

Georgia Department of Natural Resources

Environmental Protection Division, Watershed Protection Branch
4220 International Parkway, Suite 101, Atlanta, Georgia 30354
Linda MacGregor, P. E., Branch Chief 404/675-6232
FAX: 404/675-6247

June 29, 2010

DRAFT MEMORANDUM

TO: SUO Council Members

FROM: Jeff Larson, GA EPD
Bill Martello, JJG

SUBJECT: Council Meeting #6 Summary
Savannah-Upper Ogeechee Water Planning Council

Georgia Comprehensive Statewide Water Management Plan Regional Water Planning

Council Meeting 6 Summary

Meeting Date: June 22, 2010
Location: The Gatherings, Louisville, 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.

Council Member Tom Jordan showed video about Louisville and a previously operated industrial site with significant water and wastewater capacity. This site is currently being marketed for new industrial development.

Jennifer Barrington, the South Carolina liaison representing the Savannah River Basin Advisory Council, said their House and Senate approved the bill establishing a water withdrawal permitting program. It was also noted that this bill was currently being reviewed by the Governor.

Chairman Cross discussed the following:

- Planning Council chairs meeting with the EPD Director
- EPD Director's guidelines for management practices
- Governor signing SB370 Water Stewardship Act
- Remarks from the recent gubernatorial candidate's Atlanta forum and their thoughts on interbasin transfers.
- There will be another candidate's forum (in either Columbia or Hall County).
- Candidate Eric Johnson seems to be in favor of allowing interbasin transfers.

Chairman Cross recommended that the Savannah-Upper Ogeechee Water Council may want to look into legal representation to discourage interbasin transfers to make sure that the water in the Savannah River is only used for those communities surrounding the Savannah River.

He believes that the Savannah River will sustain enough yield to provide water for the Counties within the basin; however, to make sure this resource will continue to meet future basin needs, the Council needs to discourage the use of interbasin transfers.

PC Bill Martello discussed the meeting agenda and objectives.

2) Committee Review & Updates

Chairman Cross introduced the three sub-committees – Technical, Plan Review, and Interstate Coordination. He invited anyone to volunteer for subcommittees that they would be interested in participating in.

Bill Martello reviewed the status for each committee.

Scott MacGregor is in the process of developing the Interstate Coordination committee and will serve as the Chair. The Savannah River Basin Advisory Council has held two regional water meetings since January and an upcoming meeting is preliminarily planned for September. It was suggested that Scott MacGregor attend these meetings and represent the SUO Council.

The Technical Committee will be chaired by Tom Wiedmeier. The initial meeting was held June 15 where they discussed the Savannah TMDL, reviewed preliminary resource assessments and the water availability model along with an initial management practices review perhaps looking into urban v. rural practice implementation.

Plan Review Committee will be chaired by Bruce Azevedo. The committee is reviewing the Technical Memorandum (which will comprise Sections 2-4 of the Draft Plan). He commented that the 2005 baseline figures didn't show a step up to the 2009 projections. Also, the description of the area employment status did not fully reflect current positive trends. Bill Martello discussed the upcoming review tasks for the committee in July.

3) Forecasts Update

Bill Martello reviewed the revised county demand forecasts for municipal, industrial, agricultural, thermoelectric. He discussed the South Carolina water demands and the methodology for developing estimates for their future needs.

Question (Pat Goran): Why does his county not show any industrial demand but they have industrial water permits in the county.

Answer: Bill responded that not all industries were considered in the industrial demand category, only certain SIC codes were included in the industrial demand projections. However, he stated that he would confirm the industrial demand data for Hart County.

Question (Tom Jordan): He noted that the lower part of his county uses wells for irrigation.

Answer: Bill responded that the presentation numbers shown only include surface water use.

Question: Why is the municipal water demand shown on the handout for Georgia different than what is shown in the slide where we show the Georgia/South Carolina municipal demand?

Answer: Bill noted that the handout showed total demand (both surface and ground water) while the Georgia/South Carolina comparison was only showing surface water (to compare with the SC surface water withdrawals). Bill stated that we have been sharing the methodology for the Georgia/South Carolina projections with South Carolina, and the numbers we showed in the presentation are only to be considered as preliminary numbers right now, used for general planning purposes in council discussions, and will be refined based on South Carolina input and further discussion with South Carolina.

Question (Larry Walker): Don't we need to be looking at future wastewater return flows as well as water demands?

Answer: PC explained how the returns will be used and would be accounted for in both the water availability as well as the water quality models.

Question (Pat Goran): Could PC send out the slide tables from presentation for the Georgia/South Carolina water demand?

Answer: PC stated they would be part of the meeting summary.

Attendee Wade Johnson showed a letter to the editor of the Augusta Chronicle strongly criticizing any transfer of water from the Savannah River to Atlanta.

4) Guest Speaker from DNR / WRD - Fisheries

Bill Martello introduced our guest speaker, Ed Bettross, from DNR Fisheries. A copy of his presentation, *Protecting "Environmental Flows" in the Georgia's State Water Plan* will be included with the meeting summary.

Ed stated that there is a need to mimic pre-dam/reservoir flows to increase the aquatic biodiversity. Minimum 7Q10 flows do not provide enough pulsing within streams to achieve this. There are many studies that support these needs. While fish were emphasized, these flows also affect bird migration and seed stock dispersal.

He discussed the need to maintain cool water springs for juvenile striped bass and the Augusta Shoals Instream Flow Study.

Ed ended his presentation with two suggestions for council consideration: 1) the need to have clear management objectives, and 2) understanding of how flow alteration affects those objectives.

Ed also offered the following management practices to protect environmental flows:

- Maximize water conservation (leave more water in the stream)
- Return water to the river as near as possible to the withdrawal
- Utilize water withdrawals before impoundments to maintain upstream-downstream connectivity
- Identify free-flowing streams in your region where environmental flows are a high priority for protection
- Minimize flow impacts from new reservoirs by:
 - Increasing the size of existing reservoirs when feasible
 - Locating new reservoirs on streams with existing reservoirs
- Engage the Technical Advisory Committee

Question (Charlie Newton): Are lower flows in the summer and fall good for the aquatic life?

Answer: Ed responded that the fish and aquatic life have adapted to lower flows during these periods. High flows during late winter/early spring are important because fish need these higher flows.

Question (Wade Johnson): Do the fish on the Savannah River affect the fish along the east coast? Could current human development completely kill off any species?

Answer: Ed responded that some species have already become extinct and that we are aware of others that have significantly decreased in numbers due to decreased habitats. He also noted that a balance between water needs for wild life and humans should to be reached to preserve our water needs for the future.

Question: How well do fish species adapt to dams?

Answer: Ed responded that the habitat lost through the installation of dams has significantly decreased fish biodiversity numbers. Rivers are habitats for many species and reservoirs have created differing habitat to which not all species are able to adapt. Balance needs to be made concerning the few riverine habitats left along the Savannah River.

Question (Robert Jenkins): Shouldn't economic interests be kept in mind?

Answer: Ed responded that other issues are affected by changing water habitats. These changes cause changes to water and its quality.

Question: Would placing reservoirs on tributaries be a better option than reservoirs on the Savannah River?

Answer: Ed stated that the addition of any reservoir would have a review process for its permitting before it would be constructed. We have altered flow in order to make it more

regular. This helps with flood control and engineering has allowed “regular” water flow but this has resulted in altered habitats. The example of Augusta flooding regularly which caused loss of life and property damage – the reservoirs now keep this from happening as often.

Question: Should we be looking at other remediation plans beyond having the USACE pulse their releases?

Answer: The SUO council may decide that is something they could consider; however Ed doesn’t currently have specific recommendations. He stated that the overall idea is that naturally occurring flows are important and that includes high, medium, and low flows to make sure fish/aquatic life survive.

Question: Should low flow conditions be the same because of climate change?

Answer: Ed stated that the reservoirs actually perpetuate the low flow situation because there is no policy requiring flows to be kept higher than the low flow conditions (7Q10).

Question: How do reservoirs on the tributaries affect the main water way?

Answer: Ed stated that reservoirs can perpetuate low flows during drought periods especially if low flow regulations aren’t required.

Chairman Cross commented that balancing environmental needs and human needs is important. Both sides need to be addressed, and conservation is a key. He also noted that the council needs to think about how water resources are maintained. If we are unable to sustain fish life, how does that bode to the quality of the drinking water we need to survive?

Bill Martello commented about how we need to look at how reservoirs are operated and that we should try to implement pulsing to simulate natural environments.

5) Water Quantity Resource Assessment

Bill Martello introduced Surface Water Quantity. After discussing the planning nodes along the Ogeechee River, Bill discussed that preliminary analysis identifies a small gap in the Ogeechee River.

Question: When does the gap occur?

Answer: PC stated that the gap exists today, but the gap stays fairly constant into the future because of increased returns in future.

Irrigation is a concern for the Ogeechee. More farmers are increasing their surface water use. Bill responded that, as a council, we may want to look at how we manage agriculture use and consider groundwater sources.

Council Member Azevedo asked how temperature change will affect water availability. Will this water availability cause differences in population migration? There were more comments on climate change and how the change in evaporation may affect the ‘gap’.

PC then discussed the planning nodes in Savannah River Basin. With the current USACE operations, modeling showed that all demands would be met for both Georgia and South Carolina; however, the next steps are to continue to refine South Carolina's data.

Question: If Atlanta starts to take water from Savannah River, how would that impact flows?

Answer: Bill stated that current use is equivalent to approximately four percent of minimum releases from Thurmond. No modeling has been done to estimate the effects of Atlanta water use.

Question (Pat Goran): Is anyone looking at what the low flows really need to be? How were the low flows determined and have we confirmed that they are what is in place?

Answer: PC responded the USACE was willing to consider studies targeted at what flows are actually needed.

Chairman Cross stated that water quality is the main concern of USACE (especially DO for the Savannah River). Downstream water quality will be the biggest concern for minimum flow.

It was discussed that better downstream flow data is needed to determine the actual water quality and flow at locations along the river. Downstream of Lake Thurmond, the river is very sensitive and many relationships need to be evaluated.

The comment was made that politically it seems contradictory to say we support lower minimum releases from Thurmond but not allow Atlanta to take water because of impacts to water available for downstream use.

Chairman Cross says he believes the river in the vicinity of Augusta during low flow periods looks and feels different and the "environment" of the river changes.

Someone commented that the USACE is looking at flows and a drought plan that works with both states. They are doing studies to look at the flows. They are modeling to simulate various periods of time. However, there is not enough money to do all of this work, and it will take a long time (without more funding).

"Adaptive Management" was brought up. However, dialog is the key to working with the USACE and South Carolina. It was noted that it is unlikely that there will be a change in minimum flow amount.

Council Member MacGregor mentioned that 3,600 cfs was a recent change in flow; so he doesn't think that new modeling efforts will change the minimum flow amount because recent studies have been done to set it at 3,600 cfs. Jeff Larson agreed that the minimum flows from the dam probably would not change all that much, but that the USACE has the capability, if funding is available, to evaluate various simulations.

Question: How much flow do we need to keep gravel bar habitats at their full potential?

Answer: Ed responds 8,000 cfs.

Question (Tom Jordan): How does Lake Thurmond operate during drought periods - Do they still use pumped storage?

Answer/Discussion. The point was made that water released is not done primarily for power. Flood control and water supply are other reasons that water is released from reservoirs. Power generation is a secondary concern.

If all the water demands are being met, then asking the USACE to change operating release flows would be for economic reasons, which the USACE does not consider a priority.

While we have the water demands met, we still need to think about recreational use and when the pool is low how it affects the region's economy.

Council Member Workman stated that the drought affects their community drastically. The community does not thrive when lake levels are low. Since the USACE will not help keep lake levels higher for economic or recreational reasons, the council needs to plan for and conserve to keep lake levels higher.

Discussions proceeded regarding reservoir effects on downstream flows and that the same principles apply for inter-basin transfers. This led into talks about Savannah water regulations and storage. EPD explained that the river needs to keep the same amount of minimum flow in the river just the same as inline storage.

Harold Reheis explained how new reservoirs are permitted by EPD.

Bill Martello went on to review the groundwater modeling results for the region.

Question: Is it okay to supplement surface water withdrawals with ground water withdrawals?

Answer: Jeff Larson stated that EPD does not object to that as a potential proposed management practice

6) Savannah TMDL/Water Quality Resource Assessment

Bill Martello led the council with basic Water Quality terminology. He then recapped the current conditions assessment and the initial evaluations of future assimilative capacity in the rivers.

The Savannah TMDL shows significant reduction will be necessary to permit holders. There are many tributaries showing available assimilative capacity. While further analysis is ongoing, there are some permit holders who show assimilative capacity problems.

7) Management Practice Options

Bill Martello identified management practice options grouped by objectives. He led the council in identifying "no-regrets practices", as well as discussing potential rural v. urban area practices and groundwater practices that may only pertain to the coastal plain area and not the piedmont. Chairman Cross assigned preliminary review of these practices to the Technical Committee.

Question: Do irrigation meters actually decrease water use? (It was noted that irrigation meters do not get charged for sewer which makes the irrigation water less expensive.)

Answer: Bill suggested that the irrigation rates could be separately developed based on infrastructure availability and it would be reasonable to charge more for irrigation water use.

Question: Is there technology coming within the next 40-50 years that will revolutionize wastewater treatment?

Answer: Bill responded that while we'll still be interested in organics and similar contaminants that affect dissolved oxygen, we may see more interest in toxics and pharmaceuticals.

Question: Within the next 40-50 years do you think the trend of using more grey water for non-potable use?

Answer: Yes, this may evolve as water becomes less available.

Question: Jeff Larson asked how the council will coordinate with cities and utilities regarding management practices with respect to those entities that would be responsible for implementing and funding those practices.

Answer: It was suggested that a strategy plan for implementation be made.

Council Member Newton commented that, unless utilities do not meet TMDL requirements for discharge, he didn't think there would be many "capital" costs associated with the management practices. EPD could mandate that a community make improvements to increase water quality.

Question: Is there a chance management practices will become regulations or laws? Because the point when they do, they could add increased capital costs, such as moving people over to centralized wastewater from septic tanks.

Council Member Azevedo identified that there are small private lakes /reservoirs that are not up to code (according to the EPD). He wondered if utilities could take these over for water use. Also, comments were made about funding for taking over these reservoirs and making upgrades.

Question: There are concerns about which management practices will be chosen and writing them into a draft plan.

Answer: Bill thinks the council members would be accountable for the group they represent. For example, if a council member represents a county or a particular stakeholder group, then they would transfer information to the utilities in that county or to other similar stakeholders in the region.

Question: How do we deal with Savannah River and Harbor TMDL issues?

Answer: The necessary management practices will be included in the plan but this issue is being handled separately with the Savannah River TMDL for the Savannah Harbor.

There is a draft TMDL affecting the point source dischargers. A process is being developed for the dischargers to determine how the Savannah TMDL will be allocated. All this will be done separate from the SUO Council; however, some council members may be involved with this.

8) WDCP Regional Plan

Bill Martello led the group in reviewing the latest TOC for the Draft Plan along with the proposed structure and its completion schedule.

9) Elected Official and Public Comments

Chairman Cross went around the room for final comments from attendees:

He asked Jennifer Barrington (SC liaison) if South Carolina is having similar coordination meetings. Jennifer responded that the first regional meetings have occurred in South Carolina and they have not discussed water resource issues at this level of detail.

Chairman Cross commented that he believes that South Carolina should adopt the permitting legislation currently being reviewed by the governor's office. This will allow everyone to understand what is being withdrawn and discharged into the river.

Frank Carl noted that he believes the metro district politicians will vote against inter-basin transfers.

The Thursday night Governor's Debate on the Savannah River was mentioned.

Alan Saxon mentioned that Tom Wiedmeier (who was not able to attend this meeting) is interested in getting into the technical committee and working towards goals.

The Nature Conservancy talked about how they have been working towards completing land acquisition along the Savannah River. The Conservancy has also worked with the USACE as part of the Sustainable Rivers Project along the Savannah River.

Wade Johnson mentioned that when the lake water level is high, it significantly increases the local economy. Lake use and recreation are major issues for his county (Lincoln) because the county has put a large amount of capital into land development around the lake.

10) Meeting Wrap-up

Chairman Cross thanked the council members for attending the meeting.

Chairman Cross stated that no date/locations has been decided for next meeting; however, Council Member Walker is working on inviting the Georgia Forestry Commission to present on their best management practices at the next meeting. He also again suggested talking to the committee chairs if you are interested in joining one of the committees.

Meeting was adjourned by 3:00 p.m.

11) Action Items

- PC to finalize meeting location for Council Meeting 7
- Council Member Newton would like a list of acronyms for the TMDL document.

CM#6 Meeting Attendees

Council Members in attendance

Ron Cross, Chair
Bruce Azevedo
Braye Boardman
Jerry Boling
Don Dye
Dan Fowler (Alternate)
Pat Goran (Alternate)
Robert Jenkins
Tom Jordan
Scott MacGregor
Eddie Madden
Tim McGill
Charlie Newton, Vice Chair
Lewis Sanders
Stan Sheppard
Larry Walker
Tenia Workman
Alan Saxon (for Tom Wiedmeier)

Council Members not in attendance

Charles Cawthon
Deke Copenhaver
Barry Cronic
Mike Eskew
Patricia Goodwin (Alternate)
Larry Guest
Toye Hill
Ralph Hudgens (Ex-Officio)
Chris McCorkle
James H. Newsome
Lee Webster
Tom Wiedmeier
Tom McCall (Ex-Officio)

Staff in attendance

Jeff Larson – EPD
Brian Baker - EPD
Bill Martello – Jacobs
Diana Jackson – Jacobs
Rita Kelly – Jacobs

Partnering Agencies in attendance

John Colberg
Ed Bettross
Loren Moore
Teresa Concannon
Dennis Black
Phil Sanders
Jennifer Barrington
Mary Gazaway
William Hargrove
Nancy Bobbitt
Jim Hussey
H. Wade Lincoln

General Public in attendance

Harold Reheis
Doug Cheek
Frank Carl
Christi Lambert