

To: Lower Flint Ochlockonee 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 8 on December 8, 2010

The council meeting was held on December 8, 2010 in Sylvester. 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.lowerflint.org/>).

Welcome, Introductions and Chairman's discussion

Chairman Royal started the meeting by welcoming the Council. John Bridges provided an invocation. Next, Chairman Royal asked the Council to approve the meeting summary, and it was approved by unanimous consensus. Next, Chairman Royal asked for consideration of the agenda. There was a slight change to correct an error on the agenda regarding who was giving the committee reports. The Council members approved the agenda by consensus.

Kristin Rowles referred to a [memo](#) from Allen Barnes, Director of GAEPD. The memo extends the original regional water planning schedule by three months. Since this memo came out after the pre-planning packet, Kristin noted this schedule is different than what was included in the pre-meeting packet. Kristin reviewed the following revised milestone schedule and asked for comments from the Council:

<u>Completion Date</u>	<u>Milestone</u>
November 30, 2010	Council Meeting 8
November, 2010	Lower Flint Receives Water Quality Modeling Results
December, 2010	Plan Review Committee Meeting
January, 2011	Council Meeting 9
March, 2011	Plan Review Committee Meeting
March, 2011	Council Meeting 10

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May 2, 2011	Recommended Plan to GAEPD
May-July, 2011	Public Notice of Draft Plan
August, 2011	Final Production of Adopted WDCP
September 30, 2011	GAEPD Approves UF Regional WDCP

In discussing the schedule, some Council members expressed an interest in moving the Council meeting from January to February, and potentially the March meeting to April. There were no objections to this. Kristin asked if there were any questions or comments about the milestones. There were no other questions.

Next, Kristin reported on the October 6th Joint Council meeting in Macon. She said the response was positive from the meeting participants. She explained that representatives from all ten councils discussed how their plans were developed and many common themes were noted.

Kristin said there was a joint meeting between the Upper Flint and Lower Flint-Ochlockonee Councils' Water Quantity Committees on October 26th in Albany. She said it was a very constructive meeting in which the committees discussed how to address each others' concerns.

Kristin said there was Instream Flow Ad-Hoc Meeting on December 7, 2010 in Macon. Kristin explained this meeting was a work session on instream flows needs. The objective of the meeting was to develop recommendations regarding information and management related to instream flows targeted toward improved management in the next round of planning. Council member John Heath commented that it was a good meeting and there was agreement that a lot more information is needed. Kristin noted that many councils would like to see the more nodes used in evaluating surface water flows. Also, the meeting discussion focused on how to manage for variable flows and not just minimum flows. Chairman Royal asked Woody Hicks, member of the Technical Ad Hoc Committee, for his thoughts on the meeting. Woody commented that more nodes would be good for planning. He also said that the unimpaired flows data used in this process is a synthesized dataset, and he thinks there is an interest in looking at other methods such as the use of predevelopment flows data from USGS. Kristin said that several information needs were identified at the meeting. A summary of the meeting should be forthcoming soon. Kristin will provide the instream flow requirements handout from the meeting to council members.

Chairman Royal said that today (December 8th) there is a meeting of the joint legislative committee created by Senate Bill 370 to consider water supply issues. The regional water councils have been invited to send a representative, but they will not be provided with time to speak on the agenda. Representative Bob Hanner and Senator John Bulloch are likely attending this meeting, and Doug Wilson of the GWPPC has been asked to

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speak. Kristin will distribute materials made available from this meeting to the Council members.

Chairman Royal said he met with GAEPD Director with Allen Barnes to discuss Endangered Species Act concerns in the region, including the USFWS letters that were discussed at the previous Council meeting. Director Barnes said that he recommends against GAEPD applying for a Section 10(a)(1)(b) taking permit because it would be an admission of guilt in a takings. He agrees that the risk in this situation is a 3rd party lawsuit. He recommends a focus on management practices to address concerns, including augmentation from groundwater in critical habitat areas during drought. State geologist Jim Kennedy has identified possible sites for such augmentation. Royal and Barnes discussed seeking funding for this augmentation proposal.

The Council discussed this issue; the following summarizes the discussion:

- Groundwater augmentation would need to come from deep aquifers (below the Floridan). Care must be taken to ensure that the source aquifers would not be harmed by pumping for augmentation. Woody Hicks thought that the potential for this type of augmentation would be quite limited in the region. He said that great care would be needed to protect the source aquifers. Council members reported that groundwater is limited in their experience and that they have concerns about using groundwater to augment surface water flow.
- Dry stream conditions did occur in Spring Creek (mussel habitat) before large scale irrigation started. Generally, however, these dry conditions were observed upstream of the Iron City gage, which is the gage that agencies like USFWS use in management. The Iron City gage did not go dry in the drought of 1954 (pre-irrigation).
- Sandy Tucker (USFWS) made a presentation to the Golden Triangle Soil and Water District recently. USFWS is particularly concerned about a new withdrawal near Colquitt, and several additional mussel species.
- Director Barnes is reluctant to re-open the Flint River Drought Protection Act to consider augmentation payments, but he is interested in pursuing a program to make payments to farmers for augmentation until the state can develop an augmentation program.
- The Metro District recently had a meeting/public hearing and discussed retrofitting commercial buildings with low flow toilets.

Chairman Royal said that the Water Quantity Committee had asked for more legal analysis of the situation, including evaluation of takings permits precedents in other places. This request has been made of GAEPD.

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Energy Forecast Update

Mitch Horrie with CDM presented the energy sector water demand results. The Executive Summary of this forecast is in the pre-meeting packet.

Mitch explained that he would discuss the forecast methodology, forecast results, and guidance to the Councils. He said that development of the forecasts was supported by an energy sector ad hoc group, which was comprised of representatives of the power industry (Georgia Power, MEAG Power, and Oglethorpe Power Corporation) and GEFA. The initial stages of the ad hoc group also included Dalton Utilities. The ad hoc group assisted with data collection, interpretation and technical review.

Council member Huddy Hudgens asked about power produced in North Georgia and if it goes to Florida. Mitch explained that with this methodology they only looked at the energy facilities and their relationship with the Georgia population.

Mitch explained the forecast methodology. He said the base year water withdrawals and consumption were for 2005 and the power generation needs forecast was developed using statistical analysis based on the historical rates of energy use. He noted that data was collected for all NAICS 22 facilities in Georgia as well as planned facilities that have applied for an EPD air quality permit.

Mitch said that water consumption refers to water that is consumed during the power production process and not returned to the stream. This is mostly as a result of evaporation during the cooling process. He said they found that statewide, 93% of the water withdrawn for the production of thermoelectric power was returned to the source.

Mitch said a regression analysis of statewide power generation and population from 1990-2008 created the statewide power needs scenarios. There were two different power generation scenarios (baseline and alternative) and two forecast scenarios (2017 and 2050). Three total water demand forecasts were developed.

The baseline power needs scenario uses the mean parameters from the regression analysis, while the alternative power needs scenario uses the upper limits of the parameters while still within the 95% confidence interval. This scenario is higher to support conservative planning.

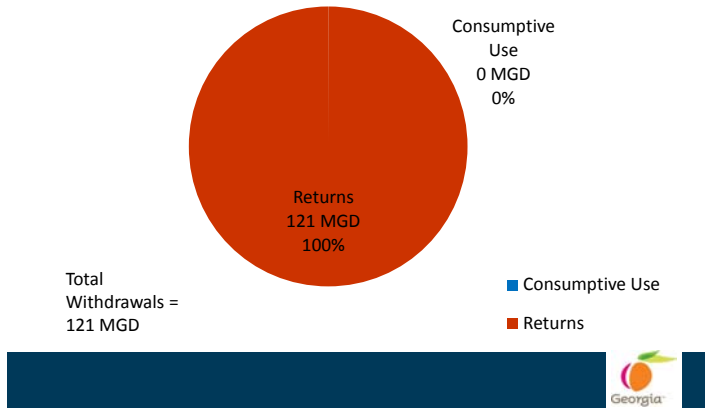
The 2017 water demand scenario presents what would happen if we did not add any new facilities beyond existing, permitted or planned. Under the 2017 Capacity Scenario, existing and planned facilities produce 100% of statewide power needs until their capacity factors reach maximum sustainable levels.

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Next, Mitch showed the energy sector withdrawals for Lower Flint-Ochlockonee (see below). He said this region’s energy sector water demand was associated with Plant Mitchell in Dougherty County, Gum Power Plant in Dougherty County, and Crisp County Power Commission Steam plant in Worth County.

Lower Flint Ochlockonee–Energy Sector 2005 Consumptive Use



Mitch presented water withdrawal needs for existing and planned facilities for the Lower Flint-Ochlockonee region through 2050 as shown in the graphic below. The additional statewide water withdrawal needs for 2030 through 2050 are also shown. Future needs are presented as statewide needs and are not allocated to a specific region. Mitch noted that after the year 2020, this region’s withdrawals include the planned Longleaf coal-fired plant, with cooling towers, located in Early County, using Chattahoochee River water.

Lower Flint Ochlockonee Energy Water Withdrawal Needs (mgd)

Region	Power Needs Scenario	2010	2020	2030	2040	2050
Lower Flint Ochlockonee	Baseline	135	146	146	145	145
	Alternative	166	188	176	176	176
No Assigned Region	Baseline	-	-	106	210	313
	Alternative	-	-	118	233	346



Mitch next reported the water consumption needs for existing and planned facilities for the Lower Flint-Ochlockonee region through the year 2050. Again, he noted that future

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needs are statewide needs and are not allocated to a specific region. Before the year 2020, none of the plants in the region are forecasted to consume water because they have once-through cooling. After the year 2020, the region’s consumption includes the planned Longleaf coal-fired plant, and because this plant will use cooling towers, it does have some consumptive water use.

**Lower Flint Ochlockonee Energy
 Water Consumption Needs (mgd)**

Region	Power Needs Scenario	2010	2020	2030	2040	2050
Lower Flint Ochlockonee	Baseline	0	11	11	11	11
	Alternative	0	12	12	12	12
No Assigned Region	Baseline	-	-	58	114	170
	Alternative	-	-	64	127	189



Council member Mike Newberry asked about future of biomass. Mitch said whether a plant is fueled by biomass or fossil fuel, the water demand is essentially the same. Mitch said the forecast did not separate out the percentage of future power that is biomass or fossil fuel.

Mitch noted each power generation combination has a maximum sustainable capacity factor. The energy ad hoc group assisted in developing these factors. The maximum sustainable capacity factor is not the “optimized” or most efficient level of power generation. It is the highest level of output that can be sustained over a period of time.

After describing more about the results, Mitch presented the following conclusions:

- Statewide energy sector withdrawals are forecasted to increase at about 0.20 – 0.25% annually from 2010 to 2050.
- Statewide energy sector consumption is forecasted to increase at about 1.80 – 1.85% annually from 2010 to 2050.
- Trends indicate more capacity development for water consumption intensive power generation (those with cooling towers)
- Little to no capacity development for water withdrawal intensive power generation processes (those with once-through cooling).
- Power generation from renewable energy, primarily biomass, will increase over the planning horizon.

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- The additional capacity scenario presents the forecast most useful to Councils in making regional water resources planning decisions.

Mitch then offered the following guidance:

- Location of any assumed additional capacity beyond 2017 is unknown. (This is the capacity that is forecast for the state as a whole, but not allocated to the regions.)
- Councils can incorporate forecasted withdrawals and consumption directly attributable to existing and planned facilities into their regional plans.
- Councils should consider how much additional capacity would be desirable to have in this region and whether surface water resources are available in the region to support that capacity.
- For demands associated with assumed additional capacity beyond 2017, Councils may wish to address the issue more qualitatively by trying to understand the water resources implications should some percentage of future additional power generating capacity locate within their regions. (e.g., Is it logical to increase capacity in this region? Are the resources available?)

The council members discussed the forecasts; the following is a summary of the discussion:

- Council member Mike Newberry said that it appears that the state will need to add the equivalent of a new Longleaf energy plant each year (1,000 megawatts per year). Mitch confirmed that this is true, and Mike said that this was a lot of power capacity to be developed.
- Council member Will Vereen asked if the forecasted included the two nuclear power plants in Georgia. Mitch said yes.
- Mike Newberry asked why Plant Farley is not included in the forecasts for this region. Mitch said that Farley's withdrawal occurs in Alabama and only GAEPD permitted plants were included in the forecasts.
- New energy production capacity often locates near existing facilities.

Overview of October 15th Draft Water Development and Conservation Plan (WDCP)

Kristin Rowles said that she and Steve had discussed the Council's October 15th draft plan with GAEPD and their responses were positive overall. She said that she thinks most of the comments can be addressed – either directly or by indicating where additional information is needed.

Kristin reviewed slides that summarized GAEPD's comments (available on Council website). She said that GAEPD was focused in its comments on adoptability and implementation. She said that it was ok not to completely resolve all issues today. At the

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end of the meeting, she will review outstanding issues with the Council to focus on in the coming months.

In its general comments, GAEPD asked for additional coordination with existing plans to be noted, including local and regional comprehensive plans, the State energy strategy, and watershed management plans. GAEPD also asked that management practices be described as clearly and specifically as possible, including more explanation of why particular practices were selected, how they relate to the gap, and how they will be implemented.

Council member said John Heath said that the riparian legal doctrine is a constraint to managing demand. He asked whether GAEPD could provide any guidance on this issue. Given the size of the gap, limiting demand may be necessary in drought, but the state's powers to do so are limited by law. Kristin said that the Council has recommended agricultural withdrawal permit quantification to provide for more precise management of demand. At this time, it is not possible to require each use to reduce demand by a particular percentage amount because the permits are not based on use levels. Woody Hicks asked, for example, what does it mean to reduce demand by 30%? Jerry Lee said that in North Carolina, they established capacity use areas, monitored use in those areas for five years to set use baselines, and then reduced from the baseline amounts.

Kristin suggested that given that the Water Quantity Committee would probably be taking up the issue of permit quantification again, that this topic could be added to that discussion in committee.

Section 6 Comments

Kristin reviewed the following major comments for this section:

- Quantify how management practices will address gaps (where possible)
- Address information gaps with recommendations for data collection and analysis to improve specificity of management practices and to support future planning
- Prioritize management practices for implementation

Kristin noted there were estimates in the strawman water quantity management practices document for water savings from various practices. These would be incorporated into the plan through an appendix. She noted that for some practices, good estimates might not be possible, especially given the lack of information on baseline levels of implementation. Kristin said she would like to work with the Council to improve specificity of management practices. The council also discussed the scheduled meeting to discuss water conservation practices and estimates of conservation. Kristin suggested that the Plan Review Committee decide how to address conservation and prioritization of the management practices.

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Section 7 comments

Kristin reviewed the following major comments for this section:

- Be more specific about entities responsible for implementing management practices (Table 7-1)
- Clarify priorities of management practices
 - Detail Council's consideration of feasibility (technical, political, affordability) and effectiveness
 - Reflect Council's consideration of financial and environmental costs of management practices.
- For actions identified for state entities, state what Council objective(s) that the action will support (per Section 14(7)(c)(xiii) of State Water Plan).
- Strongly consider adding eligible water quality projects as management practices to receive CWA Section 319 funds made available by GAEPD.

Kristin noted that the City of Griffin is implementing a 319 funded project to install pet waste stations.

Section 8 comments

Kristin explained the following major comments for this section:

- Include benchmarks that can be used to assess progress and effectiveness
 - Select qualitative and quantitative benchmarks that can help to assess whether management practices are closing gaps and supporting attainment of Council vision and goals over time.
- Include benchmarks that measure progress relative to water use and environmental outcomes (i.e., not just implementation actions).
- Group benchmarks by categories where possible (e.g., implementing party, types of management practice, geographic area).

Next, Kristin reviewed other GAEPD comments including:

- Borrow from other councils' plans
- Discuss lack of baseline information on implementation of conservation practices and how it affects the ability to evaluate extent (and cost) of future implementation needed
- Explain the portfolio of MPs: how it fits together to address gaps
- Specify geographic coverage of management practices, where applicable
- GAEPD will provide guidance on how to address future actions by Councils consistently
- Discuss more thoroughly how to evaluate the adverse impacts of identified gaps
- Add conclusion to Section 8 that ties plan together (linking goals, vision, management practices, expected outcomes)

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Specific GAEPD comments related to water quality include:

- Make sure that the Water Quality assumptions about where future discharges will go are evaluated by the Council
- Add information on GA Forestry Commission on BMP implementation by forestry operations
- Consider adding a management practice that would implement a BMP tracking and complaint response program for agriculture (like that implemented by the GA Forestry Commission for forestry)
- Consider adding a management practice that would develop a monitoring network including local water systems that are implementing watershed assessment plans
- Be more specific about how to increase water quality monitoring

Kristin also noted that some formatting changes will be made, including numbering the management practices and carrying table heading over to each new page of a table.

Draft WDCP Sections 1-5

Kristin said that comments on Sections 1-5 had been received from GAEPD on the August draft of the plan. Improvements were still being made to these sections; most would address presentation and formatting. She reviewed several modifications. She drew the Council's attention to the last subsection of Section 5 and asked for the Council members to read that over. It is a new section designed to explain the results of the resources assessments and how the Council used them in selecting management practices.

Council member Greg Murray asked where the Quincy gage in the Ochlockonee River is located. Kristin and Steve said that they will check.

Review of October 15th Draft Plan (Chapters 6-8)

Kristin reviewed some of more specific comments from GAEPD on Sections 6, 7, and 8. A summary follows of the EPD comments and Council discussion follows:

- Section 6.1: Identifying Water Management Practices: This section needs to be simplified. Also in this section, GAEPD asked that we include several additional plans in the list of plans considered, including the State Energy Strategy and the Statewide Water Plan.
- List of uncertainties (Section 6-1, page 6-2): Note how these uncertainties are being addressed and where additional information can be found.
- Number the management practices for easier reference.
- Page 6-4: Implement Tier 3 and 4 non-farm water conservation practices with the support of incentive programs. GAEPD asked which incentive programs are referred to here. Kristin noted that there are not any at the state level. *The Council*

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recommends removing the word “existing” from the description section. There was consensus among the Council.

- Page 6-5: GAEPD asked that the practice regarding the use of the Flint River Drought Protection Act be modified to reflect the need for better predictive tools to support GAEPD in determining the need for a drought declaration. GAEPD is currently developing such a tool. Without better predictive tools, GAEPD cannot make a drought declaration earlier than March 1. The Council recommends that a sentence be added to the description section that says that the council supports the GAEPD effort to develop better predictive tools to use in determining the need for a drought declaration.
- GAEPD asked for explanation regarding the purpose and functions of agricultural irrigation institutions. How far would the regulatory reach of this type of organization go? Would it be a permitting authority for withdrawals? Kristin noted that GAEPD had made a similar comment regarding recommendations for regional water management institutions in the Middle Chattahoochee and Upper Flint Plans. She said that the Council might want to consider those recommendations as it had discussed making a similar recommendation itself in the past. Then she asked the Council whether they envisioned a regional water institution for agricultural having permitting authority. Council member Greg Murray and John Bridges expressed support for decentralized permitting. Bridges said that people in the region would be more familiar with conditions here. Jerry Lee noted that it would mean that a local institution would be in the position of having to cut off water use if that became necessary. The Water Quantity committee was charged with further consideration of districts and bringing back a recommendation to the council at the next meeting.
- Farm ponds, page 6-6: GAEPD would like for the Council to specify that withdrawals to fill farms ponds from surface water withdrawals should be subject to requirements for low flow protection. Low flow protections are already in place for withdrawals from the Flint Basin, so this would only be new for withdrawals in other surface water systems. The Council had no objections to this change.
- Interbasin transfers, page 6-6: GAEPD recommends that this management practice be presented as a recommendation to the state (Section 7.4) instead of as a management practice. The Council had no objections to this change.
- Water Quality - Improve enforcement, page 6-7: GAEPD asked for more clarification on what is called for in the 1st bullet point in the description: “Improved enforcement of existing discharge permits.” This was referred to the Water Quality Committee.
- Water Quality – Improve Monitoring, page 6-7: GAEPD asked for more specificity on what type of monitoring is needed and what questions additional monitoring will seek to address. This was referred to the Water Quality Committee.

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- The Council asked for definitions in the plan of Tiers 1-4 for conservation measures. Kristin said that this would be addressed in detail in the conservation technical memo that will become an appendix to the plan, but additional notation could be added in the plan itself to explain these references more clearly.
- GA EPD asked for better explanation of how closing the gap would violated the council's vision and goals, adding "sources of funding" to the groundwater augmentation management practice, adding EPD to the list of responsible parties where appropriate, and adding "identify funding sources" for the reservoir storage study. The Council had no objections to these additions.
- In Section 7, Kristin said that the Recommendations to the State section would be expanded. In particular, it will include several recommendations to address information needs, many of which were discussed today.
- For Section 8, GAEPD suggested a conclusion section for the plan that ties together the vision and goals with the resource assessments, selected management practices, and expected outcomes.

Kristin said that several items had been identified for additional work in committees, which would meet before the next Council meeting. The goal is to provide a new draft for the Council at its next meeting in February.

Next, Kristin asked for the Council's approval to post the draft version of the plan to the Council's website. Chairman Royal asked if there were any objections. No objections were noted.

Water Quantity Committee Report

Since Council member Jimmy Webb could not attend, Kristin made the Water Quantity Committee's report. The Committee met with the Upper Flint Water Quantity Committee on October 26. A meeting summary is included as pages 35-39 of the pre-meeting packet. The committee then met by conference call on December 3rd. A meeting summary for the conference call was handed out during the meeting. At its meetings, the committee discussed management practices (agricultural permits, inter-basin transfers, storage), information needs, and Endangered Species Act concerns. The committee developed some recommendations for today's Council meeting.

GAEPD has asked for clarification in the plan of the role of the 2006 Flint Plan as permitting guidance. The committee recommends that a management practice similar to that recently adopted by the Upper Flint Council should be considered to provide this clarification. The Committee suggests a management practice that will:

- Acknowledge 2006 Flint Plan as current permit guidance until such a time as better information can support improved management of water withdrawals to protect streamflow
- Information needs:

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- Water use: Better actual use information based on meters
- Impact evaluation: Improved assessment of effect of withdrawals on streamflow
- Metrics: Use of stream flow targets that directly relate to minimizing adverse impacts to downstream users and natural systems

The Upper Flint management practice reads as follows:

Manage new agricultural water withdrawal permits in the region according to the 2006 Flint River Basin Water Development and Conservation Plan

- The 2006 Flint Plan limits new agricultural withdrawal permits based on expected impact on nearby wells and streams (summarized by map of Capacity Use, Restricted Use, and Conservation Use areas included in the 2006 plan).
- Under the 2006 Flint Plan, new agricultural water withdrawal permits require mandatory conservation measures, such as end-gun shut off switches and leak prevention and repair, as a condition of the permit.
- New surface water permits in Ichawaynochaway and Spring Creek sub-basins must suspend use when streamflow drops below 25% Average Annual Discharge instead of 7Q10.
- New permits in the Flint River Basin have a \$250 application fee.

In the discussion, Council members thought that the Upper Flint management practice was acceptable, but noted that they would like to see it stated more clearly to note that the bulleted items are already required by the 2006 Flint Plan. With that modification, the Council had no objections to adding this management practice to the plan.

The Committee also discussed how to address GAEPD's request for quantification of potential water savings from conservation practices. The Committee asked that the Technical Ad Hoc Committee take this issue up with respect to water savings from agricultural conservation practices, consider information in the strawman document and the recent white paper from Stripling Irrigation Lab, and seek to develop agreement on estimates for these practices.

Water Quality Committee Report

Committee chairman Jerry Lee gave the Water Quality Committee report. He started by discussing the recently released Florida nutrient standards. He said the new standards are numeric nutrient criteria to protect Florida's designated uses for freshwater lakes, springs, and streams. The effective date for the rule is 15 months from now in order to provide time for outreach and the development of compliance and implementation plans.

Jerry reviewed the timeline for the Florida nutrient standards:

- EPA made a Clean Water Act determination in January 2009 that numeric nutrient standards are needed.

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- EPA entered into a consent decree in August 2009 (revised in June 2010 and October 2010) to:
 - Propose numeric criteria for lakes and flowing waters by Jan 2010, finalizing by Nov 2010.
 - Propose numeric criteria for estuaries and coastal waters by Nov 2011, finalizing by Aug 2012.

EPA relied on Florida's extensive data and used a variety of technical approaches developed by Florida's Department of Environmental Protection (FDEP) to develop the final nutrient criteria.

Jerry said he had never seen numbers this strict before as standards. It is not yet clear how the new standards would translate into permit limits in GA, but they are expected to have a significant effect.

Tim Cash said GAEPD does not have a specific plan or guidance yet about compliance with the new standards. Jerry emphasized the need for guidance from GAEPD on this issue and asked Tim to look into this to help the council in developing its water quality management practices.

Woody Hicks (Jones Ecological Research Center) briefly presented recent research that showed nutrient contributions from in-stream springs of nitrogen in the 3-14 mg/L range. Spring water samples were age dated to determine when they entered the groundwater, and samples were in the range of 10-50 years. Nutrient contributions from these springs are the result of decades old activities on the land and cannot be managed.

Jerry Lee and Tim Cash noted that the water quality modeling results were due to be available to the Council in the next few weeks.

Chairman Royal thanked the committee for their efforts.

Middle Chattahoochee Draft Plan Review

Kristin presented an overview of the Middle Chattahoochee Council's October 15th draft plan. She noted that she was asked for this presentation by the Upper Flint Council, and Chairman Royal said he thought this Council could benefit from it, too. The slides will be available on the Council website.

Kristin noted a major theme of the Middle Chattahoochee plan is the assertion that the U.S. Army Corps of Engineers' current Water Control Manual for the ACF is inadequate and that it contradicts and compromises authorized purposes, specifically, recreational use at West Point Lake. The Water Control Manual is currently under revision; completion is due in 2012.

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Kristin said the Middle Chattahoochee plan recommends that the Water Control Manual should be modified as follows:

- Reduce operational flood storage and improve lake levels for recreation in West Point Lake
- Establish and maintain in-stream flow targets below Columbus and Columbia planning nodes to ensure adequate protection of water quality for downstream users
- Allow for operational flexibility to enable storage reservoirs to recover faster after severe droughts and reduce risk of follow-up droughts
- Ensure protection of critical habitat for listed species, based on thorough science

The Middle Chattahoochee plan also endorses the modeling work of Georgakakos of modifications to the Water Control Manual.

Kristin reviewed management practices in the Middle Chattahoochee plan that relate to ACF management and storage. She also noted that the Middle Chattahoochee plan has a lengthy list of recommendations to the state which the Council could review for ideas for its own plan.

Kristin said that the Council's concerns regarding the Middle Chattahoochee plan would likely relate to the following issues:

- Competing uses in ACF (Middle Chattahoochee emphasis on recreation)
- Flint vs. Chattahoochee flow contributions
- Uncertainty surrounding Operations Plan revisions

Kristin said that the Council might want to look at "borrowing" certain parts of the Middle Chattahoochee plan. She said that the recommendations to the state on Woodruff dam target flows, water conservation program evaluation, and water planning districts might be desirable to the Council.

Council member Will Vereen asked what distinguishes the Georgakakos model from the GAEPD model for the ACF. The Georgakakos modeling incorporated higher levels in West Point Reservoir and suggests reducing instream flows following dry weather to allow faster refilling of system reservoirs. By doing so, the Georgakakos model is able to calculate greater storage levels in the reservoirs more often to meet the various water uses demanded from the system.

Kristin noted that the Middle Chattahoochee Council invited the Upper Flint to a meeting to discuss their concerns in January. Chairman Royal told Kristin that the LFO Council was interested in attending and requested council members be invited.

Identification of Outstanding Issues for WDCP

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Based on today's discussions, Kristin reviewed issues that still need to be addressed in the WDCP:

- Endangered Species Act concerns: Referred to Water Quantity Committee
- Energy Forecasts: Determine how to evaluate future capacity in region, referred to Water Quantity Committee
- Permit/Legal Doctrine issues: Referred to Water Quantity Committee
- Prioritization of management practices: Referred to Plan Review Committee
- Water Districts recommendations: Referred to Water Quantity Committee
- Various Water Quality Issues/Comments from GAEPD: Referred to Water Quality Committee
- Consideration of FL Nutrient Standards and Water Quality Modeling Results: Referred to Water Quality Committee
- Recommendations to State: Referred to Plan Review Committee
- Estimates of water savings from agricultural conservation practices: Referred to Technical Ad Hoc Committee

As noted earlier, committees will meet before the next Council meeting. *Additionally, Kristin asked that Council members send any plan edits that they have to her by December 20.*

Local Elected Officials and Public Comments

Next, the Council provided time for local elected officials and the general public to address the council.

Luke Crosson from Region 5 of the Georgia Soil and Water Conservation Commission (GSWCC) addressed the Council. He said that the GSWCC has implemented a number of 319 funded projects across the state. He distributed a CD with Best Management Practices (BMP) information.

A Council member asked Woody Hicks to talk more about the study he discussed earlier regarding groundwater nutrient contributions and determining the "age" of groundwater. Hicks explained that monitoring has been done in springs along the Flint for the last 9 years. An increase in nutrient levels (in particular, nitrate has increased from 1 to 5-6 mg/L). Isotopes have been used to determine the approximate date when the water entered the ground, and there has been an attempt to correlate land use/spring/age of water. He said that the paper is currently in review for the Journal of the American Water Resources Association. It can be distributed after the review process is complete.

Hicks said he would like to address the Council with other comments. He said that members from other councils seem to have an incorrect perception of the Bainbridge surface water flow gap. A Middle Chattahoochee member that spoke with Hicks thought

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that the Bainbridge gap was caused only by excessive water use, but that in actuality, it is created by all consumptive water use. Hicks said he thinks there is a significant perception problem regarding the Bainbridge gap and how it should be addressed.

Bert Early, Georgia Forestry Commission, also spoke to the Council. He said that the Commission has quite a bit of experience in monitoring forestry BMPs, and has shared the detailed monitoring report with the LFO Water Quality committee. He would be happy to assist the Council members in presenting information on forestry practices in the plan.

Wrap-Up and What to Expect Next Meeting

The Council selected the first week of February for its next meeting. The location will be Colquitt. Kristin will send out a Doodle survey to the Council members to select the exact date.

Council Meeting 8 Evaluation

At the conclusion of the Council meeting, the members completed an evaluation form about the meeting, and the meeting was adjourned.

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Attachment 1:

**Lower Flint-Ochlockonee Water Planning Council
Council Meeting Attendance – December 8, 2010**

Council Members

Steve Bailey
John Bridges
Jimmy Champion
Jerry Chapman
Terry Clark
Hal Haddock
John Heath
Huddy Hudgens
Jerry Lee
Chuck Lingle

George C. McIntosh
Greg Murray
Mike Newberry
Jim Quinn
Richard Royal
Steve Singletary
Howard Small
Will Vereen
Bill Yearta

Council Members Not In Attendance

John Bulloch
Bob Hanner
Josh Herring
Chris Hobby
Gary Leddon

Doyle Medders
Rick Moss
T.E. Moyer
Steve Sykes
Jimmy Webb

Planning Consultants

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

Mark Masters, GWPPC
Kristin Rowles, GWPPC

Georgia EPD

Tim Cash, Assistant Branch Chief
Bill Morris

Georgia State Agencies

