

Georgia Department of Natural Resources

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May 17, 2010

DRAFT MEMORANDUM

TO: Council Members

FROM: Jeff Larson, GA EPD
Bill Martello, JJG

SUBJECT: Interim Council Meeting Summary
Savannah-Upper Ogeechee Water Planning Council

Georgia Comprehensive Statewide Water Management Plan Regional Water Planning

Interim Council Meeting 5 Summary

Meeting Date: May 5, 2010
Location: Augusta Technical College, Waynesboro, Georgia
Attendees: See list

1) Welcome and Council Member Introduction

Ron Cross, Council Chairman, welcomed everyone to the meeting and thanked them for attending. Council members, EPD staff, planning consultants, partnering agencies, and other attendees introduced themselves.

Chairman Cross discussed the passage of the Water Stewardship Act of 2010 (SB 370). The bill will require sub-meters to be installed in multi-family (or multi-tenant) residential, commercial and industrial buildings (after July 1, 2012) and will mandate a permanent outdoor watering schedule.

Representative Tom McCall's bill (Interbasin Transfer Bill) did not pass. Chairman Cross asked Council member Scott MacGregor, a lobbyist for Columbia County, to provide an update. He indicated that an agreement was made between stakeholders to work on solutions on the Interbasin Transfer Bill this coming summer.

Chairman Cross reminded members that organizations such as ACCG and Georgia Chamber of Commerce represent larger interests in Georgia and may not always understand the needs for the

Savannah-Upper Ogeechee Region. Ron has had discussions with Ross King of ACCG who favors interbasin transfer for the Metro Atlanta area.

Bill Martello discussed the meeting agenda and objectives and announced the optional tour of Plant Vogtle that would be offered to council members and staff immediately after the meeting.

2) Demand Forecasts

Martello reviewed how the baseline demand was established.

Agricultural Demand

The 2050 irrigation demand was recently updated on April 30. The current demand snapshots for the livestock industry and the nursery/horticultural industry have not been changed since Council Meeting 5. EPD is working on the 2050 nursery industry demand forecast with the Green Industry Association representatives and they will be available soon.

Municipal

A forecast summary sheet was sent out to the contact members for each county assigned by Chairman Cross after Council Meeting 5. The Planning Contractor (PC) has been working on updating the demand based on feedback received so far. PC has communicated with these members via e-mails and phone calls to help answer questions on the forecast. In the handout packet, the council member received a summary of municipal water and wastewater forecast by county, a regional industrial demand forecast and a revised summary sheet for their county.

A summary status of feedback is below:

- Lincoln, Rabun, and Wilkes Counties: Have reviewed the demand and have no additional comments (forecasts are considered approved).
- Banks or Taliaferro Counties: No feedback has been received from these counties.
- Burke County: PC just received data today and will follow up with Lee Webster and Burke County staff on revision. Council member Webster was not able to attend today's meeting due to family illness.
- Other counties: have received some form of feedback and these feedbacks have mostly been addressed on the revised summary presented.

Question (Stan Sheppard): Need to know if it can still incorporate changes for Screven County? They had expressed dissatisfaction to the population forecasts.

Answer: PC noted that they cannot change population forecasts at this point. The population and employment forecasts were initially released in June of 2009 and the revision was distributed in March of 2010 prior to Council Meeting 5. Comments to population forecasts need to be submitted to the Office of Planning and Budgets (OPB). PC provided e-mail addresses for OPB contacts to Council member who still have comments on population forecasts. [Note from PC – comments should be submitted to Richard Young - Richard.Young@opb.state.ga.us or Kathy Kinsella - Kathy.Kinsella@opb.state.ga.us]

Ron mentioned Columbia County provided comments on population and received revisions based on their comments. PC (Tai-Yi Su) suggested setting up a conference call with Stan and staff from Screven

County to review the water and wastewater forecasts and the assumptions that went into it. Su noted that we can explain each one of the assumptions to his staff so they can understand better whether the water needs of Screven County is met through the forecasts and provide comments or required revision.

Martello discussed the County forecast summary sheet. He walked through Columbia County's data as an example.

Question (Pat Goran): The percentage flow on centralized treatment (sewer system) seemed high for Hart County in 2050. Where did the percentage come from? Hart County currently has no funding to expand the sewer system.

Answer: It was based on the feedback received. PC will review data and get back with Council member Goran on this. [Note from PC: This has been resolved and percent wastewater flow for centralized treatment has been revised for Hart County.]

Question (Don Dye): Stephens County provided data for City of Martin's groundwater source and this was not reflected in the 2050 projections.

Answer: PC have updated current source table and will include in 2010 through 2050 for groundwater based on feedback that they expect to continue using the source (keep Martin's groundwater supply of 0.08 MGD for 2010 through 2050).

Legislative Update

Representative Tom McCall arrived and Chairman Cross asked him to give a water-related legislative update. Rep. McCall said the Governor's bill (SB 370 – Water Stewardship Act) has passed. The bill includes outdoor watering restrictions with a list of exceptions, low flow fixtures in new construction by 2013, and more water conservation measures.

The bill on Interconnectivity (SB442 - Water System Interconnection, Redundancy, and Reliability Act) was passed and it was narrowed down to include emergency connections for only the Metro Atlanta area. [Note from PC: SB 442 allows Georgia Environmental Facilities Authority (GEFA) to issue a request for proposal for an engineering study to identify interconnections and redundancies so as to achieve district-wide interconnection within the Metropolitan North Georgia Water Planning District. SB 380 allows GEFA to make grants/loans to local governments for expansion of existing reservoirs.]

The bill on interbasin transfer caused major concerns. The Metro and Georgia Chamber of Commerce will get together with Rep McCall to discuss the bill over the summer. The language may include a requirement for EPD to study interbasin transfer before issuing permits, including consideration for ecology, downstream effects, etc. The intention is to leave interbasin transfer out of the SWP.

Jim Hussey (rep. from Senator Chambliss' office): Any community that has long standing issues with water should submit projects to the Senate Environment and Public Works Committee by May 18th.

Energy Demand

EPD is currently working on a statewide projection for 2050. This forecast will be available in summer of 2010. Current water usage for energy production is available.

Question (Ron): Question on plant Vogtle's usage. Is its usage included in the demand for the region?

Answer: It uses 64-65 MGD currently and returns 22 MGD to the river. The 43 MGD is for consumptive loss; the permitted quantity is much higher. The forecast will include water usage for the planned expansion at Plant Vogtle.

Tim McGill – provided clarification on thermoelectric generation needs, where the energy needs will be fulfilled is difficult to predict. His note showed 40 MGD as consumptive use for Plant Vogtle.

Question: Are South Carolina's thermo facilities included?

Answer: Yes. Current water demands from South Carolina are included in the resource assessment model; however, the PC currently is only responsible for preparing forecasts for Georgia's counties. EPD is working with South Carolina on future demand forecasts.

Questions: Will biomass facility be included?

Answer: Yes. EPD confirmed that the water use for planned biomass energy facilities will be included in the forecasts. PC will get further clarification on how the number of facilities is accounted for – whether it is based on current number of pending permits. Many facilities are proposed but don't know how many will get built by 2050.

Bill provided an overview on the region's water and wastewater demand forecasts. In summary, total demand for the region is projected to increase from 366 MGD in 2010 to 441 MGD in 2050. These numbers will be updated as agricultural (nursery/horticultural needs) and energy forecasts become available. We will also be updating the industrial forecasts. PC just received updates from the mining industry and will revise to reflect the changes.

3) Resource Assessment

Martello presented an update on Surface Water Availability Resource Assessments (RA). EPD is working on simulations using draft 2050 demands, but the results are not available yet. Hopefully the results can be ready by next Council meeting.

Question: Rep. McCall offered to provide metered data for irrigation. The general sentiments are to encourage use of metered data.

Answer: The existing metered data is not used for good reasons (inconsistency, calibration issues), but EPD hopes to have more complete data for forecast for next revision of plans. EPD/UGA has access to these data and has evaluated the use of these data.

PC comment: Seasonal usage (monthly) for irrigation has been published on website. This was done based on one of the major comments from several ad-hoc meetings with the agricultural communities—annual average does not represent irrigation needs. EPD will incorporate seasonal peaks in RA model.

Chairman Cross asked about status of our next Council meeting. PC stated that the meeting is scheduled to be held on June 22nd. PC is coordinating the meeting location with Tom Jordan and it is likely in Jefferson County. Council member Larry Walker requested that council meeting begins at 10:00 am if we are going to have meeting in the southern part of the region.

4) USACE Presentation, Reservoir Management and Drought in the Savannah River Basin

Bill Bailey US Army Corps of Engineers (USACE) introduced Jason Ward and Stan Simpson, both hydrologists who are responsible for the operation of the USACE projects (Lakes Hartwell, Russell, and Thurmond) in the Savannah River Basins.

Ward stated that the USACE currently follows the Water Control Manual for Savannah District (1996 Version) and a Drought Contingency Plan (DCP) completed in 1989. Deviation from DCP was approved for the 2007-08 droughts but it was a one-year change. It is more difficult to make long-term changes to the DCP. The USACE has storage agreement with Duke Power projects upstream and continuously coordinates releases of its projects with Duke Power.

He showed where Council members can get updated lake levels, precipitation data, and trigger levels for Lakes Hartwell, Russell and Thurmond. <http://water.sas.usace.army.mil/home/indexDU.htm>

Managing reservoir operation is a balancing act among all of the projects' authorized purposes including water quality, aquatic resources, water supply, navigation, recreation, hydropower, etc. USACE coordinates with the GA and SC for input on how they manage their projects.

Ward discussed the pool schematic of the three Savannah River projects. The schematic showed the levels for top of flood control, conservation, and inactive pool storage. The total inactive pool storage is estimated at 3.5 million acre-ft. The Inactive Pool elevations: 625 ft MSL at Hartwell, 470 ft MSL at Russell and 312 ft MSL at Thurmond.

The release below Lake Thurmond was reduced in 2007-2008 during drought. The release was reduced during Level 3 drought to 3,600 cfs for one and a half years during the 2008 drought (extreme drought mitigation included going to 3,100 cfs as a temporary deviation). The USACE needs some of these options added to the permanent tool box for drought management. Current USACE studies include:

- Use of inactive storage
- Intakes survey - where municipalities would need to extend the pipe to obtain water during droughts
- Outlet prioritization - how to use low level outlets in intake structure although water quality from the lower level outlets may not be preferred
- Estimating time to depletion with 3,600 cfs
- Shift to public safety perspective; working on environmental assessments NEPA for Level 4 drought

Question: When do you use the sluice gates?

Answer: During emergency drawdowns. Typically the sluice gates are not used because of their design. During drought operations, we try to use the turbines to pass required flows as much as possible.

Question: Can you use penstock to generate power?

Answer: Yes. We can draw down the pool further than anticipated with penstock based on recent study. As available, this option would be utilized before spillway gates to reduce impacts to project purposes.

Question: How much of the reservoir capacity can accommodate rain and flood?

Answer: For flood control, it depends on rainfall intensity and preceding conditions. The reservoir pool can be drawn down during rainy seasons and when precipitation is expected.

Question: If Hartwell has a spill (due to flooding), can we still use Thurmond's storage for flood control?

Answer: Yes, Hartwell, Russell, and Thurmond work in tandem to store flood water. Nashville's recent flood is close to a 1,000-year event. Most reservoirs are designed based on 100-year flood event.

Question: Do we need to consider what Judge Magnuson did with Lanier?

Answer: These projects have different authorization language than Lanier. All three dams have the water supply purpose authorized by Congress.

Question: What is the top priority in operating these reservoirs?

Answer: The top priorities (in order) are:

1. Public safety and flood control
2. Water supply
3. Hydropower (concurrent with water supply)
4. Navigation
5. Water quality, fish & wildlife, recreation were later authorized

Contrary to common perception, hydropower is not always the priority. For example, recreation is a priority. However, water must be released for downstream purposes.

In addition, navigation is an authorized purpose but is operated as an incidental purpose. During the last drought, requests to float barge traffic was denied and rescheduled. USACE does not currently maintain channel depth and width requirement for navigation needs in the upper portions of the Savannah River.

Question: Where did 3,600 cfs come from?

Answer: This flow was based on experience and from the drought in 1986-1988. Reactors would need to be shut down at the Savannah River site intake if flow went below 3,600 cfs. Endangered species have been considered since late 1980s.

Question: Did the upstream and downstream communities get together to discuss this requirements?

Answer: Two states met to develop the 3,600-cfs low flow requirement.

Comment: Also point source discharge assimilation concerns were considered.

Question: Has the history considered downstream habitat at 3,600 cfs?

Answer: Biologists are studying lasting effects of low flow release on aquatic life.

Question: Is higher flow or lower flow better for assimilative capacity?

Answer: Higher flow is better for assimilative capacity. It provides more mixing to increase DO at the harbor.

Question: How will greater consumption affect the minimum flow release?

Answer: Greater consumption may force the reservoir to hit the trigger for minimum flow release quicker; cumulative effects on downstream needs to be considered.

Question: Are biological effects modeled?

Answer: Biological effects are harder to model. An in-stream flow study is desired by the US Fish and Wildlife Service and NOAA National Marine Fisheries Service to quantify habitat need for endangered species during low flow periods. State fisheries agencies could be helpful in accomplishing such as study as well.

Question: What is required to change operations of these projects?

Answer: Congress will need to authorize operational changes. A non-federal sponsor is needed to begin the study. Currently, a comprehensive water resources study (Savannah River Basin Comprehensive Study) is being conducted for the Savannah River Basin to develop an updated plan addressing current and future needs in the basin, examine reallocation of storage at Corps of Engineers multi-purpose projects, and to develop a better management structure to address basin water resources issues.

Current sponsors of the study are Georgia and South Carolina (each provided 25% funding) It was a two-phase study with Phase 1 finished in 2005. This year the Congress provided additional funding for follow-up study. However, the States are under budget constraints. USACE is putting the scope together; it is likely to include:

1. Review of drought operation (potential changes)
2. Water supply: USACE can allocate 50,000 ac-ft for water supply from each reservoir. It needs to study withdrawal requests and their effects on downstream users. USACE has not determined who will get the water supply allocation.
3. Reallocation: changing current operation goals - less flood control and more recreation – study effects and cost implication – who will pay for the loss of hydro benefits (pay for portion of the operation cost for the reservoirs)
4. Recommendation for reallocation will need to be approved by the congress – will also need to go to public comments

Question: Will it be appropriate for the council to request Georgia to provide funding for the study?

Answer: The data the council is compiling can be useful for evaluation in this comprehensive study. Any recommendation to provided state funds and in-kind services could help reinstate and continue the study.

Comment (Ron): Where would the budget from the state come from?

Will the counties pay for the study? Is the council prepared to ask the counties to pay for the study?

Question: Is maintaining the levee necessary in Augusta?

Answer: Yes. The levee is still required for flood protection.

Comment: Trees on the levee can compromise the condition of the levee and Augusta has to address these problems.

Question: On gap analysis of RA (Goran), Pat mentioned that he reviewed the draft synopses and it apparently assumed the reservoir storage can go below conservation levels of Hartwell and Thurmond – may not be hydrologic gap but is a serious issue. It is also a quality of life issue.

Chairman Cross commented that he, Charlie and Jeff had discussed this with Wei in a conference call. Recreation and economic impacts are low priorities for USACE. He urged the Council to understand that USACE is directed by the Congress to operate the reservoirs according to the lakes’ authorized purposes and the Council has to understand the complexity of the operation. What USACE does on a day-to-day basis is based on good experience and principles. They cannot always meet the recreational needs.

Comment: We cannot think of these lakes as retention ponds.

Comment: The authorized recreational purpose has more to do with access to the lake, not regional economic concerns.

Comment: At 316 ft MSL there is plenty of water to enjoy at Thurmond, but getting access to it may be difficult. It is emotionally devastating to see the lake empty.

5) Draft Report Preparation

Bill provided an overview of the proposed table of content. Structure and length of document: Eight sections with a target length of 40 pages total with supplemental documents.

SUO REGIONAL PLAN COMPLETION SCHEDULE		
Month	Tasks	Documents
April	Draft Demand Forecast	
May	Final Demand Forecast No-Regrets Management Practices	
June	CM6 , 2050 Gap Analysis Initial Selection of Management Practices	
July	<i>Possible interim meeting, coordination with Coastal Council</i>	Section 1-4 Forecast Methodology Tech Memo
August	Refine Management Practices	
September	CM7 , Resource Assessments & Management Practices	
October	Final Management Practices	
November	<i>Possible interim meeting, coordination with Coastal Council</i>	Tech Memos – Gap Analysis & Management Practice Selection Sections 5 & 6
December	CM8 , Present draft Regional Plan	Draft Regional Plan (all sections)
January	Final Plan comments	Submit Draft Regional Plan to EPD

Completion schedule; Council assignments: The draft plan needs to be completed by the end of 2010 for EPD review. PC is expected to produce sections of the draft plan for council review beginning at the end

of June and on average every two months in the second half of 2010. Martello showed a table of tentative schedule and tasks (see below) from April to December of 2010. PC will need frequent interaction with the Council in order to get feedback in time.

Martello asked how the Council would like to proceed – either to participate in the process as a whole Council or in sub-committees to divide up responsibilities and time commitments. Many council members agreed that establishing sub-committee would be more efficient. Chairman Cross asked PC and EPD to identify potential areas for council members to participate in subcommittees.

Ron called a vote to approve the municipal forecasts except for Screven, Hart and Stephens Co. Council members proceeded to approve the forecasts with the exception of Stephens, Hart and Screven Counties. PC will follow up with these County representatives to revise and finalize forecasts for these counties.

6) Meeting Wrap-up

Chairman Cross thanked the council members for attending the meeting.

Meeting was adjourned by 12:45 p.m.

Tim McGill provided directions to Plant Vogtle and asked members to arrive no later than 1:15 pm at the security gate for checking-in. Many council members attended the tour at Plant Vogtle.

7) Action Items

- PC to set up conference calls with Screven, Stephens and Hart Counties to revise forecasts.
- PC to propose Chair/Co-Chair subcommittee ideas/function
- PC to confirm how many biomass facilities' water needs are included
- PC to finalize meeting location for Council Meeting 6

Meeting Attendees

Council Members in Attendance

Ron Cross, Chair
Scott MacGregor
Tom Weidmeier
Bruce Azevedo
Don Dye
Chris McCorkle
Tim McGill
Pat Goran
Tenia Workman
Stan Sheppard
Larry Walker
Patricia Goodwin (Alternate)
Robert Jenkins
Mike Eskew
Tom McCall

Council Members Not in Attendance

Jerry Boling
Braye Boardman
Charles Cawthon
Deke Copenhaver
Barry Cronic
Dan Fowler
Larry Guest
Toye Hill
Ralph Hudgens
Tom Jordan
Eddie Madden
James H. Newsome
Lewis Sanders
Lee Webster

Staff in Attendance

Jeff Larson – EPD
Brian Baker – EPD
Bill Martello – Jacobs
Tai-Yi Su – Jacobs
Inga Kennedy – PEQ

Partnering Agencies and General Public:

Jerry Coalson, Waynesboro, Georgia
Danny Phillips, Columbia County Water
Bob Masse, OPC Jim Hussey – Senator Saxby Chambliss’ Office
Nancy Bobbitt – Senator Johnny Isakson’s Office

USACE Members:

William Bailey
Virgil Hobbs
Jason Ward
Stan Simpson

GSWCC Members:

Robert Amos
Bob Fulmer
Lauren Zduncyk