



**Upper Flint Water Council Meeting 11
September 21, 2011 - Griffin, GA
Agenda**

Objectives:

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| <ol style="list-style-type: none">1) Review comments on plan2) Decide on plan modifications3) Approve final plan |
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8:30–9:00 a.m.	Registration
9:00–9:25	Welcome, Introductions, Chairman's Discussion – Donald Chase <i>Adopt April meeting summary, review agenda</i>
9:25-9:40	Discussion of GA EPD Direction to the Councils – Donald Chase
9:40-10:30	Review of comments on plan - Kristin Rowles
10:30-10:45	Break
10:45-12:00pm	Continued review of comments on plan - Kristin Rowles
12:00-1:00	Lunch
1:00-1:30	Local Elected Official and Public Comments
1:30-2:00	Final Discussion of Plan for Submittal to EPD
2:00pm	Adjourn

To: Upper Flint Water Planning Council

From: Kristin Rowles, GWPPC and Robert Osborne, Black & Veatch

cc: Tim Cash, Assistant Branch Chief, GA EPD

Subject: Meeting Summary: Council Meeting 10 on April 14, 2011

The council meeting was held on April 14, 2011 at Lake Blackshear. 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/>).

Welcome, Introductions and Chairman's discussion

Chairman Chase started the meeting with an invocation. Chairman Chase thanked Buddy Leger and the Crisp County Power Commission for providing breakfast. Chairman Chase next thanked the members of the Council for their role in the process, and he said that this is a model for how government should work. Council member Mike Beres thanked Chairman Chase for his contribution.

Next, Chairman Chase asked the Council to approve the meeting minutes from the Council's last meeting. Vice-Chairman Dick Morrow made a motion to approve the minutes, and they were approved by consensus. Next, Chairman Chase asked for consideration of the meeting agenda. The agenda was adopted by consensus.

Plan Process/Timeline

Kristin reviewed the following revised milestone schedule:

<u>Completion Date</u>	<u>Milestone</u>
April 14, 2011	Council Meeting 10
Late April, 2011	Production of Final Plan/Plan Review Committee (if needed)
May 2, 2011	Recommended Plan to GA EPD
May-July 2011	Public Notice of Draft Plan

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August 2011

Final Production of Adopted WDCP

September 30, 2011

GA EPD Approves Upper Flint Regional
WDCP

Overview of Plan Revisions

Kristin Rowles referred to the April 7th review draft of the plan. She said that changes in this draft included: minor edits (such as grammar or formatting), references, revisions based on decisions at the last council meeting, and revisions based on committee work since the last council meeting. She said that the committee work related changes would be discussed in committee reports. She said that the Council could make changes today as needed during the meeting, and if necessary, follow-up by the Plan Review Committee next week is possible.

Next, Kristin reviewed major changes in each of the sections:

Sections 1 & 2

- New maps in Sections 1 and 2
- Clarifying notes and references
- Section 2, Page 2-4: 2006 Flint Plan clarification. Kristin said that this change, requested by EPD, clarified that the 2006 Flint Plan and this plan will be implemented together.
- Will add reference to Council meeting summaries

Section 3

- Page 3-1 to 3-3: clarification on what is included in various forecasts
- Section 3.1:
 - Clarifying language on models
 - Statement of Council position on model assumptions for upstream reservoirs (page 3-5) [from last Council meeting]
- Section 3.2.2: Groundwater models were recalibrated, results will be discussed in the Water Quantity committee report later today [recommended by committee]
- Section 3.2.3: Discussion of nutrient modeling results [reviewed by Water Quality Committee; recommendations today]
- Section 3.3.1: Figure 3-6 – New impaired waters graphic
- Section 3.3.2 – Revisions proposed from Plan Review and Water Quality Committees based on Division of Wildlife Resources' comments

Section 4

- Section 4.3: clarification on what is included in agricultural water use forecasts

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- Section 4.4: Thermoelectric Power Production Water Demand Forecasts – revised [reviewed by Water Quantity – recommend adoption (with modification)]

Section 5

- Section 5.2: New groundwater results; more explanation of meaning of results [recommended by committee]
- Section 5.3: Discussion of nutrient modeling results [reviewed by Water Quality Committee; recommendations today]
- Section 5.4 (page 5-6): Surface water and groundwater availability sections revised for consistency with other changes and from committee review

Section 6: Table 6-1

- Order of management practices and noting priority practices
- SF1 wording in description [Water Quantity Committee]
- Moved former WQ5 to Section 7.4 (coordination with other councils) [Plan Review Committee]

Section 6.2

- Page 6-10, last paragraph: revisions to address gap discussion and storage need [Water Quantity Committee; recommendation today]
- Page 6-11: New paragraph on water conservation – credit for prior implementation [last Council meeting]

Section 7

- Table 7-1: Implementation Schedule
- Table 7-2: Cost Estimates for Implementation
- Section 7.4:
 - Information needs: 5th bullet [W. Qual.], 7th bullet [W. Quant], last bullet [W. Qual.], nutrient modeling [forthcoming]
 - Water policy: 1st, 3rd, and 4th bullet points [last Council meeting], last three bullet points [Plan Review Committee]
 - Coordinated Recommendations with Neighboring Councils [last Council meeting]

Section 8

- Table 8-1: Benchmarks
- Section 8.4: Conclusion – emphasis on need to continue regional planning process [Plan Review Committee]
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Executive Summary and Supplemental Document

- Executive Summary to be developed next week

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- Supplemental documents cited in plan and available on Upper Flint Council website

Kristin provided a list of the supplemental documents as a hand-out. She said that these would be available on the Council website soon, and if any Council members would like to review any of these documents before then, let her know.

Vice-Chairman Morrow said in a recent GMA meeting he promoted the continuation of the regional water planning process, and he said that he believes there is support to continue the process. Council member Beth English said that because the council members were political appointees, they can help make this process more visible to the proper channels. Council member Buddy Leger said he had heard that the Commissioner of Agriculture was planning to meet with the chairmen of the councils. Michael Beres suggested it would be helpful if Council members reviewed the Upper Flint plan face-to-face with legislative representatives. Council member Randall Starling suggested that the Council should remain active in promoting the plan and should meet again at some point in the future to monitor progress, even without planning contractors. Starling asked if there was anything they would have to do from a legal standpoint to have more meetings. Steve Simpson said the Memorandum of Agreement that the Council signed with EPD says that EPD should be notified.

Kristin explained that the Regional Water Plans will be released for public comment on May 9, 2011. The comment period is expected to be 45 days. She said there is an Internet site for collecting comments on the regional water plans. The new website, for this purpose is called the Public Comment Collection Center (<http://www.gaepdcommentcenter.org>). She said the link will also be available from www.georgiawaterplanning.org. Comments can also be submitted to EPD by mail, fax, and e-mail (see hand-out). She said that the comment website will allow the Council members to see what comments are being made on the plan. Use of the website requires registration. Chairman Chase asked if it was appropriate for council members to make comments. Kristin answered yes.

Next, Council member Lamar Perlis asked the council to consider a change to one of the Council goals. He suggested adding “commercial” to the list of water using sectors in Goal #4 so that it reads:

Manage water resources sustainably through the three “C’s” – conserving, capturing and controlling water – in order to provide for the needs of all water users in the region (agriculture, utilities, residential, commercial, industry, forestry, and recreation).

This revision was approved by the Council by consensus.

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Water Quantity Committee Report and Recommendations

Council member Cliff Arnett, Chair of Water Quantity Committee, thanked the committee members for their efforts. He said that he has learned a lot about consensus through this process. Council member Buddy Leger thanked Arnett for his commitment and his time.

Arnett said the committee met on March 23, 2011, and the meeting summary for that meeting is in the pre-meeting packet. The committee also met on April 12, 2011. A summary of this meeting was handed out during the meeting. Arnett said that both of these meetings involved discussing outstanding issues and finalizing the draft plan.

First, Arnett explained references in the plan to resources shared with Satilla-Suwannee Council. The Upper Flint shares the Alapaha node in the Suwannee with this neighboring Council. It is referenced on pages 3-5 and 5-2 and in Tables in Sections 6, 7, and 8 in the plan. Pages 50 & 51 of pre-meeting packet are copies of pages in the Suwannee-Satilla plan that reference the Upper Flint Council's management practices that will affect this node. Arnett said the committee approved presentation of shared resources information and recommends adoption (as presented in April 7th review draft). Chairman Chase asked for any more discussion and asked if there was consensus on approving the shared resource language. **The shared resources presentation in the plan was approved by consensus.**

Next, Arnett reviewed new groundwater results in the table below. Arnett said both the Claiborne and Cretaceous aquifers were recalibrated based on more up-to-date use information. He asked Kristin to explain the results. She said that the recalibration was conducted due to the availability of better information. She said that the results provided wider sustainable yield ranges for these aquifers. She explained that the results are a range because the lower end of the range is based on a conservative assumption that use will increase uniformly across the aquifer, while the upper end of the range is based on an assumption of non-uniform increases in use. The non-uniform assumption allows for more use because use can be limited in some areas where adverse impacts are projected by the model while allowing increased use in other parts of the aquifer where adverse impacts are not projected. Section 3 compares the sustainable yield range to current estimates of use, for which there is also a range. The lower end of the range for use estimates includes average year agricultural withdrawals, while the upper end of the range includes dry year agricultural withdrawals. Kristin said that the committee had asked for an improvement of an explanation of the results in the plan text, and the new

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draft reflects revisions to the explanation to meet this request, as well as the revision to the results themselves. These changes appear in Sections 3.1.1 and Section 5.1.

The council then discussed model limitations. Concern with potential adverse impacts was noted, but Council members also have significant concerns about the accuracy of the models. Arnett said that for him, the answer is adaptive management. As we continue to learn about the system, we can revise the plan.

Chairman Chase asked for any more discussion and if there was consensus on the revisions related to the groundwater results. **The revisions were approved by consensus.**

Next, Arnett reviewed a revision in Section 4.4: Thermoelectric Power Production Water Demand Forecasts. The Committee recommends that addition of a new sentence at the end of this section:

The Upper Flint Council recommends that as a part of water withdrawal permitting decisions for new thermoelectric power production or any other water-intensive industry, a thorough evaluation should be conducted to determine if an adequate and sustainable water supply is available to meet the demands of the new permittee.

Council member Mike Donnelly said that this is consistent with the process a utility would follow in siting a new power plant. Chairman Chase asked for any more discussion and if there was consensus on this language. **The revision to Section 4.4 was approved by consensus.**

Next Arnett, noted a change in text on SF5 in Table 6-1 (page 6-6 of the plan) which changed from: “Addressing the surface water availability gap at Bainbridge may require the addition of storage...” to: “Eliminating the surface water availability gap at Bainbridge will require the addition of storage”. The Committee recommends adopting this revision. Chairman Chase if there was consensus on this language. **The revision was approved by consensus.**

Next, Arnett reviewed several other revisions, including:

- High priority management practices listed 1st in each section in Table 6-1
- After *Surface Water Availability* on page 5-6:
 - Change “Close the gap” to “Address the gap”
 - Added last sentence of same paragraph to note storage needs/recommendation
- Page 8-1, 1st paragraph, line 4: Changed “closing gaps” to “addressing gaps”
- Page 7-15, 7th bullet point: Deleted the last sentence, which read: “Furthermore, the Council recommends the analysis of alternative structural hydraulic measures

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such as temporary weirs, gates, and/or steps to control river stage and sediment transport and scour at or below Woodruff Dam in order to protect critical habitat.” The Committee recommends adoption of these revisions (as presented in April 7th review draft). Chairman Chase asked if there was any more discussion and if there was consensus on approving this language. **There was no additional discussion on these revisions, and they were approved by consensus.**

Next, Arnett said that the committee recommended new revisions (not reflected in the April 7th review draft) that will present the “gaps” throughout the plan as “modeled gaps” and “gaps identified by the model”. The Committee recommends adoption of this revision. **The revision was approved by consensus.**

Next, Arnett presented the committee’s recommendation on revising how the gap is presented and emphasizing the Council’s storage recommendation. This recommendation revises the plan text on page 6-10 and 6-11 and Note 8 (page 6-10). The Committee discussed these revisions extensively. The Committee recommends changing the last paragraph on page 6-10 to read:

As described above, the Council selected management practices to address its vision and goals and gaps by the resource assessment models. However, the implications of these gaps for other users, in-stream needs, and aquifer health are not fully understood; evaluation is needed to delineate and quantify the impacts of these gaps. Without a more complete understanding of severity of these impacts, the Council would violate its own vision and goals if it were to recommend complete closing of the gaps at this time. The Council's vision and goals call for sustainable management of water resources that ensures that the welfare and needs of the region are met. They call for providing for the needs of all users, while protecting the economy, public health, and natural systems, and they specifically call for protection of the forestry and agricultural sectors of the regional economy. Complete closure of the gaps would require complete cessation of water withdrawals by agriculture in dry periods unless and until offsetting storage or augmentation are implemented. Even with complete cessation of water withdrawal by agriculture in dry periods, the entire gap cannot be closed. The complete cessation of consumptive use would have severe economic impacts for water users in the region, especially agriculture, and the economic impact on the state would be devastating, as well. It would be a major water policy shift with extraordinary implications for the region’s economy and quality of life. Such drastic action is not justified. Construction of large-scale storage or augmentation will close gaps identified by the model. Therefore, it is the Council’s position that the only way to satisfy the modeled gap at Bainbridge is to build one or more reservoirs in the Flint River Basin.

The Committee recommends adoption of these revisions. Council member Raines Jordan asked if the Council was recommending a reservoir on the mainstem of the river. Council

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member Hays Arnold said that it does not say that. Cliff Arnett said that this wording says that if you do not build new storage in this region, do not talk to us about closing the gap. The gap will be there unless there is new storage. Vice-Chairman Morrow said the Council wants all options on the table and does not favor one reservoir option over another in the plan. He said that while he personally opposes a mainstem reservoir, he can support this statement. Council member Brant Keller said this plan section reinforces the explanation that you cannot close the gap by conservation alone. Buddy Leger said that a reservoir is needed if the gap is to be closed and the wording calls for storage in the Flint River Basin, not Flint River.

Mike Donnelly said that Jordan is correct: some readers will assume that we are supporting a dam on the mainstem of the river. Lamar Perlis asked if it is possible that storage might be needed for reasons other than closing the gap. Dick Morrow said that in this plan, the gap was the reason to recommend storage. Terrell Hudson said that this is a regional plan; a local plan might have other reasons to call for a new reservoir. Hays Arnold said that the region needs to keep its options open and be ready for the worst case scenario. The Council further discussed whether the plan should call for storage for a reason other than the gap. Chairman Chase said that the plan does not preclude building a reservoir for other reasons, but those reasons are not within the purview of the Council and the Council should not overstep its responsibility. Cliff Arnett asked to call the question. Randy Starling reminded the group that it was deciding whether it could live with the plan language as presented. Chairman Chase asked for a vote to ensure that support for these revisions was unanimous. **The Council votes unanimously in favor of the recommended revisions.** It was clarified that the last sentence of the paragraph (ending on page 6-11) should be underlined in the plan.

Water Quality Committee Report and Recommendations

Committee Chair Raines Jordan thanked the Committee Members for their contributions. He said the process has been exciting, thought provoking and educational for him. He also commented about the need to keep this Council together to keep moving forward.

Jordan explained that the committee had two Meetings. The March 7th meeting summary is in the pre-meeting packet (pages 34-41), and the April 7th meeting summary was provided as a hand-out. The committee reviewed the new nutrient model results, discussed outstanding issues and finalizing draft plan, discussed the 319 grant proposal from Two River RC&D, and developed recommendations to Council for today's meeting.

Jordan presented the committee's recommendations to the Council. First, in Section 7.4, the committee suggested a modified Information Need regarding assessment of baseline agricultural BMP implementation (5th bullet point, page 7-15). Revision of this item was

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referred back to the committee at the last Council meeting. The committee recommends the following revised text:

Conduct a comprehensive assessment of baseline implementation of water conservation and water quality Best Management Practices (BMPs) by agricultural producers. The Council recognizes that state and federal agencies have existing programs that measure BMP implementation, but at this time, a comprehensive baseline assessment is lacking. A comprehensive field survey of BMP implementation, such as the one conducted periodically by the forestry industry, would support estimation of potential benefits of future implementation, tracking of implementation progress, and BMP prioritization.

There was no additional discussion on this revision, and it was approved by consensus.

Next, Jordan said the committee suggested a modification to the introductory paragraph under Information Needs (page 7-14) as follows:

Addressing the following information needs would support improved water resources management and future water planning. Implementation of research and assessments to fill these needs will require funding (state, federal, other). Implementing agencies are not indicated here; if funding is identified, qualified researchers from state universities, institutions, and agencies, as well as private sector firms, can fulfill these information needs. As new information becomes available, it should be incorporated into future cycles of this regional water planning process, and the resource assessment models should be modified to reflect up-to-date information as it is developed.

This revision was approved by consensus.

Next, Jordan said the committee added a new bullet point under Information Needs (Section 7.4) regarding use designation:

Evaluate the use designations assigned to stream reaches in the Upper Flint region as a part of the Triennial Review of Georgia Water Quality Standards. This review is intended to ensure that water quality performance criteria reflect actual conditions, in terms of both use and quality.

This revision was approved by consensus.

Next, Jordan explained that revisions to address comments received on Section 3 from the Division of Wildlife Resources (DWR) had been referred to this committee by the Plan Review Committee. The recommended revisions are presented on in Section 3.3.2

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page 3-12 of the April 7th review draft. Additionally, the list of rare aquatic species provided by DWR on page 48 of the pre-meeting packet will be added to a supplemental document to the plan. Chairman Chase asked if DWR was aware of the committee's revisions to address their comments and what their reaction was. Kristin said that DWR was aware of the revisions. DWR would have liked to have seen more of their suggestions adopted, but they could live with the revisions. **There was no additional discussion on these revisions, and they were approved by consensus.**

Next, Jordan explained that the committee recommended several revisions to address the new nutrient modeling results. The committee had reviewed the new results and the explanation of the results in Sections 3 and 5 of the plan. The committee discussed several concerns about the model calibration, assumptions, and inputs. The committee recommends the following revisions to address these concerns:

- Page 3-10: Add the following as new 3rd paragraph under Nutrient Modeling:
"The Council received the lake and watershed model results late in the planning process, but in its review of the models and their results, the Council had several concerns about the model assumptions and inputs. See Section 7.4 for a recommendation related to the Council's concerns about the lake and watershed models."
- Add the same paragraph on page 5-4 after 2nd paragraph in Section 5.3
- Add the following as a new information item in Section 7.4:
"The Council recommends a peer review of the lake and watershed water quality assessment models to better understand the methodology as it relates to the output and calibration. Pending the review, the council recommends that the model outputs not be utilized for setting water quality standards in-stream or for any other regulatory purposes including point source permitting in the region."

Committee member Brant Keller commented that the model needs to be improved before it is used for permitting. Cliff Arnett commented that the peer review of the model is recommended. This recommendation is similar to the Council's recommendation on the Water Quantity models, but it goes a bit further in that it recommends that the model results not be used before further review. Arnett confirmed that this is true.

Chairman Chase asked Tim Cash (EPD) to comment on the proposed revisions. Cash said that peer review is a process that is standard for research, but he has some concerns about how it would be implemented in this situation.

The Chairman asked for a vote to assess support for this proposal from the committee. **The Council approved the committee's recommended revisions related to nutrient modeling by unanimous vote.**

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Jordan explained that Forrest Hill with the Two Rivers RC&D will explain a 319 grant proposal. This proposal would be eligible for a pool of funds set aside by EPD for Council identified 319 projects (nonpoint source). A summary of the project is included on pages 39-41 of pre-meeting packet. Forrest Hill distributed copies of the full proposal as a hand-out.

Forrest Hill explained the project, which will improve dirt and gravel roads in the Upper Flint Region to control sedimentation. The project targets dirt and gravel roads crossing TMDL listed streams in the region. Ten priorities are identified, although other roads can be improved after the needs of the priority targets are addressed. Implementation will include both structural and non-structural Best Management Practices (BMPs). Hill asked for the assistance of Council members in site selection for the project. The project will also provide training for local officials across the state in the Better Back Roads BMPs developed by Two Rivers RC&D.

Brant Keller asked about monitoring requirements for the project. Hill explained that EPD had approved of the project approach; monitoring requirements are limited because the practices to be used are well understood. Cliff Arnett asked if future maintenance would be required of participating local governments. Hill said that 3 years of maintenance is required, but in his experience, counties will keep the maintenance up for much longer. Vice-chairman Morrow said that he had learned a lot from Two Rivers through the Better Back Roads program and that counties should use the Better Back Roads manual as a practical guide.

Raines Jordan said the committee recommends that the Council send a letter of support for this proposal. A sample letter of support was distributed as a hand-out. This letter is necessary for the proposal to be eligible for the special pool of funds. **The Council approved supporting the proposal by consensus.**

Plan Review Committee Report

The Plan Review Committee met on March 29, 2011. A meeting summary is included as pages 42-46 of the pre-meeting packet. The committee reviewed the March 8th review draft of the plan and developed recommendations to Council for today's meeting. Chairman Chase gave the committee report.

First, the committee noted that the Water Quality Committee had suggested re-ordering management practices so that the top priority practices are at top of each section in Table 6-1. The April 7th review draft reflects this revision; priorities were selected based on the survey conducted at the last Council meeting.

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Next, Chase said that the committee recommended modifying its recommendation on the future of the councils as follows (Section 7.4):

The Council recommends that the General Assembly legislate authority to the Regional Water Councils, including the Upper Flint Council, to manage, plan and provide oversight of water resources within each region around the State. Funding should be provided to the Councils from State appropriations. Revenue raising authority should be considered for these councils (similar to the Metro North Georgia Water District). All funding raised should be used to provide for the coordination and implementation of the regional and state water plans and for studies, assessments and future plan updates within the respective regions.

Council member Randy Starling said that he was concerned about granting revenue raising authority to each Regional Water Council. Vice-Chairman Morrow said that the state uses this type of authority with good success, and these authorities have accountability to elected officials. Chairman Chase said this was an effort assert local control over future management of our region's water resources.

Starling said he does not support the language about revenue raising authority for the regional councils. Raines Jordan expressed support for a regional water authority. Michael Beres noted that any funding raised should stay in the region. Beres suggested that the sentence regarding revenue-raising should be deleted after "State appropriations".

Lamar Perlis said that funding would be important to administer and continue our efforts. Morrow suggested a user fee for water as a revenue source.

Chairman Chase said this is a pivotal issue for the council. He sees it in terms of whether the region does its own planning or allows the state to plan for it. Lamar Perlis said he would rather have control here in the region. Raines Jordan said that we need new ideas and thinking for water, and we cannot implement without funding. Brant Keller expressed a preference for local control. He said that he does not mind paying money to a local authority if it provides for local control. Buddy Leger also expressed support for local control. Arnold reminded the Council that this was still simply a recommendation; we do not know what the legislature is going to do.

There was some discussion about how the Metropolitan North Georgia Water Planning District is funded. Tim Cash (EPD) said the Metro District receives \$200,000 from the state each year for planning; the rest was raised from regional funding. Beres noted that any money raised stays in the region.

After further discussion, Chairman Chase suggested the following revision to address the concerns raised:

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The Council recommends that the General Assembly legislate authority to the Regional Water Councils, including the Upper Flint Council, to manage, plan and provide oversight of water resources within each region around the State. Funding should be provided to the Councils from State appropriations. Revenue raising authority should be considered for these councils (similar to the Metropolitan North Georgia Water Planning District). Funding raised should be used to provide for coordination and implementation of regional and state water plans and for studies, assessments and future plan updates within the respective regions.

This proposed revision was approved by consensus.

Next, the committee's recommendation for a new item under Water Policy Recommendations (Section 7.4) was reviewed (as presented in the April 7th draft):

The Council urges the State to seek a timely resolution of current interstate water issues that directly affect the Apalachicola-Chattahoochee-Flint Basin. The Council recommends the development of a tri-state framework designed to address interstate water issues in the future and the inclusion of the Regional Water Councils within this framework.

This proposal was approved by consensus.

Next, it was noted that the committee recommended moving management practice (formerly) WQ5 to this section as a recommendation because its purview was broader than water quality. It is presented in Section 7.4 in the April 7th review draft, as follows:

The Council recommends continued coordination and cooperation among neighboring water councils. The Upper Flint Council has worked closely with the Middle Chattahoochee and Lower Flint-Ochlockonee Councils, and our joint efforts will benefit our regions and the state as a whole.

This proposal was approved by consensus.

Local Elected Officials and Public Comments

Next, the Council provided time for local elected officials and the general public to address the council, but no one indicated that they would like to speak.

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Final Discussion of Plan for Submittal to EPD

Kristin asked the Council if there were any more issues to discuss before approval of the plan for submittal to EPD.

Vice-Chairman Morrow reminded the Council of the importance of education about the plan. He discussed how Brant Keller provides water education programs for 5th and 6th graders in Griffin.

Chairman Chase said that the Council needs to defend this plan. He said that we were all in this together, and the Council members need to be advocates for the plan. Beth English reminded the Council that it will be important to work with the legislature.

Brant Keller said it would be good to have a PowerPoint presentation about the plan to support education efforts. Steve Simpson said the executive summary would be a good hand-out. Kristin Rowles said she had some slides that she had recently compiled for Cliff Arnett to conduct a program on the plan. These could be adapted for future presentations.

Adoption of Plan for Submittal to EPD

Chairman Chase asked for any more discussion of the plan. There was no further discussion. He asked the Council members to stand to indicate their support for adoption of this plan, as modified today, for submittal as the recommended plan to EPD by May 2nd. **All of the Council members stood to indicate their support and approve the plan by consensus.**

The Council adjourned.

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Attachment 1:
Upper Flint Water Planning Council
Council Meeting Attendance – April 14, 2011

Council Members

Clifford Arnett
Hays Arnold
Mike Beres
Michael Bowens
Gene Brunson
Donald Chase
Mike Donnelly
Beth English
Harold Fallin
Jack Holbrook

Raines Jordan
Frank Keller
Brant Keller
Buddy Leger
Dick Morrow
Lamar Perlis
Gary Powell
Charles Rucks
Bill Sawyer
Randall Starling

Council Members Not In Attendance

Greg Barineau
Tommy Burnsed
William Culpepper
Eddie Freeman

George Hooks
Lynmore James
Jim Reid
Joel Wood

Planning Consultants

Steve Simpson, B&V
Robert Osborne, B&V

Mark Masters, GWPPC
Kristin Rowles, GWPPC

Georgia EPD

Bill Morris
Tim Cash, Assistant Branch Chief

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

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Mr. Donald Chase, Chairman
Upper Flint Water Planning Council
577 Stagecoach Road
Oglethorpe, Georgia 31068

RE: EPD Comments on Upper Flint Council
Initial Recommended Water Plan

Dear Chairman Chase:

I want to thank you for your timely submittal of the Upper Flint Regional Water Planning Council's initial recommended regional water plan for EPD's review. In addition to EPD's review of your Council's plan to determine if it is consistent with the requirements of the State Water Plan and the rules for regional water planning and guidance adopted pursuant to those rules, EPD has provided, and just completed, a forty-five day public notice and comment period for all ten initial recommended regional water plans.

This letter serves to transmit EPD's comments arising from EPD's review of your Council's plan, as well as public comments received. This letter highlights those additional measures necessary to complete your Council's recommended plan by September 30, 2011, to make it consistent with the provisions of the rules for regional water planning and guidance adopted pursuant to those rules. As the Council finalizes its Regional Water Plan, please continue to coordinate with Tim Cash and Bill Morris.

- The State Water Plan specifically highlights water conservation as a priority management practice to be implemented to help meet water demand in all areas of the state. In the final recommended plan and/or supplemental materials, the Council should consider adding additional information or narrative describing how cost and applicability of conservation practices to all water use sectors were considered in the decision making process for selection of water conservation management practices. To assist Councils in evaluating demand management practices, EPD provided Detailed Guidance for Evaluating Practices to Manage Demand dated on September 21, 2010 (see pages 8 & 9).

As required by Georgia's Comprehensive State-wide Water Management Plan, all public comments received that are relevant to the Council's regional water plan should be considered by the Council, and any changes to the plan deemed necessary should be made prior to submittal of the Council's final recommended regional water plan.

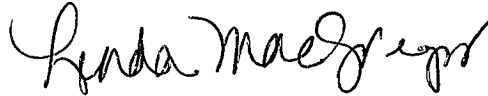
EPD looks forward to receiving the Upper Flint Regional Water Planning Council's final recommended regional water plan, revised as called for in this letter, by September 30, 2011. Once the plans are submitted, EPD will determine if the plans are consistent with the State Water Plan and rules and guidance for regional planning, and will either adopt the

Donald Chase
8/23/11
Page 2

recommended regional water plan as submitted or adopt the recommended regional water plan with conditions.

Let me reiterate my appreciation for the Council's time and efforts to develop a meaningful Regional Water Plan for the Upper Flint Water Planning Region. As reflected in nearly all of the public comments, with this set of regional water plans, Georgia has taken important and meaningful strides toward the continued sustainable management of our State's precious water resources.

Sincerely,

A handwritten signature in black ink that reads "Linda MacGregor". The signature is written in a cursive, flowing style.

Linda MacGregor, P.E.
Branch Chief
Watershed Protection Branch

Copy: Mr. Steve Simpson, Black & Veatch
Mr. Tim Cash, Georgia Environmental Protection Division

UF – REVIEW OF AGENCY COMMENTS

EXECUTIVE SUMMARY

COMMENT FROM EPD:

In the table titled “Resource Assessment Results – UF Region”, for Surface Water Quality under the column titled “Summary of Model Results”, it states that “results indicated decreasing availability of assimilative capacity in streams as discharge flows increase.” In the column titled “Council Plan to Address Results”, suggest wording could be change: “Collect more complete information to confirm model results and to support the targeting of management practices for water quality in the future.”

SECTION 3

COMMENTS FROM EPD:

Make the following modifications to the last paragraph on page 3-5:

The sustainable yields calculated by the groundwater availability assessment model estimate the volume of groundwater that can be used without causing adverse impacts, including: limiting use of neighboring wells (drawdown), reducing groundwater contributions to stream baseflows, ~~flow in nearby streams (base flow)~~, and permanent reduction of aquifer levels. Sustainable yield estimates were determined by simulating withdrawals from existing wells and, where applicable, simulated ~~hypothetical~~ new wells. Aquifer use was evaluated by the model against various threshold levels that defined unacceptable impacts. Model results are shown in Table 3-3. The sustainable yield results in Table 3-3 indicate the levels of use at which a threshold indicating an adverse impact threshold was exceeded in model simulations. Sustainable yield was estimated as a range for each aquifer based on multiple model runs with different assumptions about aquifer use. These assumptions varied for different aquifers.

Make the following modifications to the paragraph at the bottom of page 3-7:

As noted above, the sustainable yield results estimate the volume of groundwater that can be used without causing adverse impacts. In the model, increasing levels of use were evaluated against various threshold levels that defined an unacceptable level of impact. While most of the impacts evaluated related to the health of the aquifer directly, the impact on groundwater contributions to stream baseflows ~~surface water flows~~ was also evaluated where interconnection between surface water and groundwater is present. In the case of the Upper Floridan aquifer in the Dougherty Plain, the sustainable yield results were defined by the modeled impact of groundwater withdrawals on groundwater contributions

to stream baseflows ~~surface water flows~~. In the resource assessment model runs for this aquifer, adverse impacts on groundwater contributions to stream baseflows ~~surface water flows~~ were observed when impacts on the aquifer itself were minimal (i.e., drawdown of the aquifer was less than five feet at modeled use levels). Therefore, the results for this aquifer relate closely to those observed in the surface water availability assessment at the Bainbridge node.

AND, add a new footnote at the end of this paragraph clarifying as follows:

“It is noted that surface water and groundwater availability were modeled using different types of computer programs.”

Page 3-8, first sentence the 4th paragraph under Section 3.2.3 (Surface Water Quality) states that the 303(d) list includes streams listed “on the basis of other parameters such as solids, bacteria, and metals.” It could possibly be interpreted to mean that a stream is not listed due to dissolved oxygen, and that it must be other parameters that cause its listing, such as solids, bacteria, and metals. Suggest re-wording to read “on the basis of dissolved oxygen and other parameters, such as metals, bacteria, and biota.” This clarifies the fact that a stream can be included on the 303(d) list due to low dissolved oxygen. Also note that streams are not listed due to “solids”.

Section 3.2.3, page 3-8 (bottom) – Suggested change for first sentence, which currently reads “Figure 3-5 shows the dissolved oxygen (DO) model results for current discharges...” to read “Figure 3-5 shows the in-stream dissolved oxygen (DO) model results for current discharges....” The model is showing results for in-stream DO concentrations, not the results for DO concentrations of the current discharges.

In the same paragraph: Since there are many possible reasons that a stream is in a certain color range, it may be less confusing to state that the color for streams at the allowable DO levels or below the water quality standards are pink and red, respectively.

In the same paragraph: Surface Water Quality under Dissolved Oxygen Modeling indicates “Naturally low DO waters (below 5.0 mg/l in the summer) are typically in the yellow to red range”. This is not always correct. There are many instances where the naturally low DO streams are improved with added point source discharge flows, especially where the added DO has pushed the segments into the blue color range. Conversely, there are streams with naturally adequate DO’s that have been driven to yellow and red color ranges by point source discharges.

Page 3-10, Section 3.3 (Ecosystem Conditions and In-stream Uses), under Section 3.3.1 [303(d) list and TMDLs], in the 3rd to the last sentence, change the word “budget” to “load” or “loading”

SECTION 4

COMMENT FROM EPD:

Page 4-4: Specific mention of CDM doing energy forecasts. This was a stand-out reference to a contractor. Much work was contracted out by EPD. Only CDM was mentioned specifically.

SECTION 5

COMMENTS FROM EPD:

The estimated 2050 groundwater withdrawal numbers for the Cretaceous Aquifer in Table 5-1 (page 5-3) should be 267-303 mgd (and the equivalent cfs numbers should be adjusted accordingly).

Page 5-4, last paragraph in Section 5.2, modify 1st sentence as follows:

As discussed in Section 3, the sustainable yield results for the Upper Floridan aquifer in the Dougherty Plain were determined based upon the impact of groundwater withdrawals on groundwater contributions to stream baseflows, ~~surface water flows~~, rather than on the condition of the aquifer itself.

In the Upper Flint, Lower Flint, Middle Chattahoochee there is a table that compares current and future assimilative capacity. The "at assimilative capacity" and "exceeds the assimilative capacity" stream segments are added together so that it may appear as if things get worst in the future, which is not the case. In several 2050 models, there is an increase in those segments "at assimilative capacity" and a decrease in the "exceeds capacity category." Recommend adding a column to show these as separate categories.

SECTION 6

COMMENT FROM EPD:

Page 6-4, DM2, and subsequent references to DM2: The current wording of DM2 is not consistent with current state law, which obligates the Director to require involuntary suspension of irrigation under certain circumstances. Consider revising to read "primarily through voluntary means" or other wording that reflects the Council's intent but is consistent with state law.

SECTION 7

COMMENT FROM EPD:

1) Table 7-2: Footnote “b” is used in a number of places that do not seem to fit with the concept of cost per million gallons saved. Please review and delete where needed or clarify note b.

COMMENT FROM GEFA:

In Table 7-2 (on page 7-7), the Council should consider adding the Georgia Land Conservation Program as a responsible party for item WQ-2 (Improve Implementation of Nonpoint Source Controls).

SECTION 8

COMMENT FROM EPD:

2) P. 8-4:

In the 2nd to last row of the table, "triennial" should actually be "biennial."

CONSERVATION

COMMENTS FROM EPD:

Although, no clear conservation practices listed, both the Upper and Lower Flint plans follow the Detailed Guidance - describing the process, key points, calculations, and final decision to include benchmarks rather than conservation practices. A very unique approach.

1. **RECOMMENDATION:** Revise the Plans and/or TMs to include a description or narrative describing how cost and any cost comparisons were used in the decision making for the final list of management practices.
 - Page 9 of the Detailed Guidance states, “Cost is expected to be used as a comparison in selecting the appropriate portfolios (in other words, the cost of implementing demand management practices should be compared to the cost of implementing other water quantity management practices.)”
 - The “Supplemental Guidance for Planning Contractors: Water Management Practice Cost Comparison” (revised April 2011) provides ranges of cost for a variety of water quantity management practices.

2. The Detailed Guidance page 8, (B) states: “In order to effectively evaluate the potential of demand management to close a current or future resource gap, the Council must quantify the maximum amount of water that can be saved through a water conservation portfolio of a variety of conservation practices for multiple water users in portions of the region contributing to the existence or creation of a gap.” (emphasis added)

RECOMMENDATION: Revise the Plans and TMs to address multiple water users.

- Upper Flint : Industrial water use = 16 MGD and Municipal water use = 29 MGD
- Lower Flint: Industrial water use = 126 MGD; Energy water use = 121 MGD; Municipal 39
- If the Council decided to not address other water users, consider adding a narrative description of any discussions that occurred regarding the multiple water users conservation efforts.
 - If other water use groups are already employing water conservation practices, consider listing those practices.
 - Alternately, consider endorsing the list of basic industrial conservation practices identified in the State Water Plan – Section 8; or the benchmarks identified for energy and industrial water users in the WCIP.

FORMATTING/TYPOGRAPHICAL

COMMENTS FROM EPD:

1. No title on plan cover page (or date). (applies to other plans)
2. Executive Summary (ES) comes before Acronyms and Abbreviations (other plans have ES after that and acknowledgments, right before section 1).
3. ES does not have page numbers (UF also).
4. ES is not laid out so it could be a “stand alone” document (printed that way without being on the back of a page from TOC, for example).
5. As compared to other plans, plan sections run together with pages from one section on the back of those from another (example, page 2-1 is on the back of page 1-4).
6. Section 3, page 3-2, figs 3-1, 3-1, 3-3, and 3-4 – values for pie charts are not indicted as MGD (no units). Total value for all sectors is indicated as “x MGD” though.
7. Section 3, page 3-7, table 3-2 – WP and WFG not defined in or near table (they are in acronym list in front of plan).
8. Section 3, page 3-12 – reference to fig 3-7. There is no fig 3-7, probably meant fig 3-6.
9. Section 4, page 4-2 – good discussion of I/I and fact that it did not factor into SWA RA because they were run at low-flow, critical conditions. Good example of language.

page 5-4, Section 5.3, second paragraph, the third sentence reads “. . . phosphorus loading in the future will be primarily from nonpoint souces, . . .”
Change “souces” to “sources”.

Note: All plans need to be checked for consistency with format and style templates to be consistent with all RWP’s.

Addendum to State Agency Comments – UF

September 9, 2011

EPD Comments

Executive Summary: In the table titled “Resource Assessment Results – Upper Flint Region”, for Surface Water Quality under the column titled “Summary of Model Results”, it states that “results indicated decreasing availability of assimilative capacity in streams as discharge flows increase”. It should be noted here that in certain segments of the Flint watershed the model indicates that no assimilative capacity is left.

River Valley Regional Commission Comments

River Valley Regional Commission reviewed the Upper Flint plan and found it to be consistent with the regional comprehensive plans.