

To: Lower Flint Water Planning Council

From: Kristin Rowles, Black & Veatch and Steve Simpson, Black & Veatch

cc: Tim Cash, Assistant Branch Chief, GA EPD

Subject: Meeting Summary: Council Meeting 6 on June 15, 2010

The council meeting was held on June 15, 2010, in Colquitt. The list of attendees is attached. In addition to these minutes, all the presentations (slides) discussed in this meeting will be posted on the Lower Flint web portal (<http://www.flintochlockonee.org/>). The public sign-in sheet is included as an attachment.

Welcome, Introductions, and Chairman's Discussion

Council Chair Richard Royal welcomed members and thanked everyone for attending. John Bridges provided the invocation. Council member and Mayor Jerry Chapman welcomed the council to Colquitt. Chairman Royal recognized Jaime Crozier from Representative Sanford Bishop's office and Russel Carlson from Lieutenant Governor Casey Cagle's office. Next, Richard discussed meetings he has been involved with since the last Council meeting:

Joint Leadership Meeting – ACF Water Councils, May 10, 2010 (Meeting with Upper Flint and Middle Chattahoochee Chairs). Richard said this meeting opened a dialogue among the ACF councils. He said Middle Chattahoochee was concerned that gaps in the Flint River are offset by existing reservoir storage capacity in the Chattahoochee basin, while the Upper Flint had concerns similar to those of the Lower Flint Ochlockonee with respect to ensuring protection of their agricultural economies. The Upper Flint has discussed considering replacing surface water for agriculture with groundwater as a management practice. Richard advised that he shared concerns over the lack of guidance, doubts about funding of reservoirs, and timely receipt of information. Richard said that the councils share frustration over the availability of information in a timely manner. Vice Chairman Hal Haddock, who was also at the meeting, also shared this concern and said he was concerned about meeting the deadline for the completion of the regional plan.

Lower Flint Ochlockonee Water Planning Council
Council Meeting 6
Meeting Date: June 15, 2010

B&V Project 164139
June 18, 2010

June 7th Meeting with EPD Director Allen Barnes

On June 7th, water council chairs and vice chairs met with EPD Director Allen Barnes. Chairman Royal said he was reassured by Allen Barnes when he said that common sense must be used in the water planning process. He said Director Barnes said that we have to proceed based on the best available data at this time and acknowledged that the lateness of information has caused frustration. Chairman Royal said that Director Barnes is open to discussion of the modeling assumptions. Director Barnes told the council leaders that he is not sure that some gaps can even be closed, but he expects that the councils will work toward reducing gaps.

Chairman Royal said they plan to meet again on August 6th in Albany to discuss technical issues and concerns of the water council. Chairman Royal said he was impressed with the Director and that he felt the Director was genuine and listening to their concerns. Hal Haddock advised that he was looking forward to meeting with Barnes.

Next, Chairman Royal asked for approval of the agenda. With no objections, the agenda was approved. Next, Chairman Royal asked for approval of the last council meeting summary. Motion to approve was made by John Bridges, second by Jimmy Webb, and the Council approved the summary with no objections. Last, Chairman Royal thanked all the committees for their hard work.

Kristin Rowles made a few logistical announcements, including a request that council members review page two of their pre-meeting packets and ensure they were listed on the correct committee lists. She asked the members to notify her of corrections and additions for this list.

Agricultural Meter Data Analysis Report

Doug Wilson of the Georgia Water Planning and Policy Center (Center) provided an overview of recent efforts to analyze data from the agricultural metering program. Doug said the Center has recently received the metering data for 2008 and 2009. This data was made available to the Center based on a request by the chairs of the state House and Senate agricultural and environmental committees. He said that the Center will be sending the legislators that requested the data a report on analysis of the data in the near future. He noted that these legislators will decide how to release the data in the future. He noted that Senator Bulloch, who is a council member, was one of the legislators making the request.

Q. Are meters are still being installed?

Doug: Yes.

Q. Does the new data confirm Dr. Hook's estimates?

Lower Flint Ochlockonee Water Planning Council
Council Meeting 6
Meeting Date: June 15, 2010

B&V Project 164139
June 18, 2010

Doug: Based on prior analysis, the 2007 data set is close to Dr. Hook's estimates, but the results are not yet complete on the new data. The 2007 data are probably the best comparison to the dry-year Hook estimates.

Looking ahead, Doug noted that there will be a lot of value in having this type of data, and good data collection, management, and analysis will help to make good on the \$20 million investment in the metering program. Council member Jimmy Webb said it was good to finally be getting this information and that the information will help us. He expressed frustration at the difficulty in getting the information. Jimmy noted the importance of this information to the council's decision making. Antonio Fleming from the GA Soil and Conservation Commission said that release of the data was a result of the commission's uncertainty that it was legally permitted to do so, but that now that the uncertainty had been addressed, the data had been released.

Assessment Forecasts Update

Robert Osborne from Black and Veatch gave an update on water demand forecasts. Corrections have been made in several forecasts, and in some cases, the forecasts are still not complete (i.e., energy). For energy, the existing consumptive use has been used in the 2050 forecasts. The agricultural water demand forecasts have been revised and include forecasts for nursery operations, as well as current information for golf courses. Animal operations water use have been estimated but are not included in the model runs. Jerry Lee noted that the horticulture industry had worked with EPD and came to agreement on how to estimate current use and make forecasts for this industry.

Jimmy Webb asked whether agricultural use of surface water was really going to increase in the region. He said he did not think that surface water use by agriculture would increase, though groundwater probably would. It was noted that Hook's forecasts do include a small increase in agricultural water use. Woody Hicks (Tech Ad Hoc Committee) asked why agricultural demand would increase if there is such a big gap. Kristin Rowles responded that the demand side had not been adjusted based on management practices in the model runs to date; so far, we have just compared projects to resource availability without adjustment based on the modeling results. That step is where we are headed now.

Committee Efforts Updates

Committee reports are included in the pre-meeting packet.

Water Quantity Committee

Given the surface water availability model results, Committee Chair Jimmy Webb said that he is concerned about the perception of the gap at Bainbridge, especially by neighboring states. He also expressed concern that the gap is overestimated. He said that he knows there is a gap, but does not think it is as significant as the model indicates. He

Lower Flint Ochlockonee Water Planning Council
Council Meeting 6
Meeting Date: June 15, 2010

B&V Project 164139
June 18, 2010

said that he believes natural gaps occur, but that Wei Zeng had told him that the model removes the effects of nature on the gap. Jimmy said that the council needs to show it is working to reduce the gap, but it does not have to completely close the gap.

Based on discussion of management practices so far, Jimmy reported that he believes we could replace some surface water withdrawals with groundwater withdrawal. He also thinks that agricultural technology innovations will help to substantially reduce water use by 2050. He noted that the last 10 years alone had brought amazing innovations. Jimmy said that Chairman Royal has said that irrigation cessation should be taken off the table. Jimmy also said that we need to consider reservoirs, and the committee has requested a model run to estimate storage needs to address the gap.

Q. Can we quantify improvements in water use over past 10 years in irrigation efficiency?

Kristin Rowles: We are working on that. Mark Masters will be surveying NRCS agents on this issue. We hope to come up with an estimate of the baseline for agricultural conservation practices in order to support estimation of potential savings that could yet be attained. Information in the strawman document shared with the committee is a start.

Doug Wilson: It is important to note that we can measure equipment changes for water conservation, but attaining water savings also requires behavioral change in the way a system is operated. As for the baseline, that is where we need to focus. It would be best to have a field survey on which to base that estimate.

Water Quality Committee

Jerry Lee said that so far the committee has mostly talked in generalities because enough data on water quality resource capacity is not yet available. Kristin noted that Steve would be reviewing some new water quality results today; these were just received from GA EPD in the past week.

Technical Ad Hoc Committee

This committee met on April 15 in Albany. The issues it considered were technical issues in the modeling work, including the assumption of 100% consumptive use by agriculture and the use of 7Q10 as the low-flow metric.

With respect to the assumption of 100% consumptive use by agriculture, John noted that the timing of returns and field conditions are important factors that cause variation. He said that selection of a specific figure could harm agriculture if it were incorrect. He said that as we increase the efficiency of agricultural water use, we increase the consumptive use of water by agriculture. He noted that during the committee meeting, Doug Wilson checked with a representative of the Florida Water Management Districts, and he reported the four of the five Florida districts use a 100% consumptive use assumption for agriculture. The committee recommended that, without a defensible alternative, this

Lower Flint Ochlockonee Water Planning Council
Council Meeting 6
Meeting Date: June 15, 2010

B&V Project 164139
June 18, 2010

assumption should not be changed at this time, but the issue does warrant further research.

With respect to the use of 7Q10 as a low flow metric, the committee reached a similar conclusion. Without a defensible alternative metric, the committee could not recommend an alternative.

John said that the committee discussed a number of other issues, including: evaluation of the gap at a node in between Montezuma and Bainbridge, the definition and implications of the gap, and conditions in Spring Creek, which are not addressed in the model results.

Chairman Royal referred to an article recently circulated to the council in which it was stated that prior to the construction of Woodruff Dam, flows into Florida often went below 5000 cfs. Woody Hicks (committee member) said he would provide data for the council that would address this statement, which he stated was not completely correct.

Surface Water Availability Forecasts and Modeling Conditions

Kristin reviewed the results of the recent surface water availability model runs. She said that the new analysis includes two model runs:

1. Revised Current Conditions: This updates the current conditions model run presented at the joint meetings in January. Revisions include changes to demand inputs, including Alabama demands, energy demands, and agricultural demands (based on revisions in Dr. Hook's estimates).
2. Baseline Future Conditions: This includes 2050 forecasted demand conditions with no new management practices applied.

Kristin noted that the process was still very active, and that further revisions were to be expected. The planning team had received these results only recently and were still reviewing them and making suggestions to EPD. These results are the best available at the current time, but further revisions will adjust these results.

Kristin presented the following results:

Lower Flint Ochlockonee Water Planning Council
 Council Meeting 6
 Meeting Date: June 15, 2010

B&V Project 164139
 June 18, 2010

Surface Water Availability Model Results
Revised Current Conditions and Initial Future Conditions

FLINT

	Length of Shortfall(% of time)	Average Shortfall (cfs)	Long-term Average Flow (cfs)	Maximum Shortfall (cfs)	Corresponding Flow Regime (cfs)
MONTEZUMA					
Current	3%	1	339	94	623
2050	2%	1	3429	1	593
BAINBRIDGE					
Current	13%	361	7880	1376	2506
2050	11%	316	7981	1215	2506

CHATTAHOOCHEE

	Demand Shortage (cfs)	At-site Flow Requirement Shortage (cfs)	Minimum Reservoir Storage (acre-feet)	Minimum Percentage Reservoir Storage	Basin-wide Flow Requirement Shortage
WHITESBURG					
Current	0	0	539,960	50%	None
2050	0	0	471,867	43%	None
COLUMBUS					
Current	0	0	14,310	5%	None
2050	0	0	14,269	5%	None
COLUMBIA					
Current	0	0	30,816	13%	None
2050	0	0	64,924	27%	None
WOODRUFF					
Current	0	0	585,086 at Buford, WP, & WFG	36% at Buford, WP, & WFG	None
2050	0	0	551,060 at Buford, WP, & WFG	34% at Buford, WP, & WFG	None

Lower Flint Ochlockonee Water Planning Council
 Council Meeting 6
 Meeting Date: June 15, 2010

B&V Project 164139
 June 18, 2010

Surface Water Availability Model Results
Revised Current Conditions and Initial Future Conditions (cont.)

OCHLOCKONEE

Scenario	Length of Shortfall (% of time)	Average Shortfall (cfs)	Long-term Average Flow (cfs)	Maximum Shortfall (cfs)	Corresponding Flow Regime (cfs)
CONCORD					
Current	9%	26	1107	60	68
2050	8%	34	1115	79	97
QUINCY					
Current	5%	5	264	11	11
2050	3%	6	291	12	12

Jimmy Webb noted the lack of a shortfall in the Chattahoochee and the ability to make up for flow shortfalls with reservoir storage. He said that we need to consider reservoirs on the Flint side.

Chairman Royal commented that he thought the reservoir in the Griffin was only using half of its storage. Woody Hicks said that he thought they were only using 20% of the reservoir's permitted withdrawal capacity. Woody also commented he was concerned with the modeling, that it was more hypothetical for the Upper Flint and based more in reality for the Lower Flint.

Council member John Bridges commented that he thought we are probably sending more water underground than we are aware of.

Surface Water Quality Forecasts and Modeling Conditions

Steve Simpson presented the surface water quality modeling results, which were received from GA EPD last week.

Steve showed some county by county maps which showed the current permitted municipal and infrastructure compared to the 2050 demand. This comparison shows that total existing permitted flows are similar to 2050 projections at a county level. Therefore, dissolved oxygen modeling results under permitted conditions should offer a reasonable approximation of conditions under 2050 projections.

Steve then showed the list of permits that were modeled for the Flint River Basin. Steve reminded the Council that it would be good for them to review it for corrections when

Lower Flint Ochlockonee Water Planning Council
Council Meeting 6
Meeting Date: June 15, 2010

B&V Project 164139
June 18, 2010

they can download this presentation. Steve explained that the notes column in the list is helpful in understanding how each permit was modeled.

Steve then reviewed the proportion of stream reaches in the council in the various categories of available assimilative capacity and noted that the models gave us the expected results, that less assimilative capacity was available under permitted conditions than under existing conditions. Steve then reviewed the available assimilative capacity in a series of maps for the region.

Q. Council Member Jerry Lee asked to confirm that the model does NOT include non-point sources.

Steve said yes, the model does NOT include nonpoint sources.

Q. A Council Member asked if the DO standard changed, this would probably change some of the maps.

Steve said yes, however, the information they have so far does not indicate which stream segments would be affected by this change. In addition, the plan is scheduled to be completed before the DO standard revisions.

Q. Council Member TE Moye asked about how the Council would be affected by the proposed new Florida nutrient standard.

Steve commented that this could greatly affect both point and nonpoint sources. However, in the current draft the nutrients standards are expressed as time averages, so the exact effect is unclear at this time. GA EPD has commented on these draft standards.

Steve said that he was going to give this data to the Water Quality committee and then they would decide how to proceed.

Groundwater Sustainable Yields and Pumping Comparison

Kristin said that these results were not yet available from GA EPD, but would be presented to the Water Quantity Committee when they become available.

Given that the council was ahead of schedule on the agenda, Kristin suggested that she cover the management practices update and WDCP Development before lunch. Chairman Royal agreed.

Management Practices Update

Kristin presented slides from GA EPD on water conservation practices. She also distributed a hand-out of the water conservation guidance. The distributed hand-out replaces a prior version of the same document that was included in the pre-meeting packet. (It was updated after the packet was sent to the council.)

Lower Flint Ochlockonee Water Planning Council
Council Meeting 6
Meeting Date: June 15, 2010

B&V Project 164139
June 18, 2010

In summary, the presentation and hand-out divide water conservation practices into four tiers as follows:

- **Tier ONE practices** – mandatory through rules or law (permittees)
- **Tier TWO practices** – options addressed through rule (permittees)
- **Tier THREE practices** – optional, basic (permittees and others)
- **Tier FOUR practices** – optional, beyond basic to help “close the gap” (permittees and others)

The presentation emphasized that water conservation is considered a priority management practice and should be included in the regional plans. The presentation cites existing and expected regulations related to water conservation and deriving from the Statewide Water Plan and the recently passed Water Stewardship Act, as well as the Water Conservation Implementation Plan.

The presentation noted that many water conservation goals and practices are available for consideration. Some are already required, and new requirements will be going into place in the coming months. For the regional councils, it is expected that the councils will decide which water conservation goals and/or practices are appropriate for their region and include them in the WDCP.

Next, Robert Osborne reported to the council that he had collected information on local plans for water resource management related projects through his recent phone calls to each of the council members. He thanked the council members for their input. He also noted that brochures were available for council members to use in informing their local counties and governments about the state water plan process.

WDCP Development

Kristin referred the council members to pages 47-53 of the pre-meeting packet. This is a revised draft table of contents for the regional Water Development and Conservation Plan (WDCP). Kristin noted that this is a guideline for the council to follow in developing its plan. It can be adapted to regional conditions. She said that this document is an update of previous documents that the council has seen.

Kristin said that the most significant point to emphasize at this time is that it is now suggested that the plans be around 40 pages each, like the Statewide Water Plan. She noted that this would greatly limit the amount of detail that could be included in the plan itself. The planning contractors are to provide a draft of the plan to GA EPD August 15. This draft will include sections 1-5, which includes summaries of regional conditions, forecasts, and resource assessments. A second draft including sections 6-8 is to be provided to GA EPD October 15.

Lower Flint Ochlockonee Water Planning Council
Council Meeting 6
Meeting Date: June 15, 2010

B&V Project 164139
June 18, 2010

In closing, Kristin said that it would be helpful to have a committee of council members to review the draft. Chairman Royal said he would consider that suggestion.

Next Meeting

The Council selected September 8 as the date for the next council meeting and proposed Thomasville as the location. Steve Sykes will coordinate with Kristin about location details.

The Council broke for lunch at the Tarrer Inn. After lunch, the Chairman said that the Council would take local elected official and public comments, and then, conclude the full group meeting and break into committees for discussion of management practices.

Local Elected Officials and Public Comments

Chairman Royal recognized Newton Cloud with the Spring Creek Watershed Partnership. Newton asked the Council if there was going to be metering of home wells. A Council Member responded that this use was pretty negligible and could not foresee metering of home wells. Newton was also concerned about the impact to endangered species, particularly in Spring Creek, which does not have a planning node summary. A council member responded that Spring Creek has run dry several times within his lifetime; another member stated that the Flint River Basin plan included actions aimed in part at addressing sensitive species.

Chairman Royal said Suzanne Brandt with Keep Decatur County Beautiful had to leave prior to the public comments.

David Reckford with the Flint River Basin Partnership Flint River basin next spoke to the Council. He explained the Flint River Basin Program is a conservation partnership between the Flint River Soil and Water Conservation District, the USDA Natural Resources Conservation Service and The Nature Conservancy. He volunteered to assist the Council in organizing a field day or any other way in showing them some cutting edge water conservation practices.

Wrap-Up and What to Expect Next Meeting

The next Council meeting will be September 8 in Thomasville. There will be committee meeting in the interim. Kristin distributed an evaluation form and asked the members to complete them before leaving. The Council then broke up into the Water Quality and Water Quantity Committees to discuss management practice selection. Committee reports from these meetings are separate documents.

Lower Flint Ochlockonee Water Planning Council
Council Meeting 6
Meeting Date: June 15, 2010

B&V Project 164139
June 18, 2010

Attachment 1:
Lower Flint Ochlockonee Water Planning Council
Council Meeting Attendance – June 15, 2010

Council Members

Steve Bailey

John Bridges

Jerry Chapman

Bob Hanner

Hal Haddock (Vice Chair)

John Heath

Huddy Hudgens

Gary Leddon

Jerry Lee

Chuck Lingle

George McIntosh

T.E. Moye

Mike Newberry

Richard Royal (Chair)

Steve Singletary

Howard Small

Steve Sykes

Jimmy Webb

Council Members Not In Attendance

John Bulloch (Ex-Officio)

Dean Burke

Jimmy Champion

Terry Clark

Josh Herring

Chris Hobby

Doyle Medders

Rick Moss

Greg Murray

Jim Quinn

Planning Consultants

Robert Osborne, B&V

Kristin Rowles, GWPPC

Steve Simpson, B&V

Doug Wilson, GWPPC

Georgia EPD

Tim Cash, Assistant Branch Chief

Bill Morris

Tommy Rumph

Georgia State Agencies

Antonio Fleming, Georgia Soil and
Water Conservation Service

Bert Earley, GA Forestry Commission

Lower Flint-Ochlockonee Water Planning Council
Council Meeting 2
Meeting Date: June 11, 2009

B&V Project 164139
June 16, 2009



LOWER FLINT-OCHLOCKONEE
WATER COUNCIL

Meeting #6, June 15, 2010

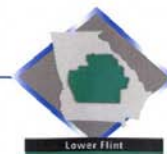
Local Elected Official Comment Sign-In

Name

Public Comment Sign-In

Name

<i>Newton Cloud Spring Creek Watershed Partnership</i>
<i>Guzanne Brandt Keep Decatur County Beautiful</i>
<i>David Reckford Flint River Basin Partnership</i>



Lower Flint-Ochlockonee Water Planning Council
 Council Meeting 2
 Meeting Date: June 11, 2009

B&V Project 164139
 June 16, 2009



LOWER FLINT-OCHLOCKONEE
 WATER COUNCIL

Meeting #6, June 15, 2010
 Public Sign-In

Name	Organization
RYAN LEE	CANDIDATE HOUSE DIST 173
LaDon Collier	
Linton Thompson	Georgia Organic Solutions
Jimmie LAING	MAYOR Whigham
Kathleen Rugeley	UGA - Jones Ctr.
Jeffrey Harvey	GA FARM Bureau
Russel Carlson	Lt. Gov. Office
Jeff Nunnery	GFB
SARAH KESEY	S.W. GEORGIA R.C.
Janey Crozier	Congressman Bishop
Antonio Fleming	GASWCC
Newton Cloud	Spring Creek Watershed Partnership
Bert Earley	Georgia Forestry Commission
Mitch Williams	Georgia Pacific
Frank Yancey	NRCS/Golden Triangle RCD
David Burke	Oil-Dri Corp

4

