

Upper Oconee Regional Water Planning Council Meeting

April 14, 2022



**GEORGIA
WATER PLANNING**

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Welcome & Council Business

Melvin Davis, UOC Chair

Welcome & Council Business

- Welcome and Introductions
- Approve Draft Meeting Summary from April 12, 2022 Council Meeting
- Approve Today's Draft Meeting Agenda



Upper Oconee Regional Water Council Meeting
DRAFT Agenda – February 23, 2023
[Virtual Meeting – Click to Join](#)

Council Meeting Agenda

Objectives:

- 1) Review Council schedule for 2023
- 2) Receive updates from EPD
- 3) Review updated resource assessments from EPD
- 4) Provide initial feedback on revisions to Sections 3 and 5
- 5) Discuss revision of remaining plan sections
- 6) Receive public comments

12:45 – 1:00 pm	Online Check-in/Roll Call	Michelle Vincent, Jacobs
1:00 – 1:05 pm	Welcome and Council Business <ul style="list-style-type: none">• Approve Draft Meeting Summary (4/14/22)• Approve Draft Meeting Agenda	Chairman Melvin Davis
1:05 – 1:15 pm	EPD Updates	Ania Truszczynski , EPD
1:15 – 1:20 pm	Council Schedule	Gail Cowie, GWPPC
1:20 – 2:00 pm	Surface Water and Groundwater Resource Assessments <ul style="list-style-type: none">• Review updates and provide feedback on revisions	Gail Cowie, GWPPC
2:00 – 2:10 pm	Break	
2:10 – 2:30 pm	Surface Water Quality Resource Assessment <ul style="list-style-type: none">• Review updates and provide feedback on revisions	Michelle Vincent, Jacobs or Gail Cowie, GWPPC (TBD)
2:30 – 2:40 pm	Revision of remaining plan sections	Gail Cowie, GWPPC
2:40 – 2:50 pm	Wrap Up <ul style="list-style-type: none">• Public Comments/Local Elected Official Comments• Adjourn	Chairman Melvin Davis



EPD Updates

Ania Truszczyński, EPD

Regional Water Planning

- March 31 – May 14, 2023: Draft plans are posted for 45-Day public comment.
- May 15 – mid-June, 2023: Councils revise (if needed) Draft plans based on public comments received during public notice period. Submit final draft plans to EPD for review and approval.
- June 30th, 2023: EPD adopts recommended revised plans if consistent with State Water Plan, Rules, and Guidance.
- EPD uses final approved plans to guide agency decision making.

Seed Grant History & Awards

- Seed grants are announced at the start of the state fiscal year, and applications are due in the fall.
- Since State Fiscal Year 2014, EPD has awarded \$2,266,815 in state funds to Seed Grant projects.
- Projects support implementation of Regional Water Plans
- In the Upper Oconee region, \$140,701 of state funds have been awarded towards three total seed grant projects.
 - Including match, the total project spending is \$260,935.

Upper Oconee: Wastewater Update

- Industrial wastewater NPDES permits issued in the last six months
 - Kamin LLC – McIntyre Pits (GA0046621; minor modification to reflect change of ownership; major modification of the permit was just public noticed)
 - Kamin LLC – R-MINES (GA0050288; minor modification to reflect change of ownership)
 - Renewal of the Imerys Clays Inc. – Danzy Mine permit (GA0050253)
- Municipal wastewater NPDES permits issued in the last six months
 - Renewal of the City of Tennille WWTP permit (GA0039357)

Upper Oconee: Water Withdrawal Update

- Groundwater withdrawal permits issued in the last six months
 - Town of Dexter (087-0009, renewal)
 - BASF Corp - Edgar Plant (158-0021, new)
 - KaMin, LLC - MidGA Plant (158-0001, modification)
- Surface water withdrawal permits issued in the last six months
 - None – five applications in-house, including two from the Upper Oconee Basin Water Authority, two from the City of Statham, and one from Tallassee Shoals, Inc.

Water Quality Trading Guidance Document

- Intended to provide additional tools for entities that discharge into waterbodies with limited assimilative capacity, particularly related to nutrients.
- Explicitly discussed in Coosa-North Georgia, Middle Ocmulgee, and Savannah-Upper Ogeechee Regional Water Plans, but may be relevant for entities in the Upper Oconee Region as well.
- Document builds on seed and 319(h) grant projects, two stakeholder processes, efforts from other states, and national guidance.
- Finalized February 2023.

Council Schedule

Gail Cowie, Water Policy Center

COUNCIL SCHEDULE	Draft Done	February	March	April-June
Vision and Goals	✓			
Future Forecasts of Water Needs				
Current Conditions - Water Use and Resource Assessments		✓ Today's meeting ✓ Additional comments by March 2		
Future Conditions – Resource Assessment				
Management Practices Implementation Monitoring Progress			✓ Review draft by March 10 ✓ Council meeting March 23 or 24	
Adopt Draft Plan for Public Review			✓ Council meeting March 23 or 24	
Public Review and Comment				March 31 - May 14
Revise Draft and Adopt Final Plan				June 14 or 16

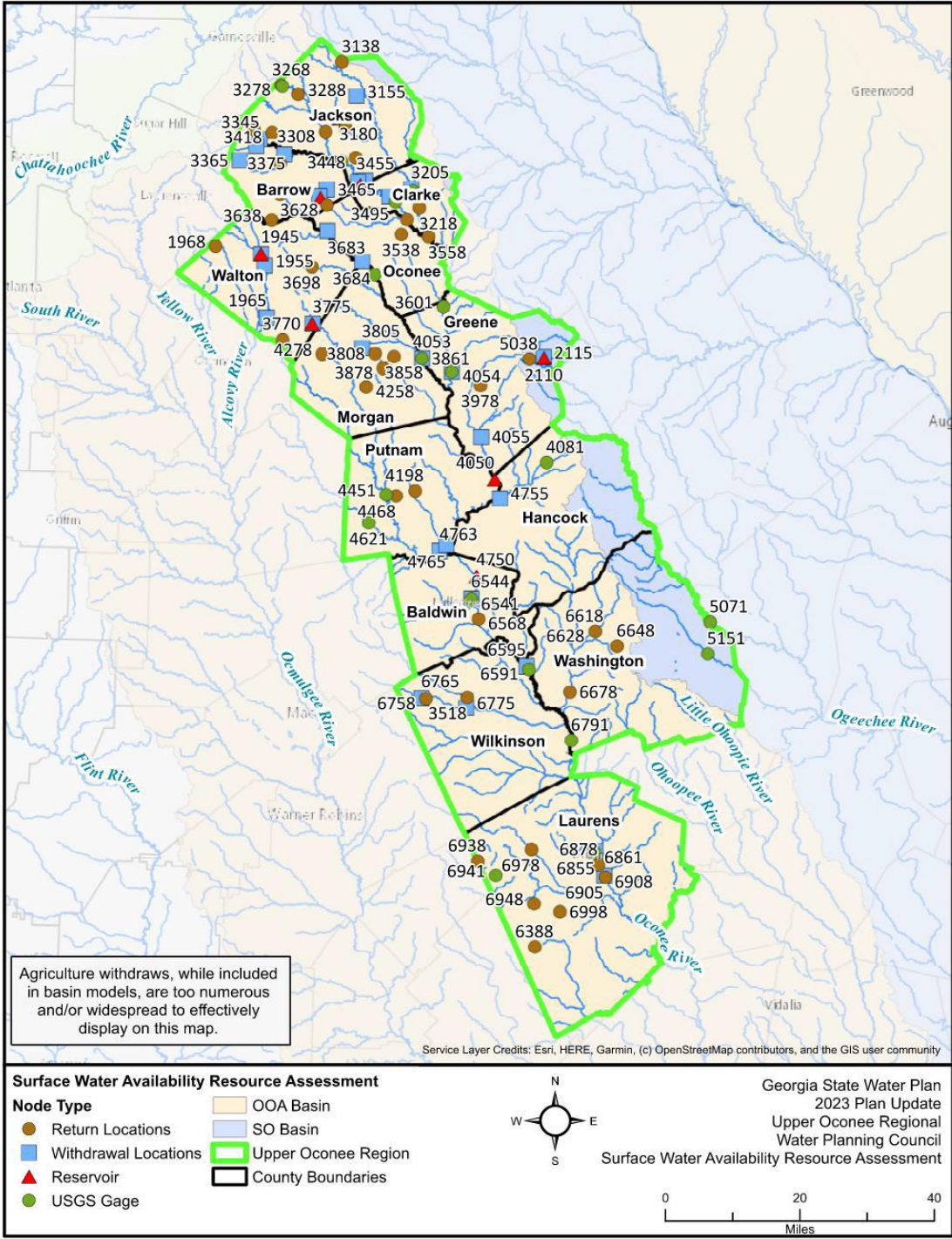
Surface Water Availability Assessment

Gail Cowie, Water Policy Center

BEAM Model Overview

- Simulation period (hydrologic conditions): 1939-2018
- Withdrawal and discharge amounts:
 - Average from 2010-2018
 - Marginally dry conditions
- Instream flow protection thresholds per permit
- Reservoir data from reservoir owner or EPD
- Nodes at all permitted withdrawal and discharge facilities
- New metrics used to show “water availability challenges”

Nodes in BEAM model



Surface Water Availability Metrics (Table 3.2)

Metrics from BEAM Model	
Water Withdrawal	% of time with flows below instream threshold
	Total volume of shortage for the model period
	Volume of shortage in 2007-2008 drought
	Volume of shortage in 2011-2012 drought
Wastewater Discharge Assimilation	% of time with flows below 7Q10
	Total volume of shortage for the model period

Surface Water Availability Metrics (Table 3.2)

Metrics from BEAM Model

Water Withdrawal

% of time with flows below instream threshold

Total volume of shortage for the model period

Volume of shortage in 2007-2008 drought

Volume of shortage in 2011-2012 drought

Wastewater Discharge Assimilation

% of time with flows below 7Q10

Total volume of shortage for the model period

Surface Water Availability Metrics (Table 3.2)

Metrics from BEAM Model	
Water Withdrawal	% of time with flows below instream threshold
	Total volume of shortage for the model period
	Volume of shortage in 2007-2008 drought
	Volume of shortage in 2011-2012 drought
Wastewater Discharge Assimilation	% of time with flows <u>below 7Q10</u>
	Total volume of shortage for the model period

Summary: Surface Water Availability Assessment Results (Table 3-3)

	Facility Type	Number of permitted facilities analyzed	Number of permitted facilities with challenge indicated
Water Withdrawals	Municipal	22	4
	Industrial	6	0
	Energy	2	0
Wastewater Discharge Assimilation	Municipal	30	26
	Industrial	6	1
	Energy	2	0

Source: GAEPD Tech Memo: Surface Water Resource Assessment Modeling and Result Interpretation, Dec. 2022

Water Supply Challenges (Table 3-4)

Facility (permit number)	Amount of time in model period		Total volume of shortage (million gallons)		
	Days with shortage	% of model period	In model period	In 2007-08 drought	In 2011-12 drought
City of Social Circle (147-0410-01)	6	0.02%	1	0	0
City of Winder (007-0303-01)	255	0.87%	1131	419	119
City of Statham (007-0304-07)	22,454	76.84%	1026	49	41
City of Statham (007-0304-04)	609	2.08%	64	23	31

Wastewater Assimilation Challenges (see Table 3-5)

Permit holder (# of facilities with challenges)

- Loganville (1)
- Athens-Clarke County (3)
- Braselton (1)
- Winder (2)
- Arcade (1)
- Barrow County BOC (2)
- Oconee County BOC (1)
- Monroe (1)
- Madison (2)
- Eatonton-Putnam Water & Sewer Auth (2)
- Rutledge (1)
- Social Circle (1)
- Cadwell (1)
- Milledgeville (1)
- Sandersville (1)
- Tennille (1)
- Dublin (1)
- Westrock Southeast, LLC (1)
- Gordon (1)
- Dudley (1)
- Rentz (1)

Examples from Table 3-5: Wastewater Assimilation Challenges

Permit Holder and Facility	Permit #	7Q10 Flow (cfs ¹)	Days with shortage	% of time
Loganville (Loganville WPCP)	GA0020788	0.14	67	0.23
Athens-Clarke County (North Oconee WRF)	GA0021725	34.7	652	2.23
Eatonton - Putnam Water & Sewer Authority (Eastside WPCP)	GA0032271	0.76	5972	20.44
Dudley (Dudley WPCP)	GA0023957	14.68	5868	20.08

Selected Examples of Flow Metrics for Recreation, Aquatic Habitat (see Table 3-6)

Measurement location	Indicator	Example Metric
Aquatic habitat		
USGS 02217500 Middle Oconee R. near Athens, GA	Loss of deep, swift habitat in dry season	# days with flow <265 cfs, June-October
Recreation (boating)		
L. Oconee and L. Sinclair boat ramps	Developed boat access	# of days with lake level above 428.4 feet at Lawrence Shoals boat ramp in Lake Oconee

Surface Water Availability: Future Conditions

- Presented in Section 5 – based on forecasted water demand and wastewater discharge
- New tables in the same format as in Section 3
 - Summary of Water Supply and Wastewater Assessment Results
 - Water Supply Challenges Indicated in Assessment Results:
 - Wastewater Assimilation Challenges Indicated in Assessment Results
- Other tables updated with current information
 - Permitted Municipal Withdrawal Limits vs. 2060 Forecasted Demands
 - Summary of Potential Challenges and Needs by County

Summary: Future Conditions Results

Water Supply Challenges

- 30 facilities analyzed
- Potential challenges seen at 4 facilities:
 - Social Circle
 - Two Statham facilities (one for reservoir that lacks data)
 - BASF Catalysts (Wilkinson County)
- Future challenges more likely in dry years
- Address with practices such as interconnections, alternate sources, additional water supply storage, and drought management measures

Summary: Future Conditions Results

Wastewater Assimilation Challenges

- 38 facilities analyzed
- Potential challenges at the same 27 facilities as seen in current conditions
- Key question for each facility:
Is the % time with a shortfall greater under future conditions than seen under current conditions?
- Only 8 facilities had an increase in the % of time with shortfall and increases were relatively small
- % time with shortfall decreased for 19 facilities

Groundwater Availability Assessment

Gail Cowie, Water Policy Center

Groundwater Availability Assessment: Current Conditions (mgd)

	Cretaceous Aquifer	Floridan Aquifer in South-Central and Eastern Coastal Plain
Upper Oconee Region Demand: 2020 Use	27	11
Aquifer-Wide Demand: 2020 Use	177	579
Sustainable Yield Range: Low End	347	868
Sustainable Yield Range: High End	445	982

Groundwater Availability Assessment: Future Conditions (mgd)

	Cretaceous Aquifer	Floridan Aquifer in South-Central and Eastern Coastal Plain
Upper Oconee Region Demand: 2020 Use	29	15
Aquifer-Wide Demand: 2020 Use	237	684
Sustainable Yield Range: Low End	347	868
Sustainable Yield Range: High End	445	982

Break

Surface Water Quality Assessment

Michelle Vincent, Jacobs

Overview of Water Quality Assessment

Current Conditions (Section 3)

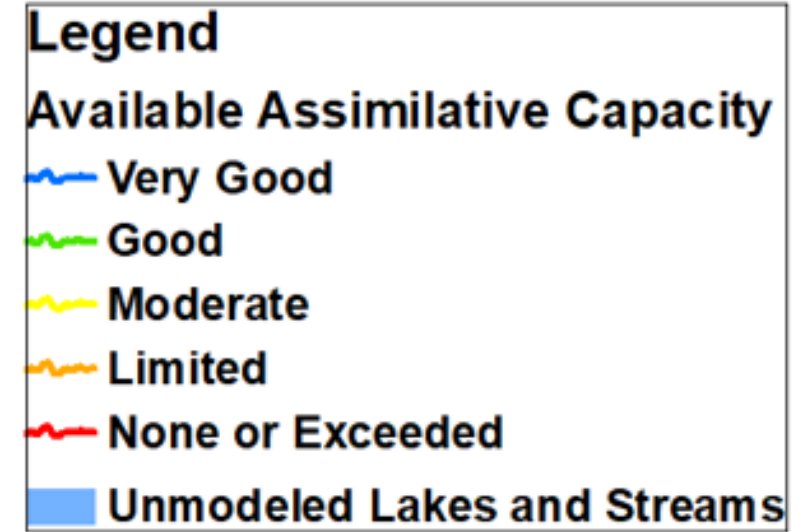
- Assimilative capacity for dissolved oxygen
 - Figures, tables, and text updated with current information
- Chlorophyll response to nutrients in Lakes Oconee and Sinclair
 - New lake water quality standards
 - New monitoring results

Future Conditions (Section 5)

- Updated with current information

Dissolved Oxygen (DOSAG Models)

- Same Methodology - more stream segments modeled, and updated results
- Current Conditions
 - 2019 Permit Limits
- Future Conditions
 - 2060 Assumed Permit Limits
- DOSAG Models:
 - Dischargers at permit limits
 - High temp, low flow conditions



- Assimilative Capacity
 - Evaluating how DO levels compare to WQ standard of 5.0 mg/L (or natural conditions)

Dissolved Oxygen Results: Upper Oconee Basin

Current Conditions

Future Conditions

Legend

Available Assimilative Capacity

Very Good

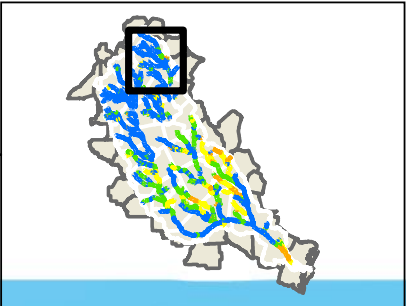
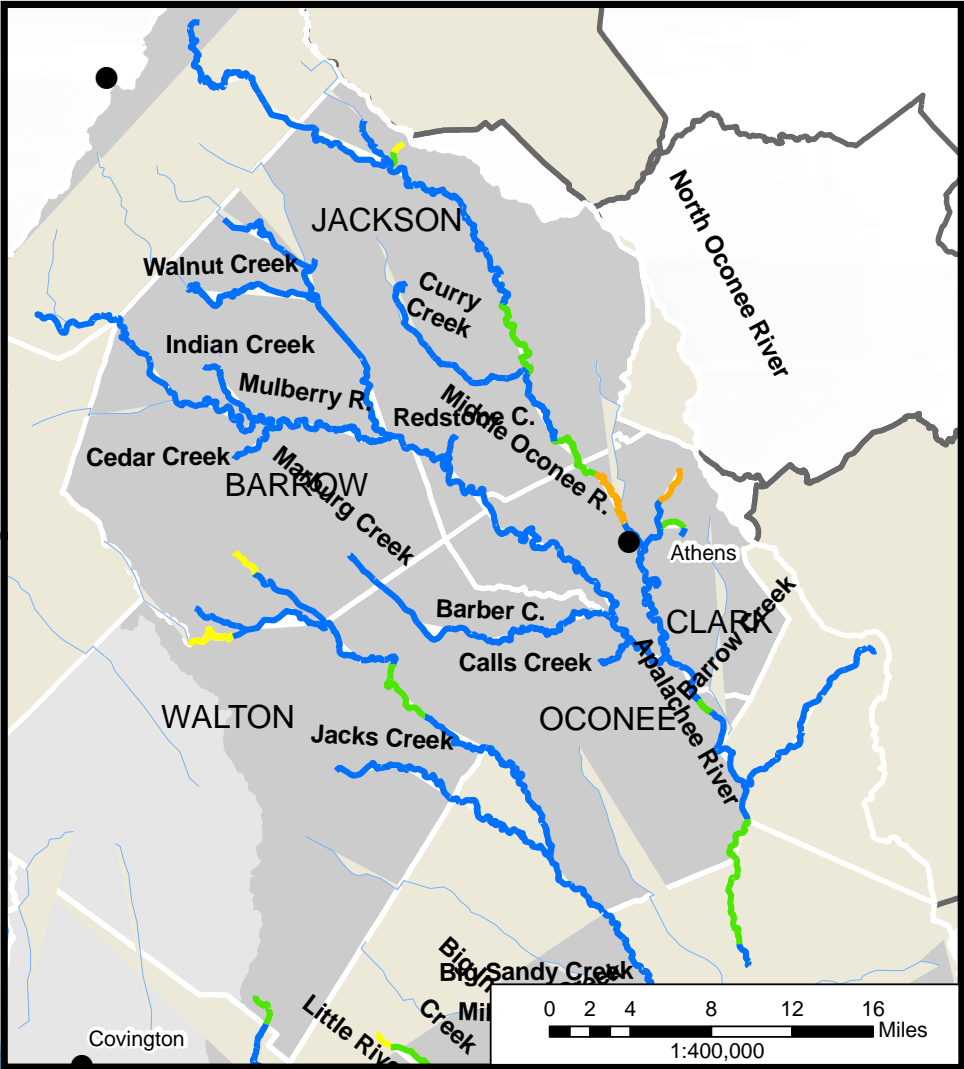
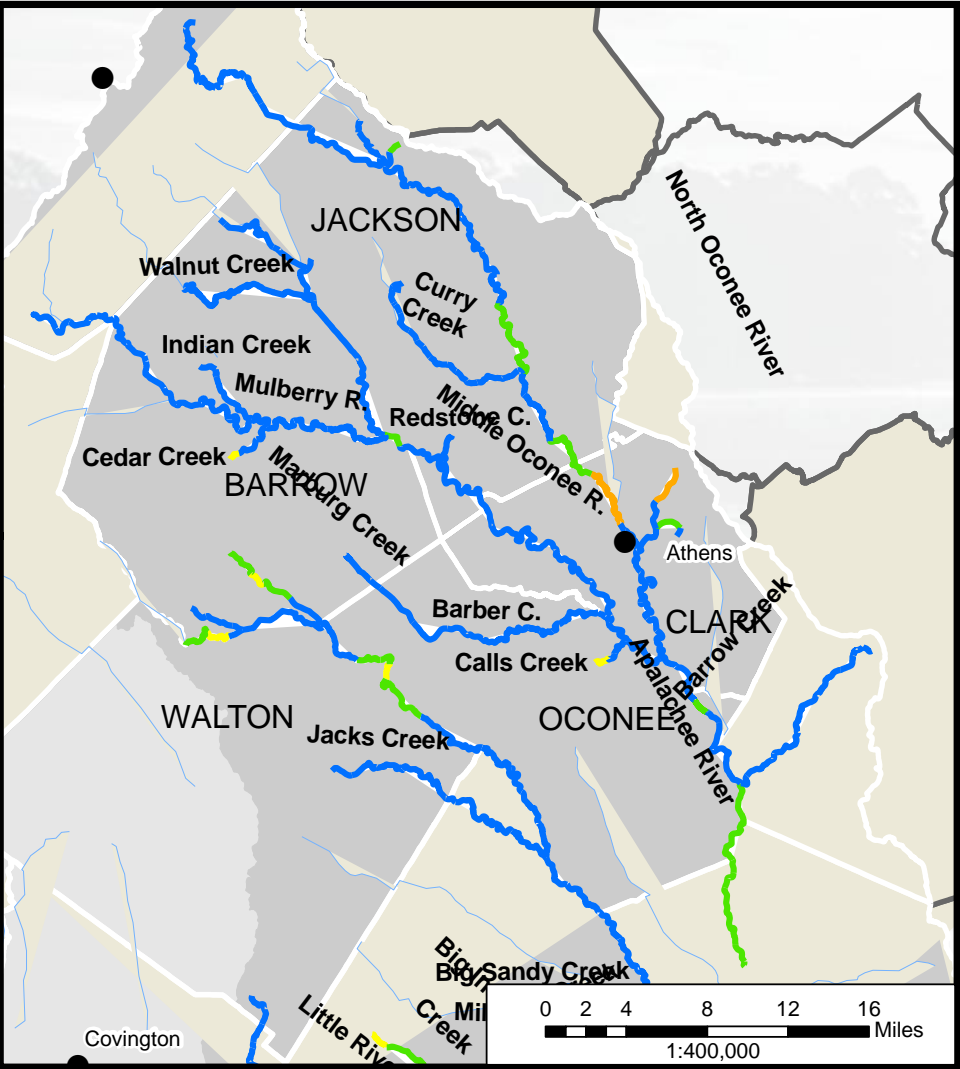
Good

Moderate

Limited

None or Exceeded

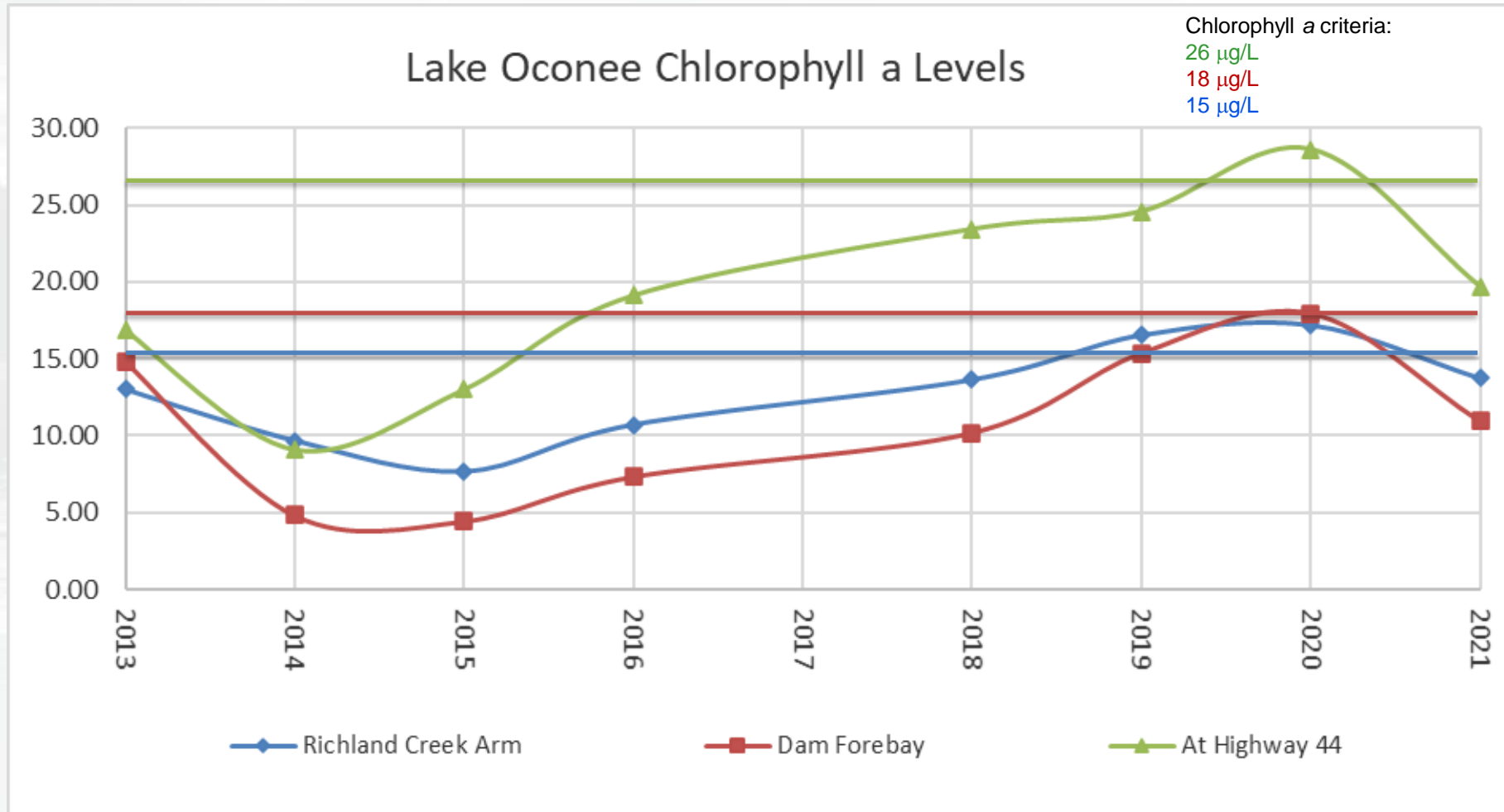
Unmodeled Lakes and Streams



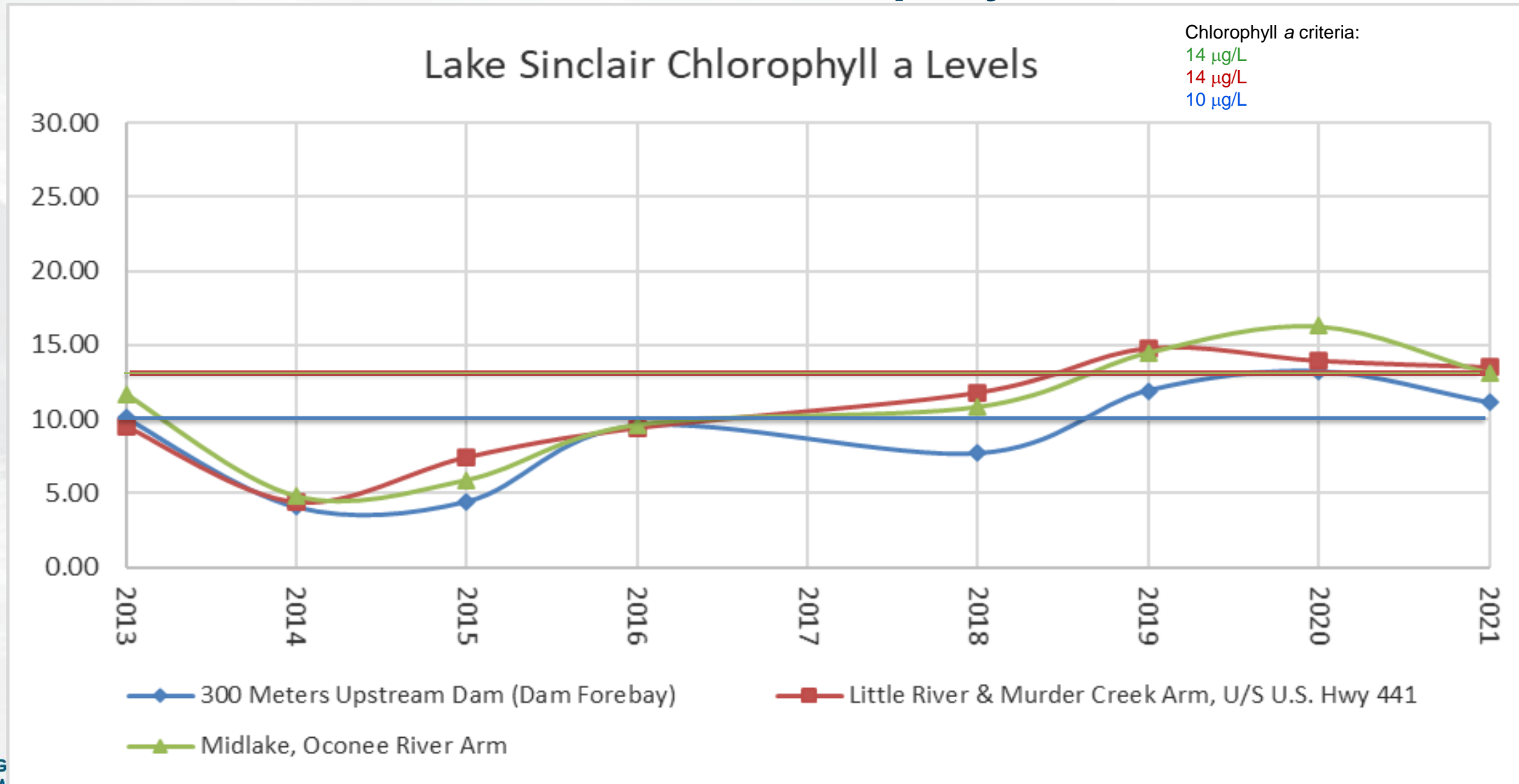
New Chlorophyll Standards

- Average monthly samples for April – October shall not exceed specific concentrations at these locations
- Lake Oconee
 - 26 micrograms per liter ($\mu\text{g/L}$) at Oconee Arm at Highway 44
 - 15 $\mu\text{g/L}$ at Richland Creek Arm
 - 18 $\mu\text{g/L}$ upstream from the Wallace Dam Forebay
- Lake Sinclair
 - 14 $\mu\text{g/L}$ at Oconee River Arm Midlake **and** at Little River and Murder Creek Arm upstream from Highway 441
 - 10 $\mu\text{g/L}$ upstream from the Sinclair Dam Forebay

Measurements of chlorophyll – Lake Oconee



Measurements of chlorophyll – Lake Sinclair



Revision of Sections 6-8

Gail Cowie, Water Policy Center

Planning Contractor Approach

- Section 6: Water management practices
- Section 7: Implementing water management practices
- Section 8: Monitoring and reporting progress
- Update or annotate information that is outdated in each section
- Include this statement in each section:

”Due to the number of vacant seats on the Council, 2023 revisions of this section were limited to updates of dated or inaccurate information.”

→ Do you have initial feedback on this approach or on specific revisions?

Next steps

- Council members send additional comments on Sections 3 and 5 to Gail or Michelle by **March 2**
 - By email or by phone
- Contractors to distribute full draft plan for review by **March 10**
 - Sections 1, 2, and 4 adopted in April 2022
 - Additional revisions to Sections 3 and 5
 - Limited revisions to Sections 6-8
- Council meeting to review full draft plan and adopt draft plan for public review on **March 23 or March 24**
 - Let Gail or Michelle know about conflicts today
 - Public notice of March meeting to go out on Friday

Public Comments/Local Elected Official Comments

Melvin Davis, UOC Chair

Wrap Up / Next Meeting / Adjourn

Melvin Davis, UOC Chair