

Georgia Department of Natural Resources

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November 18, 2009

MEMORANDUM

TO: Coosa – North Georgia Water Planning Council Members
FROM: Rick Brownlow, CH2M HILL
SUBJECT: Council Meeting #4 Summary

Georgia Comprehensive Statewide Water Management Plan Regional Water Planning

Council Meeting #4 Summary

Meeting Date: November 18, 2009
Location: Community Center, Dahlonega, Georgia

1) Welcome and Introductions

Chairman Bennett welcomed the group and thanked them for attending. He thanked council member Tim Bowden, Lumpkin County Commissioner, for arranging the meeting accommodations. Commissioner Bowden asked Dr. John Raber, Chairman, Lumpkin County Board of Commissioners to give some opening remarks. Chairman Raber noted that they were happy to host the group and he introduced several other local officials. Gary McCullough, Mayor of Dahlonega, also gave opening remarks, noting that the nation's first gold rush began in Dahlonega. He also discussed the importance of water resources, discussing the permitting and construction process for the Yahoola Creek Reservoir. He explained that the reservoir project started in 1994 and was completed in 2004. In 1999, the city took over management of the project, they reviewed water supply yields and had to modify withdrawal permit. The city worked with the Georgia Conservancy for trout stream mitigation, and purchased 400 acres on the Etowah River. Now that the reservoir is operating, Dahlonega has enough water supply and are happy to have the process done.

Following this introduction, Chairman Bennett asked everyone in the room introduce themselves. Chairman Bennett then discussed the Governor's Water Contingency Task Force

who are currently working to come up with possible approaches for water supply as a result of the Judge Magnuson ruling. Some of this work overlaps with the work of the council. Chairman Bennett discussed plans for next meetings – tentatively scheduled for Tuesday, January 26 (joint meeting) and that the next regular council meeting was being planned for Wednesday, March 24.

Rick Brownlow went through the agenda and explained each topic. Mr. Brownlow gave an overview of the schedule and highlighted next steps for the council including joint meetings on resource assessments.

2) Stream Buffers and Other Alternatives for Water Quality Protection

Lamar Paris and Becky Champion came forward to discuss the complex problem of stream buffers. Commissioner Paris discussed his role in a committee tasked with implementing alternative minimum criteria related to the 150-foot buffer for small water supply watersheds. Dr. Champion discussed the scientific issue of a larger buffer providing more water quality protection. However, there are other ways to provide water quality protection including projects that promote stormwater retention, detention, and filtration. The group has come up with several options for combinations of stream buffer protection and water quality treatments. Water quantity is also a very important issue related to water quality. Commissioner Paris and Dr. Champion answered questions from the council.

Question: Why are buffers more important in mountain region?

Response: The area has more streams compared to coastal plain with steeper slopes. Stream buffer regulations frequently lead to property rights issues.

Question: How do you account for the differences in buffer widths?

Response: The level of protection, undisturbed natural buffer needs to be greater with a narrower buffer as opposed to impervious setbacks in wider buffers.

Question: How is the buffer delineated—based on grade steepness or horizontal measurement?

Response: Studies suggest that steeper the land, more buffer needed, but this is difficult to enforce. Only areas in Union County that have real detention ponds are the high school and other municipal facilities. Commissioner Paris's opinion is that detention ponds are functionally questionable—seems that engineering should be more focused on dissipating sheet flow, such as removing curb and gutter.

Question: Is underground retention an option?

Response: No, underground retention is very expensive and sheet flow is better and allows for filtration and dissipation of stormwater.

Dr. Champion summarized that the buffer committee was a very diverse group much like the council. Emphasized the fact that in the mountain region, land is crisscrossed with streams and extensive buffers would inhibit land uses/property rights. She agreed with Commissioner Paris that the wider the buffer, the better the water quality protection. With 50 to 75 foot buffer, need to have other measures to help control stormwater flow to maximize the advantage of the buffer that we have. Dr. Champion has a one-page fact sheet with specifics on some of the measures that can be implemented.

Question: For defining the width of buffer – what are your thoughts on elevation/how steep the slopes are as to appropriateness of width?

Response: This makes it more difficult for locals to enforce. This is one of the things that we will be talking about with regards to the management practices in the regional water plan. Dr. Champion noted that the goal of stream buffer protection is to try to get something out there that's better than what we've had in the past. We have to go forward with the best option – then have to go back and make sure that the strategy is appropriate.

Question: What about farmers where most of their land will be taken? Any buyout since they won't be able to use their property?

Response: Have to come up with a protection buffer width that is reasonable that everyone can agree with so there's not a difference--everyone has it. The new buffer rule gives each government building a water supply reservoir an option of varying buffer widths to adopt. Narrower buffers require more protection for erosion and sediment protection, but the regulations are designed so that the land can be developed. Dr. Champion gave an example of landowners with major development with little to no stormwater management. The county ended up having large payments to remove downstream sediment as a result of the development.

Comment: EPD does not have staff to manage Erosion and Sedimentation enforcement, they have put it on counties/cities to manage with their limited staff. Managing the concept of who does this is very challenging. People who aren't going to comply aren't going to comply whether it's 50 feet verses 150 feet in buffer width, so need to include incentives to make the program successful. There are fundamental property rights issues to be sure to compensate affected property owners.

Question: Are land application systems separate from water supply buffer rules?

Response: Yes

Comment: Everybody benefits from clean water, but water suppliers benefit directly by lower treatment costs, fishermen benefit--is there a group trying to look at everyone who benefits from buffers—water quality improvements—need to do a study for credit trading programs to help create a system of compensation/payment for buffers. Part V planning criteria was put together from multiple legislations and should also be revisited.

Question: Is EPD going to listen to recommendations from the council on updates/management practices to better manage the buffer issue?

Response: State Waters is a broad term referring to areas with protected buffers– the public has a misconception of what State Waters is – areas where water is not always running, particularly during drought. The public don't understand why it should have buffer when they think it's just a ditch.

Recent legislation regarding ephemeral drainages has been implemented and State Senator Chip Pearson discussed his involvement with this legislation. If a stream does not have groundwater flow, it is ephemeral and not State Waters. State legislature is still looking at issue and this is

considered as a starting point. If reservoirs continue to be constructed and more people's property falls under 150 foot buffer, we will have more public outcry.

Question: What if we just forget the buffers and compensate for treatment?

Response: We'd be losing intrinsic value of the streams, ecosystems, and why we all live here. Moreover, studies have consistently shown that stormwater runoff is the leading cause of water quality issues.

Public Comment: Extensive protected buffers may not be fair for upstream properties who don't even use reservoir.

Question: Is there a product that allows water to drain straight through a paved area?

Response: Pervious pavement – yes, but there is maintenance required to keep it functioning properly.

3) Municipal and Industrial Water Use Forecast

Brian Skeens discussed updates to the Municipal Forecasting. He reviewed historical data and current data used to develop a baseline from which to project future needs. Regionwide forecasting is being done for multiple sectors. Population projections by county produced by the Carl Vinson Institute for Government (CVIOG) Applied Demography Program are under review by the Office of Planning and Budget (OPB) and will be incorporated as soon as possible. He explained that they had developed preliminary county-level per capita rates and held meetings to discuss issues with council members from across the State.

Rick Brownlow asked Kelly Cornwell to give overview of one of the meetings. The meeting was well attended and provided a good opportunity for feedback from councils. Population and employment issues and updates were discussed. He continued that there are accuracy issues using data during the drought because of water restrictions. As a result, data from 2004 to 2006 were used for current uses. There has been a lot of discussion on transients. EPD has selected target industries to consult with to verify and refine accuracy permitted withdrawals for particular industries. The council agreed that we need to be sure that ~~what~~ we are using is accurate data before we move forward.

Mr. Skeens then revisited the forecasting methodology. OPB and CVIOG are still seeking additional input from group to make adjustments to the projected numbers. Numbers in the municipal forecasting currently include water supply for industrial users, and these numbers will be segregated and included in the Industrial Forecasting. Data is adjusted using reported monthly water withdrawal data from EPD. Brian noted the comment sheets located at each table and asked the group for feedback on the data. He explained that they are looking at peak data not average data.

Comment: Need to document that 2005 really was a “normal” year...look at number of rain events, need to know what is. Why don't we use the average of the three years?

Response: We could do that if makes the most sense. The bigger the numbers we aggregate, the more numbers we are going to get. Local aspect is important—need to account for outliers.

Trying to capture a recent year with most normal rain – just looking for peak for residential and peak for industry to make sure we are accounting for values.

Comment: It is impractical to request other data regarding number of rain events, etc.

Comment: Need to incorporate water buyers in Tennessee that we don't have permit data for.

Response: It should be noted that results will be a range, not an exact value. Mr. Skeens also noted that there are other steps to go through before these results are finalized.

Comment: Add a column for a confidence interval to the results table.

Mr. Skeens explained that they were using a rate for self-supplied users of 75 gallons per capita per day (or refined county numbers) based on USGS study in GA. This largely represents residential use. This methodology is being used across the state, and CVIOG is requesting feedback from councils. The council suggested that this value was low. Mr. Skeens added that the council can decide to deviate from it.

Comment: It makes more sense to use permitted capacity rather than current use for baseline conditions, because the potential demand is accounted for. If baseline conditions are derived from current use, you are potentially hurting the demand for those municipalities who have invested in increased capacity – both in infrastructure and permitting. Plus, a needs justification is already written up for anyone with a withdrawal permit.

Comment: The purpose of the forecasting is to understand the needs. This is not system specific planning—remember that we are forecasting out into the future to address permitted capacity – even if we are baselining existing use, not permitted capacity.

Comment: I'd ask to accelerate projections rather than just continue on with historical trends, given the increased level of urbanization.

EPD plans to reconvene with the expanded ad hoc groups, present preliminary information, and present refined forecasts to the council in 2010.

Mr. Skeens then directed discussions to industrial water and wastewater forecasting. He showed major water using industries and discussed that North American Industry Classification System (NAICS) will be used to standardize codes across sectors. Mr. Skeens explained that water using industries will be queried by regional water use needs and types. One means of projecting future water use is to project rates of employment, including exemptions for efficiency improvements. Mr. Skeens showed charts and pointed out the growth in fabricated metal products and steady growth in other categories. Textiles are the largest sector for employment followed by the Department of Transportation.

Question: How have you accounted for development?

Response: The Georgia Department of Economic Development has been involved with forecasting development. Forecasting is based on region-wide information, not county-level.

Comment: The Metropolitan North Georgia Water Planning District shows a breakout by county for all employment – why don't we have this? I want similar information for our plan.

Comment: The ‘Other’ category has a significant proportion of the region’s employment.

Feedback is encouraged and will be addressed in the forecasting. Stakeholder opportunities have occurred with industry representatives to make our forecasts closer to what they will be using.

4) Energy and Agricultural Water Use Forecast

Rick introduced Chrissy Thom to discuss energy and agricultural water use forecasts. Chrissy presented the approach for current and future thermoelectric water use. The mix of future fuel types is uncertain, but will drive the future water use in the energy production sector. There are many influencing factors that will affect the water use in this sector such as fuel types, cooling systems technology, and energy needs for the future. The challenges include credible relationships between population and energy needs, fuel mixes and placement of fuel types.

Chrissy then switched to Agricultural Water Demand Forecasts. Some methodology was presented on non-permitted agricultural water demand, in an effort to respond to previous comments made at prior council meetings. The non-permitted users such as livestock, dairy, poultry, and nursery agricultural water uses are not currently included in the Agriculture Water Demand Forecasts. EPD is investigating ways to include them to recognize their economic impact to the state. Water withdrawals less than 100,000 gallons per day are not permitted by EPD. The Georgia Farm Bureau has facilitated representation of sub threshold agricultural water users and to develop methodologies for accounting for those uses. A state sponsored effort has been established to develop a consistent approach statewide that can be used in each Region. Data will be presented to councils prior to Council Meeting 5 for feedback. It will be a snapshot of current data in these agricultural water-use sectors, as opposed to projections of growth. Councils will decide if that water use should be included in their plans.

Ms. Thom asked John Loughridge to read a statement from Irwin Bagwell about his experience with working to correct the agricultural forecast. Antonio Fleming, Georgia Soil and Water Conservation Commission, gave some info regarding the permit metering program through GAEPD. The vast majority of water usage is surface water – it is a challenge on a peak day to determine how much water is actually being used. He suggested that the forecasting cannot discount what these agricultural permittees are allowed to withdraw.

Chairman Bennett came forward to wrap up discussion. He noted that everyone appears to be worried that they won’t get enough water allocated based on permits, but this is not really the issue here. We don’t want to overestimate because we don’t want to start out the planning process with immediate rationing when it’s not necessary.

Comment: In the poultry industry – they are gathering data about this. We want to be inclusive of data to make sure everyone is being accounted for.

5) Visioning, Water Management Goals and Management Practices

Mr. Brownlow discussed how the vision will define what we will do as a council within the framework of the Statewide Water Plan. Last meeting, there was discussion about the draft vision, which was “Enhance the potential and quality of life for all communities through sustainable use of water resources in the region and state with partnerships among a broad spectrum of stakeholders.” The council discussed the statement with regards to the word potential. Chairman Bennett explained that this term was used to describe any activities in the future. The council voted to revise the term “potential” to “resources.” The council then voted to adopt the revised vision. All were in favor. The adopted vision was:

“Enhance the resources and quality of life for all communities through sustainable use of water resources in the region and state with partnerships among a broad spectrum of stakeholders.”

Mr. Brownlow explained that goals need to be detailed in support of the vision. A standard approach to setting goals should be used that are specific, measurable, attainable, realistic, and timely. The council then broke out into groups at each table to discuss goals. Each group provided an overview of the goals they came up with, as listed below.

Table 1

- Identify and develop future resources and reservoir capacity
- Ensure that all water users (small) are identified and accounted for to prevent a shortfall
- Promote conservation and guidelines for use
- Research and development for developing ways to reuse/recycle

Table 2

- Include incentives that reward conservation of resources (both quality and quantity)
- Construct sufficient storage and supply to meet anticipated need
- Promote grey water/stormwater capture and beneficial reuse
- Incentivize commercial entities to construct localized mini-reservoirs
 - Streamline permitting

Table 3

- To assess current water resources and usage in
 - Municipal
 - Industrial
 - Agricultural
 - Energy
- To forecast future water needs that supports the economic development of the region based on employment, population changes and industrial production in
 - Municipal
 - Industrial
 - Agricultural
 - Energy
- To determine the parameters of a plan that includes the means/choices to meet future water resource needs including conservation and supply development
- To develop a plan for the regular data collection on the quantity, quality and usage of water resources in the region and the means to do so
- Ensure adequate funding of water infrastructure

Table 4

- Reduce per capita water consumption through conservation practices
- Increase water storage for future demands
- Increase number of quality jobs at a growth rate equal to national average

Table 5

- Will not hinder quality economic growth
- Will minimize adverse effects to adjacent regions
- Will promote development and enhancement of water resources

- Will be based on all pertinent available information and community values

Mr. Brownlow then discussed management practices with regard to the regional vision and goals. He emphasized that the council will be talking about management practices for the majority of next year. The council discussed incentivizing water conservation measures and financial implications to utilities. The point was made that the council is planning for uses in the future—from here forward, so hopefully wouldn't see too much of a drop in revenues. Tiered, conservation rate structures were discussed.

Rick discussed the upcoming joint meetings to discuss resource assessments results by watershed. There will be three joint meetings that have interest for our council – Coosa, Tallapoosa, Tennessee scheduled for January 26, 2010, Chattahoochee on February 1, 2010, and Savannah, Ogeechee on January 19, 2010. The Coosa, Tallapoosa, Tennessee joint meeting may be a good time to start dialogues with the Metropolitan North Georgia Water Planning District.

Comment: We need to make an effort to invite counties from the Metropolitan North Georgia Water Planning District that are also in the Coosa watershed. It would be helpful to have someone from the District make a presentation of where they see that they will get their water/management in the future.

Chairman Bennett and Vice Chairman David Ashburn will coordinate with Alabama and Florida leadership before the joint meetings.

6) Water Quality Resource Assessment

Dr. Elizabeth Booth introduced herself as the manager of water quality resource assessments. EPD is trying to put people in district offices to do monitoring, so that they live in the area and have more of a vested interest in the community. Resource assessments will tell us how much water we have and what we need to do with it. An assessment of assimilative capacity will be prepared state-wide for a variety of parameters. Streams that are already impaired have used up their assimilative capacity for further pollution. Dr. Booth presented information for a variety of parameters including organics, pH, toxicity, fish consumption, dissolved oxygen, biota (sediment), fecal coliform. Dissolved oxygen issues are modeled to show as much as 80 percent from nonpoint sources. Fecal coliform comes from nonpoint sources, and there are also issues from sewer pipes, spills, and sewer overflows. Lake Allatoona, Carter's Lake, and Lake Lanier are all listed for Chlorophyll A. EPD is developing water quality models for all listed streams in the State. They calibrate models based on existing conditions to predict future conditions. 7Q10 low flows and high temperatures are used along with steady state river and stream models, estuary models, hydrodynamic models with variable flows. Coosa, Flint, Chattahoochee watersheds will get done at end of 2010. Lake Allatoona recent modeling results require revisions. Carter's Lake modeling will not be conducted until 2011. Stakeholder group for the draft Lake Lanier modeling results is coming up at North Georgia College. The revised total maximum daily loading for the Coosa watershed won't be done till summer 2010.

Question: Do any of the models overlap each other? How much agreement do you get between the models?

Response: That is one of the goals of the quality checks, which are still in process. Will report back.

Question: Will you issue phosphorus limits before you release the total maximum daily load?

Response: There is a downstream requirement for 30 percent reduction in pollutant loads from across the State. Not sure of the answer--this has to go to upper management.

Question: Was the drought an issue with monitoring/modeling?

Response: Yes, something that affects dissolved oxygen in particular- lowest flows ever seen on record.

Question: Union County has 2 listed streams last monitored in 1989—any hope that they will be revisited?

Response: Please submit the names of the streams in question. EPD is doing monitoring differently now than it used to. We used to monitor each basin intensively every 5 years. With sending folks out to district offices, the intent is to monitor on a more regular basis to ensure that situations like drought are not primary influences on results.

Pollutants are modeled in small segments, not mainstems, so that now EPD is able model everything together, incorporating land use data from University of Georgia, meteorological data over 10 years – both wet and dry years. The models will be calibrated with any local data for watershed assessments and in-lake data. Using an iterative approach, each regional council will evaluate various options from forecasted flows. Councils need to consider more stormwater management in the future to increase assimilative capacity and management quantities and speed at which high flows are sent downstream.

Question: It sounds like you have it all figured out...what are we doing?

Response: Modeling statewide has never been done all at once. EPD will provide a snapshot for the council to identify areas that have assimilative capacity issues for future water uses. If we do not address water quality, it will force downstream users to lose water resources due to costs, water quality issues, etc. We need to consider how to keep downstream users in business. Assimilative capacity is a critical part of the planning in the region and we need the council to provide direction on what management practices should be used in the region to meet our challenges.

Looking at time variable discharge data to account for variable flows, which affects assimilation capacity, rather than a steady state model. Long term biological oxygen demand models will help find areas for increased assimilative capacity and to keep fish and other sensitive species in place in addition to water supply.

Question: Drought conditions can decrease flows naturally, so why should we have to have minimum flows?

Response: Good point, all activities will be restricted in what we do when we have less flow during droughts. We have to consider the multiple uses of instream flows. People are looking at water supply sources compared to returns (interbasin transfers). If water goes to another basin, it's gone. No return for downstream flows. EPD is encouraging options as opposed to shutting down dischargers to enforce federal water quality standards. Liz provided her contact info in case you need any more info.

7) Groundwater Resource Assessment

Jim Kennedy, EPD geologist, discussed the groundwater resources assessment. He mentioned the challenges of determining sustainable yield of all aquifers, so instead they will prioritize the aquifers to be evaluated.

Four specific criteria were identified, such as functional characteristics, ability to be modeled, etc. He showed a US Geological Survey (USGS) chart about Georgia's aquifers and discussed the different geology in Georgia and related water availability. Fractured rock occurs in the Piedmont and Blue Ridge areas of the State. You can have water if you find a good fracture with the potential of 10-100 gallons per minute (gpm). In the extreme northwest Georgia there are additional resources in sandstone, folded limestone, also called "valley and ridge."

Dr. Kennedy discussed USGS groundwater use data in Georgia and the new link on the State Water Plan website, under "Resource Assessment" and then "Monitoring." He showed a histogram of which aquifers supply the most in Georgia. 85 percent of groundwater supply comes from aquifers south of the fall line. As a result, the sophisticated MODFLOW numerical modeling is being done in 5 aquifers in the Coastal Plain. The northern-most aquifer to be modeled is Macon and Augusta (kaolin area). He showed a chart where more than 50 percent of the water withdrawn in a county was from groundwater, many were in North Georgia. He identified areas where data was available to be representative for the water balance models. The western part of the Coosa-North Georgia region is valley and ridge, which is very complex hydrogeology with layers folded on top of each other. Many springs have enough yield to supply water sources. There are interactions of the groundwater and surface water systems, as shown in a figure of the Coosa River and interaction with groundwater (limestone) aquifer. Depending on where you are, the hydrology changes frequently.

Dr. Kennedy discussed sinkhole development, which is caused by dissolving limestone. Too much pumping or natural water table drop can cause an empty cavity in the ground and reduce buoyancy on the roof of underground cavity, and eventual collapse of the roof on top of the cavity.

The water balance models are being done on small watersheds, parts of Bartow, Polk, and southeastern Floyd counties. This is because there is available data needed to perform the modeling. Some preliminary results are available. EPD is doing two models, one in the Piedmont, and one in the northern Piedmont and Blue Ridge between White and Habersham counties. It has waters of the Chattahoochee River, and other data needed to perform the modeling. He showed a pictogram describing the relationship of the aquifers, dominated by fractures which have and supply the water, normally located in low areas. There are some connections to the surface water, as well, and he showed a figure that reflected the relationship between a deep well and surface water. He used a chart of the stream base flow thresholds versus water levels in Chattahoochee River and groundwater. He then showed the components of the water budget equation related to groundwater. In the northwest of the region, the net groundwater consumption is negative – where more water is put into the groundwater than is being taken out because the source is surface water and the bulk of wastewater treatment is septic tanks. He then showed a table of groundwater withdrawals compared to stream flow, which suggests that there may be more groundwater availability than is currently being used in the crystalline rock aquifer. This could possibly be a source of water in the future for our region. There have been lots of discussions about sustainable yield of an aquifer, and certain benchmarks have been identified. One benchmark can help prevent the creation of a sinkhole. Another benchmark is related to not decreasing streamflow such that groundwater aquifer recharge is

diminished. We cannot lower groundwater levels below confining layer, which would make it unconfined. We cannot exceed the ability of an aquifer to recharge/recover during a drought. The model results are done, and he is compiling the results, they are on track to present the results in mid-January.

Question: Is there any correlation between the depth of a well and the probability of sinkholes?

Response: Yes, based on where the potentiometric (define) surface drops below the level of the limestone that meets the surface of the ground (pink and red striped figure on slide titled “Paleozoic Aquifer Water Balance”. The point is not really the actual depth, but where are you in relation to the depth of the limestone “fold.”

Question: We have been approached by individuals promoting Aquifer Storage and Recovery (ASR). It doesn’t seem applicable in our aquifer, due to the groundwater movement.

Response: This is the Etowah Water Bank. ASR is a legitimate technology/technique used all over the country. The history on moratoriums of ASR was discussed. Dr. Kennedy said that Mr. Pyne is in the process of testing the feasibility of this technology in Coosa-North GA region in Georgia. The permeability is currently uncertain. Dalton Utilities is partnering in the testing with Mr. Pyne. There are many permits required for ASR such as “underground injection control permit,” groundwater withdrawal permit. Other potential uses of the recovered water could be to increase assimilative capacity.

Chairman Bennett mentioned that the council should consider if ASR is an alternative that could be used and evaluated next year as a management practice.

Question: Can closed quarries be used for water storage?

Response: Dr. Kennedy mentioned that quarries can be used on a site-specific basis. It depends if they are connected to local potentiometric surface and hydrogeology. It depends on how it is used.

Question: Is there an inventory of quarries in the state?

Response: Dr. Kennedy said no, but mining permits are listed, and could be a good source. The council discussed quarries related to sinkholes, Rockmart and Rome quarries. Borings are done to identify if there are voids present.

8) Elected Official and Public Comments

Two members of the public provided comments to the council.

9) Wrap Up/Council Meeting 4 Evaluation

Chairman Bennett thanked everyone for attending, and asked the members to read through the handouts prior to the next meeting, and participate when asked between meetings. Chairman Bennett discussed the scheduling of future meetings of the council and joint meetings. Chairman Bennett adjourned the meeting.

Coosa – North Georgia Water Planning Council, November 18, 2009 CM#4

Members Present

1. Mike Berg
2. David Ashburn
3. John Loughridge (on behalf of Irwin Bagwell)
4. Kenneth Beasley
5. John Bennett
6. Charlie Bethel
7. Tim Bowden
8. Mark Marlowe (on behalf of Don Cope)
9. Keith Coffey (alternate)
10. Kelly Cornwell
11. Katie Dempsey (ex officio)
12. Gerald Dunham
13. Stephen Gray
14. Jerry Jennings
15. Haynes Johnson (alternate)
16. Sherry Loudermilk
17. Dick Martin
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
27. Chip Pearson (ex officio)

Members Not Present:

1. Doug Anderton
2. Tim Banks
3. Pat Gober

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/>)
4. Bret Albanase, GA DNR

GA Environmental Protection Division:

1. Becky Champion, Assistant Chief for Coosa-Tallapoosa-Tennessee Basins
2. Michelle Vincent
3. Glen Behrend
4. Elizabeth Booth
5. Jim Kennedy

CH2M HILL

1. Rick Brownlow
2. Chrissy Thom
3. Brian Skeens