



**Upper Oconee Regional Water Planning Council**  
**April 21, 2021**

[www.georgiawaterplanning.org](http://www.georgiawaterplanning.org)

# Upper Oconee Council Meeting



Zoom Meeting Link: <https://zoom.us/j/98097807145>  
Meeting Phone Number: 1-646-558-8656 (NY) or 1-301-715-8592 (DC)  
Meeting ID: 98097807145#

**Objectives:**

- 1) Receive updates from EPD and the Metro District on planning timeline/coordination
- 2) Receive updates from Contractors/EPD on forecasting and modeling efforts
- 3) Receive updates on Seed Grant projects
- 4) Receive update on FERC relicensing project in UO planning region

- Welcome, Council Business
- Approve Meeting Summary from Sept. 30, 2020
- Approve Today's Draft Agenda

9:45 - 10:00	Online Check-in and Roll Call	Laura Hartt, Jacobs
10:00 - 10:10	Welcome and Council Business <ul style="list-style-type: none"><li>• Approve Meeting Summary and Meeting Agenda</li></ul>	Chairman Melvin Davis
10:10 - 10:20	EPD Updates <ul style="list-style-type: none"><li>• Appointments</li><li>• Current Efforts/Plan Timeline</li></ul>	<ul style="list-style-type: none"><li>• Jennifer Welte, EPD</li><li>• Ania Truszczynski, EPD</li></ul>
10:20 - 10:25	Metro North GA Water Planning District Update	Danny Johnson, ARC
10:25 - 11:05	Forecasting Updates <ul style="list-style-type: none"><li>• Municipal</li><li>• Industrial &amp; Energy</li><li>• Agriculture</li></ul>	<ul style="list-style-type: none"><li>• Brian Skeens, Jacobs</li><li>• Bill Davis, CDM Smith</li><li>• Mark Masters, GWPPC</li></ul>
11:05 - 11:10	Stretch Break	
11:10 - 11:15	FERC Relicensing – Tallassee Shoals Hydroelectric Project	Laura Hartt, Jacobs
11:15 - 11:30	EPD Modeling Updates <ul style="list-style-type: none"><li>• BEAM Surface Water Availability Modeling Effort</li></ul>	Dr. Wei Zeng, EPD
11:30 - 11:50	Seed Grant Update <ul style="list-style-type: none"><li>• "Flow-dependent benefits and values of water resources in the Upper Oconee Region" (2020 award) (15 min)</li><li>• Other EPD funding updates/opportunities (5 min)</li></ul>	<ul style="list-style-type: none"><li>• Dr. Gail Cowie, GWPPC</li><li>• Ania Truszczynski, EPD</li></ul>
11:50 - 12:00	Public Comments/Local Elected Official Comments	Chairman Melvin Davis
12:00 -	Wrap Up/Adjourn	Chairman Melvin Davis



# EPD Updates

## Jennifer Welte & Ania Truszczyński

## Updates from EPD

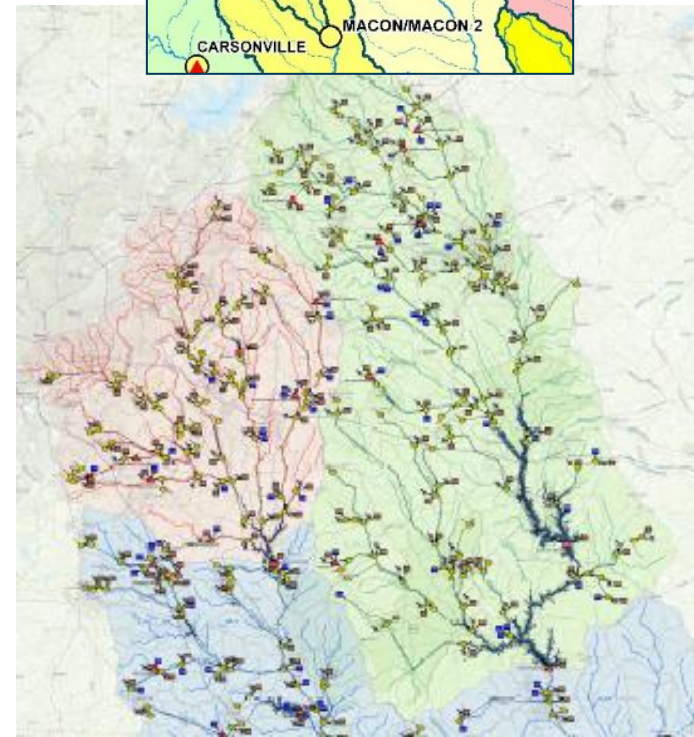
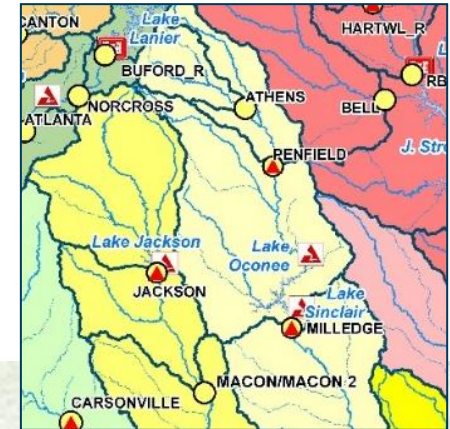
- Council appointments process
- Regional Water Plan Updates
  - Plan Updates with Metro District's process
  - Draft updated Plans by September 2022 for public notice
- Technical work in process that underlies the Regional Water Plans:
  - Forecasting
    - Municipal, Industrial & Energy Forecasts completed
    - Agricultural forecast – later this spring
  - Resource Assessments



## Resource Assessments

### Updates to Modeling Tools

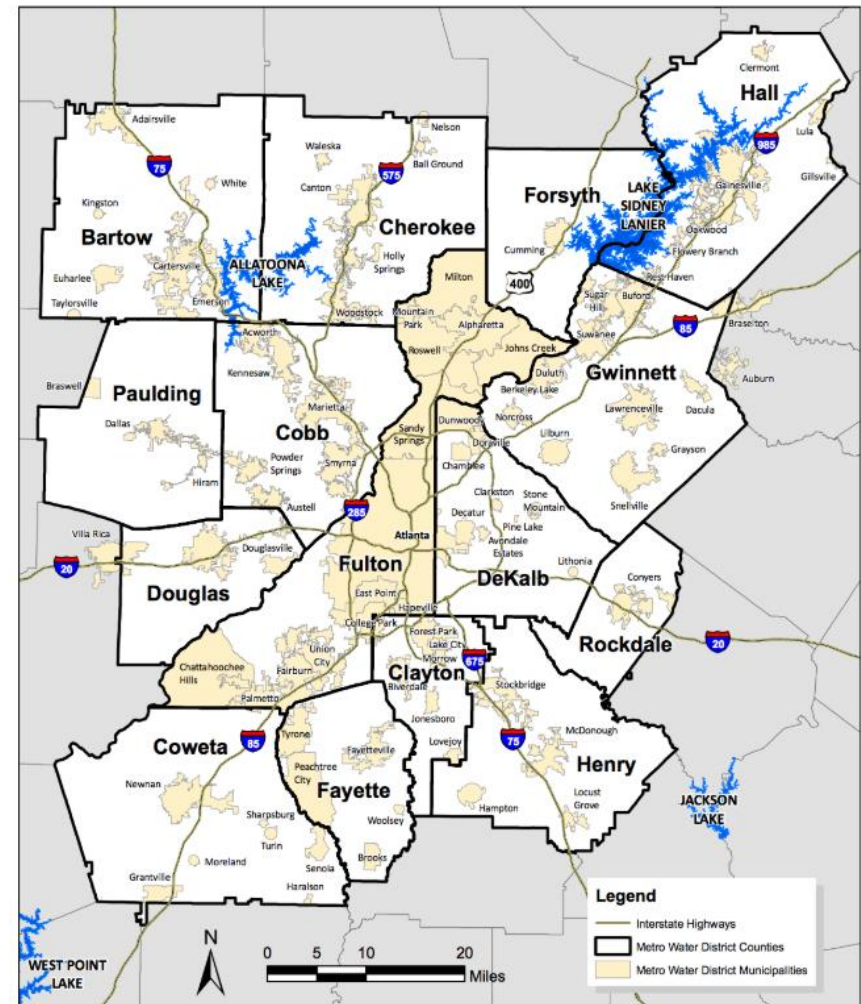
- Surface Water Availability
  - New modeling tool provides analysis at more nodes
- Groundwater Availability
  - Refined groundwater model with smaller grid spacing and transient pumping
- Water Quality Resource Assessment
  - Updated information & model recalibration



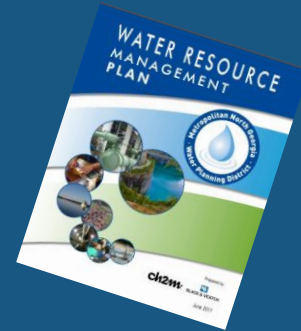
# Upper Oconee Council Meeting

## Metro District Update

- **Plan and Schedule Updates**
  - Danny Johnson, ARC



# 2022 Plan Update Schedule



	Sep-20	Dec-20	Mar-21	Jun-21	Sep-21	Dec-21	Mar-22	Jun-22	Sep-22	Dec-22
Data Collection/Resource Forecasting		◆	◆							
Action Items Review and Update		◆	◆	◆	◆	◆	◆			
Appendix A - River Basin Profiles			◆	◆	◆	◆				
Appendix B - Facility Planning				◆	◆	◆				
Stormwater Forecasting			◆	◆	◆	◆				
Supporting Efforts										
Localized Demands										
Drought Response Options Menu		◆	◆	◆	◆	◆				
Watershed Resilience										
Full Draft Plan for Review								◆	◆	
Public Comment									◆	◆
EPD/Board Approval										◆

# Moving Forward on Conservation Action Items

Improve our region's drought resilience and maintain our national leadership on water conservation by:

- Reducing long-term per capita demands by requiring use of proven water efficiency technology (Nov 2020 TCC)
- Preparing a menu of optional programs utilities can use to implement EPD's drought rule (Feb 2021 TCC)
- Promoting the voluntary, early adoption of new water efficiency technologies (Feb 2021 TCC)

# Concepts for Potential Action Item Updates - Efficient Technologies and Water Waste

Codes for New / Renovated Buildings to require More Efficient Technologies

- Plumbing Fixtures
- Landscape Irrigation System Design
- Water-Efficient Appliances
- HVAC Cooling Towers

Adjust Premise Plumbing Sizing Requirements to Account for Efficiency

Update Water Waste Model Ordinance

# Concepts for Potential Action Item Updates- Beyond Mandatory Codes

Rebate Programs to promote leading efficient technologies

- Smart Irrigation Controller rebate program
- Smart Leak Detector rebate program

Promoting whole home water efficiency

- HERS H2O Whole House Water Efficiency Rating







SHARE YOUR VOICE ON  
LOCAL WATER PLANNING

# BASIN ADVISORY COUNCIL INFO SESSION

Zoom meeting ID: 980 1815 6050  
April 22 | 6:00-7:00 PM

## *Apply for BAC Membership*

Metropolitan North Georgia  
Water Planning District

Deadline: May 21, 2021

<https://northgeorgiawater.org/apply-bac/>





## Forecasting Updates: Municipal

### Brian Skeens, Jacobs



# Municipal Demand Forecast Update

- Forecast prepared by Black & Veatch team  
<https://waterplanning.georgia.gov/forecasting/municipal-water-use>
- Revised population projections by county\*
- Updated GPCD by county\*
- Forecast was reviewed by Municipal Forecasting Stakeholder Group with representative from each Council

*\*Impacts Municipal Forecast*

DRAFT

## MUNICIPAL WATER DEMAND AND WASTEWATER FLOW FORECASTING METHODS REPORT



PREPARED FOR

Regional Water Planning Councils

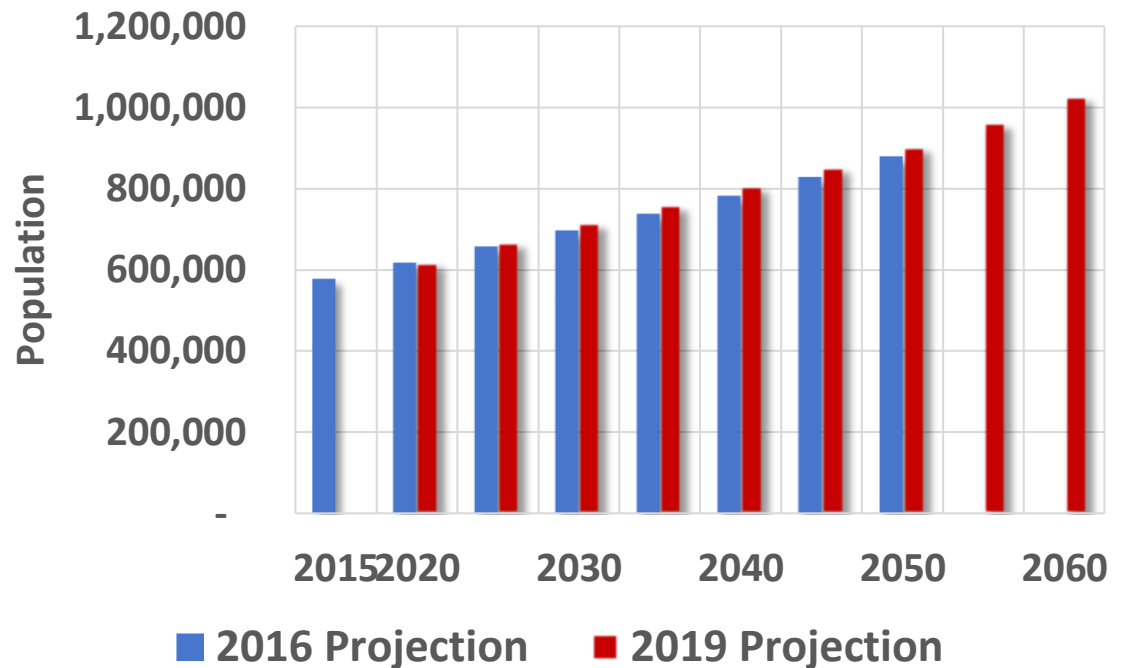
ON BEHALF OF

Georgia Environmental Protection Division

15 DECEMBER 2020

# UOC Population Projections

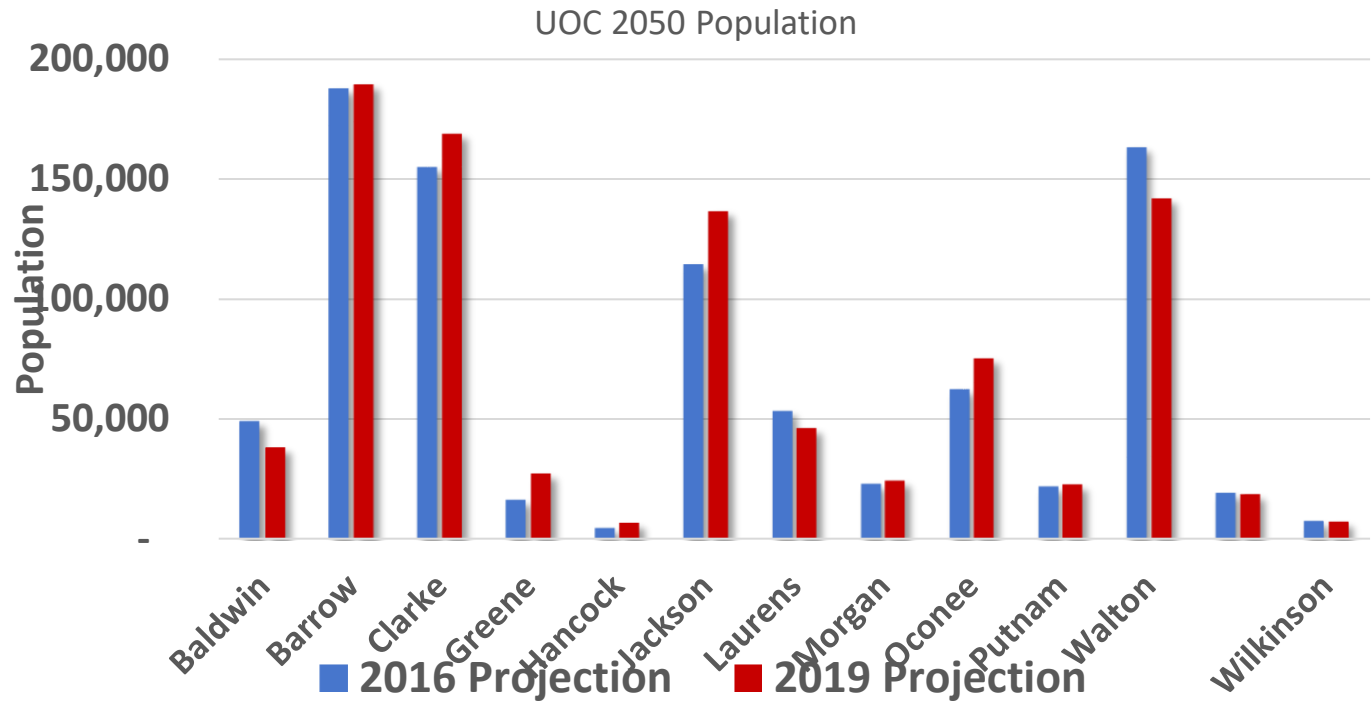
- 2017 RWP Update was based on 2016 population projections from Office of Planning & Budget (OPB)
- 2020 Municipal Forecast Demand Update based on 2019 OPB population projections
- OPB 2020 projections became available in October 2020 and similar to 2019 projections



# UOC Population Projections Comparison for 2050 by County

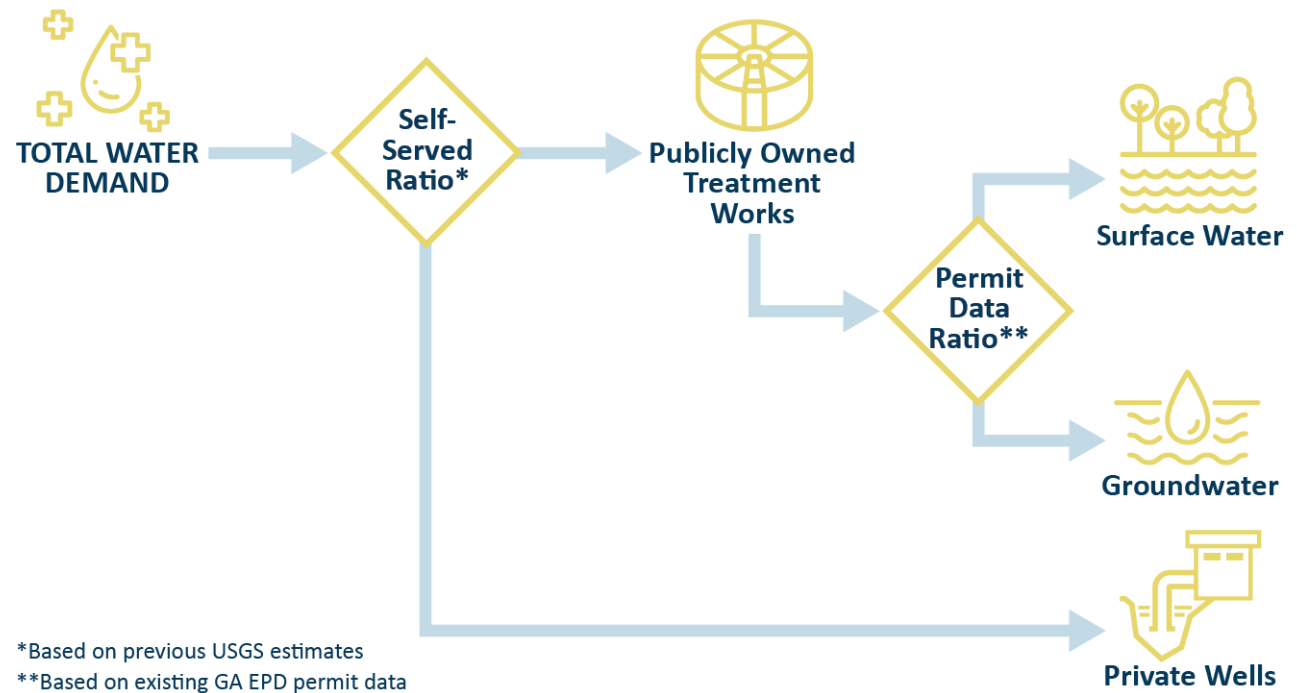
In 2050:

- 8 counties projected to have higher population in 2050
- 5 counties projected to have lower population in 2050



# County Water Demand Methodology

- Some % of county population is self-served (75 gpcd)
- Remainder of population is municipally-supplied
- Each county has unique municipal gpcd (weighted average)



# UOC Region Percent Self Supplied

- 2020 % self-supplied taken from USGS 2015 data
- Percentages held constant for the future
- Self-supplied population assumed to use 75 GPCD (USGS)

County	2017 % Self-Supplied	2020 % Self-Supplied
Baldwin	1%	8%
Barrow	47%	16%
Clarke	0%	1%
Greene	24%	21%
Hancock	37%	9%
Jackson	5%	19%
Laurens	47%	48%
Morgan	54%	57%
Oconee	40%	32%
Putnam	40%	11%
Walton	46%	28%
Washington	46%	40%
Wilkinson	30%	28%

# UOC Municipal Forecast GPCD

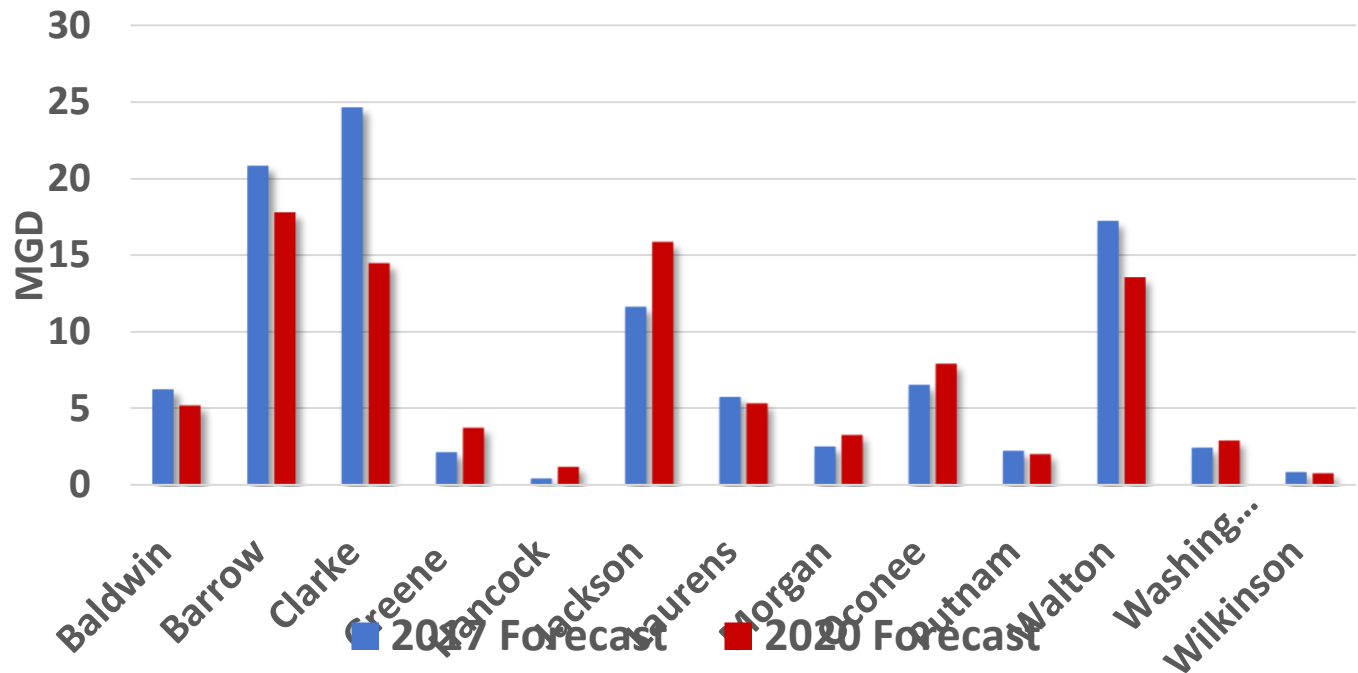
- Updated GPCD by county based on weighted average from 2015 – 2018 Water Loss Audits
- GPCD calculated from State Drinking Water Information System (SDWIS) data if Water Loss Audit data not available
- 6 counties have lower GPCD
- 6 Counties have higher GPCD

County	2017 GPCD	2020 GPCD	Change
Baldwin	137	146	10
Barrow	153	99	-54
Clarke	167	93	-74
Greene	160	160	0
Hancock	120	192	71
Jackson	110	129	20
Laurens	153	166	14
Morgan	163	220	56
Oconee	136	125	-11
Putnam	129	95	-34
Walton	142	108	-34
Washington	191	219	28
Wilkinson	135	65	-70

# UOC Municipal Demand Forecast Comparison for 2050 by County

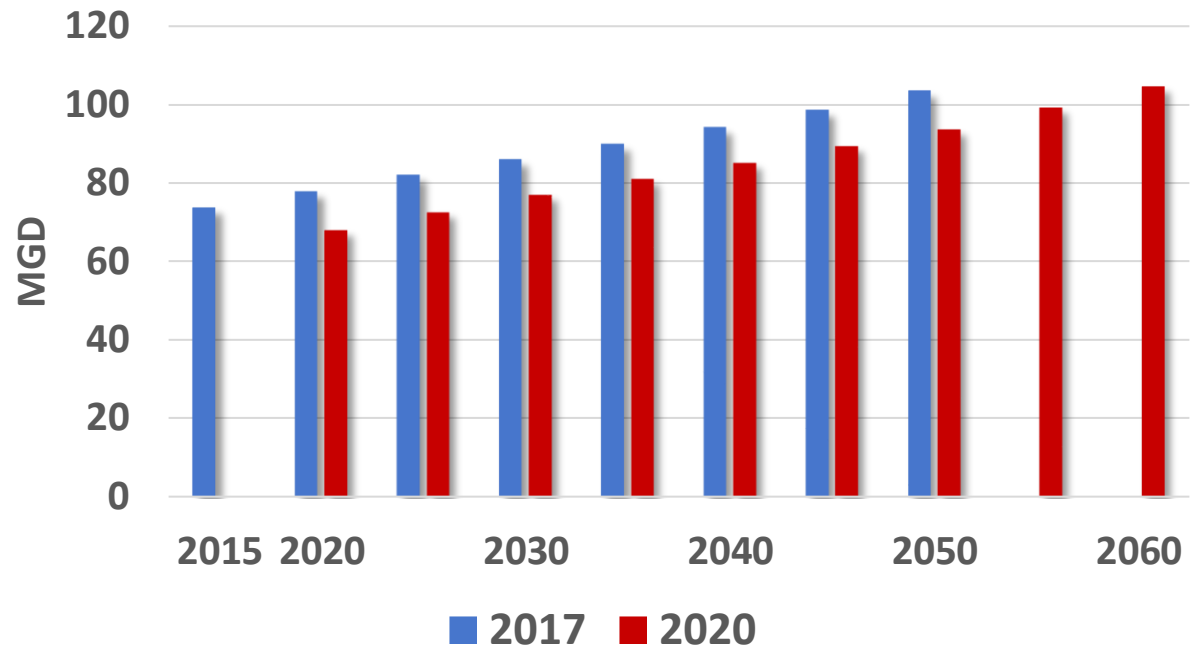
In 2050:

- 7 counties have lower demand
- 6 counties have higher demand



# UOC Region Municipal Demand Forecast

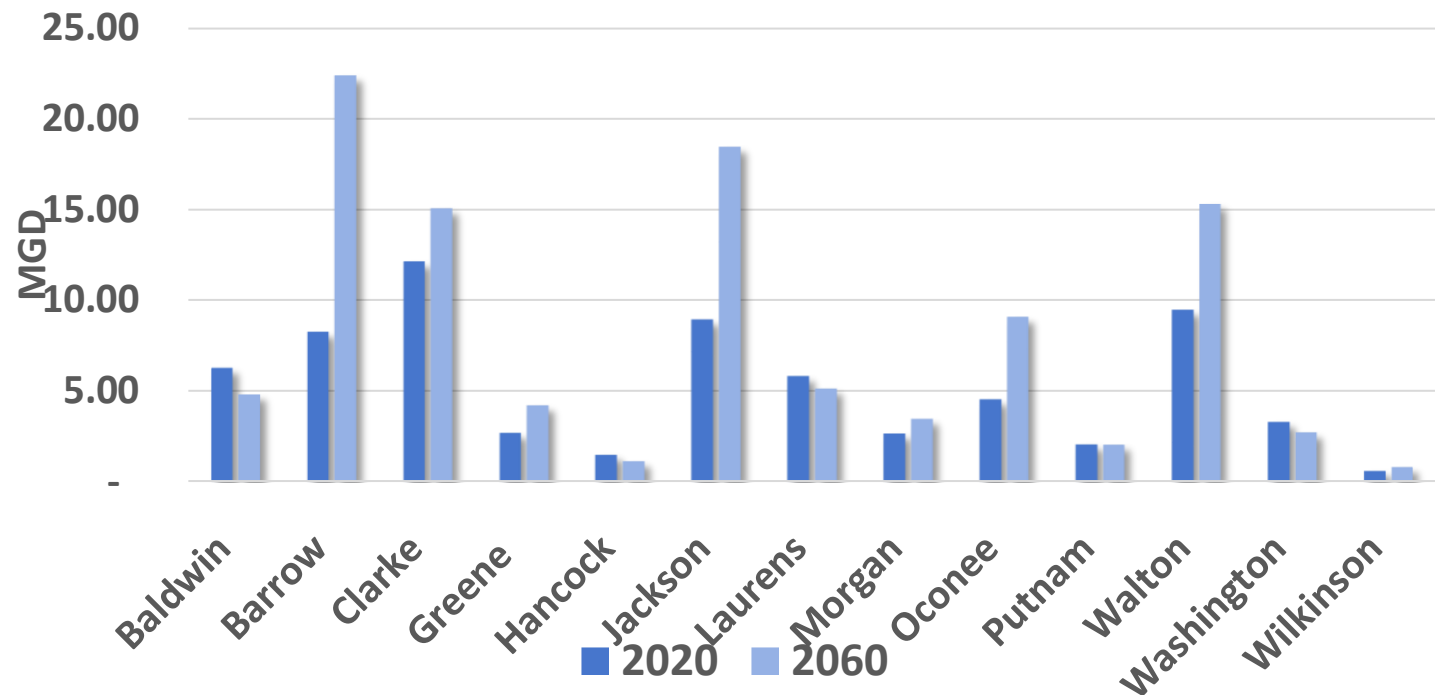
- Current (2020) demand is lower than the 2017 forecast
- Population projections are higher by 3% in 2050
- Overall, county GPCDs are lower





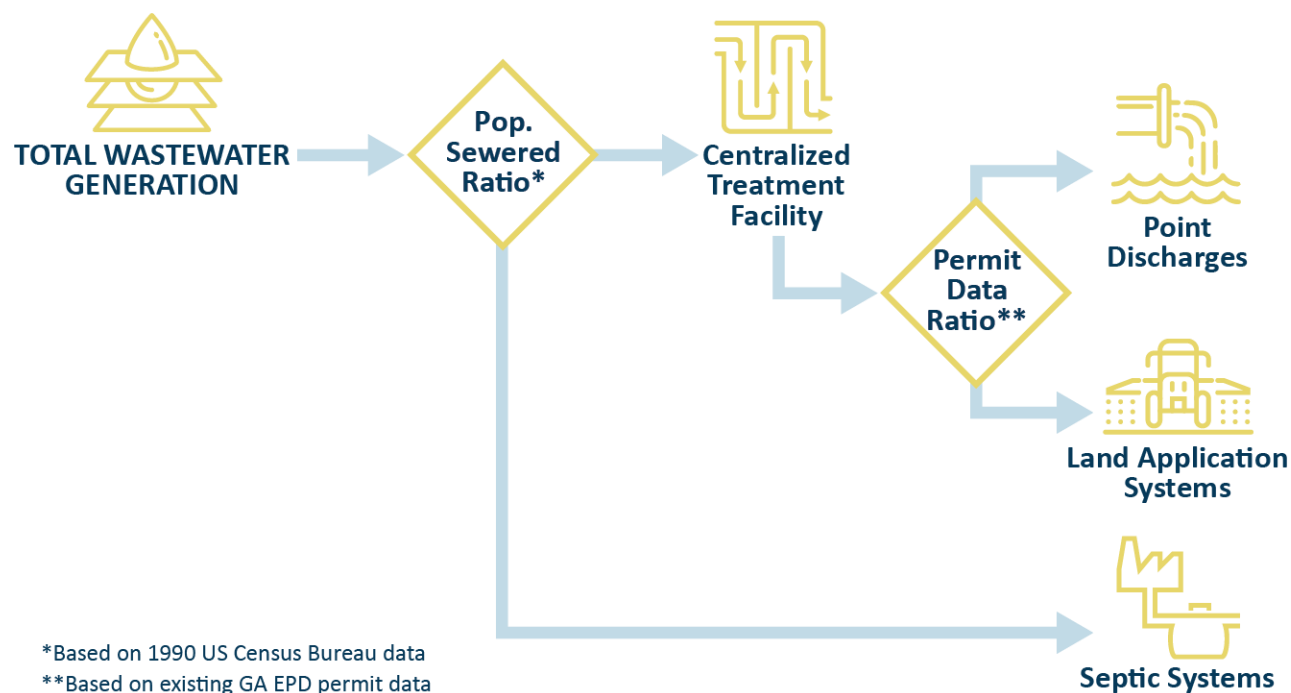
# UOC 2020 Municipal Demand Forecast by County

The 2020 Municipal demand forecast shows 7 counties with a decline and 6 with an increase in demand



# Municipal Wastewater Methodology

- Septic flow based on % households on septic (80% of use)
- Used 2019 discharges by county
- Applied % change in population
- Maintain same ratio of Point and LAS



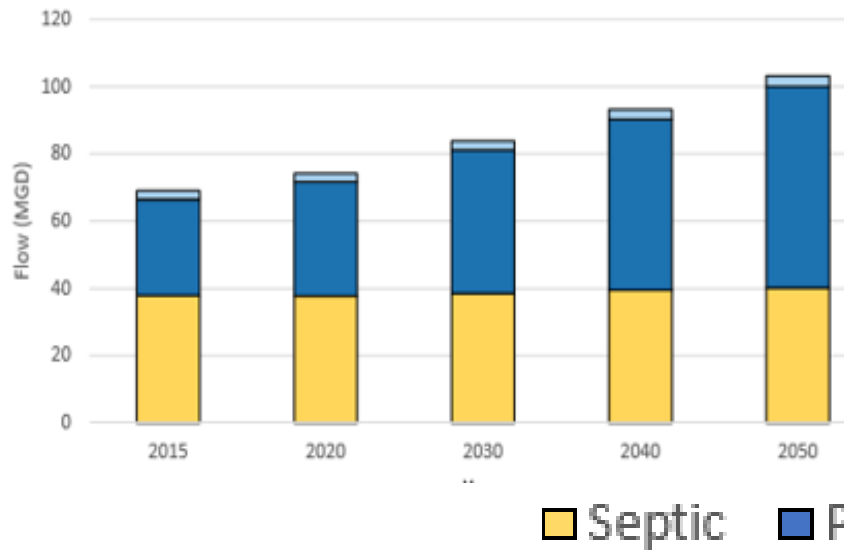
# Municipal Wastewater – Septic

- County % population on septic systems
  - Held constant, unless specific input provided
- Values with asterisks are from the 1990 Census housing characteristics for Georgia
- Values w/o asterisks are from Georgia Dept. of Public Health data (through 2018)

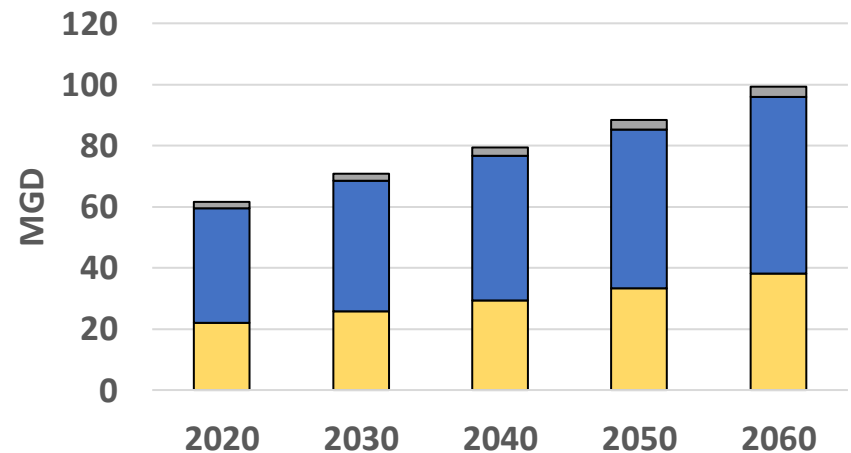
County	2020 % Septic
Baldwin	65%
Barrow	68%*
Clarke	23%*
Greene	65%*
Hancock	82%*
Jackson	74%*
Laurens	53%*
Morgan	67%*
Oconee	87%*
Putnam	72%*
Walton	71%
Washington	59%*
Wilkinson	76%*

# UOC Municipal Wastewater Forecast

## 2017 Forecast



## 2020 Forecast





## Forecasting Updates: Industrial

### Bill Davis, CDM Smith

# Industrial Demand Forecast Update

- Updated forecasting methodology based on input from industry representatives from across the state
- No longer based on employment
- Convened industry experts into multiple advisory groups and developed separate estimates
- <https://waterplanning.georgia.gov/forecasting/industrial-water-use>

## Industrial Sub-Sectors:

- Paper and Forest Products
- Food Processing
- Manufacturing
- Mining

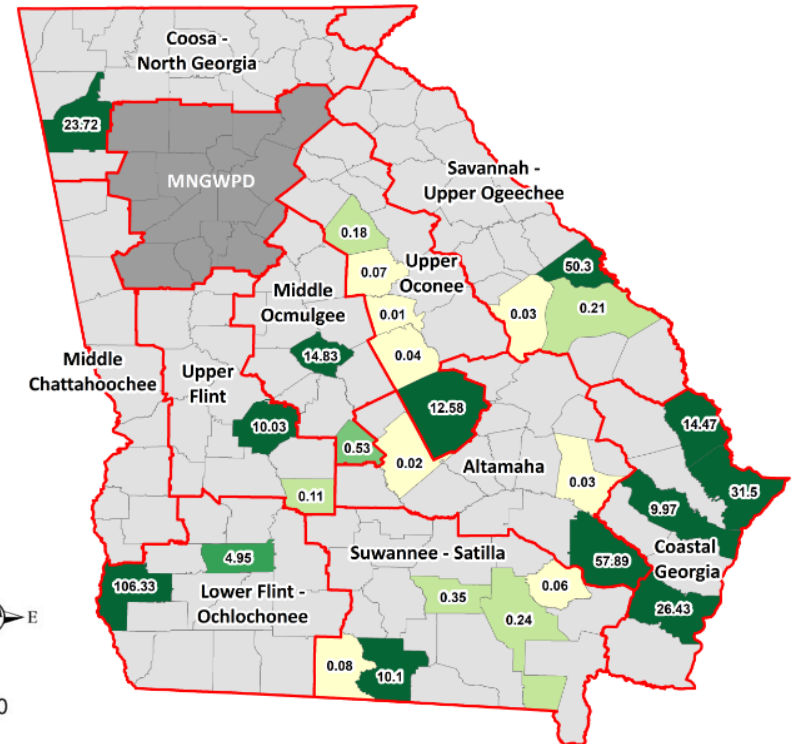
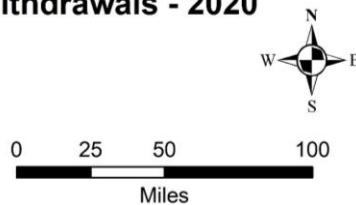
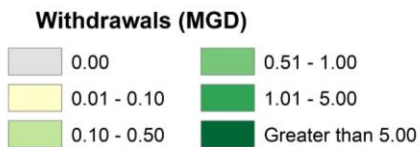
# Industrial Stakeholder Advisory Group

- BASF
- Covia
- Georgia Association of Manufacturers
- Georgia Chemistry Council
- Georgia Department of Economic Development
- Georgia Mining Association
- Georgia Pacific
- Georgia Paper and Forest Products Association
- Georgia Poultry Federation
- Georgia Tech Research Institute
- Gerdau Steel
- Gulfstream Aerospace
- International Paper
- Irving Consumer Products
- Kamin
- Kia Motors
- Milliken and Company
- Mohawk Industries
- Office of Planning and Budget
- Packaging Corporation of America
- Rayonier Performance Fibers
- SAFT, Inc.
- Southwire
- Toyo Tire

# Paper & Forest Products

- Water use to remain constant using the (2010 to 2019) 10-year average water withdrawals by location

**Paper & Forest Products Water Withdrawals - 2020**

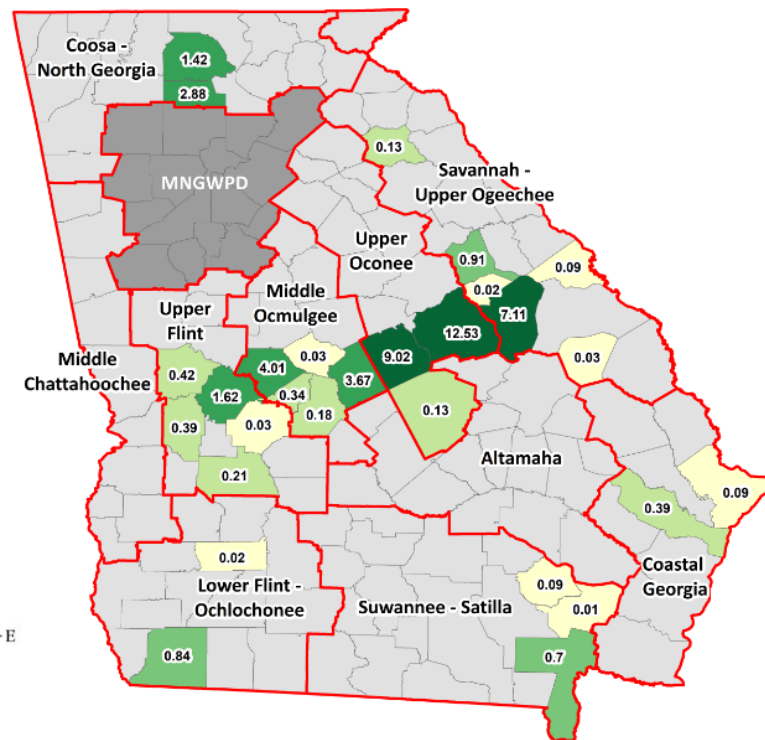
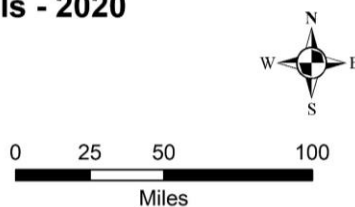
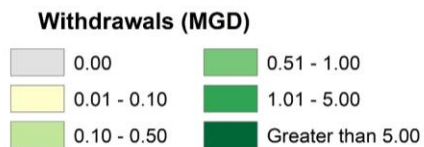




# Mining

- Water use to remain constant using the (2010 to 2019) 10-year average water withdrawals by location

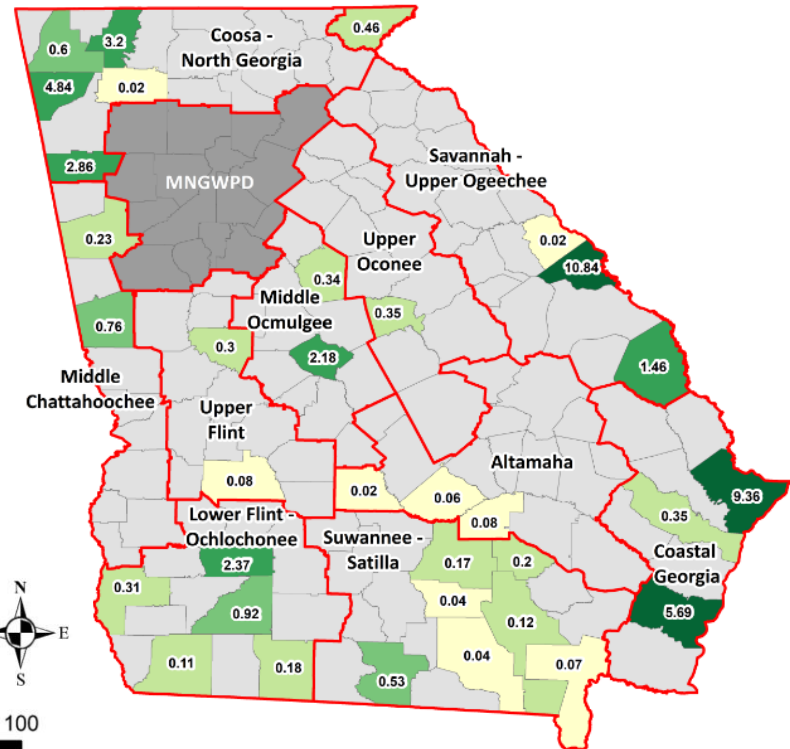
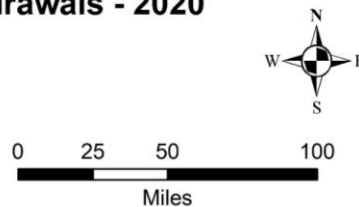
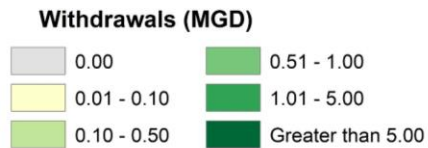
**Mining Water Withdrawals - 2020**



# Manufacturing

- Water use to remain constant using the (2010 to 2019) 10-year average water withdrawals by location

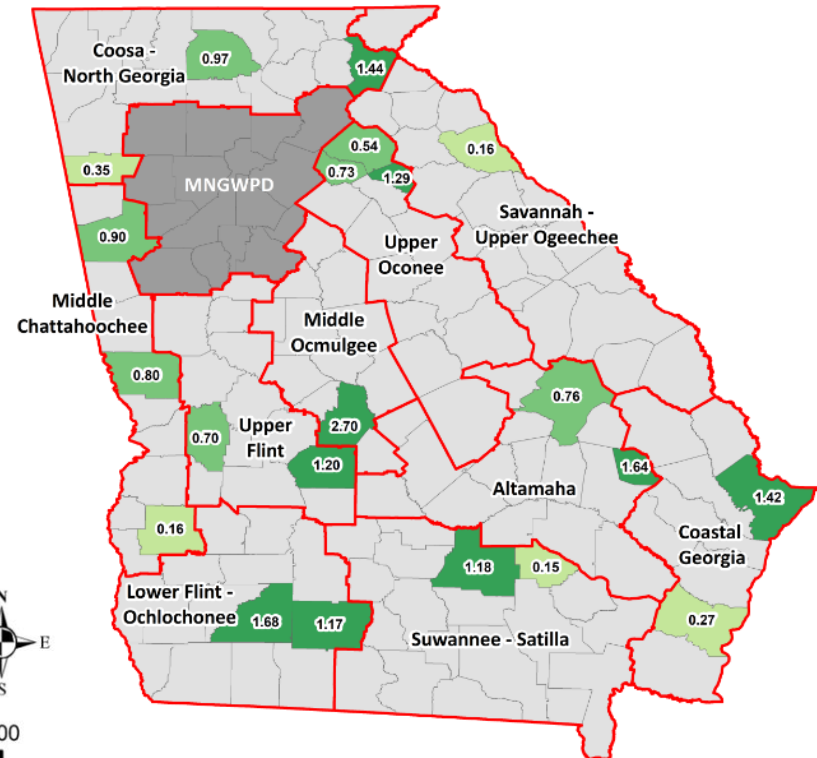
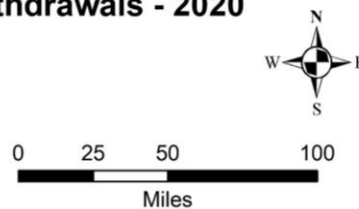
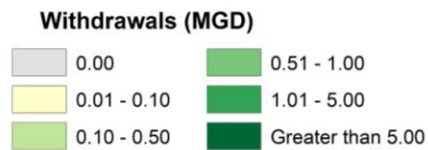
**Manufacturing Water Withdrawals - 2020**



# Food Processing

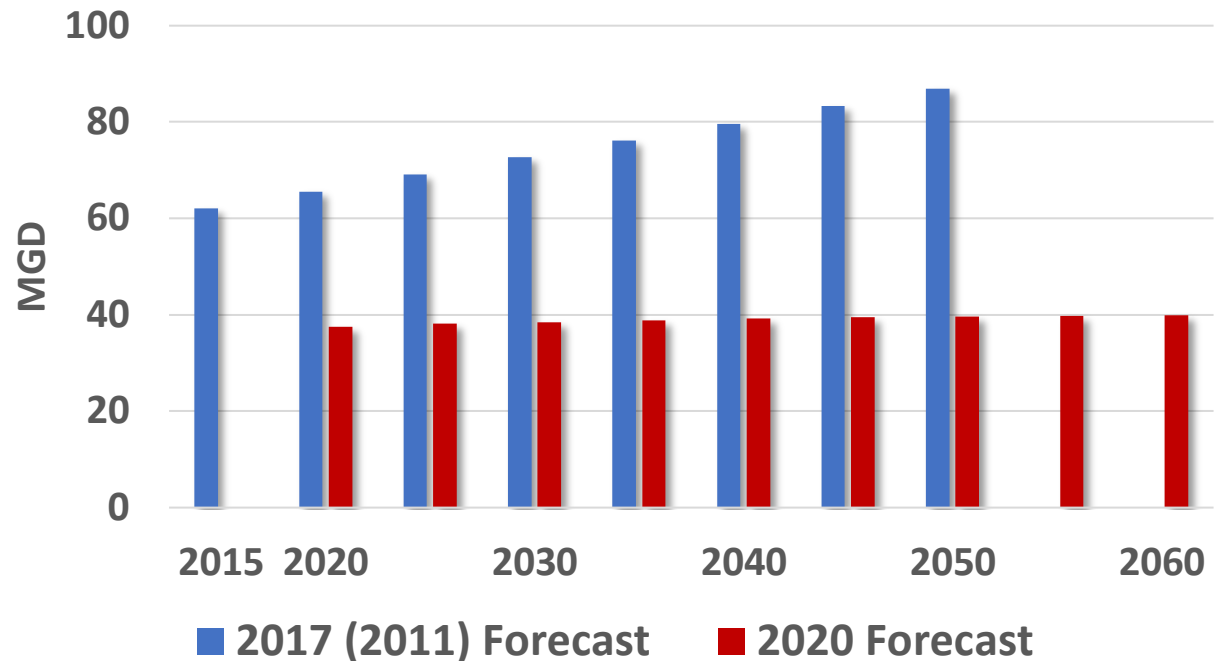
- Poultry processing projected to increase
- Non-poultry processing to remain constant at 10-year average water withdrawals

**Food Processing Water Withdrawals - 2020**



# UOC - Industrial Forecast

- 2017 forecast is from the 2011 RWP, and was based on employment growth projections
- 2020 based on input from local industry experts

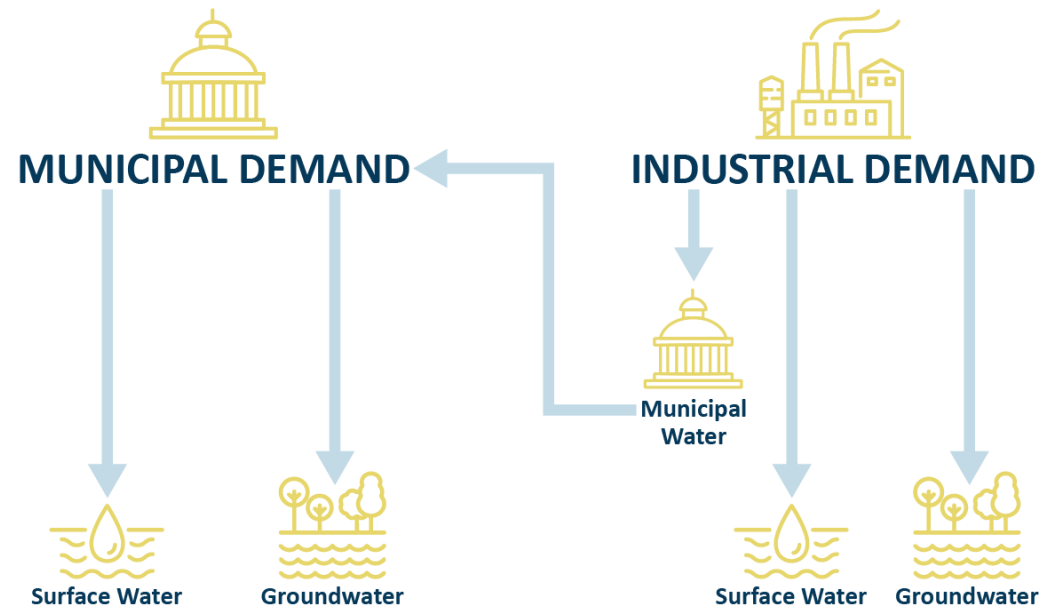


# Coordination with Municipal Water Demand Forecast

- Shared information with municipal forecast team where municipal water use is identified and greater than 0.2 MGD

## Are we double counting?

- If we add Municipal and Industrial demand, yes
- If we add surface water and groundwater demand, no





## Forecasting Updates: Energy

Bill Davis, CDM Smith

# Energy Demand Forecast Update

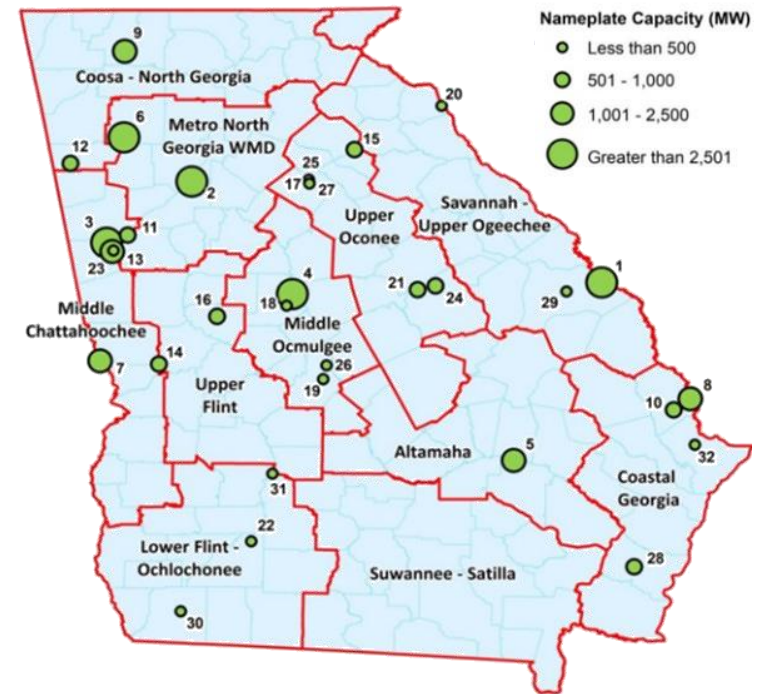
- Convened a stakeholder advisory group representing power companies in the State of Georgia
- Worked with stakeholder group to identify future sources of power generation
- <https://waterplanning.georgia.gov/forecasting/energy-water-use>

## Participating Representatives from:

- Georgia Power / Southern Company
- Municipal Electric Authority of Georgia (MEAG)
- Oglethorpe Power Corporation
- Dalton Utilities
- Georgia Public Service Commission
- Georgia Environmental Finance Authority

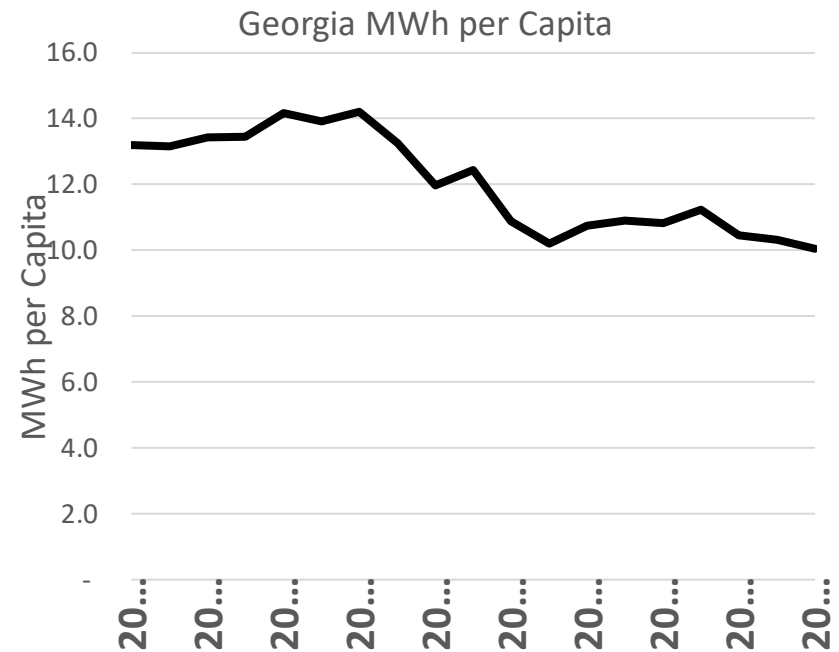
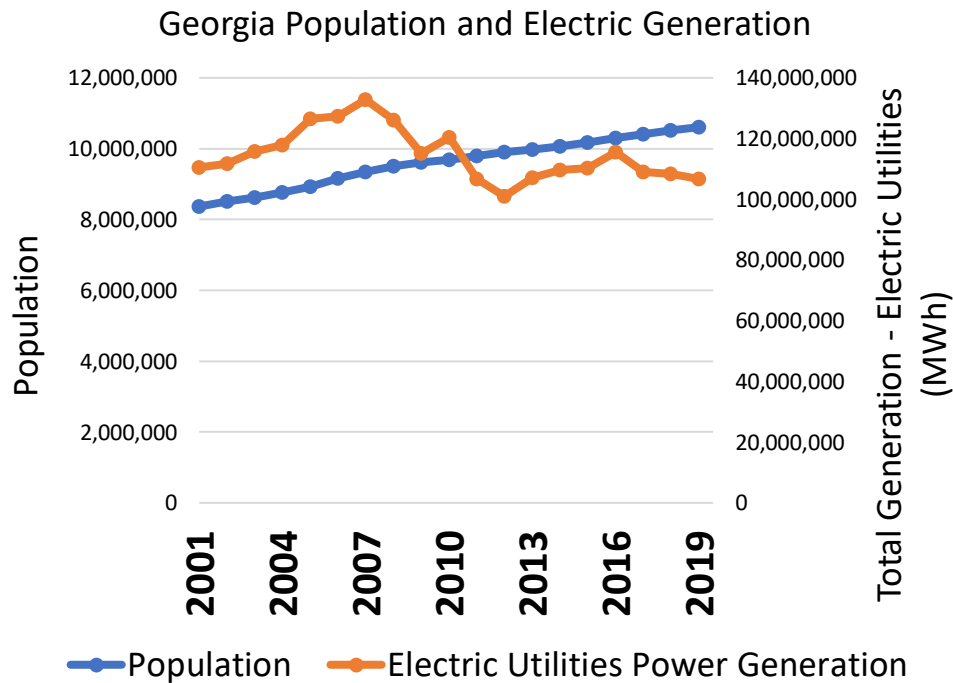
# Energy Demand Forecast Update Methodology

- Updated the list of active, retired and planned generating units
- Evaluated historic MWh per capita use
- Estimated need for power generation
- Estimated statewide generation by fuel type
- Applied water use factors by fuel type
- Identified water withdrawals and consumption by facility location

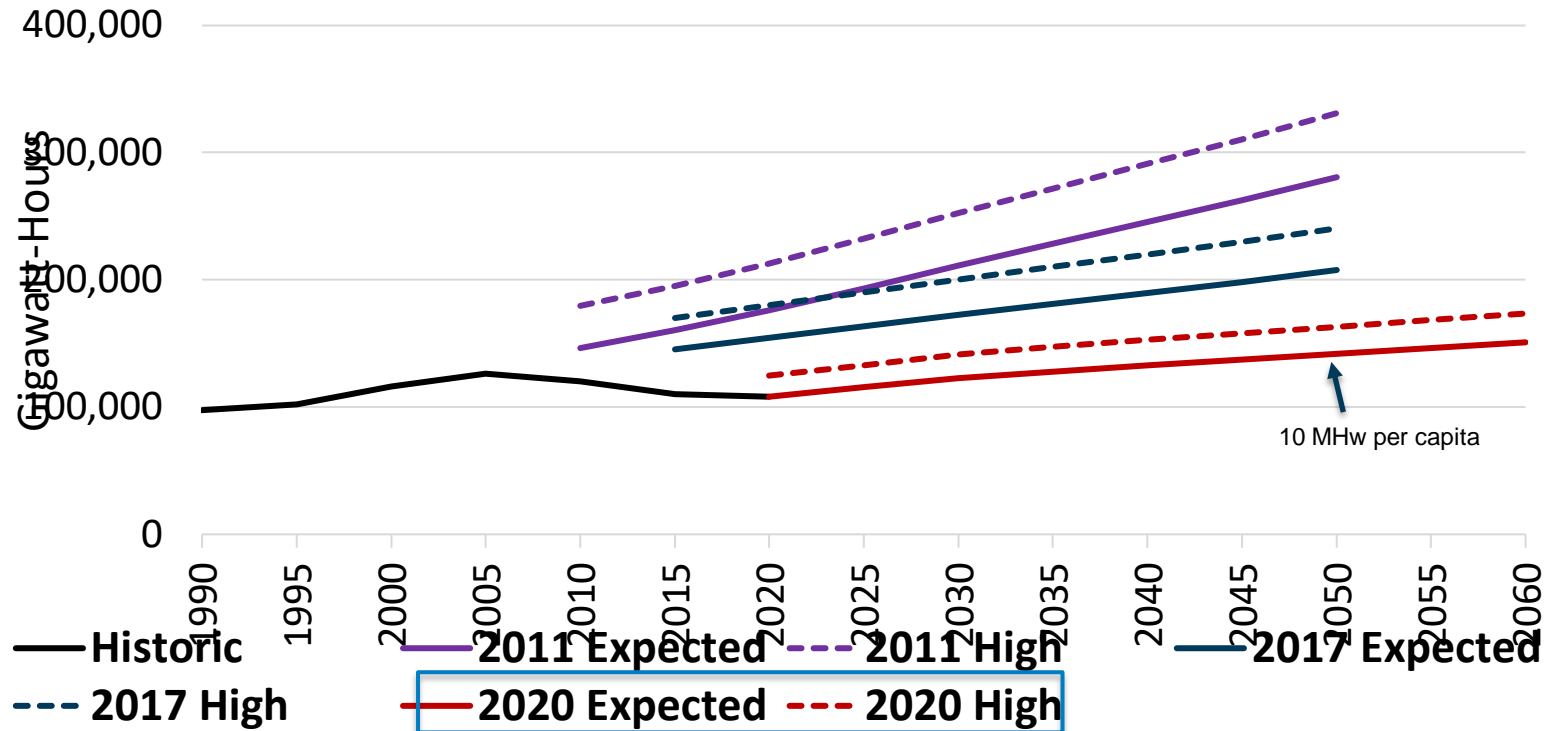




# How Much Energy Do Georgians Use?

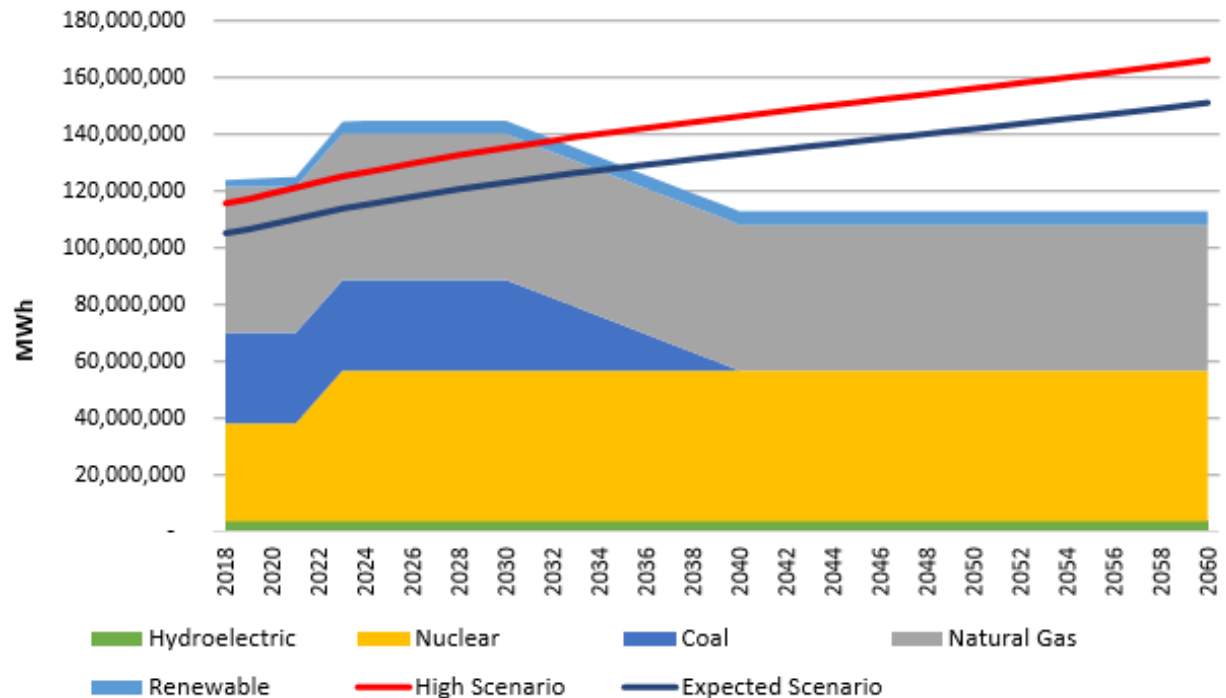


# How Much Power will Georgia Need?



# Using Current Generating Capacity for the Future

- Nuclear generation (yellow) will increase with Vogtle 3&4
- Coal generation (blue) will be phased out in the future
- Both Natural Gas and Renewable assumed to increase to meet the need



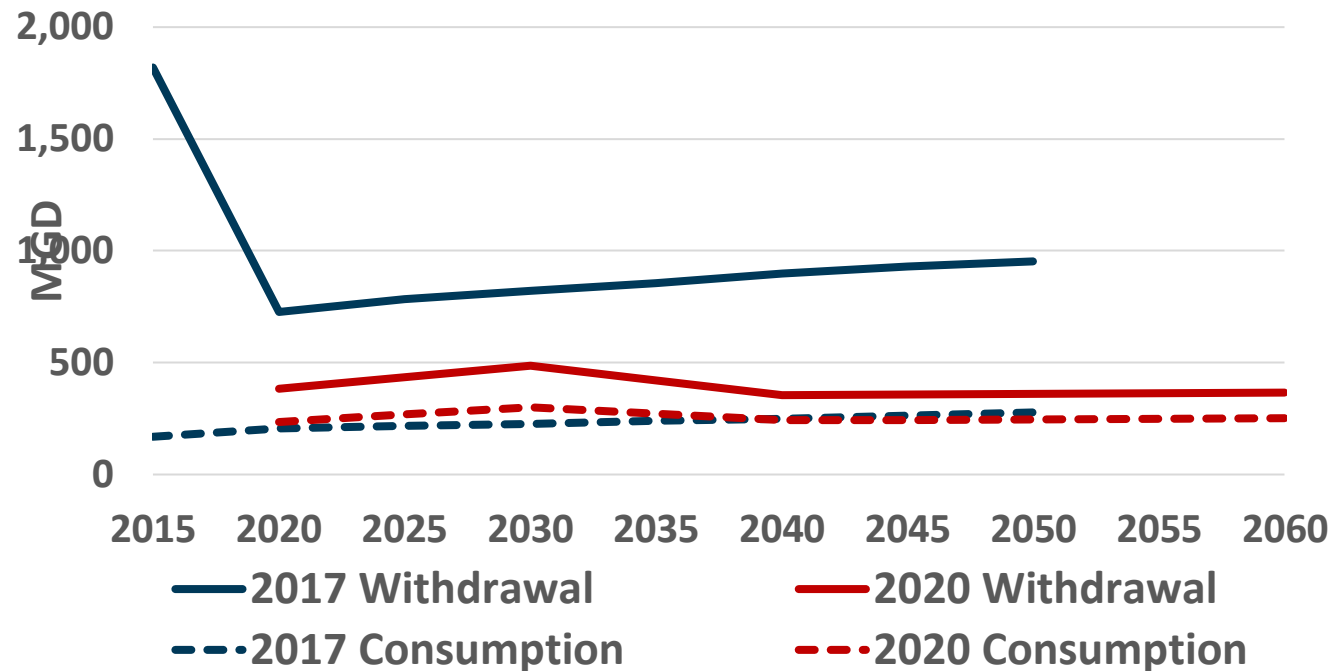
# Water Use by Generation Configuration

POWER GENERATING CONFIGURATION	WATER WITHDRAWALS Gal/MWh	WATER CONSUMPTION Gal/MWh
Fossil Fuel/Biomass, Steam Turbine, Once-Through Cooling	41,005	0
Fossil Fuel/Biomass, Steam Turbine, Cooling Tower	1,153	567
Fossil Fuel/Biomass, Gas (Combustion) Turbine	0	0
Natural Gas, Combined-Cycle, Cooling Tower	225	198
Nuclear, Steam Turbine, Cooling Tower	1,372	880

Source: 2003-2007 Averages from EIA and EPD data for Georgia facilities

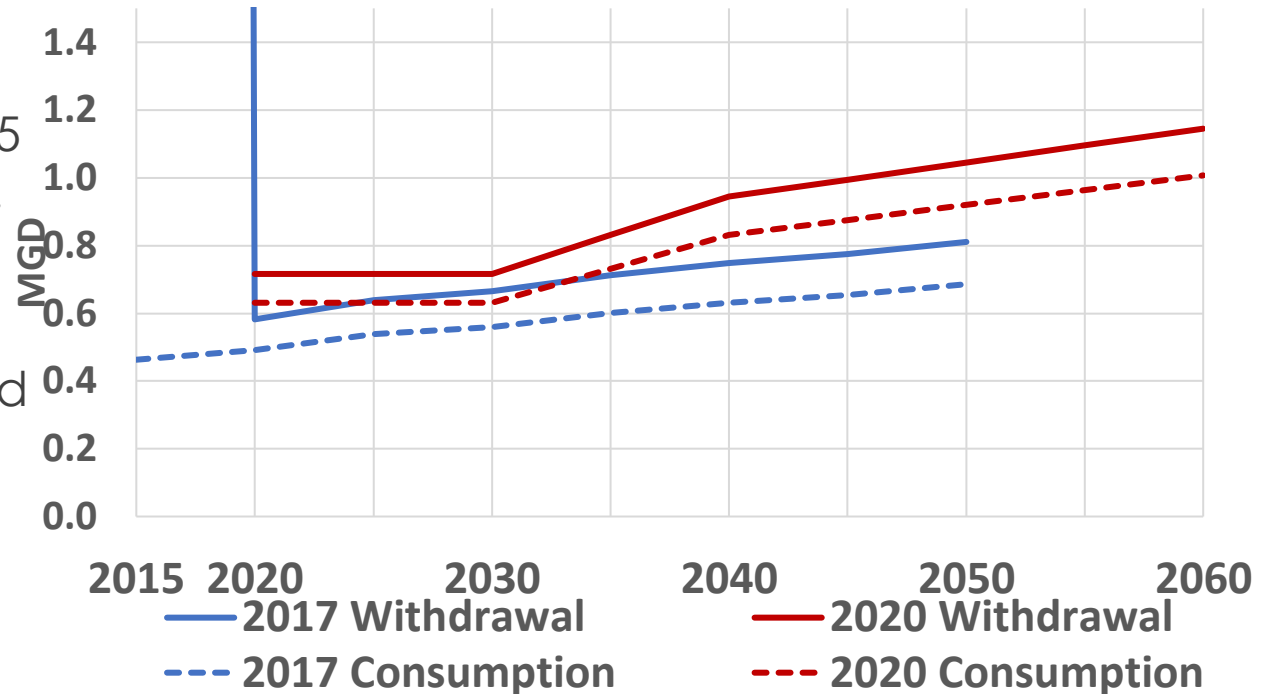
# Statewide Energy Water Demand Forecast

- 2017 Forecast has high withdrawals for coal facilities now retired
- 2020 Need (MWh) is lower
- Water per MWh is more efficient



# UOC Energy Water Demand Forecast

- Energy withdrawal was 669 MGD in 2015 in the 2017 Forecast.
- The 2020 forecast assumes that Plant Scherer will be retired by 2040





## Forecasting Updates: Agriculture Mark Masters, GWPPC

# Project Team

- ▣ Albany State University – Georgia Water Planning and Policy Center (Lead)
- ▣ University of Georgia Agricultural and Applied Economics



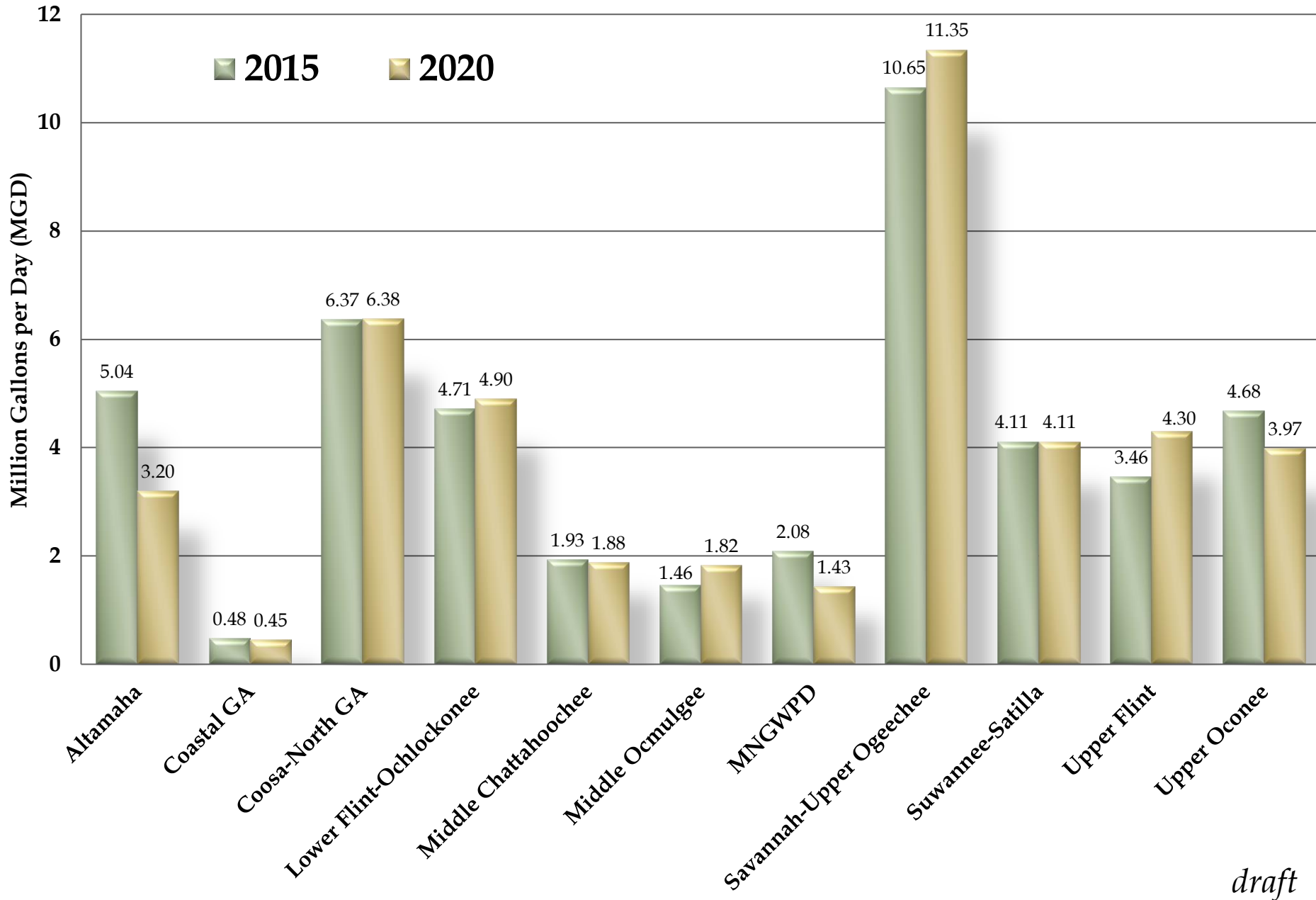


# 2020-21 Agricultural Water Demand Forecasts - Methods

- ▣ **Acreage – Updated 2020 wetted acreage data**
  - Field observation and aerial survey
- ▣ **Crop projections through 2060 - modeled based on multiple data sources:**
  - Remote sensing and field data
  - USDA Projections, Southeast Model, Georgia Model, Data Trends
- ▣ **Crop water needs - wet, normal, dry years**
  - Expanded use of meter data
  - Review estimates used in 2015-2016 and revise if needed
  - Presented by basin, county, planning node, aquifer, etc....
- ▣ **Animal Ag/Nursery**

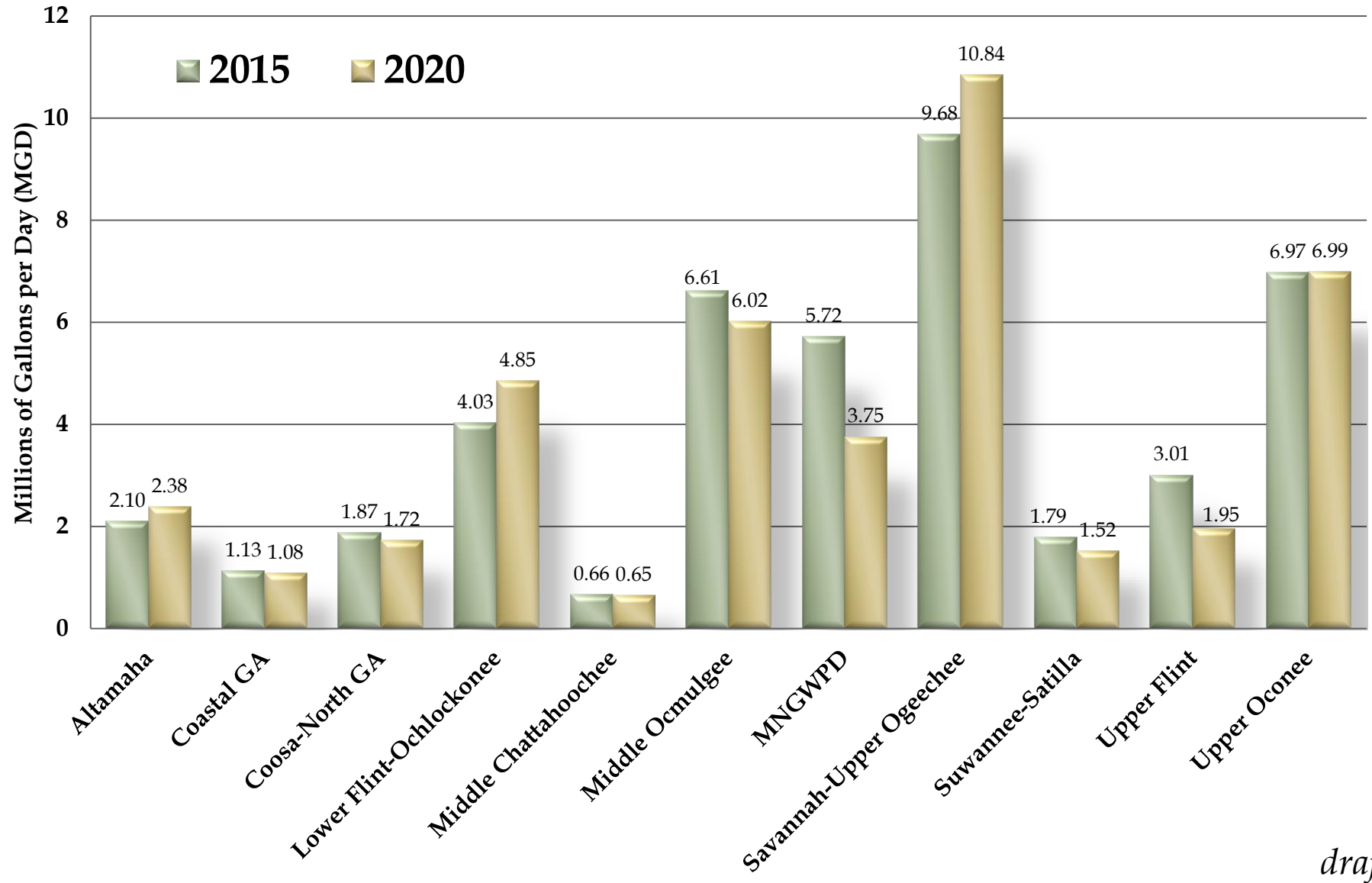
# Animal Agriculture - Daily Water Use by Water Planning Region

## Statewide Total: 43.8 MGD

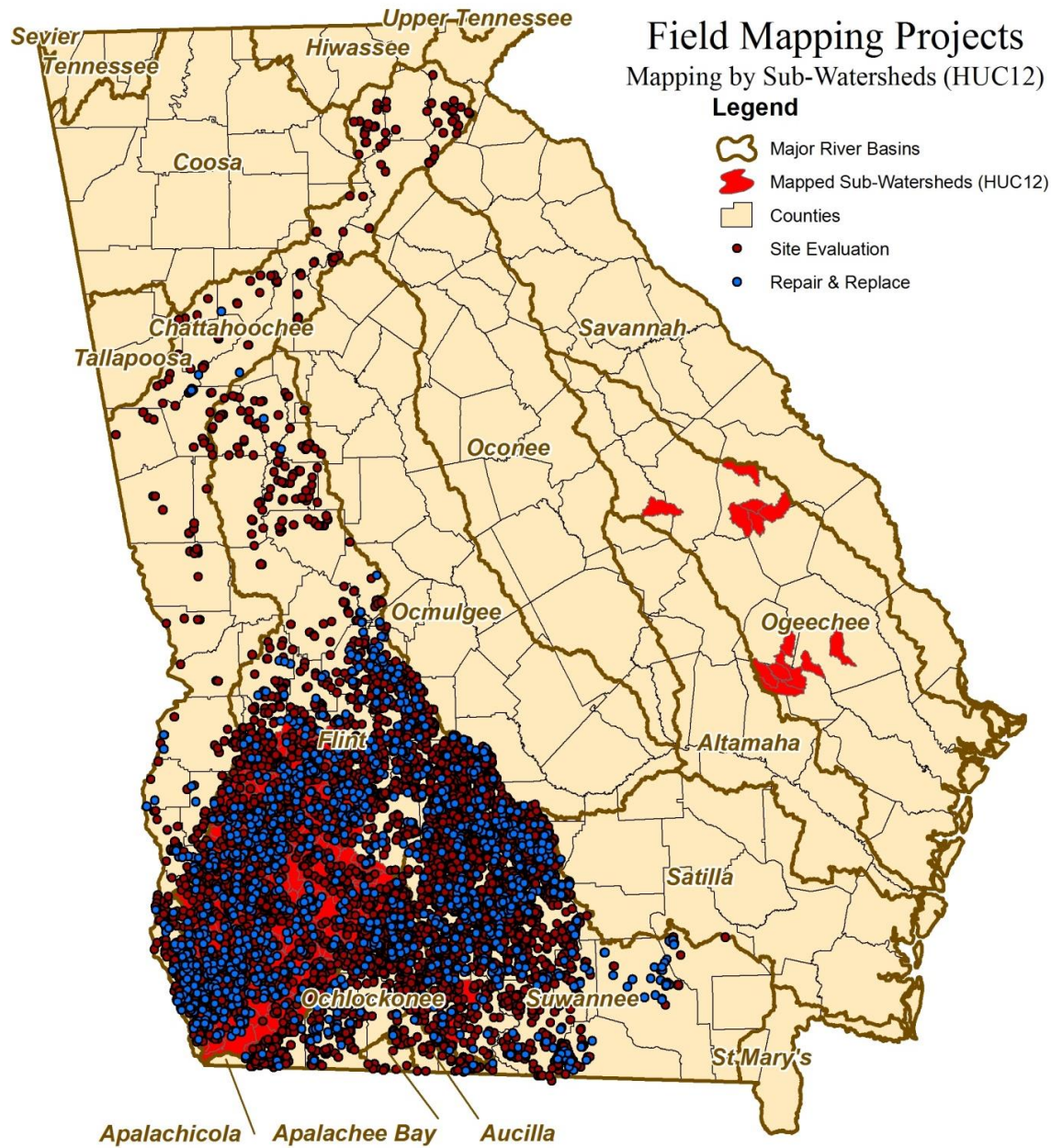


# Daily Water Use by Horticultural Nurseries (Container, In-Ground, and Greenhouse), Millions of Gallons Per Day

## Statewide Total: 41.76 MGD - *draft*

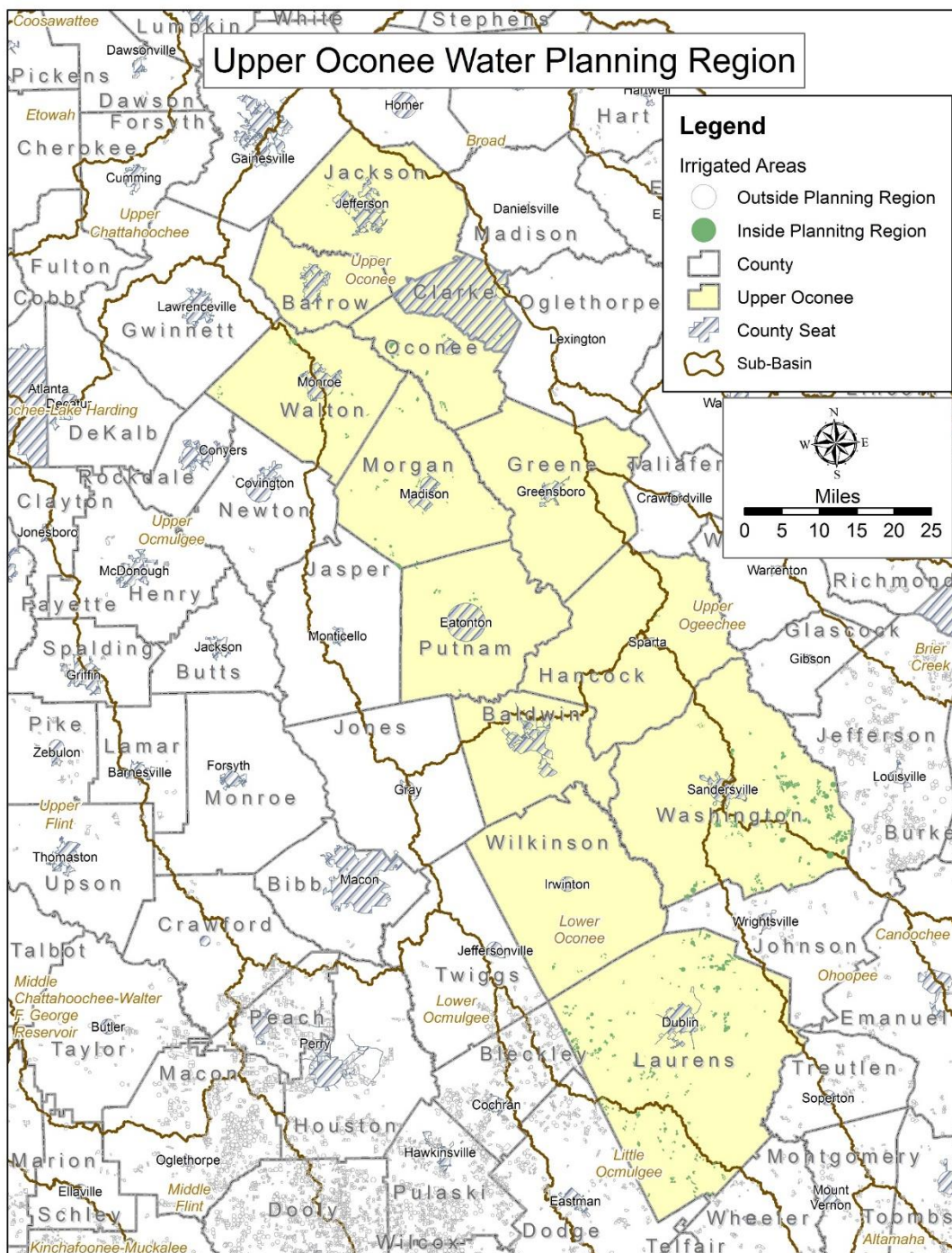


*draft*





## Upper Oconee Water Planning Region



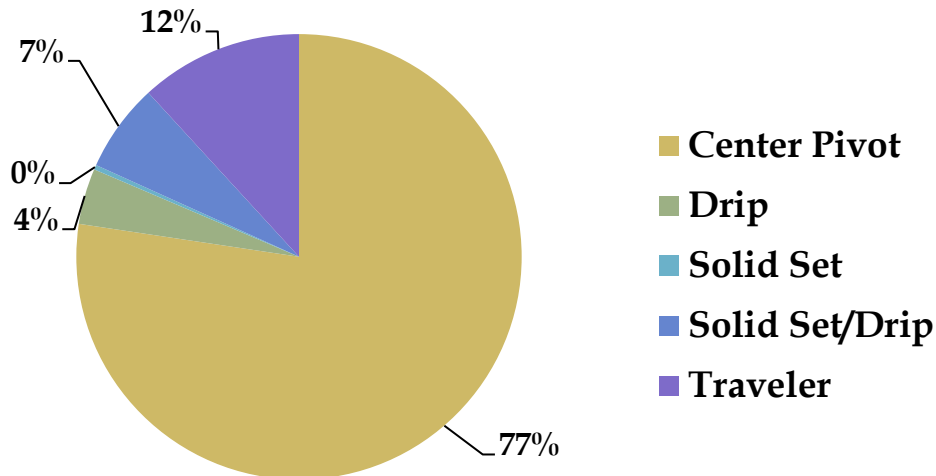
## Irrigated Acres

County	2015	2020
Clarke	114	115
Greene	0	4
Hancock	47	77
Jackson	113	113
Laurens	10,774	11,651
Morgan	1,272	1,272
Oconee	1,304	1,304
Putnam	391	654
Walton	930	930
Washington	10,924	12,050
Wilkinson	244	299

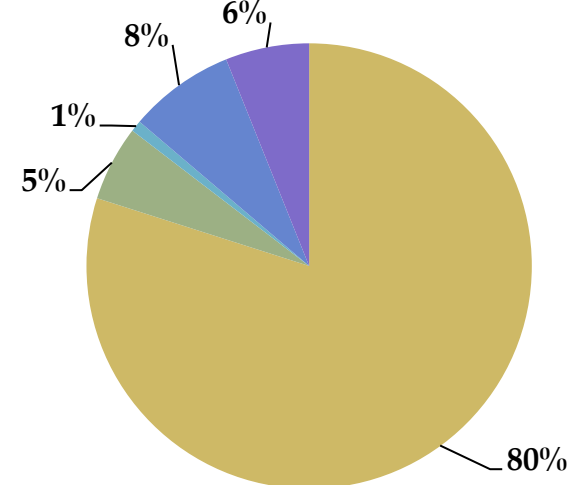
# Upper Oconee RWPC

	2015	2020	% Change
Total # of Fields	542	592	+ 9.2%
Total Acreage	26,113	28,468	+ 9.0%
Total GW Acreage	19,624	21,475	+ 11.5%
Total SW Acreage	6,489	6,723	+ 3.6%
Total Center Pivots	368	458	+ 24.5%
Center Pivot Acreage	19,307	22,753	+ 17.8%

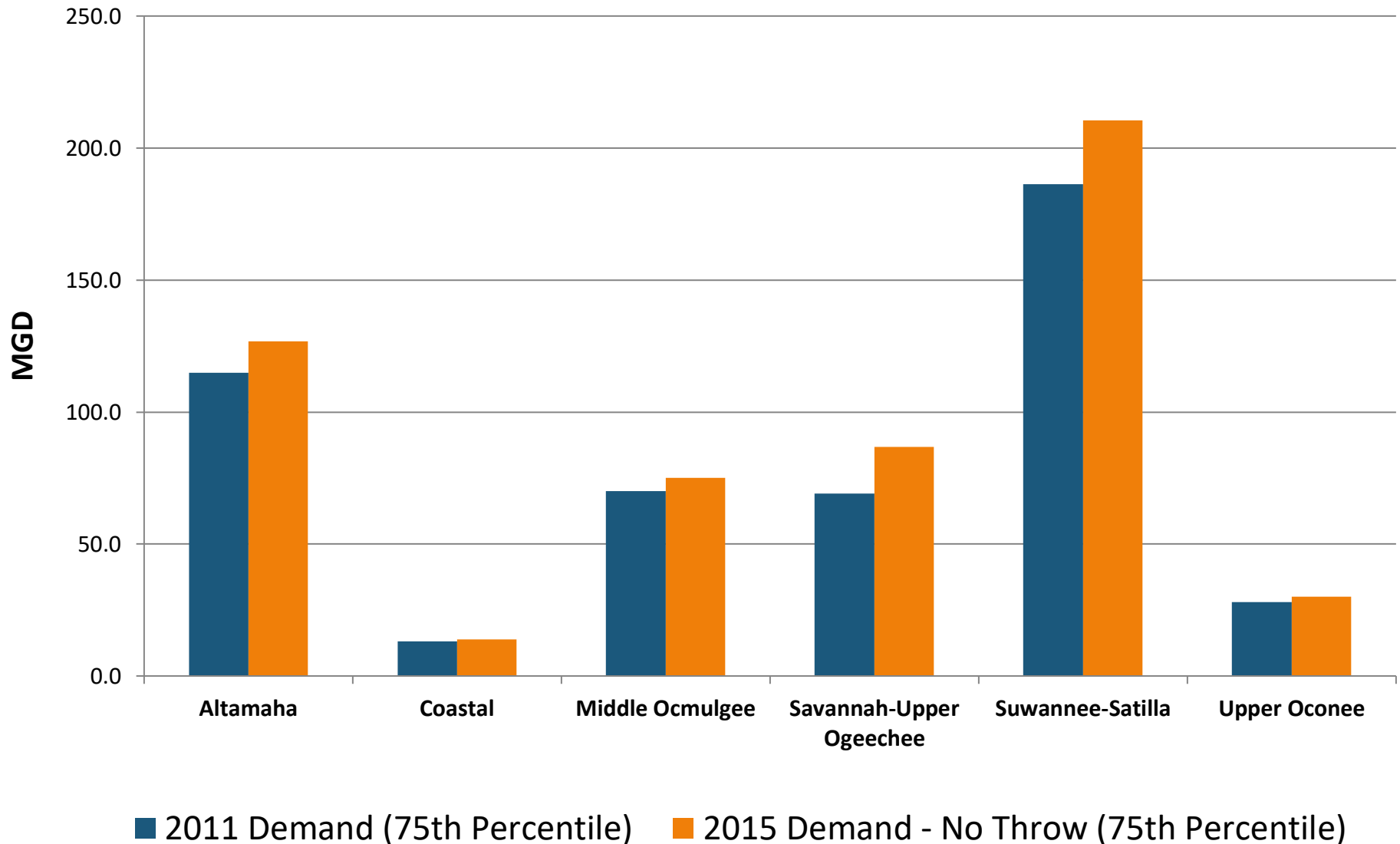
**System Type - % of Systems**



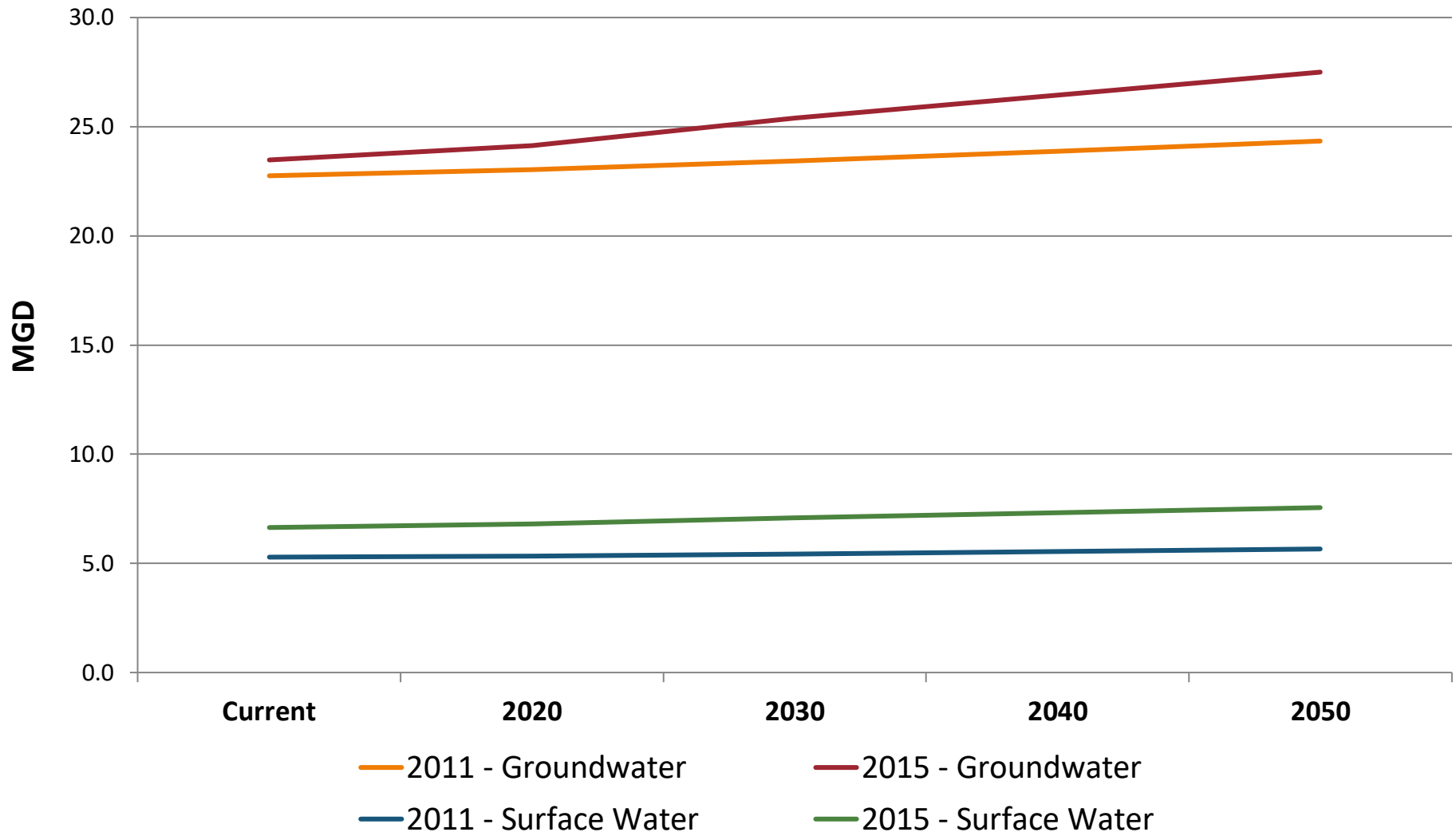
**System Type - % of Acreage**



# Ag Demand (2011 & 2015)

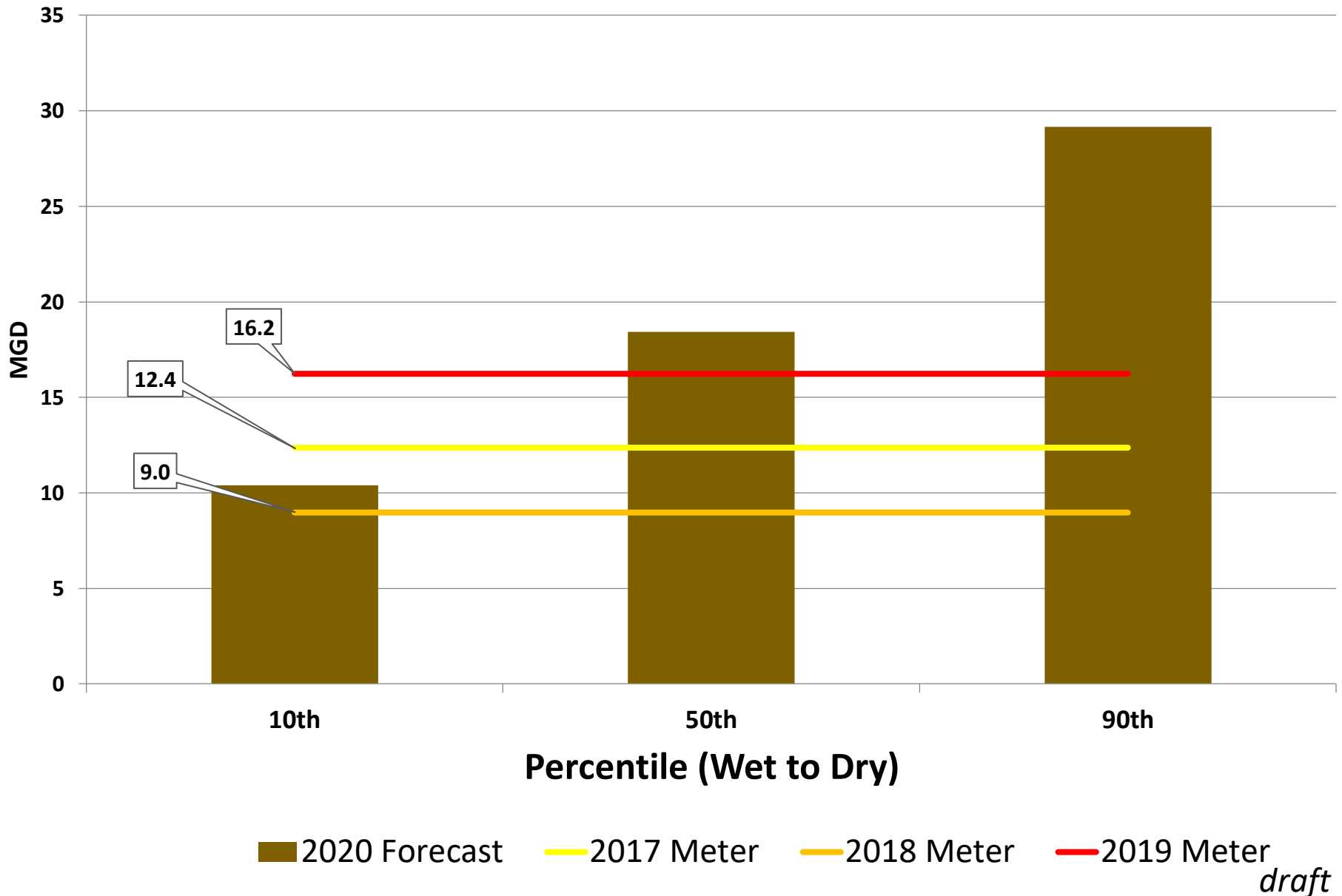


# Upper Oconee RWPC – Forecast (75<sup>th</sup> Percentile)

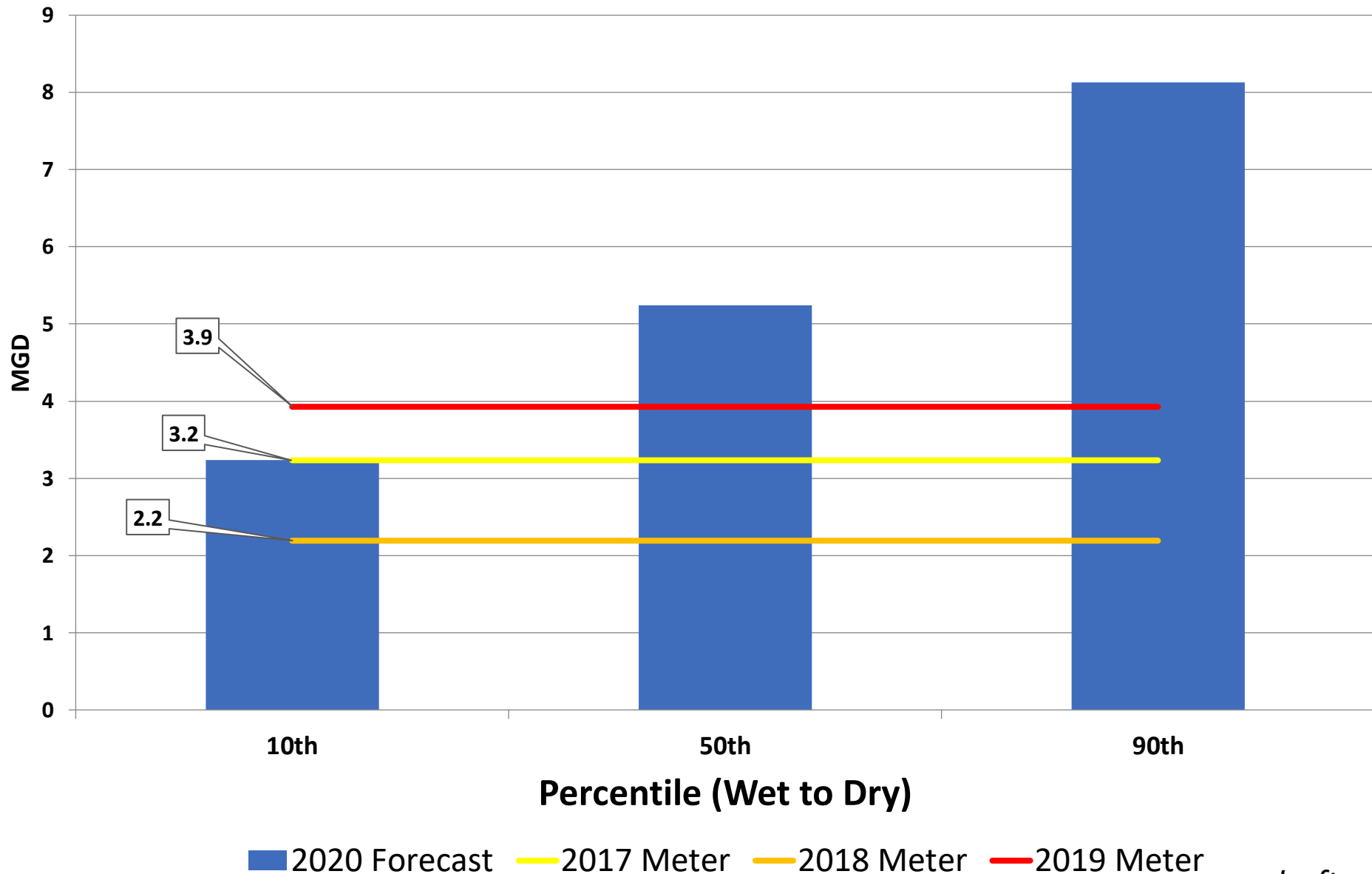




# Upper Oconee Groundwater

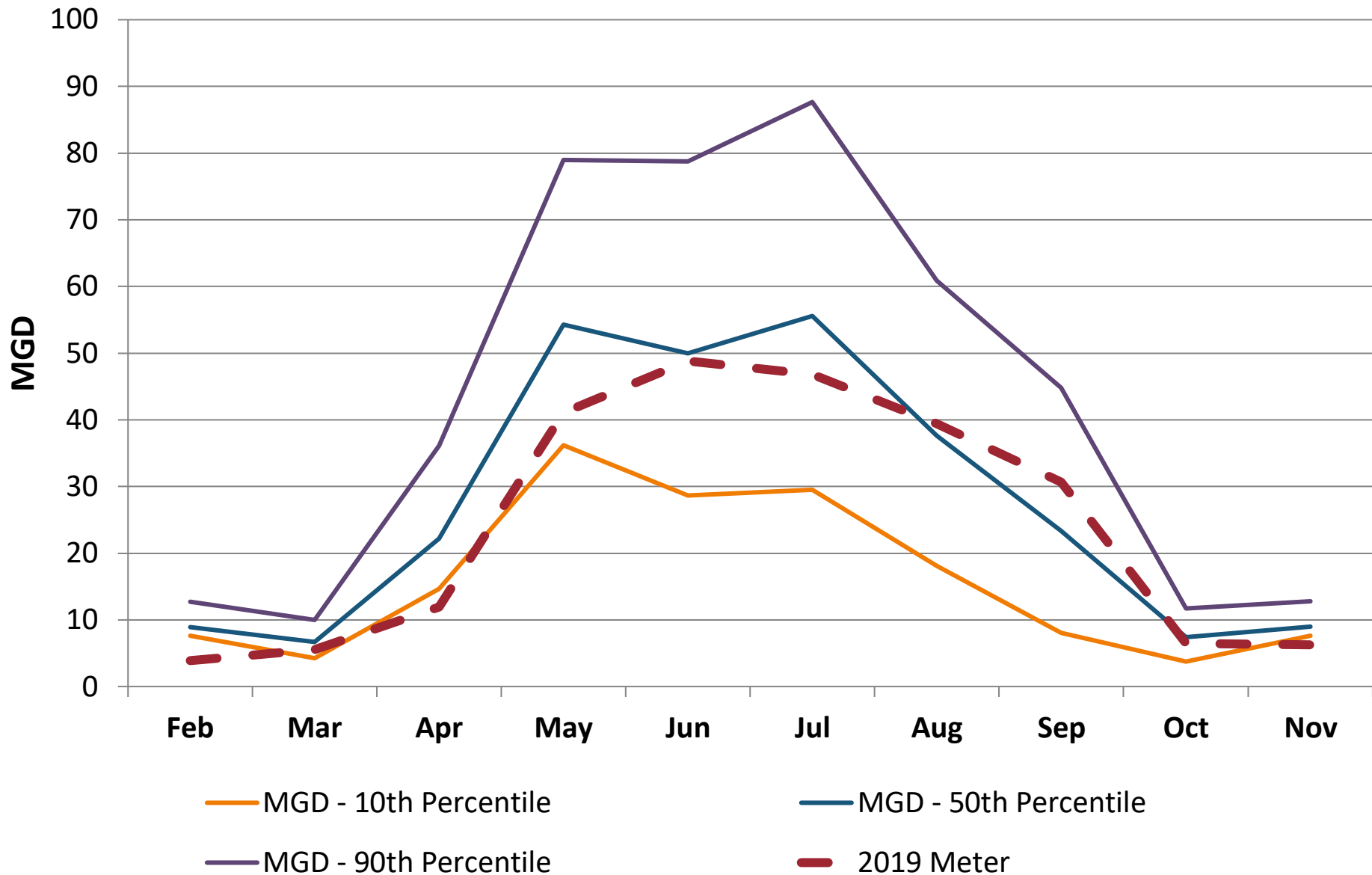


# Upper Oconee Surface Water



*draft*

# Upper Oconee - Monthly



*draft*

# Questions & Discussion



Mark H. Masters

Albany State University

Georgia Water Planning & Policy Center

[mmasters@h2opolicycenter.org](mailto:mmasters@h2opolicycenter.org)

229-430-2900 x36



Stretch Break!



# FERC Relicensing: Tallassee Shoals Hydroelectric Project

# Upper Oconee Council Meeting

## Tallassee Shoals Hydroelectric Project

- Low impact, run of river facility
- Oconee River, near Athens
- Operated by Tallassee Shoals, LLC
- Capacity of 2.3 MW
- FERC relicensing timeline
  - Current license expires September 30, 2023
  - Draft License Application filed with FERC March 23, 2021
  - **Comments due June 21, 2021**
  - Comments received to be addressed in Final License Application
  - Final License Application filed with FERC September 30, 2021
  - Expect FERC to issue a new license September 30, 2023
  - Questions? Kelly Kirven, [Kelly.Kirven@KleinschmidtGroup.com](mailto:Kelly.Kirven@KleinschmidtGroup.com) or Walt Puryear, Tallassee Shoals LLC, [wpuryear@bellsouth.net](mailto:wpuryear@bellsouth.net).







# Oconee-Ocmulgee-Altamaha (OOA) Basin Environmental Assessment Model (BEAM)





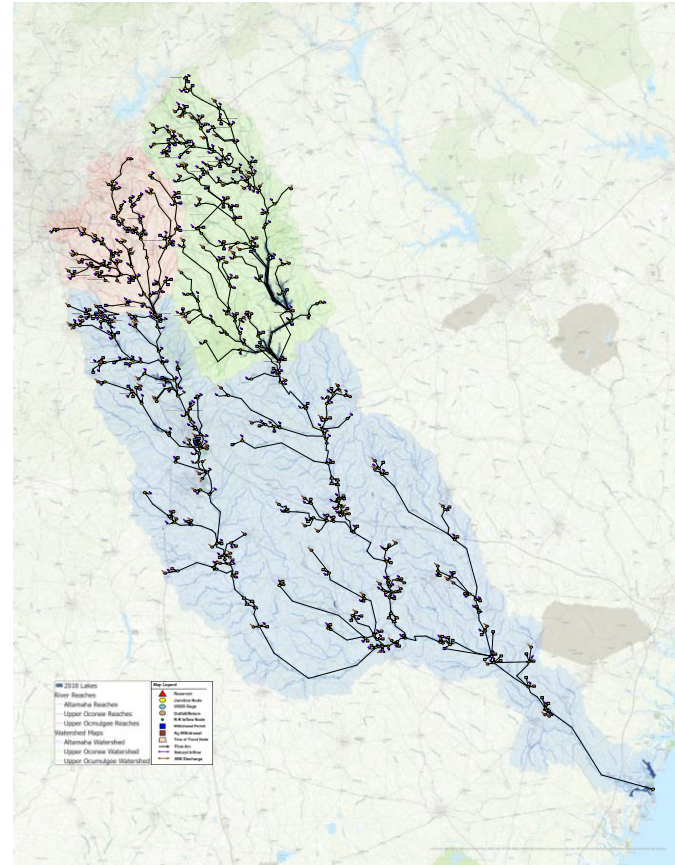
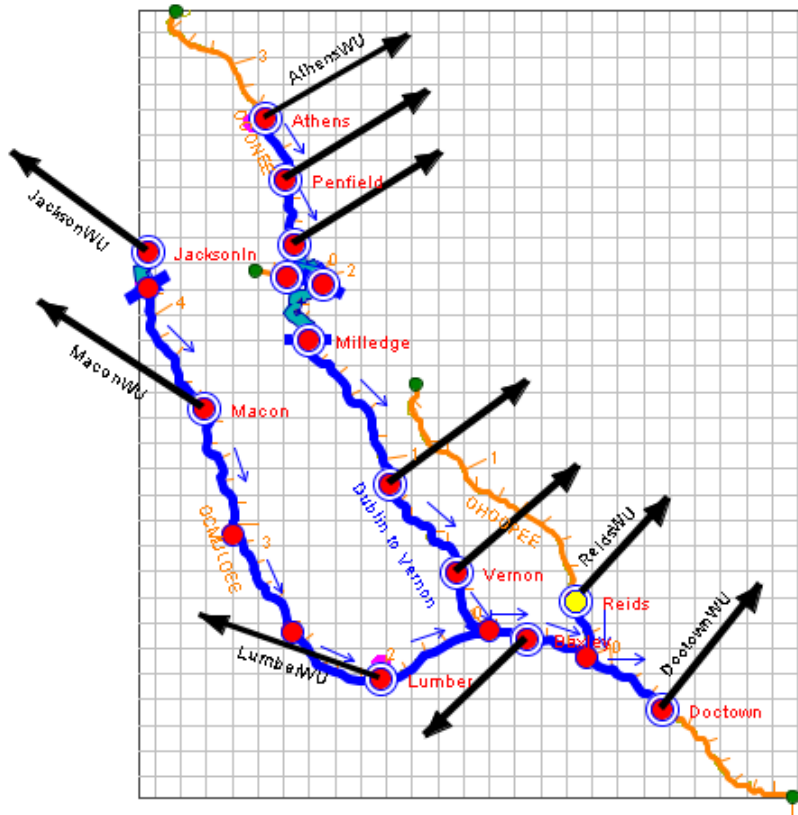
## OOA BEAM Model Development

**Surface Water Availability Resource Assessment:  
Pilot Development for Oconee-Ocmulgee-Altamaha Basin**

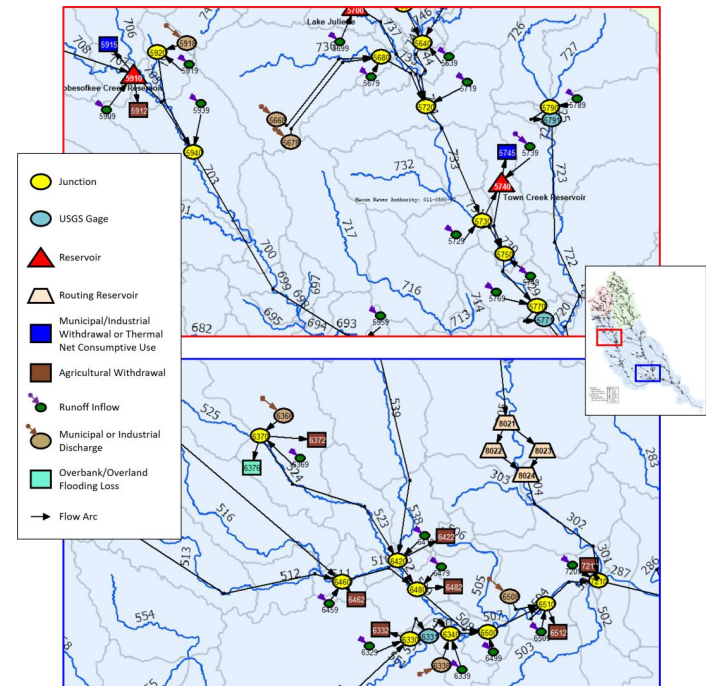
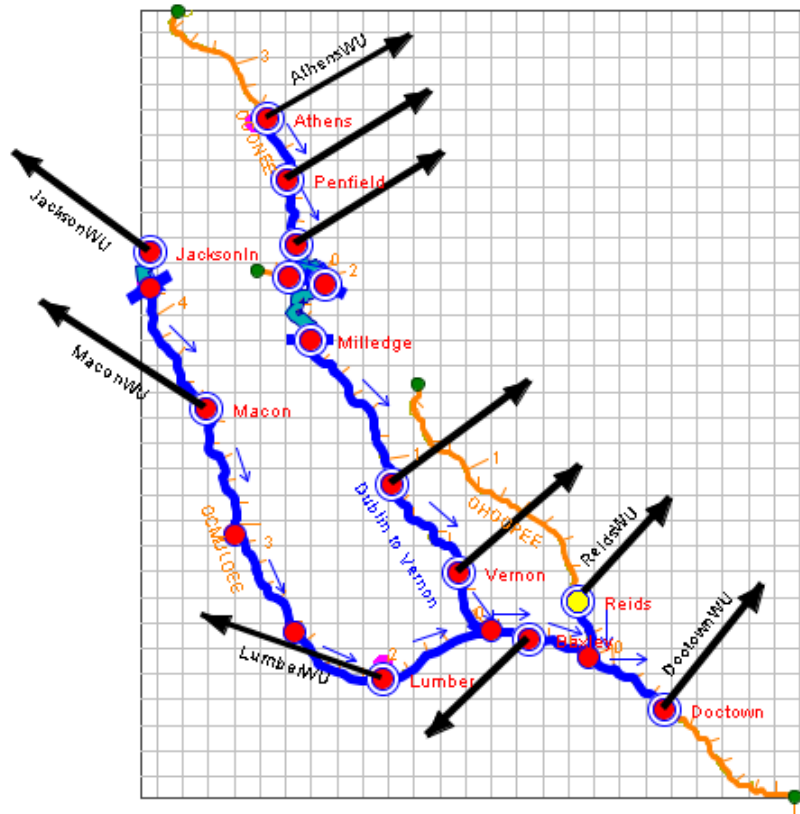
# Outline

- **Basin Environmental Assessment Model (BEAM)**
  - **Model configuration**
  - **Features**
  - **Unimpaired Flow (UIF) development**
- Performance measure (performance metrics) and a hypothetical scenario
- How this affects planning and permitting

# ResSim (Prior Model) and BEAM Schematics

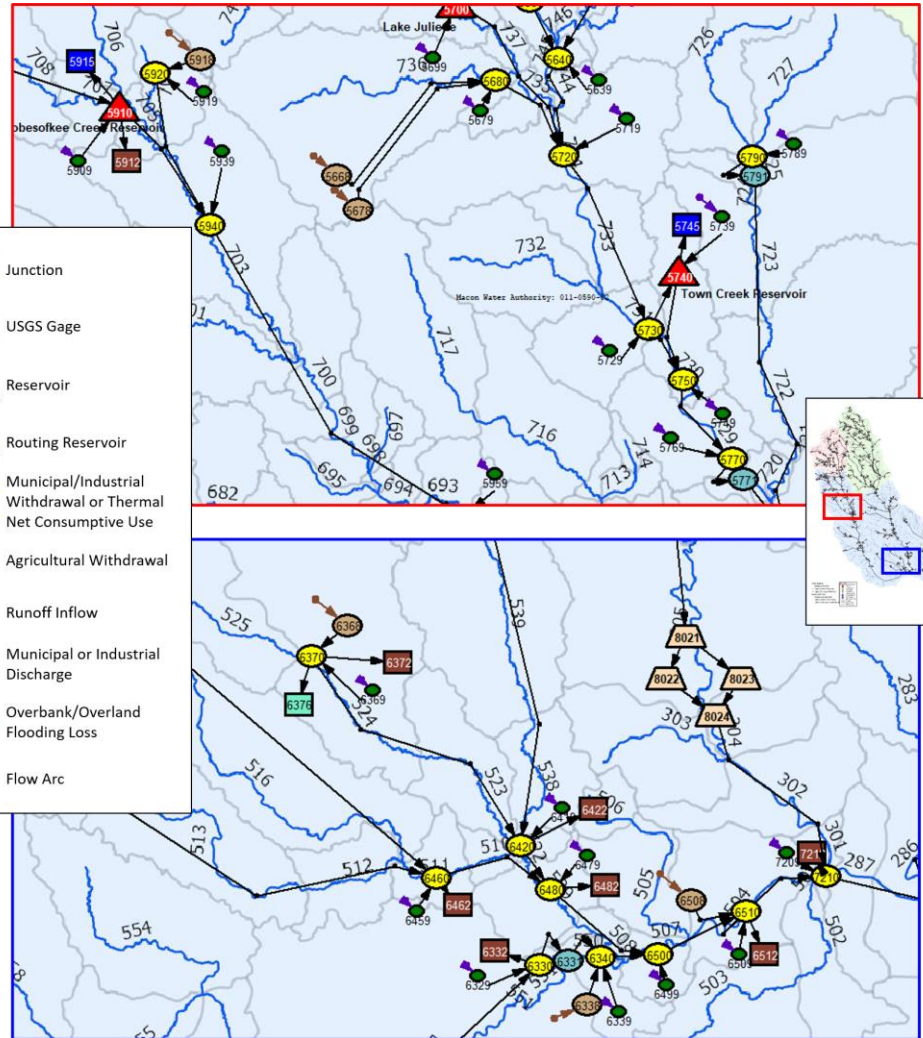
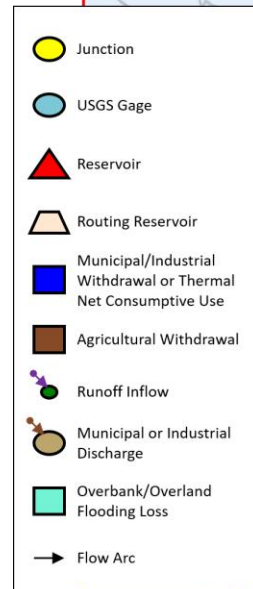
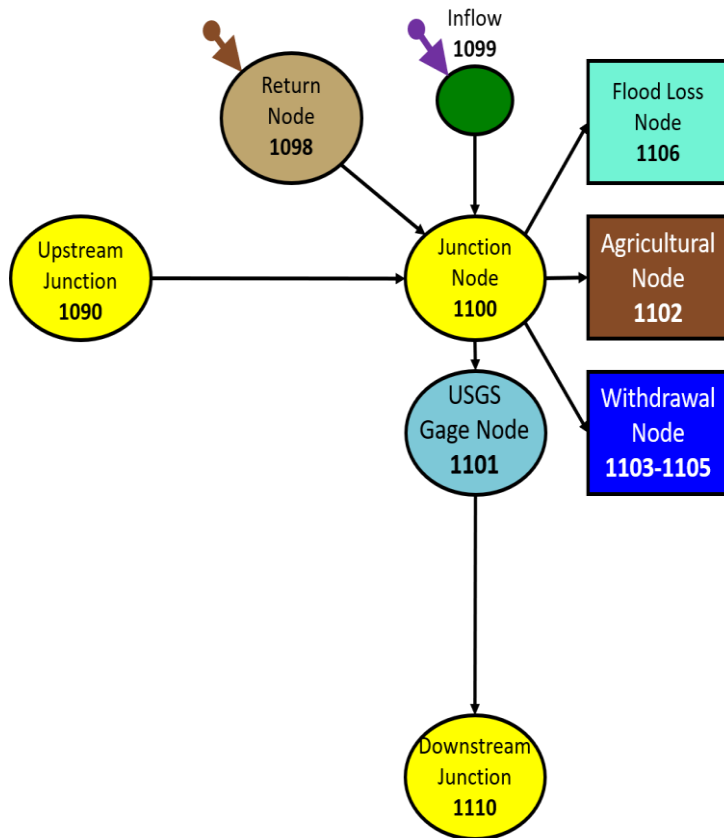


# ResSim (Prior Model) and BEAM (Zoomed In) Schematics

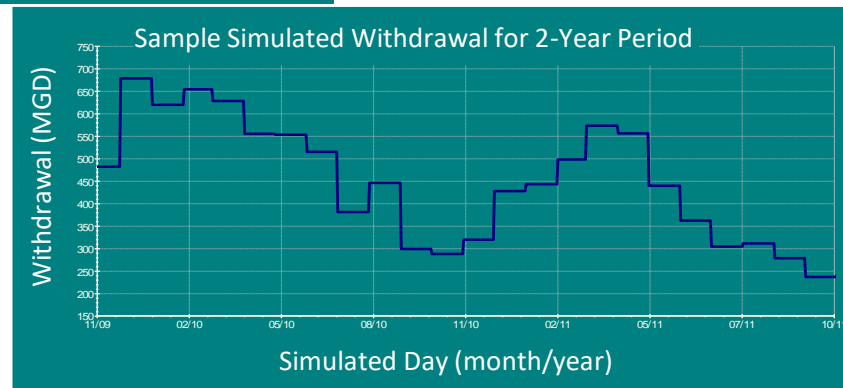
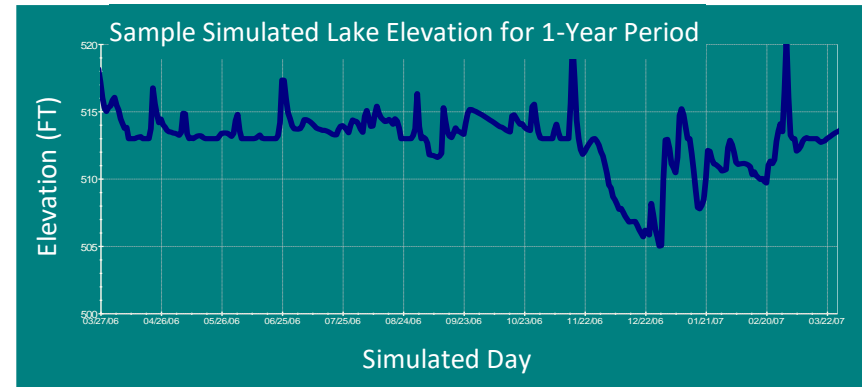
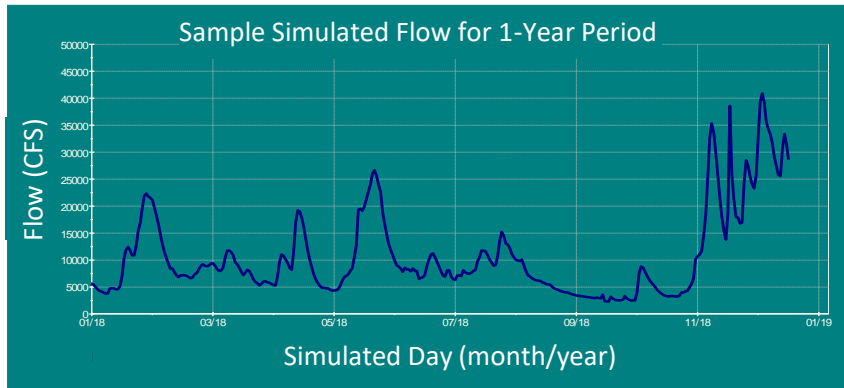




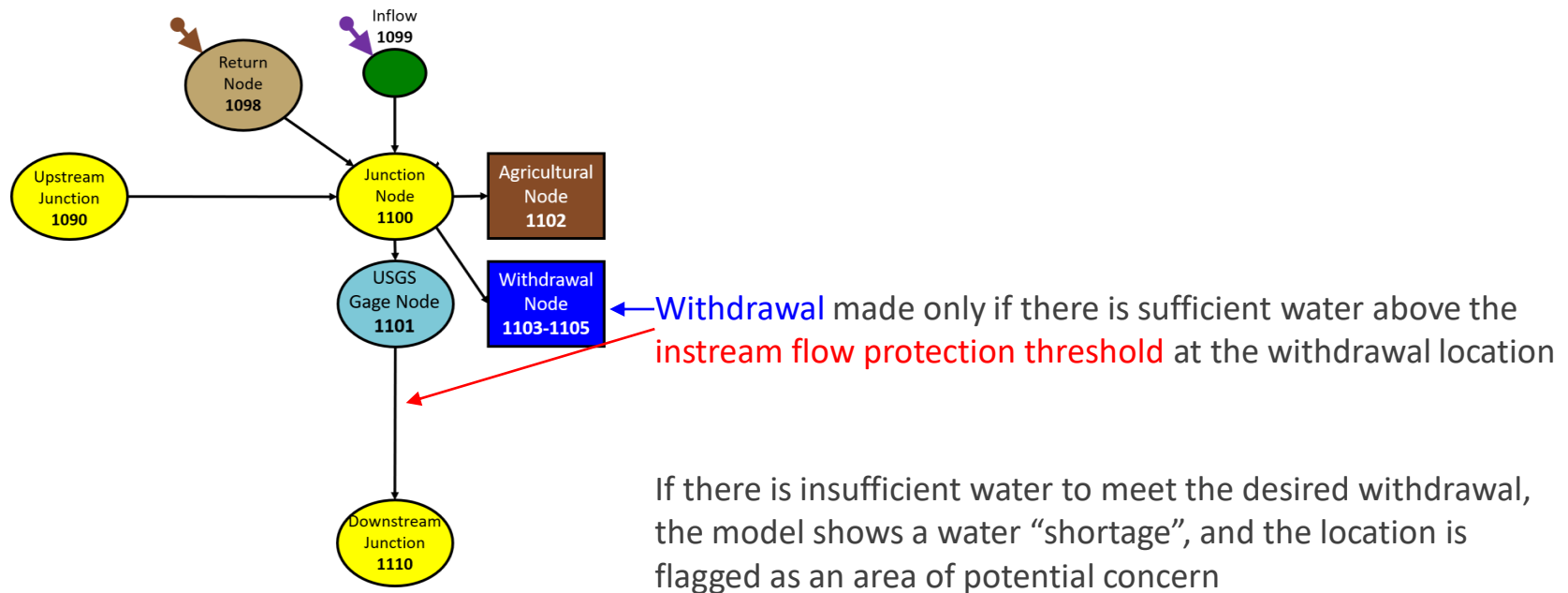
# BEAM Node Types



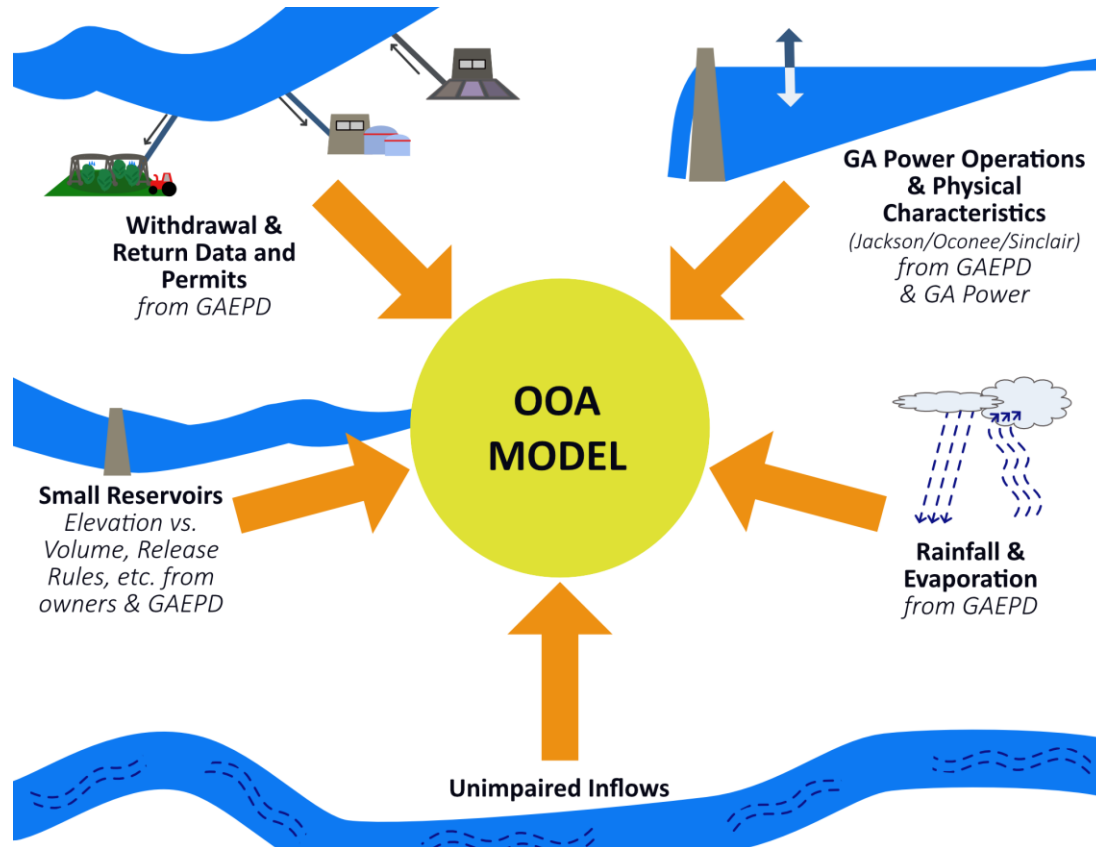
# Sample Model Output



# Instream Flow Protection Thresholds are Met *Before* Withdrawals are Made



# Input Data Sources

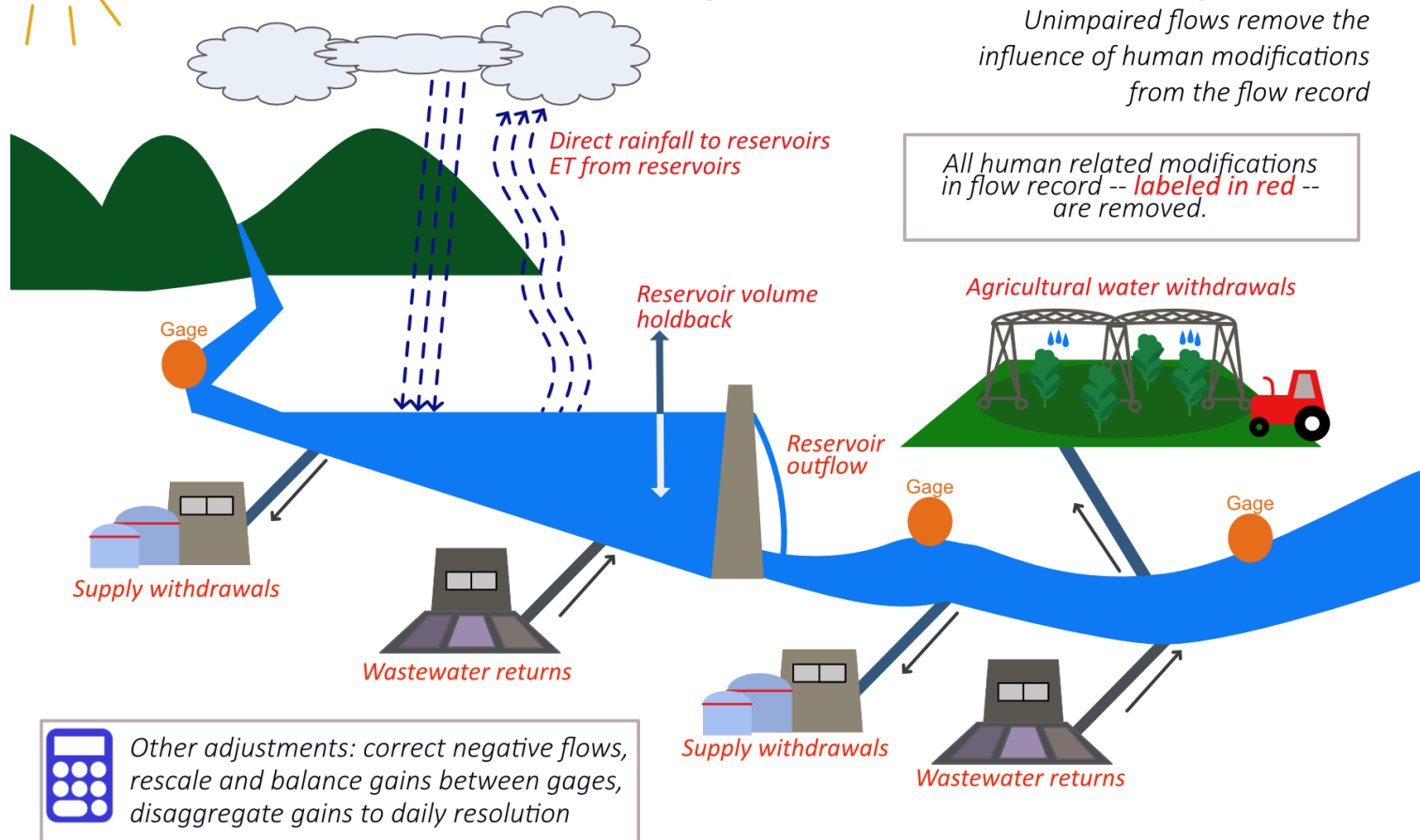






# Unimpaired Flows Development

Unimpaired flows remove the influence of human modifications from the flow record



# Outline

- Basin Environmental Assessment Model (BEAM)
  - Model configuration
  - Features
  - Unimpaired Flow (UIF) development
- **Performance measure (performance metrics) and a hypothetical scenario**
- How this affects planning and permitting

# Performance Metrics for Today's Demonstration

- Water Supply

- Number of days per year that flow falls below the regulatory flow requirement at a wastewater discharge location
- Daily volume of desired withdrawal that cannot be taken from the river because of low flows
- Daily reservoir elevation (reservoir drawdown)
- Percent of months with minimum elevation below a threshold

- Ecological

- Average monthly area of available habitat suitable for specific species of fish
- Percent of years with sufficient floodplain inundation during spawning season

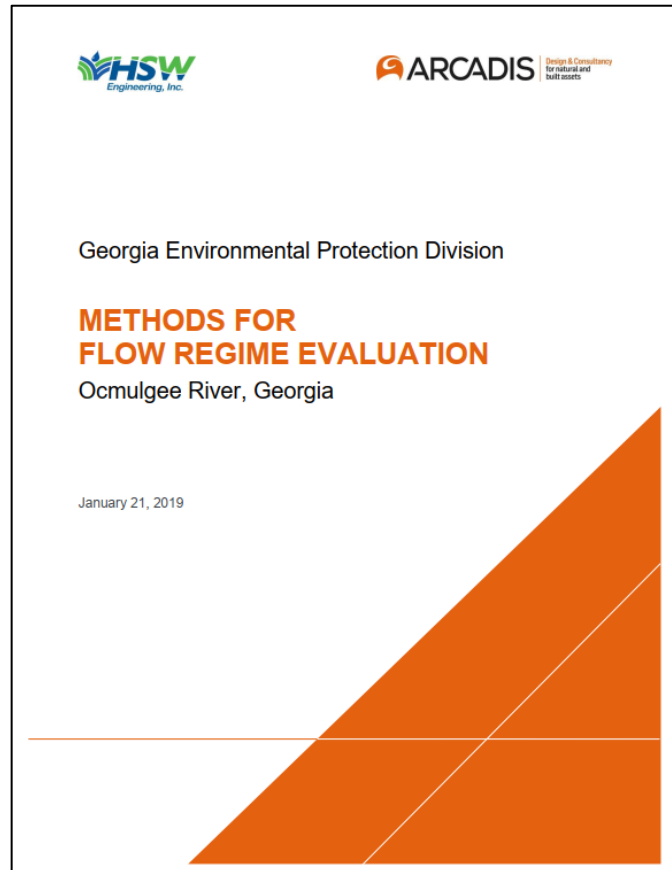
- Recreation

- Number of days per year with sufficient river water level for boating
- Percent of days with elevation below a recreational threshold

- Hydropower

- Average annual peak generation (energy generated during “peak” hours)

# Pilot Study on Ocmulgee River Identified Potential Metrics

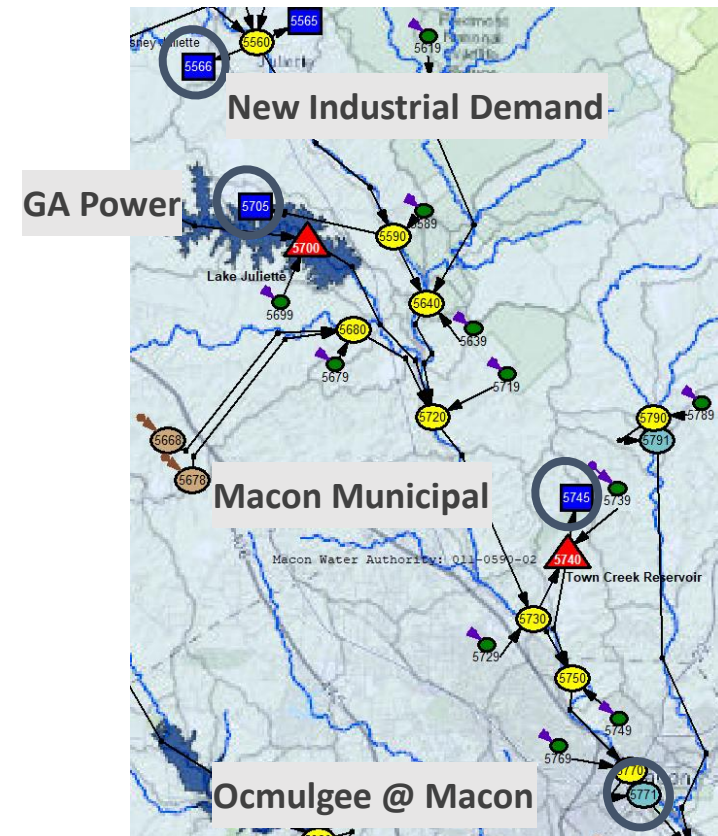


River service	Service metric
Recreation (Paddling)	Paddling during low water conditions (Stage < 6 feet)
Recreation (Boating)	Paddling during low water conditions (Stage < 7.5 feet)
Instream aquatic habitat	AWS index (Shallow Fast, Shallow Slow, Deep Fast)
	Macon site habitat area (Bhattacharjee, 2017)
Instream bottom and channel-side habitat	Frequency of exceeding wetted perimeter threshold Wetted perimeter (feet)
Floodplain wetland habitat	Wetland inundation area (square miles) Frequency of exceeding floodplain inundation threshold

## Ocmulgee Scenario: New Industrial Demand

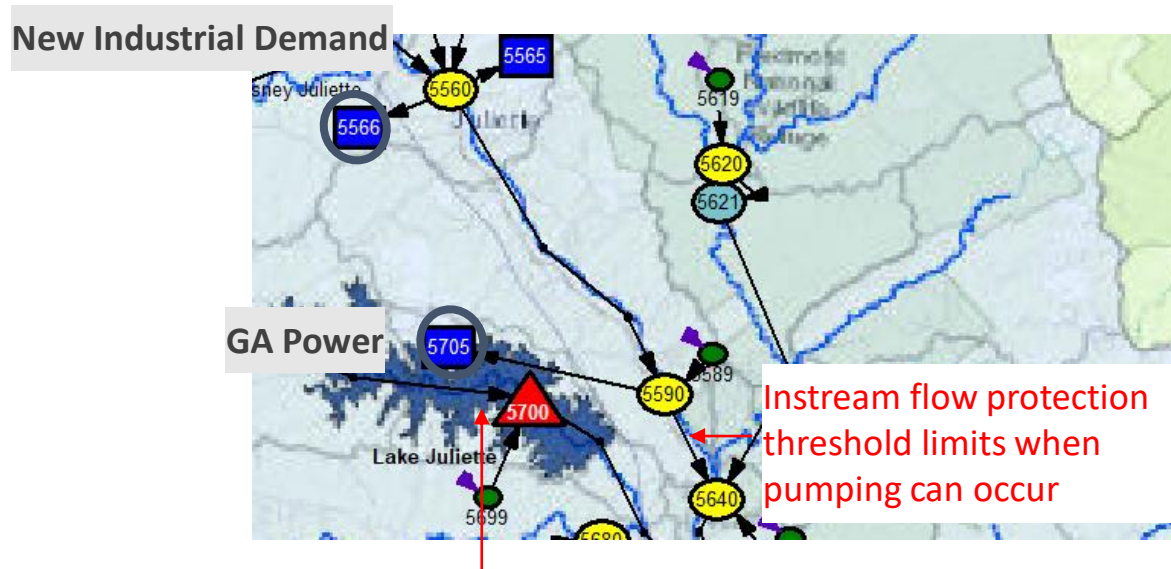
For Informational Purposes Only

- What would happen if a large (50 mgd) new industrial demand was added at Juliette, GA?
- Performance Metrics for downstream impacts
  - Impacts to downstream withdrawals
    - Volume of desired pumping that cannot be pumped from the river because of low flows
    - Daily reservoir levels at Town Creek Reservoir
  - Ocmulgee River at Macon PMs
    - Number of days per year with sufficient river level for boating
    - Instream Aquatic Habitat
    - Boating/Paddling



# Pumping to Lake Juliette May Be Impacted By New Demand

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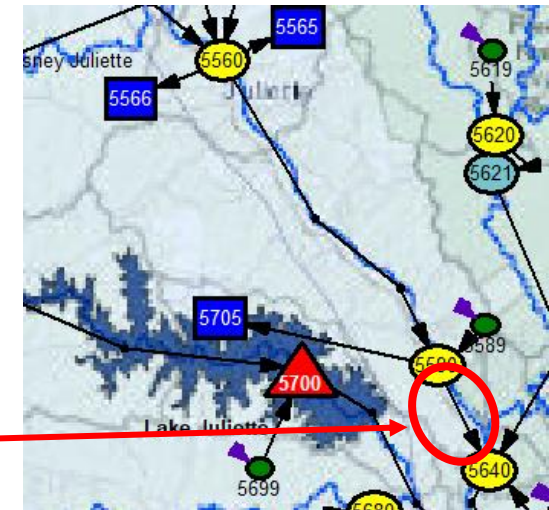
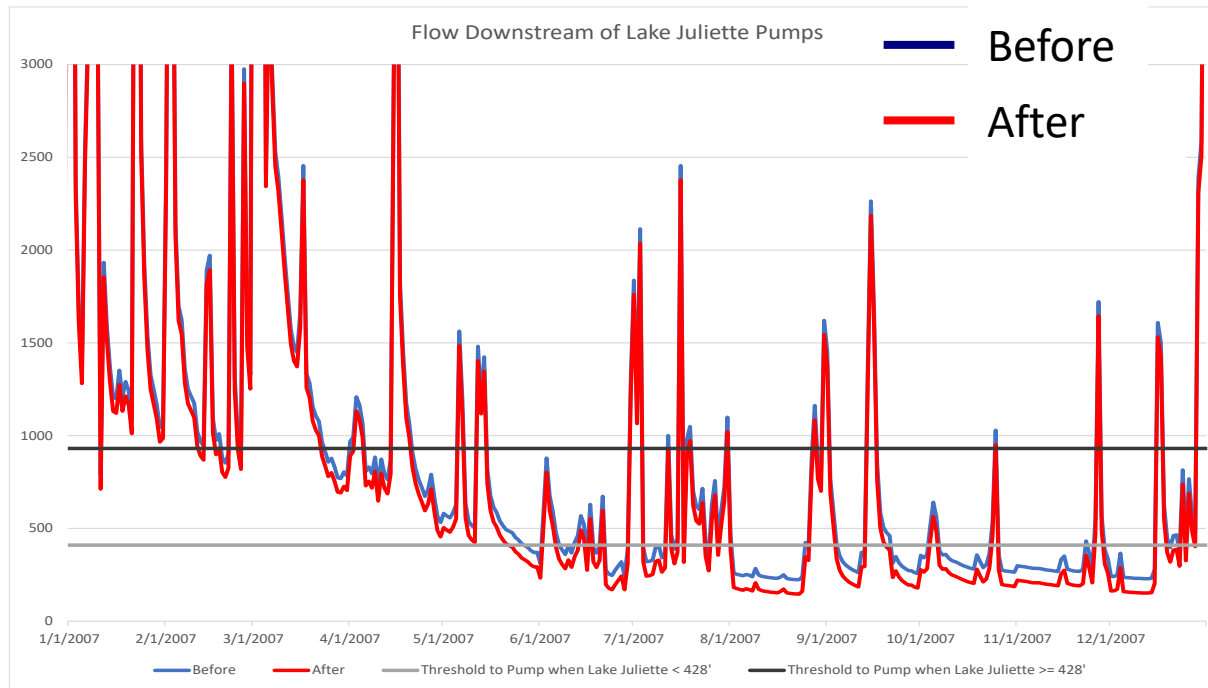
When the elevation at Lake Juliette falls below 428', the instream flow protection threshold is reduced (from 931 cfs to 410 cfs)

# Outline

- Basin Environmental Assessment Model (BEAM)
  - Model configuration
  - Features
  - Unimpaired Flow (UIF) development
- Performance measure (performance metrics) and a hypothetical scenario
- **How this affects planning and permitting**

# Ocmulgee River Flow Downstream of Pumps to Lake Juliette

For Informational Purposes Only



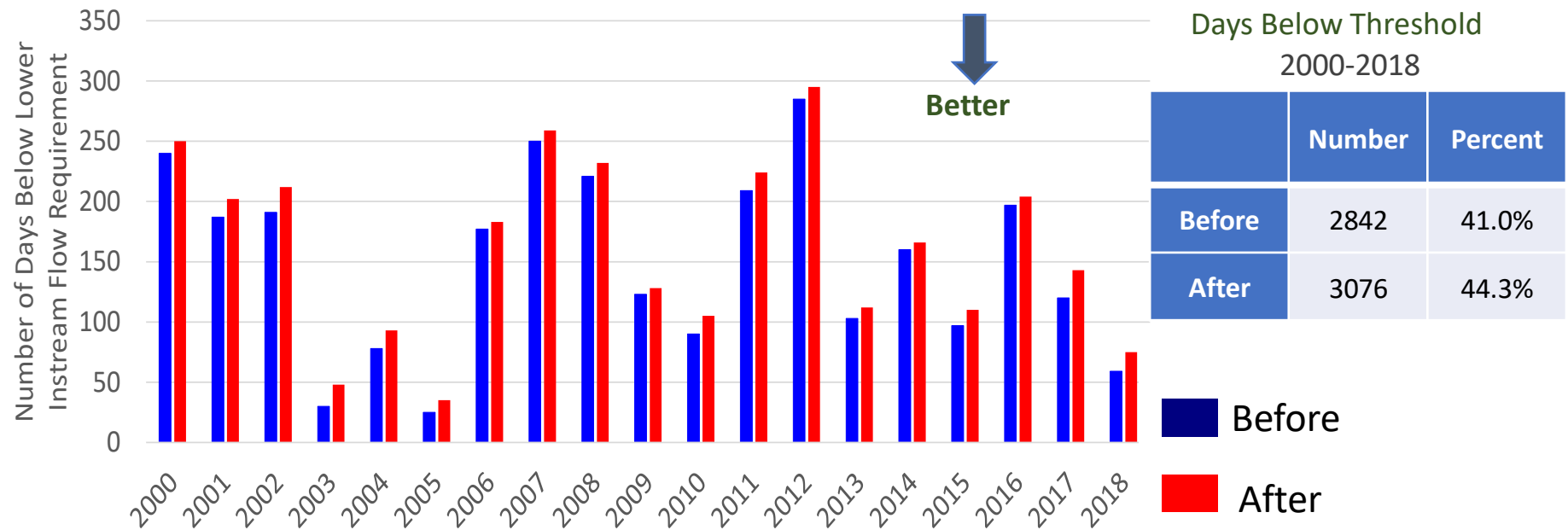
Streamflow threshold to pump when Lake Juliette  $\geq 428'$

Streamflow threshold to pump when Lake Juliette  $< 428'$



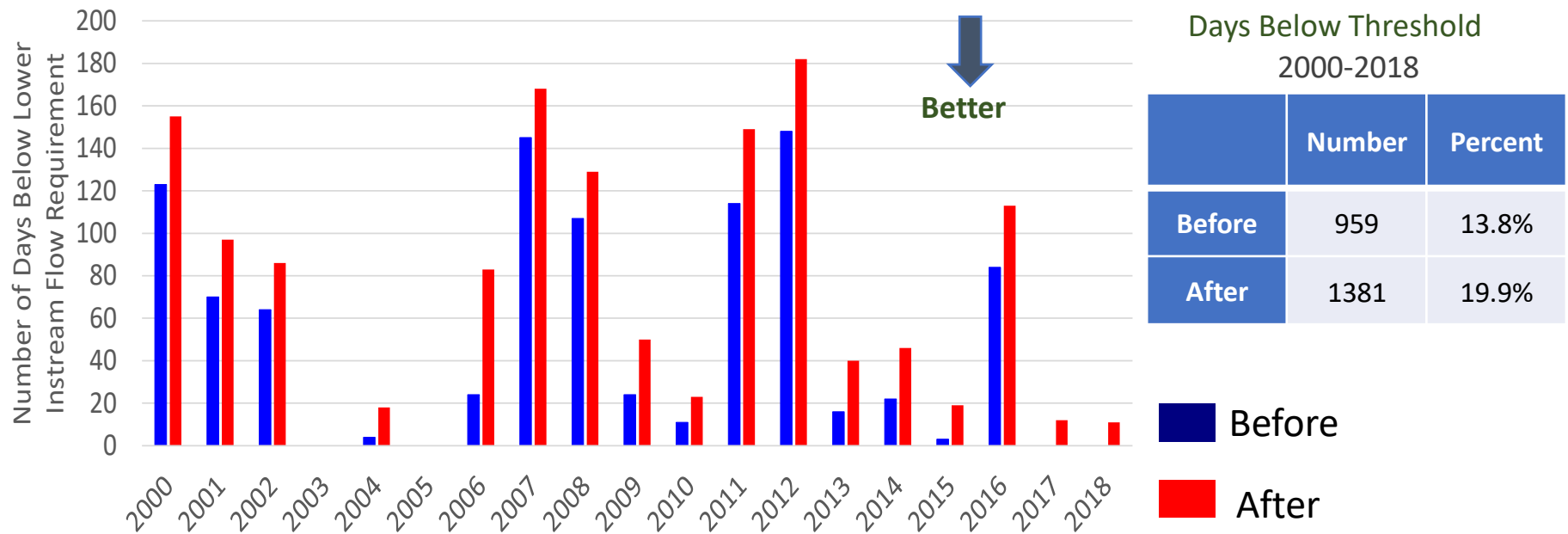
# Number of Days Each Year Ocmulgee River Flow Downstream of Pumps is Less than 931 CFS

For Informational Purposes Only



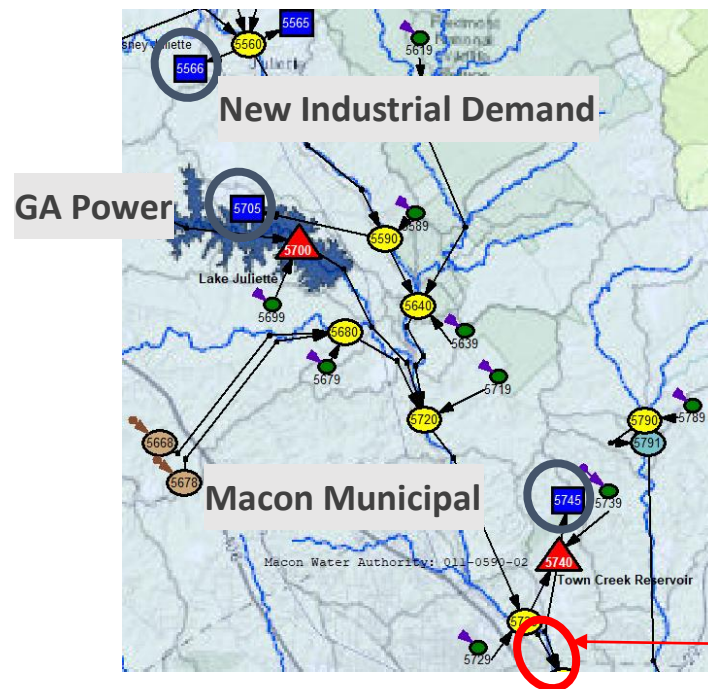
# Number of Days Each Year Ocmulgee River Flow Downstream of Pumps is Less than 410 CFS

For Informational Purposes Only



# Pumping to Town Creek Reservoir May Be Impacted By New Demand

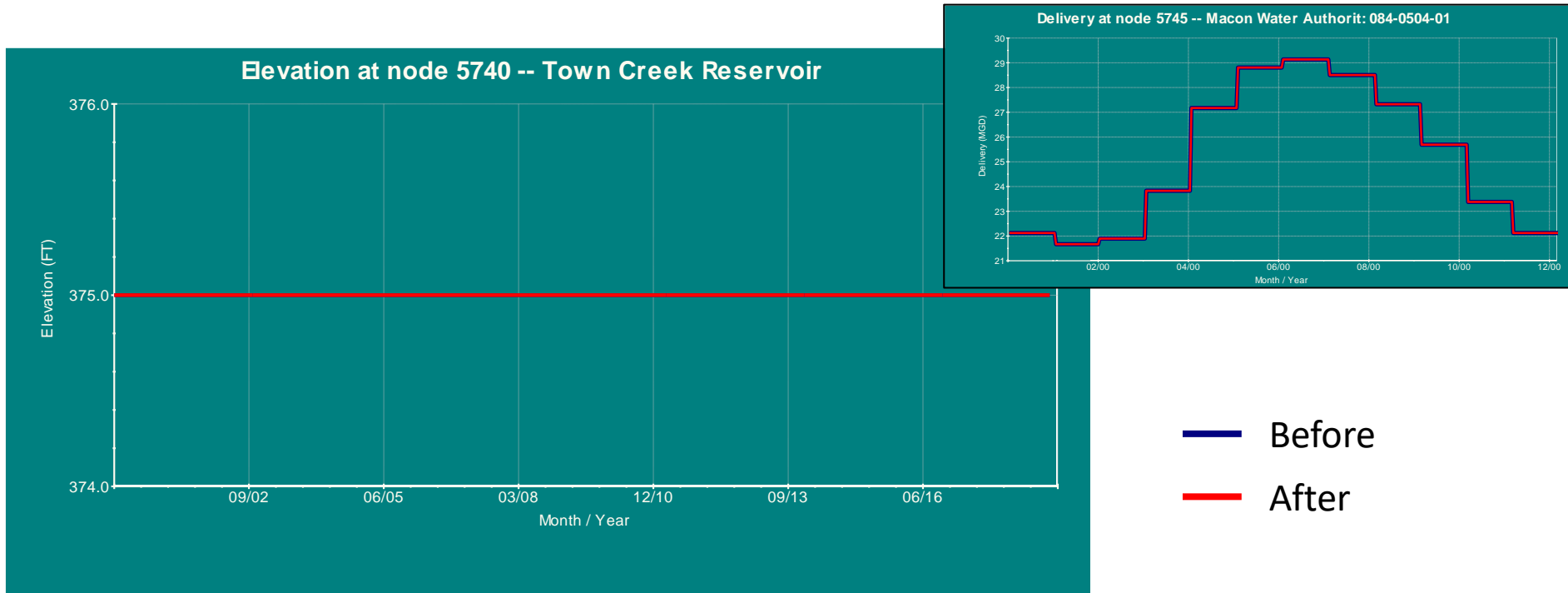
For Informational Purposes Only



Instream flow protection permit allows up to 35 MGD to be pumped any day (regardless of flows)

# Ocmulgee Scenario: No Impacts to Town Creek Reservoir

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- Pumping to reservoir is exempt from instream flow protection threshold if pumping is below 35 mgd

# Using Flow to Create Boating/Paddling Performance Metric

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- Convert stream flow to stage

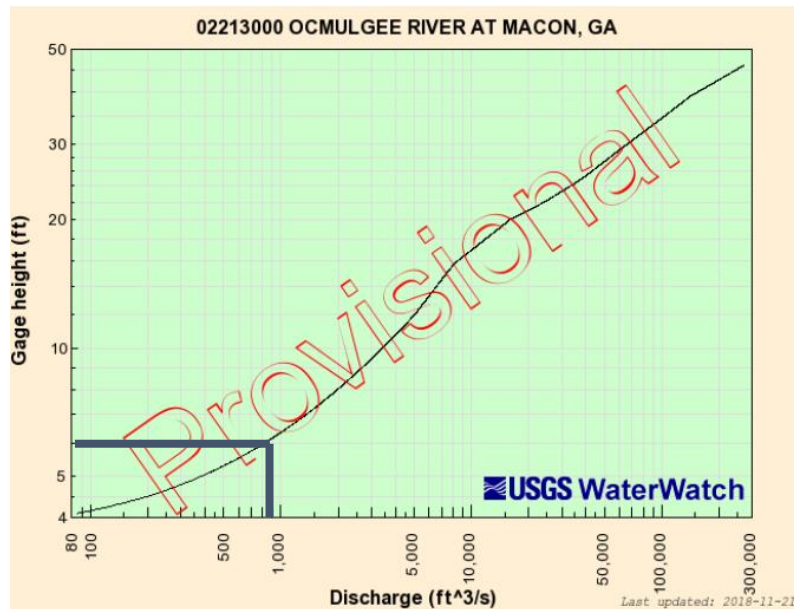
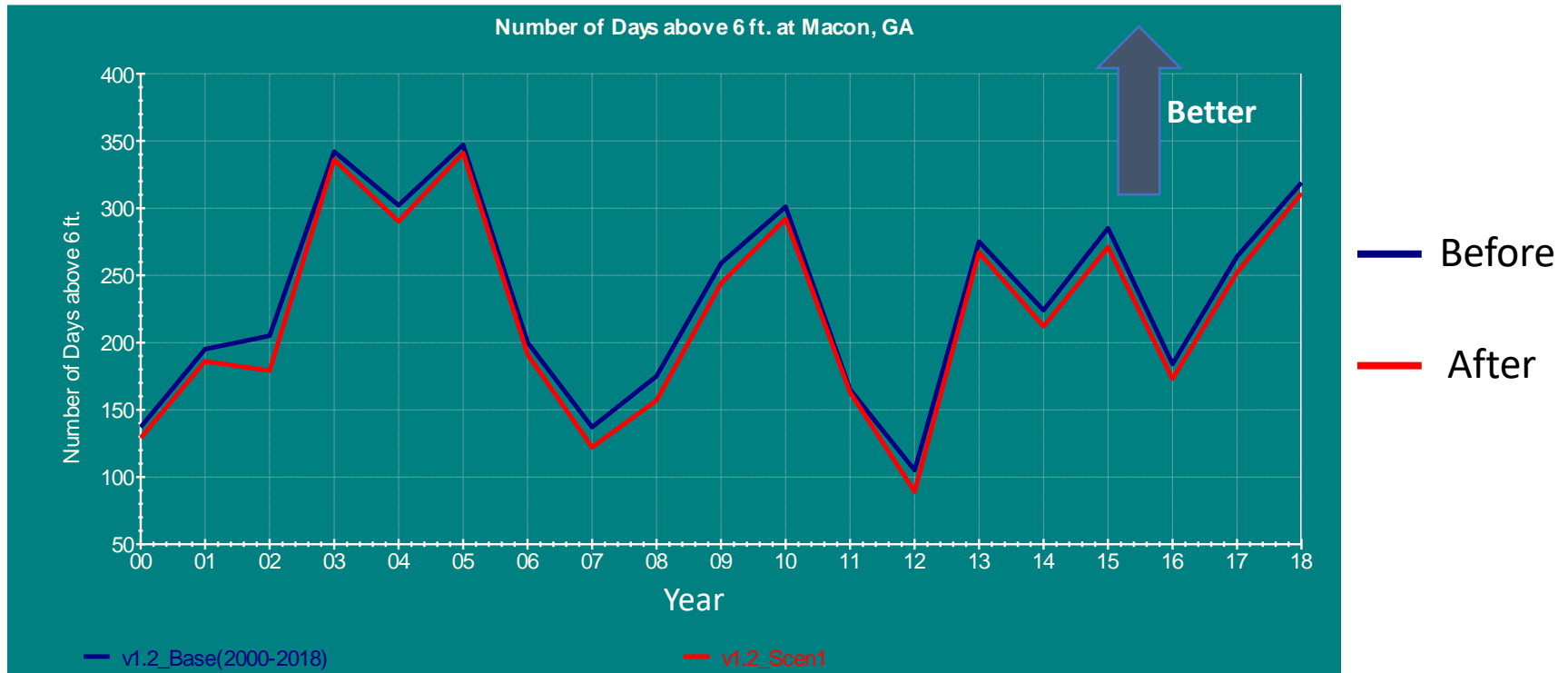


Table 11. Low-flow metrics for Ocmulgee River recreational boating

River Service	Metric	Source
Kayaking/canoeing	Amount of time that kayaking or canoeing is not ideal (i.e., gage height $\leq 6.0$ feet) due to low water conditions	Personal communication with Kathleen O' Neal (Ocmulgee Outdoor Expeditions)
Boating	Amount of time that boating is not ideal (i.e., gage height $\leq 7.5$ feet) due to low water conditions	Viable stage for kayaking/canoeing + 1.5 feet (average shaft length of short- and long-shaft small engines); (Iboats, 2009)

# Performance Metric at Macon, GA for Boating

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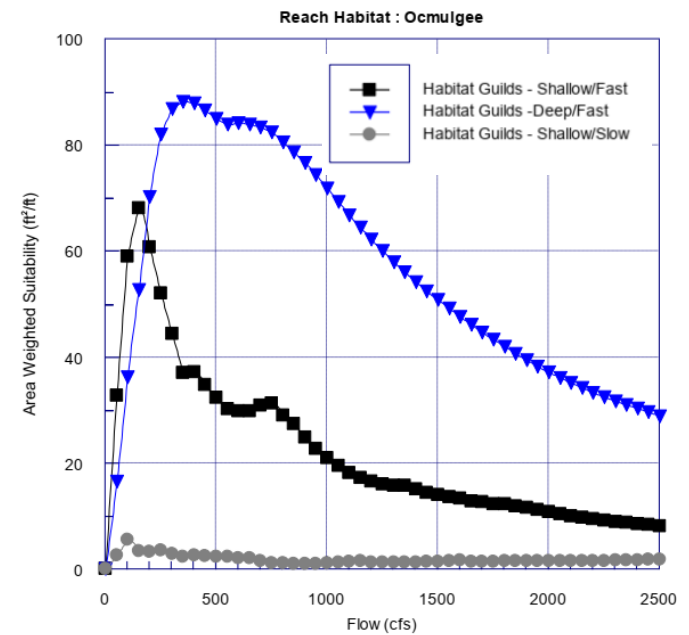


# Reach Habitat

- Shallow/Fast
  - Species: Spottail Shiner and Bluehead Chub



- Deep/Fast
  - Species: Largemouth Bass

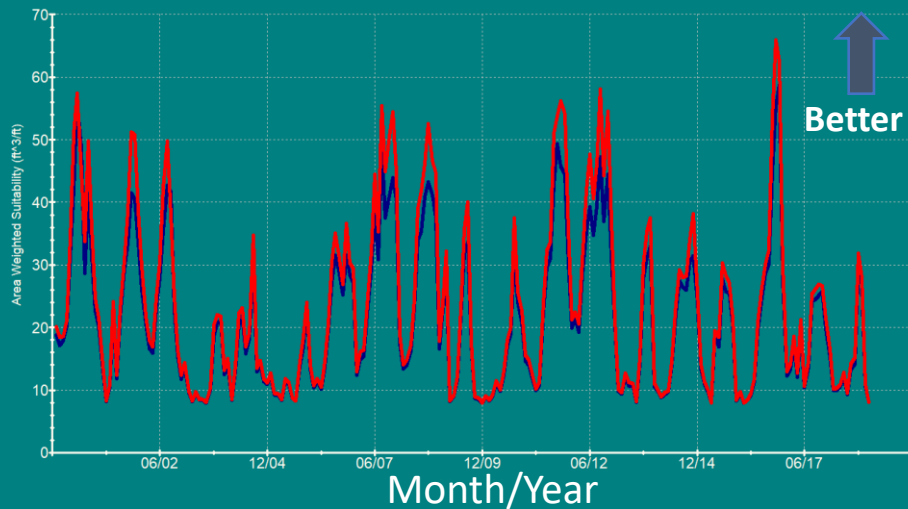


# Ocmulgee Scenario: Performance Metrics at Macon, GA

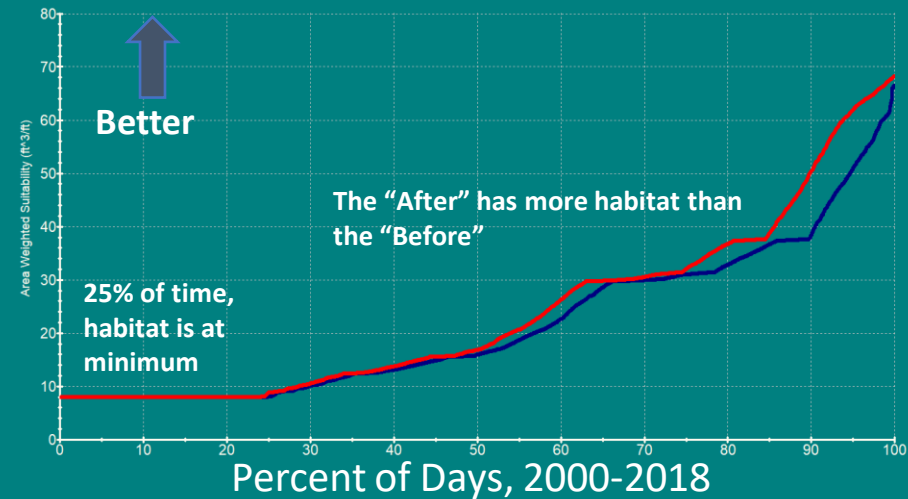
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Shallow/Fast Habitat Guild Area Weighted Suitability - Monthly Average



Shallow/Fast Habitat Guild Area Weighted Suitability - Probability at Macon, GA



— Before

— After

[https://en.wikipedia.org/wiki/Spottail\\_shiner#/media/File:Notropis\\_hudsonius.jpg](https://en.wikipedia.org/wiki/Spottail_shiner#/media/File:Notropis_hudsonius.jpg)  
[https://www.inaturalist.org/guide\\_taxa/490641](https://www.inaturalist.org/guide_taxa/490641)

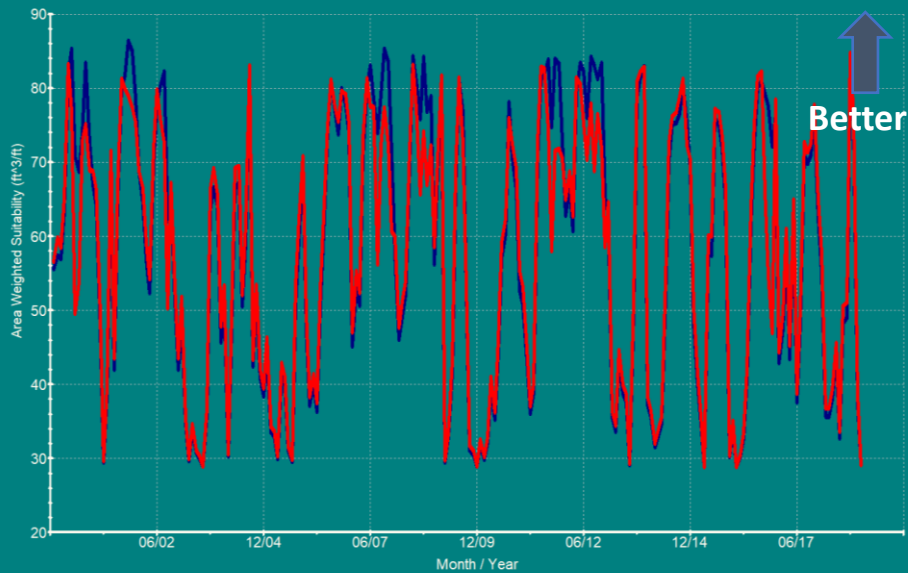


# Ocmulgee Scenario: Performance Metrics at Macon, GA

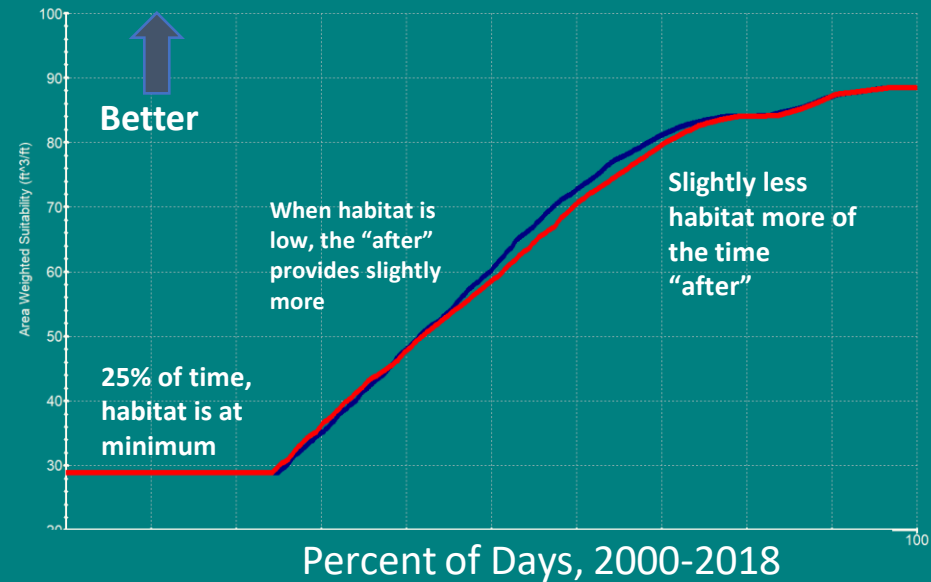
For Informational Purposes Only



Deep/Fast Habitat Guild Area Weighted Suitability - Monthly Average



Deep/Fast Habitat Guild Area Weighted Suitability - Probability at Macon, GA



— Before

— After

[https://www.fws.gov/fisheries/freshwater-fish-of-america/largemouth\\_bass.html](https://www.fws.gov/fisheries/freshwater-fish-of-america/largemouth_bass.html)

# Questions?

Georgia Environmental Protection Division  
Watershed Protection Branch  
Water Supply Program

[Wei.Zeng@dnr.ga.gov](mailto:Wei.Zeng@dnr.ga.gov)

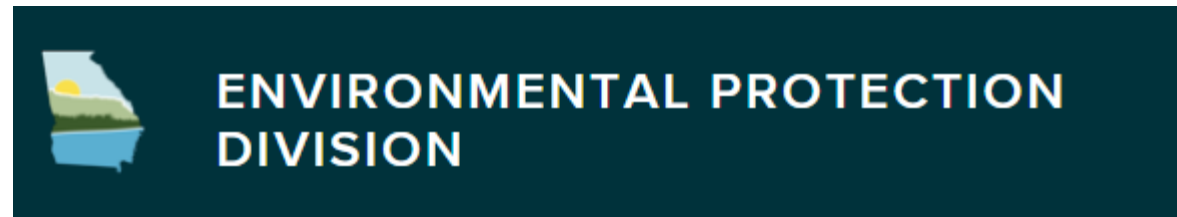
404-463-2883

Acknowledging Hazen and Sawyer team for  
developing BEAM model and for developing material  
for this presentation

# Upper Oconee Council Meeting

- **Seed Grant Updates**

- “Flow-dependent benefits and values of water resources in the Upper Oconee Region” – Dr. Gail Cowie, GWPPC
- Seed Grant/ Section 319(h) Grants – Ania Truszczynski, EPD



# Flow-dependent benefits and values of water resources in the Upper Oconee Region

Gail Cowie

4/21/21



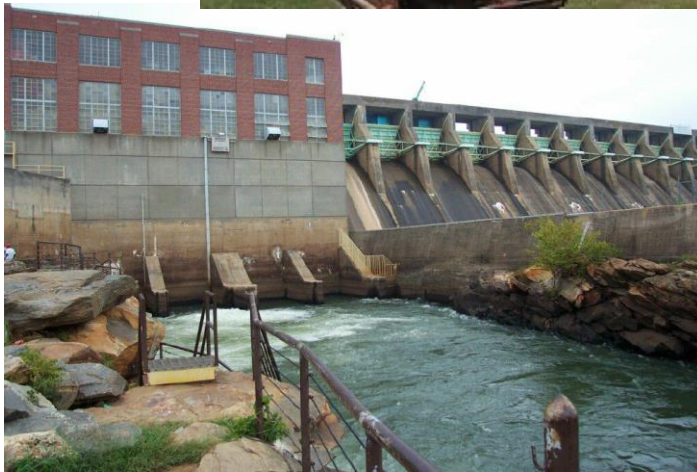
## What does 'benefits and values' mean?

- Range of benefits or value that people gain from streams, rivers, and lakes
- Created by
  - Use of water and waterbodies
  - Use of land adjacent to waterbodies
  - Natural processes that maintain or enhance other benefits and values





## Use of water and waterbodies



## Use of land adjacent to waterbodies





## Natural processes that maintain or enhance value

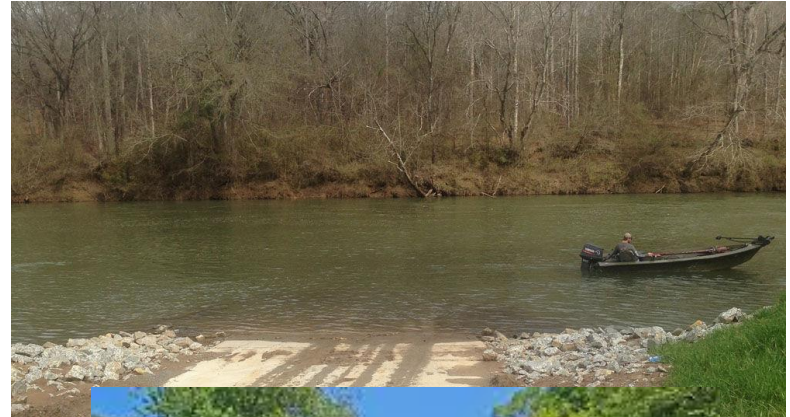




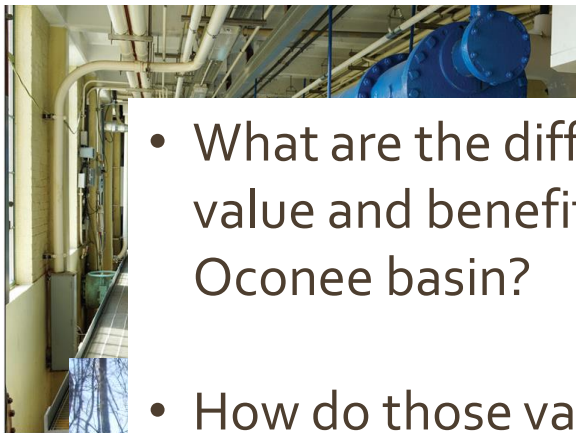
## What does 'flow-dependent' mean?

- Value or benefit varies with the amount of water in a stream, river, or lake

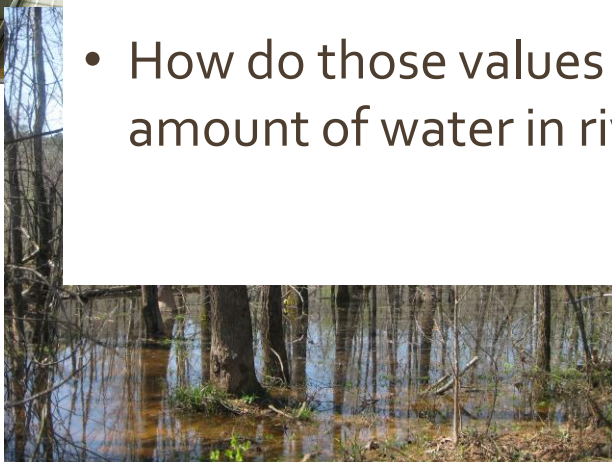
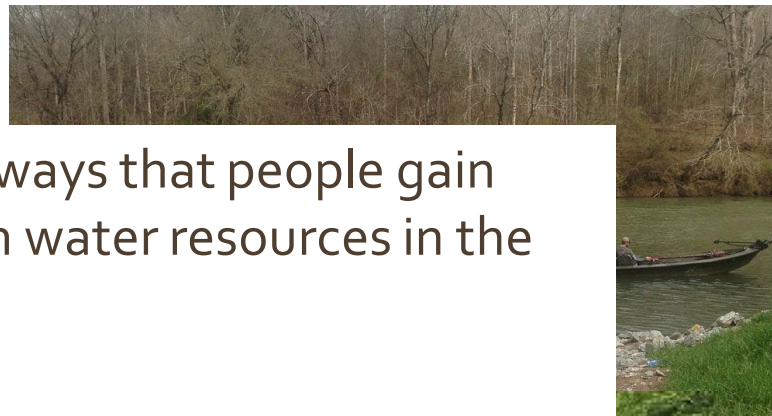
## What does 'flow-dependent' mean?



## Two questions to be answered



- What are the different ways that people gain value and benefits from water resources in the Oconee basin?
- How do those values and benefits depend on amount of water in rivers and lakes?



## Why?

Provide basin-specific information

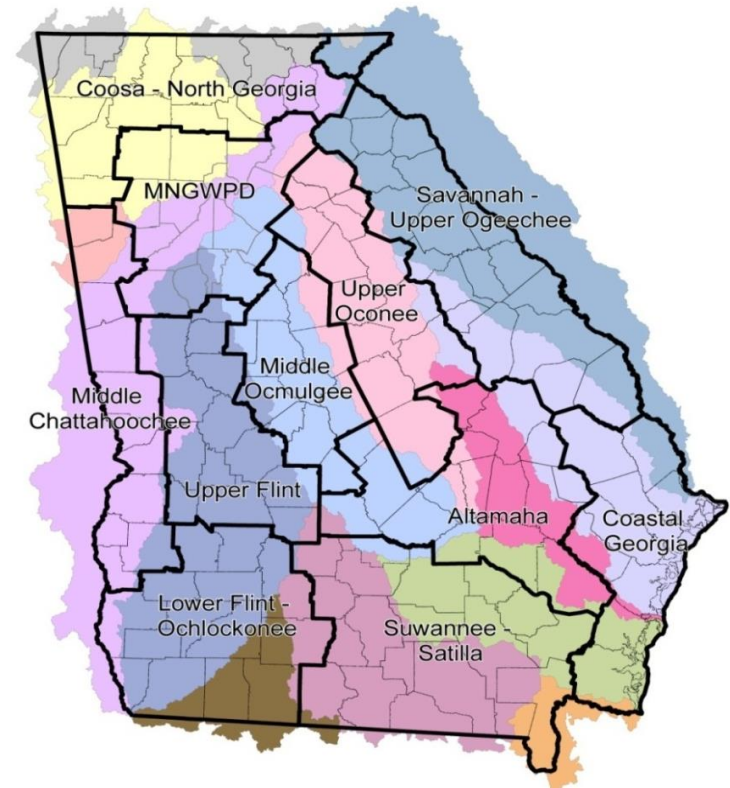
- For Council's use in plan review and revision
- For EPD use in modeling of surface water availability





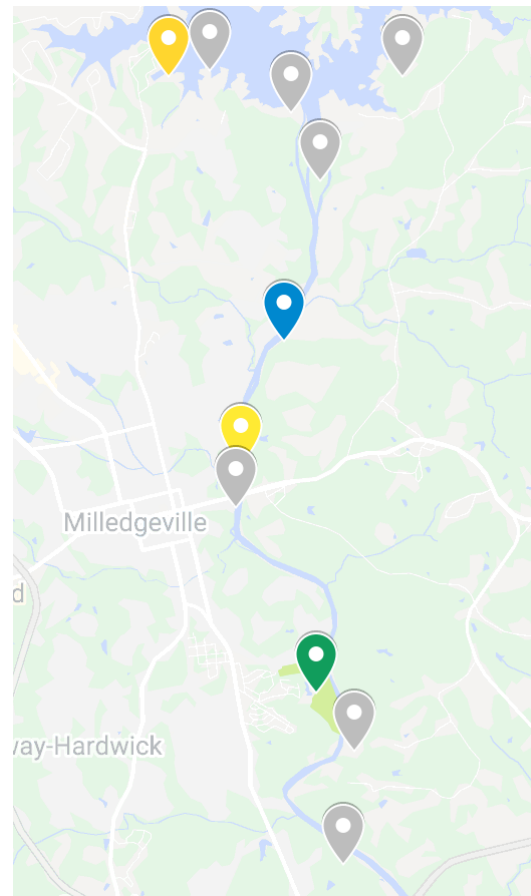
## How?

- Focus on the Oconee River basin
- Look at large rivers and major tributaries
- Compile information from
  - Scientific and technical studies
  - Water users across the basin



## Input from water users

- Round 1
  - Gather initial input
  - May-June
  - Online with phone option
- Round 2
  - See results and provide feedback
  - In-person meetings
  - August



## What's next for engagement with water users?

- Outreach to recruit participants
- Send orientation materials
- Hold three online meetings
- Collect input



## What's next?

- Outreach to recruit participants
- Send orientation materials
- Hold three online meetings
- Collect input
- **How can you help?**
  - Provide names and contact info for potential participants
  - To Gail Cowie  
[gcowie@h2opolicycenter.org](mailto:gcowie@h2opolicycenter.org)  
or 706-338-0805





# Seed Grant/Section 319(h) Grant Updates

Ania Truszczynski, Georgia EPD



# Grant Updates

- Timelines
  - 319(h) application deadline April 30, 2021
  - Seed Grant announcement July 2021
    - No anticipated changes
- Process Changes!
  - Zengine™ by WizeHive

Ania Truszczyński  
Georgia Environmental Protection Division  
(470) 657-5739  
[anna.truszczyński@dnr.ga.gov](mailto:anna.truszczyński@dnr.ga.gov)

# Upper Oconee Council Meeting



## Georgia's State Water Plan

### **Public Comment Period**

- Please limit comments to 3 minutes total
- Council encourages written submission of comments as well

[www.georgiawaterplanning.org](http://www.georgiawaterplanning.org)

# Upper Oconee Council Meeting

## Wrap Up

- Seed Grant Applications
  - Look for announcement in June; deadline Oct. 31
  - Contact Laura or Ania
- Next Council Meeting
  - Potential dates (~July 2021; ~Nov 2021)
  - In person location(s)? Hybrid?
  - Chair/Vice-Chair elections in July following new member orientation
  - Contact Laura with any ideas for topics or speakers

# Thank You!

Questions? Comments? Need  
More Information?

[Laura.Hartt@jacobs.com](mailto:Laura.Hartt@jacobs.com)

[Anna.Truszczyński@dnr.ga.gov](mailto:Anna.Truszczyński@dnr.ga.gov)