



Upper Flint Water Quantity Committee Report

UF Water Quantity Committee

- Cliff Arnett, Chair
- Michael Bowens
- Donald Chase
- Eddie Freeman
- Jack Holbrook
- Terrell Hudson
- Buddy Leger
- Dick Morrow
- Jim Reid
- Randy Starling
- Lamar Perlis



Committee Efforts

- Held Committee Meetings
 - June 10, June 17, August 25
 - Meeting summaries: pp.20-31 of pre-meeting packet
- Reviewed model results from EPD
 - Current conditions
 - Future conditions (with no new management practices)
 - Storage
- Discussed management practice selection
- Developed recommendations to Council for today's meeting

Management Practice Selection

- Used “Strawman” document as guide to discussion
- Strawman: pages 32-45 of pre-meeting packet
 - Marked up with most recent changes
 - Need council feedback and approval to include in October draft plan

MONTEZUMA

Table 1. Summary of Montezuma Node

	Length of Shortfall(% of time)	Average Shortfall (cfs)	Long-term Average Flow (cfs)	Maximum Shortfall (cfs)	Corresponding Flow Regime (cfs)
Current	0.01%	1 0.6 mgd	3421 2211 mgd	1 61 mgd	593 383 mgd
2050	0.01%	1 0.6 mgd	3409 2203 mgd	1 0.6 mgd	593 383 mgd

BAINBRIDGE

Table 2. Summary of Bainbridge Node

	Length of Shortfall(% of time)	Average Shortfall (cfs)	Long-term Average Flow (cfs)	Maximum Shortfall (cfs)	Corresponding Flow Regime (cfs)
Current	13%	352 227 mgd	7910 5113 mgd	1376 890 mgd	2506 1620 mgd
2050	13%	355 229 mgd	7904 5108 mgd	1295 837 mgd	2506 1620 mgd
MidChat-SWFA0001	0%	1 0.6 mgd	7906 5110 mgd	1 0.6 mgd	2008 1298 mgd

Storage needed to offset
Bainbridge shortfall:
162,223 acre-feet



Demand Management:

Municipal and Industrial Water Conservation

- The Council recommends that non-farm water users in the region implement Tier One and Tier Two practices. Including:
 - Water conservation plans
 - Outdoor watering restrictions
 - Car wash regulations
 - Demonstration of progress toward conservation goals
 - New plumbing fixture requirements (Water Stewardship Act)
- The Council supports the use of Tier 3 and 4 practices through incentive programs in the region.

Demand Management: *Agricultural Water Conservation*

- The Council supports the implementation of Tier 1 and 2 practices, including:
 - Flint River Water Conservation and Development Plan requirements (2006)
 - End-gun shut
 - Leak prevention and repair plans,
 - Pump-safety shutdown systems
 - Rain-gauge shut-off switches on travelers, solid set, or drip systems
 - Low-flow protection requirements (suspension of irrigation when surface flow falls below 25% average annual discharge in Ichawaynochaway and Spring Creek sub-basins or below 7Q10 in streams in the rest of the basin)
 - Compliance with forthcoming requirements (established by Water Stewardship Act of 2010) regarding active, inactive, and unused permits.

Demand Management: *Agricultural Water Conservation*

- The Council supports implementation beyond Tier 2 through incentive programs, especially including cost-share funding available through the Soil and Water Conservation Districts and the Georgia Soil and Water Conservation Commission.
- Therefore, the Council endorses the following benchmarks, based on benchmarks from the Georgia Water Conservation Implementation Plan, as objectives for agricultural water conservation in the region:
 - By January 2012, all new, and by January 2020, all existing agricultural irrigation systems should have application efficiencies of 80% or greater. By January 2050, all irrigation systems should have application efficiencies of 90% or greater.*
 - By January 2015, 25% of farmers using irrigation on their fields should adopt irrigation scheduling based on crop needs and available water supplies. By January 2020, 50% of farmers using irrigation on their fields should adopt irrigation scheduling based on crop needs and available water supplies.*
- A focus on a desired performance outcome will support increased conservation while allowing farmers to select what practices and approach will work best for their own operations.

Demand Management: *Agricultural Irrigation Suspension*

- The Council recognizes that, in some years, irrigation suspension may be a necessary tool to sustain in-stream flows in *abnormally* dry periods. The Council urges that this management practice only be used as a last resort, when other options are not available to address severe flow depletions.
- The Council makes the following recommendations regarding the use of irrigation suspension:
 - Irrigation suspension should only be used through implementation of the Flint River Drought Protection Act.
 - GA EPD should provide notification of possible use of the Flint River Drought Protection Act before the March 1 deadline (January).
 - The Flint River Drought Protection Act has not had adequate funding in recent years, and a reliable source of funding is needed to support voluntary suspension.



Demand Management:

Agricultural Water Withdrawal Permitting

To limit the expansion of existing withdrawals for agriculture, the Upper Flint Council suggests that GA EPD implement the following restrictions on new agricultural withdrawal permits in the region:

- No new Capacity Use Area (“red area”) withdrawal permits in the Flint River Basin. (See: Flint River Basin Regional Water Development and Conservation Plan, 2006)
- Make all new permits interruptible (surface and ground water).
- New permits should have to demonstrate that they have no impact on minimum in-stream flows.
- New permits should cause no net increase in consumptive use in the watershed during periods of low flow.



Demand Management: *Agricultural Water Metering*

- The Council recommends continued improvement in the implementation of the agricultural water withdrawal metering program to ensure that the data collected is as comprehensive, accurate, and useful as possible.
- The Council recommends additional investment by the state in the metering program to ensure these outcomes.
- The Council also recommends that the program provide annual reporting to the public on collected data (while recognizing the confidentiality constraints on the use of the data).

Supply and Flow Augmentation:
*Streamflow augmentation via direct
pumping from aquifers*

The Council supports further evaluation of the practice in order to support in-stream flows in dry periods.

- Environmental impacts
- Feasibility

Supply and Flow Augmentation:

Replacement of surface water withdrawals with groundwater withdrawals

- The Council supports the replacement of surface water withdrawals in the region with groundwater withdrawals where possible.
- The Council also recognizes the need and calls for further evaluation of the feasibility of this practice and its potential impacts on groundwater aquifers in the region.

Supply and Flow Augmentation: *Aquifer Storage and Recovery (ASR)*

- The Council supports the use of this practice as needed for future water supplies in the region.
- The Council recognizes the need for further evaluation of specific proposals for ASR in the region on a case-by-case basis and recommends that any such proposal be thoroughly evaluated for its environmental and other impacts.

Supply and Flow Augmentation: *Farm Ponds*

The Council supports the continued development of farm ponds in the region through existing incentive programs from the Soil and Water Conservation Districts and the Georgia Soil and Water Conservation Commission.



Supply and Flow Augmentation: *Inter-basin Transfer*

- The Council does not endorse any specific proposals for an IBT at this time.
- However, the Council urges policymakers not to preclude IBT as an option for future water management in the region, as needed and following thorough scientific evaluation.

Supply and Flow Augmentation: *Land Application Systems*

The Council instead recommends that new Land Application Systems be used only as an option of last resort.



Supply and Flow Augmentation: *Reservoirs*

- To address the need for storage to augment low flows during dry periods, the Council recommends the creation of Study Commission to evaluate storage options within the Upper Flint region.
- The Commission's evaluation should assess potential locations, viability, cost, and implementation.

In Development

- Discussion on identifying practices (6.1)
- Fiscal implications/funding (6.3)
- Review revised groundwater results
- Recommendations for metering program
- Coordination with Upper Flint/Middle Chattahoochee councils
- Further editing (document will be shorter/format changes)

Scope of Recommendations

- Apply recommendations to whole Upper Flint region?
 - All watersheds in region (Flint, Chattahoochee, Ocmulgee/Altamaha)
- Consider coordination with neighboring councils

Committee Recommendation

- Upper Flint Council approve draft recommendations prepared by the Committee for incorporation in the draft Water Development and Conservation Plan, Chapter 6 [for the October draft plan]
- The recommendations will continue to evolve and develop through the work of the committee and the Council.

