officio)
11. Pat Gober
12. Stephen Gray
13. Jerry Jennings
14. Haynes Johnson (alternate)
15. Sherry Loudermilk
16. Dick Martin
17. George Martin (alternate, on behalf of Tim Banks)
18. Tim Mercier
19. Tom O'Bryant
20. Lamar Paris
21. Sam Payne
22. Todd Pealock
23. David Pennington
24. Jimmy Petty
25. Frank Riley
26. David Westmoreland

Members Not Present:

1. Doug Anderton
2. Kelly Cornwell
3. Gerald Dunham
4. Chip Pearson (ex officio)

Partnering & Other State Agencies

1. Leamon Scott, Department of Community Affairs (http://www.dca.state.ga.us/)
2. Keith Gilmer, Georgia Soil and Water Conservation Commission (www.gaswcc.org/)
3. Greg Sheppard, Lumpkin County Extension Coordinator (http://www.caes.uga.edu/extension/)

GA Environmental Protection Division:

1. Becky Champion, Assistant Chief for Coosa-Tallapoosa-Tennessee Basins
2. Michelle Vincent, NonPoint Source Program

CH2M HILL

1. Rick Brownlow
2. Marla Hill
3. Brian Skeens

Attachment – Summary of CM2 Evaluation: Information Needs

Council members were asked to complete an information needs evaluation form to answer questions to help target the information that EPD develops to assist them in the selection of water management practices that would meet the goals for the Coosa – North Georgia Water Planning Council.

Question 1: First, consider your personal level of knowledge about the following topics. Please circle the number that indicates how much you know about each topic, with 1 indicating very little and 5 indicating a great deal.

Results: The results show the average of the 24 Council Members who completed the form.

Topic	Average
Ways to protect groundwater resources in your planning region	**2.75**
Ways to protect surface water resources in your planning region	**3.50**
Ways to protect water quality in your planning region	**3.38**
Ways to restore water quality in your planning region	**3.00**
Water chemistry with respect to water quality	**2.71**
Sediment and erosion rules and management	**3.42**
Stormwater primer & innovative technology/practices	**2.91**
Agricultural water use in your planning region	**2.83**
Energy water use in your planning region	**2.54**
Energy water use around the state	**2.42**
Industrial water use in your planning region	**2.83**
Municipal water use in your planning region	**3.08**
Per Capita water use in your planning region	**2.75**
Outdoor water use in urban areas and conservation methods	**3.00**
Other: Reservoirs[a]	**5.00**
Other: Encourage industry and development that use less water[a]	**2.00**

[a] *Average based on only 1 Council member's response*

These results show that, on average, the Council members feel that they have most knowledge of:

1. Ways to protect surface water resources in the planning region,
2. Sediment and erosion rules and management, and
3. Ways to protect water quality in your planning region.

The results also highlight the following areas in which the Council members felt they were lacking knowledge (determined by an average Council ranking of less than 3.0):

1. Stormwater primer and innovative technology/practices,
2. Agricultural water use in the planning region,
3. Industrial water use in the planning region,
4. Ways to protect groundwater resources in the planning region,
5. Per capita water use in the planning region,
6. Water chemistry with respect to water quality, and
7. Energy water use in the planning region and around the state.

Question 2: Which of these topics will be most important for your Council as a whole to explore? Please select the five topics that you think will be the most important for your Council to consider.

Please rank your five choices from most to least important using 1 to indicate most important and 5 to indicate least important:

Results:

Topic	Average	Number of votes
Ways to protect groundwater resources in your planning region	**1.80**	**10**
Ways to protect surface water resources in your planning region	**2.13**	**16**
Ways to protect water quality in your planning region	**2.24**	**17**
Ways to restore water quality in your planning region	**2.63**	**8**
Water chemistry with respect to water quality	**2.80**	**5**
Sediment and erosion rules and management	**2.78**	**9**
Stormwater primer & innovative technology/practices	**3.29**	**7**
Agricultural water use in your planning region	**2.70**	**10**
Energy water use in your planning region	**4.11**	**9**
Energy water use around the state	**3.33**	**3**

Topic	Average	Number of votes
Industrial water use in your planning region	**2.71**	**14**
Municipal water use in your planning region	**2.29**	**14**
Per Capita water use in your planning region	**3.75**	**12**
Outdoor water use in urban areas and conservation methods	**4.17**	**6**
Other: Reservoirs	**5.00**	**1**
Other: Economic and quality of life associated with water use and ways (new or existing) to ensure future long-term needs of region are met	**1.00**	**1**
Other: Water resources development in the region	**1.00**	**1**

Note: *Not all Council members completed Question 2 correctly; therefore, it was difficult to qualify the actual topics that are the most important because of the different responses, i.e. the average is of the # of votes, not the total Council.*

Using the both the average and the overall number of votes, the topics noted as being most important to the Coosa – North Georgia Council are as follows:

1. Municipal water use in the planning region,
2. Ways to protect water quality in the planning region,
3. Ways to protect surface water and groundwater resources in the planning region, and
4. Industrial water use in the planning region.

Question 3: Are there planning efforts in other states or other parts of Georgia that you are aware of and think we should factor into our process?

- Metro Planning District has minimum, average, and maximum historic daily flows for major streams at numerous locations. We should generate the same information on each of our streams.
- Yes, we need to coordinate with adjacent regions and Tennessee officials.
- Tennessee water use of Georgia.
- Georgia has done planning efforts in the past, such as regional reservoir studies back in the early 90's that might have useful information

Question 4: Are there particular management practices or issues not listed above that you want to explore?

- Management of current reservoirs in North Georgia, TVA lakes, Carters, Allatoona, Lanier-what are alternatives especially during drought; agriculture permits by County-those permitted and existing use of permits; What parameters will be used to determine

future use

- A statewide public education program for Water 101
- Interbasin transfer
- Conservation of water resources-what is in our toolbox?
- Tax incentives for water conservation industry
- Need to emphasize conservation measures
- Water/Nutrient trading; direct discharge; aquifer storage; water storage