



B&V Project 164139
B&V File C-1.4
June 21, 2010

To: Upper 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 17, 2010

The council meeting was held on June 17, 2010, in Vienna. The list of attendees is attached. In addition to these minutes, all the presentations (slides) discussed in this meeting will be posted on the Upper Flint web portal (<http://www.upperflint.org/>). The public sign-in sheet is included as an attachment.

Welcome, Introductions, and Chairman's Discussion

Council Chair Donald Chase welcomed members and thanked everyone for attending. He provided an invocation to start the meeting. Next Chairman Chase reminded the group of the importance of keeping the council's vision and goals front and center in their minds as they proceed with their work.

Next, Chairman Chase said that on May 10th, he and Vice-Chairman Dick Morrow attended a Joint Leadership Meeting with ACF water councils, including the Lower Flint Ochlockonee and Middle Chattahoochee councils. He said that the meeting was a good opportunity to share our concerns with neighboring councils.

Next, Chairman Chase said that on June 7th, water council chairs and vice-chairs met with EPD Director Allen Barnes. Chairman Chase said that they discussed the "gap guidance" and whether the councils are to fill identified gaps. 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 closing gaps. Donald asked Tim Cash with Georgia EPD, if he concurred with that statement. Tim said that this was correct and that the emphasis should be on "closing" the gap. Tim Cash stated that another important point that Director Barnes made was that even though we lack some information at this time and we do not have 100% certainty, we must proceed based on the best information available to us. Chairman Chase said that they also discussed with Director Barnes their frustration with getting results in a timely manner.

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Chairman Chase asked the council members to consider the water conservation practices that the council has been discussing and to bring ideas forward. The emphasis on conservation will be a part of the plan. He also noted that there will be dry times with low flows in the future, and we need contingency plans to address those times specifically.

Mayor Emerson Lundy (Vienna) thanked everyone for attending.

Kristin Rowles asked if anyone had any changes to the today's agenda. With no objections, the agenda was approved by consensus. Next, Chairman Chase asked for approval of the last council meeting summary, which was approved by consensus.

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.

U.S. Army Corps of Engineers Update to ACF Water Control Manual

An attempt to have Andy Andrews (Chief, Water Management, United States Army Corps of Engineers, Mobile District) provide a presentation over a speakerphone did not work sufficiently to be heard by everyone. So, Kristin Rowles narrated the presentation. Andy Andrews was available by phone for questions.

The presentation summarized the longstanding tri-state water wars, Judge Magnuson's court ruling on July 17, 2009, and some of the ruling's impacts, in the context of the update of the ACF Water Control Manual. The Army Corps of Engineers has done the following since the ruling:

- Reopened NEPA scoping due to new and significant information
- Revised Notice of Intent
- Working to comply with Magnuson Ruling in updating the Water Control Manual

The presentation noted that the Army Corps of Engineers will not pursue reallocation for water supply in the Water Control Manual update effort. If the states reach a settlement, the Corps will submit the agreement for consideration and possible referral to Congress. If Congress enacts legislation regarding ACF management, the Corps will update the operations manual accordingly.

The presentation noted that the current water control manual is outdated and inadequate with regards to drought operations. The water control manual should address current conditions and needs in the basin, including drought operations. The presentation explained the process and schedule for updating the water control manual. The process is

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due to end in June 2012. The Army Corps of Engineers noted changes in this schedule might arise due to the litigation, state negotiations, or the ACF schedule.

The presentation noted the following as summary points:

- The Corps cannot resolve the issues created by the Magnuson ruling through the water control manual update process.
- The water control manual effort is an update, not a study.
- The issues are complex.
- The water control manual updates will not meet all stakeholder expectations.
- The Magnuson ruling has “Draconian” implications.

Council member Brant Keller asked that if Army Corps of Engineers includes consideration of water quality in setting flow targets, and council member Cliff Arnett asked what flow targets are being used. Andy Ashley provided direct responses to these questions via phone discussion with Brant and Cliff. Andy advised that the Corps’ Operating Manual has three flow targets, including the water quality focused flow target at Peachtree Creek, the minimum flow downstream of Westpoint Lake, and the RIOP flow target downstream of Woodruff Dam.

In summary, Kristin said that the Corps will not be seeking to resolve issues related to the Magnuson ruling in the control manual update, but it will comply with the ruling. The control manual can also be modified based on any settlement or Congressional action that might affect it. The Corps will next provide an opportunity for public comment next year.

Committee Efforts Updates

Committee reports are included in the pre-meeting packet.

Water Quality Committee

Committee Chair Raines Jordan provided an update on the Water Quality Committee. He said basically the committee was waiting for results from the watershed models, which are expected in November. He noted that when the committee gets this information, the schedule will be tight to incorporate it into the plan. He said that the committee will need to focus on nonpoint sources as a primary concern for management practices and funding. He thanked the members of the committee and asked the Council if they had any questions.

Council member Brant Keller expressed concern over the schedule for results from the watershed model. Kristin Rowles noted that this concern was significant, but that some

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of the results could be anticipated and that the committee could begin to identify options at this time, so that the committee is prepared when results are received.

Council member Brant Keller commented that with state funds short, he is concerned about how to fund actions in the plan. Council Vice-Chair Dick Morrow said counties are strapped financially, and he thought the Council needed to start looking at a funding framework. Raines agreed and said that the Council is going to need new ideas. Council member Randall Starling asked what actions the Council could recommend to address nonpoint source pollution that would not result in increased taxes. A council member commented that in the end we all are going to have to pay for any new ideas. Randall Starling said that we really need to prioritize our BMP list in order to get the biggest bang for the buck. Dick Morrow suggested that more counties consider using a stormwater utility to raise funds. Brant drew attention to the nonpoint source problems caused by dirt roads and said he believes that nonpoint source control for dirt roads should be able to be increased at little cost. Lamar Perlis advocated for education; ie informing people of the relationship between actions and water quality impacts. Jack Holcomb noted that some education regarding sediment impacts of road maintenance is ongoing.

Water Quantity Committee

Council Member Cliff Arnett said that the committee has had two meetings. He noted that the committee has discussed the gaps at Bainbridge and Montezuma and noted that the Montezuma gap was being revised. He said that the committee was trying to figure out what the management target is. He noted the committee has asked for an estimate of the amount of storage is needed to close the gaps. They have also asked for a list of Land Application Systems in the Upper Flint.

The take-away ideas from the last committee meeting included: estimate savings that could be attained from using more drip irrigation for vegetables, consider reversing existing LAS to discharges, review the Kinchafonee reservoir study, use the Water Conservation Implementation Plan to identify management practices for water conservation, even while we are waiting for better information, in order to begin to try to address gaps and fulfill our obligations as a council.

Council Chair Donald Chase noted that consumptive use requires more study, and council vice-chair Dick Morrow said that consumptive use by septic tanks in particular needs more study. Cliff Arnett noted that a recent USGS study on septic tanks showed that septic tanks are not consumptive, but the period of return to the river might be long. Council member Cliff Arnett said it may be possible to augment the river flows with groundwater, and this is a practice that the committee favors.

Council member Lamar Perlis asked what practices could be implemented at low or no cost and what practices would provide the biggest bang for the buck. Cliff Arnett said

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that was a good question; he said that one simple solution, but a costly one, would be to build a reservoir. It could cost over \$100 million.

Council member Dick Morrow said that for \$15-17 million, the City of Griffin could convert its Land Application System into a discharging system (with treatment) and increase returns to the Flint by about 2 MGD.

Dick Morrow also said that we could replace agricultural surface water withdrawals with groundwater withdrawals, but asked who would pay for it.

Chairman Chase said that we know that there are practices that we can implement to address both quantity and quality issues, but that there will be a price tag. He said that it is the council's job to put management practices forward. Committee chair Cliff Arnett said that we need to change our concept of how we use water.

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). The agricultural water demand forecasts have been revised and include forecasts for nursery operations, as well as current snapshot information for animal operations and golf courses. In response to a question, he said that Alabama demand inputs include energy use. Dick Morrow noted that the forecasts showed about 50 MGD of surface water withdrawals in the Upper Flint and that while this amount could not be fully converted to groundwater withdrawals, he believes it has a lot of potential as a management practice.

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 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.

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Kristin presented the following results. She noted that the Montezuma results had been modified since the committee had seen the results last week to correct an error, and as a result, the gap was much less frequent, but the average gap had increased.

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	<1%	61	3391	94	623
2050	<1%	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

OCHLOCKONEE

Scenario	Length of Shortfall (% of time)	Average Shortfall (cfs)	Long-term Average Flow (cfs)	Maximum Shortfall (cfs)	Corresponding Flow Regime (cfs)
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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

Kristin Rowles noted that, in part, the Bainbridge node shortfall was caused by assumptions about diversions in the upper part of the basin. Steve reviewed how the model assumptions about pumping operated and presented the following breakdown of results into gap created by consumption and gap created by pumping in the model:

BAINBRIDGE NODE GAP – SUMMARY

Scenario	Length of Shortfall (% of time)	Average Shortfall (cfs)	Long-term Average Flow (cfs)	Maximum Shortfall (cfs)	Corresponding Flow Regime (cfs)
Total Flow Gap	13%	361 (233 MGD)	7880 (5093 MGD)	1377 (890 MGD)	2506 (1620 MGD)
Due to Lower Basin Water Use	13%	339 (219 MGD)	7880 (5093 MGD)	816 (528 MGD)	2506 (1620 MGD)
Due to Upper Basin Diversion	6%	72 (46 MGD)	7880 (5093 MGD)	636 (411 MGD)	4246 (2744 MGD)

Vice-chairman Morrow asked why the gap was improving over time. Steve Simpson said that it was a result of increased returns in the upper part of the basin, resulting from a combination of conversion from septic to sewer (upper part of basin) and municipalities withdrawing from groundwater sources and discharging into surface water (lower part of basin). Council member Brant Keller said he believed Gwinnett County has gone from 80,000 septic systems to 60,000 septic systems. Other council members questioned whether returns in the upper part of the basin could increase that dramatically and asked which municipalities were changing that much. Kristin said that the planning contractors would try to get more detailed information on the increase in returns.

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Kristin also noted that there is a difference in the agricultural demand numbers that contributes in some part to the improvement in the future vs. current comparison. She said that current conditions inputs for agricultural water use reflect very dry conditions (early 2000's), which are more severe than those used in the future inputs. For the future input (2050), agricultural water use at the 75th percentile is used (the level at which more water than that is used in 25% of years).

Council member Cliff Arnett said he was not worried about the Montezuma node, but said the Council needs to help with the Bainbridge node. He also said that given the Chattahoochee results, it seems that a reservoir for the Flint needs to be given serious consideration.

Council member Brant Keller commented that he thinks there is a misconception about how Griffin refills its reservoir. He said that they really only refill the reservoir in the winter months when river flow is high and that it takes only one month to refill the reservoir. He said that they are not withdrawing water to fill the reservoir from April to October and does not want others to have the impression that Griffin is "stealing water."

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

Steve 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.

Brant Keller asked whether there had been a model run assuming zero discharge from point sources so that the impact of nonpoint sources could be assessed. Steve said no and that the DOSAG model only addresses point sources.

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Council member Cliff Arnett asked if the corresponding memo detailed if the “red” conditions would change if the DO standard changed. Steve said the memo had additional information but did not address whether “red” conditions would change if there was a new DO standard.

Steve explained that with regard to DO, where the model identifies problems, it may not be the result of a specific pollution source, but as a result of natural conditions or nonpoint sources. However, the model does allow us to determine where it might be good (or not) to locate a future discharge.

Groundwater Sustainable Yields and Pumping Comparison

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

Kristin suggested that she cover the management practices update and WDCP Development before lunch. Chairman Chase agreed.

Management Practices Update

Kristin presented slides from GA EPD on water conservation practices. She also distributed a hand-out that summarized the presentation. 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.)

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

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decide which water conservation goals and/or practices are appropriate for their region and include them in the WDCP.

There were no questions.

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. Rob also emphasized that the council members are expected to help inform local governments about the water planning process, and reminded them of the brochure previously distributed that could be used to help explain the water planning effort.

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. She said that the most significant point to emphasize 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 on August 15. This draft will include sections 1-5, which include summaries of regional conditions, forecasts, resource assessments, and gap analysis. A second draft containing sections 6 through 8 needs to be provided by October 15. She said that it would be helpful to have a committee of council members to review the draft. Chairman Chase said he would consider that suggestion.

Next Meeting

With a few minutes left before lunch, Kristin asked to use this time to select a date for the next meeting. The Council selected September 10 in Thomaston.

The Council broke for lunch. Kyle Holder, CH2MHill, spoke during lunch about the Land Application System at Vienna. After the presentation, council member Randall Starling brought to the council's attention Bert Earley, the Georgia Forestry District Water Quality Forester. He noted that Earley had information on best management practices used by the forestry industry. This information should be helpful to the water quality committee.

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.

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Local Elected Officials and Public Comments

There were no local elected officials and public comments.

Wrap-Up and What to Expect Next Meeting

The next Council meeting will be September 10 in Thomaston. There will be committee meetings 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 available as separate documents.

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Attachment 1:

**Upper Flint Ochlockonee Water Planning Council
Council Meeting Attendance – June 17, 2010**

Council Members

Clifford Arnett

Hays Arnold

Mike Beres

Michael Bowens

Gene Brunson

Donald Chase (Chair)

Mike Donnelly

Beth English

Jack Holbrook

Raines Jordan

Frank Keller

Brant Keller

Buddy Leger

Lamar Perlis

Gary Powell

Charles Rucks

Randall Starling

Joel Wood

Council Members Not In Attendance

Greg Barineau

Tommy Brunson

William Culpepper

Harold Fallin

Eddie Freeman

George Hooks

Terrell Hudson

James Lynmore

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

Georgia State Agencies

Bert Earley, Georgia Forestry

Jimmy Evans, Georgia DNR



UPPER FLINT WATER COUNCIL

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Name	Organization
Jimmy Evans	Georgia DNR
Jeffrey Harvey	GFB
Lance Renfrow	RVRC
David Hall	GSWCC
James L. Arnold	
Ken Murphy	GFB
Adriane Wood	DCA
Burt Earley	Georgia Forestry
Anthony Cox	CH2M HILL
Boyle Holder	CH2M HILL





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Local Elected Official Comment Sign-In

Name

Public Comment Sign-In

Name

