



# Current Trends in Water Quality and Treatment

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April 24, 2024

ACF WATERS CONFERENCE

Sustaining Communities, Protecting Ecosystems

Albany, Georgia

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# Upper Watershed Water Supply Issues

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- A. Storage Contracts and Subcontracts
- B. Withdrawals
- C. Water treatment
- D. Highly treated wastewater returns
- E. Non-point source

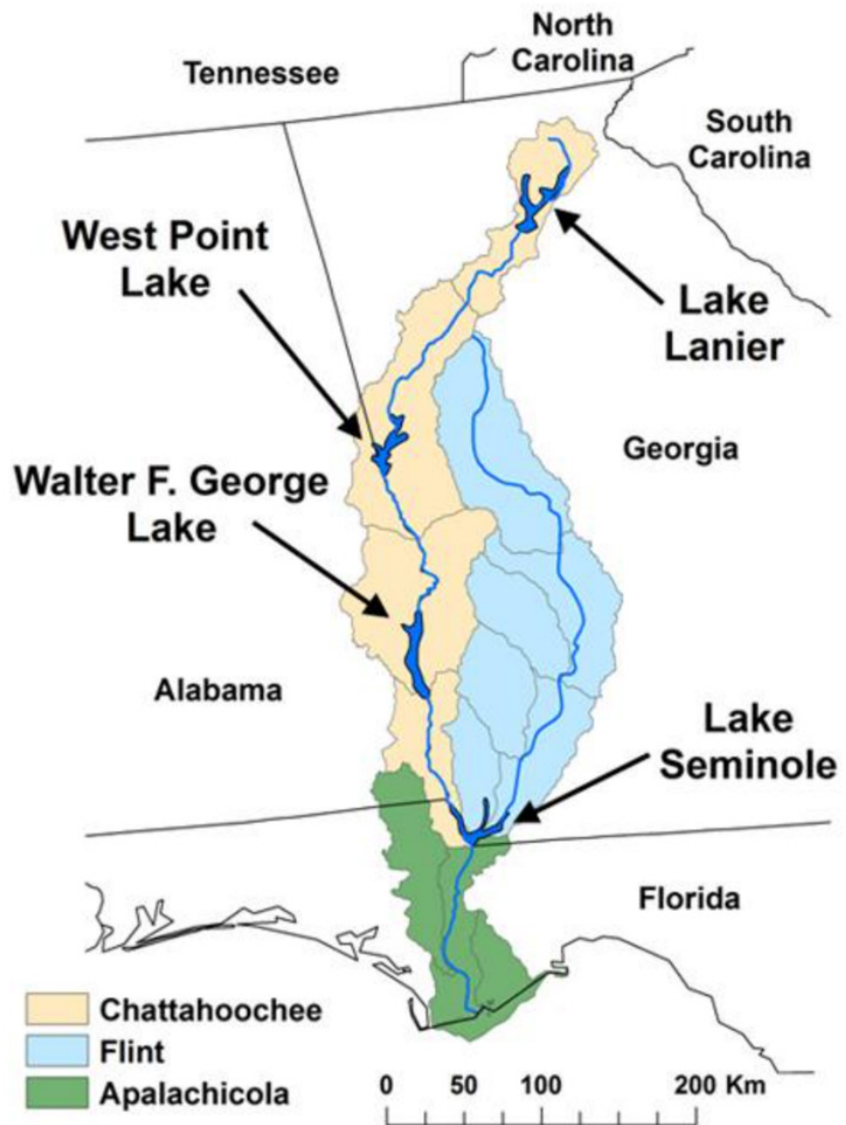


Figure 1. The ACF basin and major reservoirs.  
Credit: Christopher J. Martinez

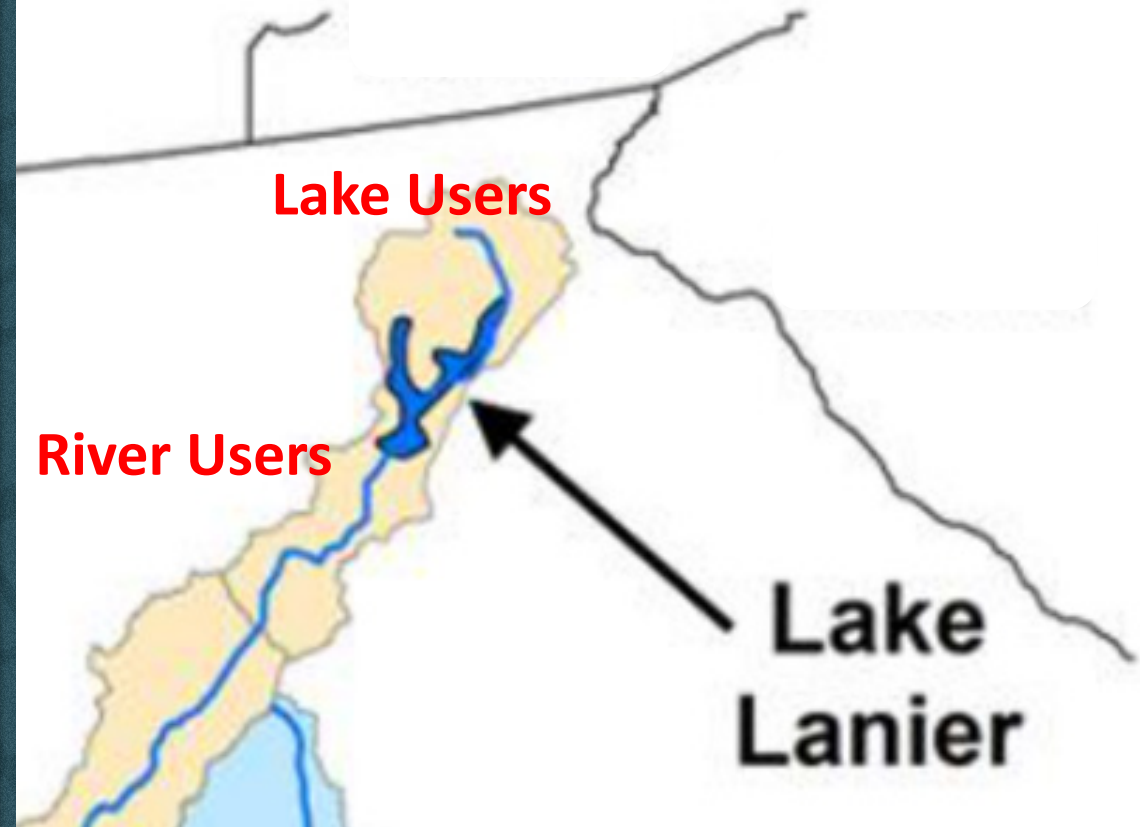


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# Water Supply Uses

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- Lake Users
  - Buford
  - Cumming
  - Forsyth County
  - Gainesville
  - Gwinnett County
- River Users
  - Atlanta
  - Atlanta-Fulton
  - Cobb Marietta Water Authority
  - Cobb County
  - DeKalb County
  - Fulton County
  - Gwinnett County



# Lake Lanier





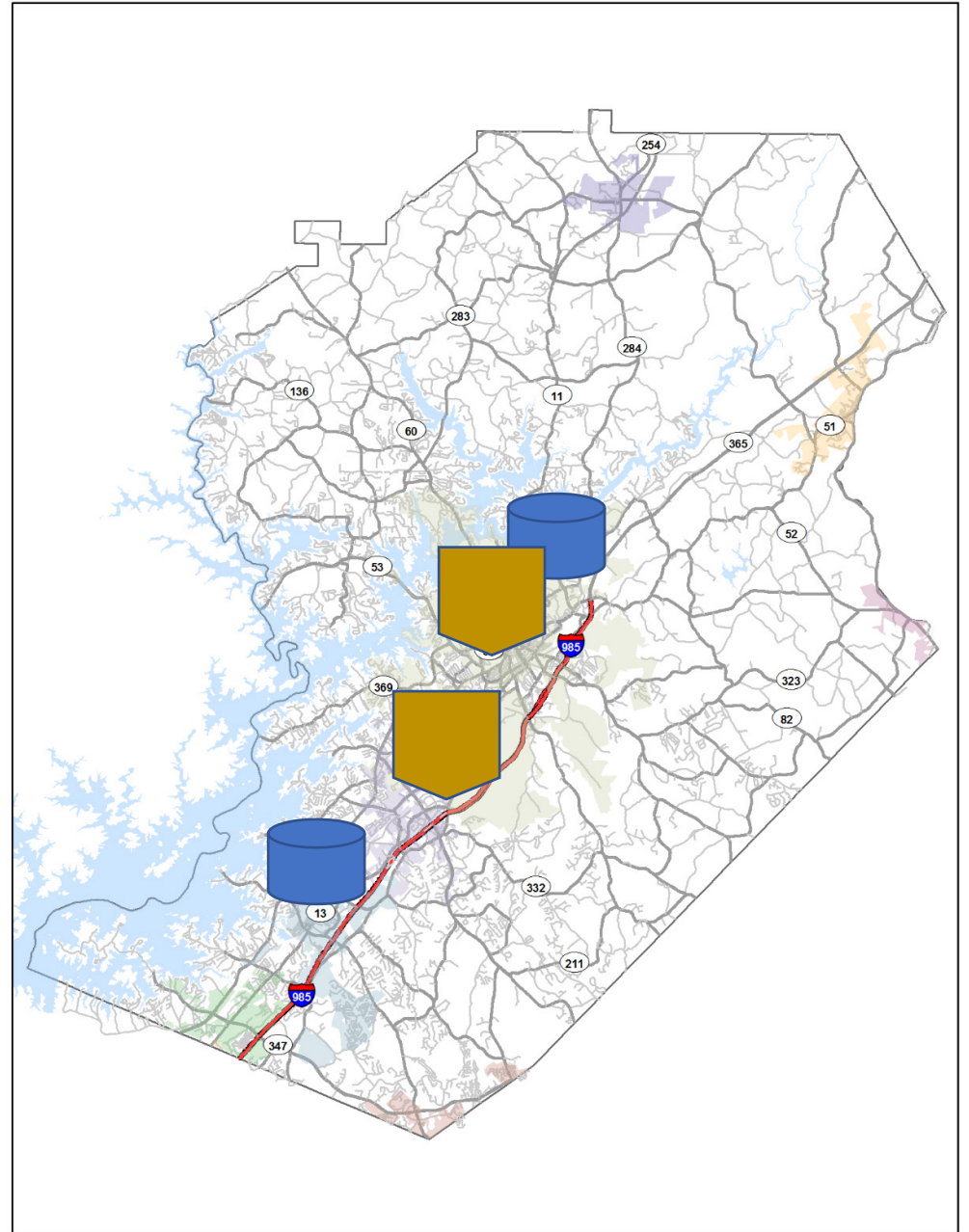
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# Gainesville & Lake Lanier

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- Water Treatment Plants 
- Wastewater Treatment Plants 
- Stormwater/Non-Point Source

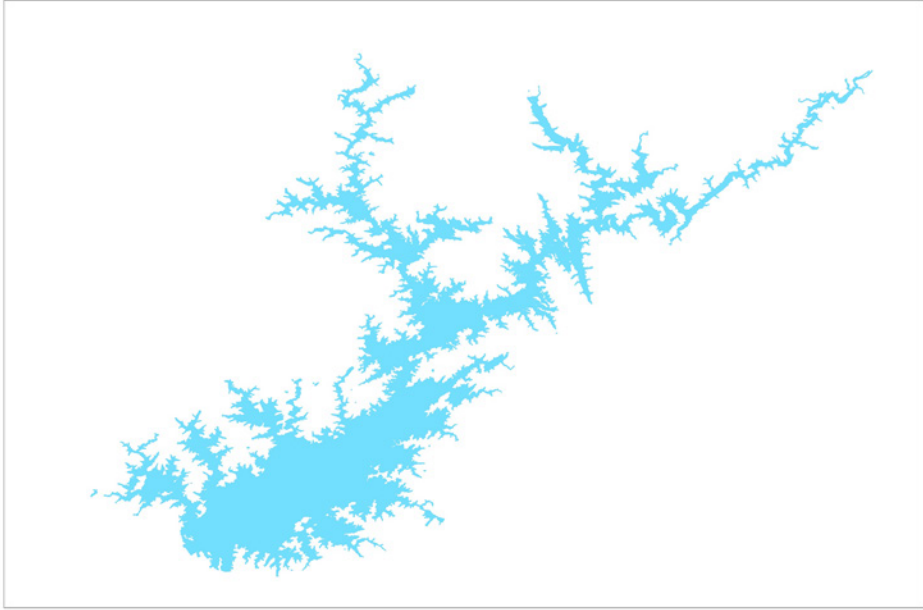




# Withdrawals & Treatment

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- Safe Drinking Water Compliance
- New initiatives – Lead, PFAS
- Distribution system
  - Water quality
  - Water loss
  - Water conservation
  - Drought management



# Returning Water to Lanier

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- Treatment infrastructure
- Very stringent effluent limits
- Pumping infrastructure



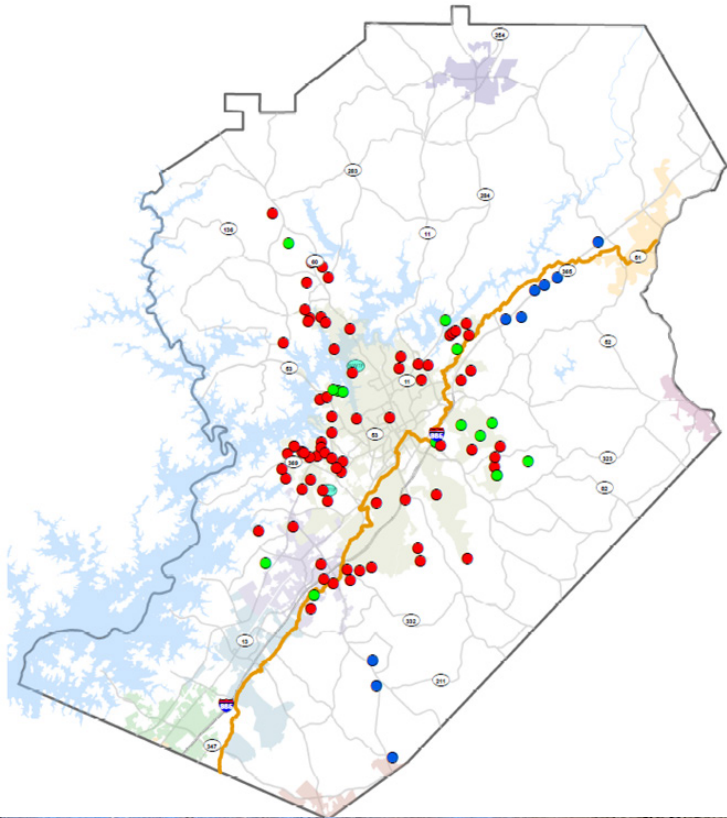
# Treatment



- Stringent effluent limits
- Aging infrastructure needing replacement and modernization

# Pumping

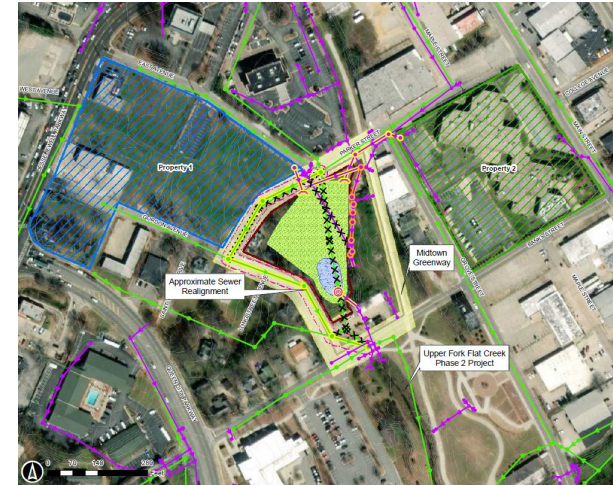
- 70 stations plus more
- Complex mechanical and electrical facilities
- Emergency Generators
- Odor control
- Remote telemetry

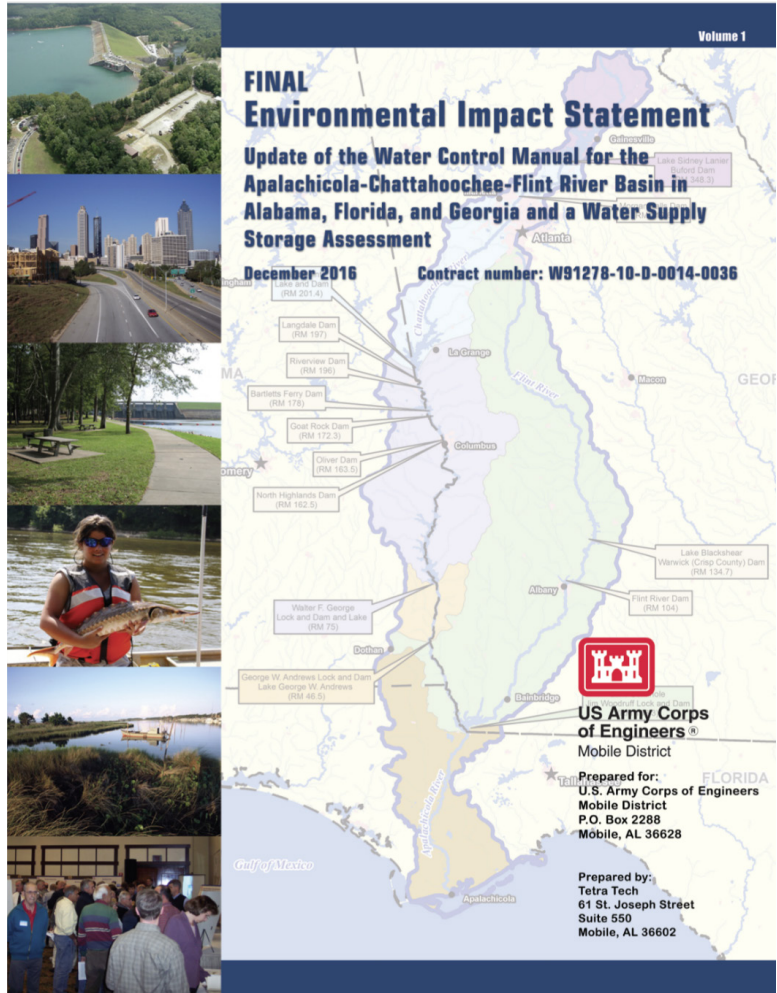




# Stormwater Non-point source

- Permits
  - Municipal Stormwater Permit
  - Industrial Stormwater Permit
  - Construction (Erosion) Permits
- Stormwater & Green Infrastructure
- Lake and stream monitoring
- Trash trap and other clean ups





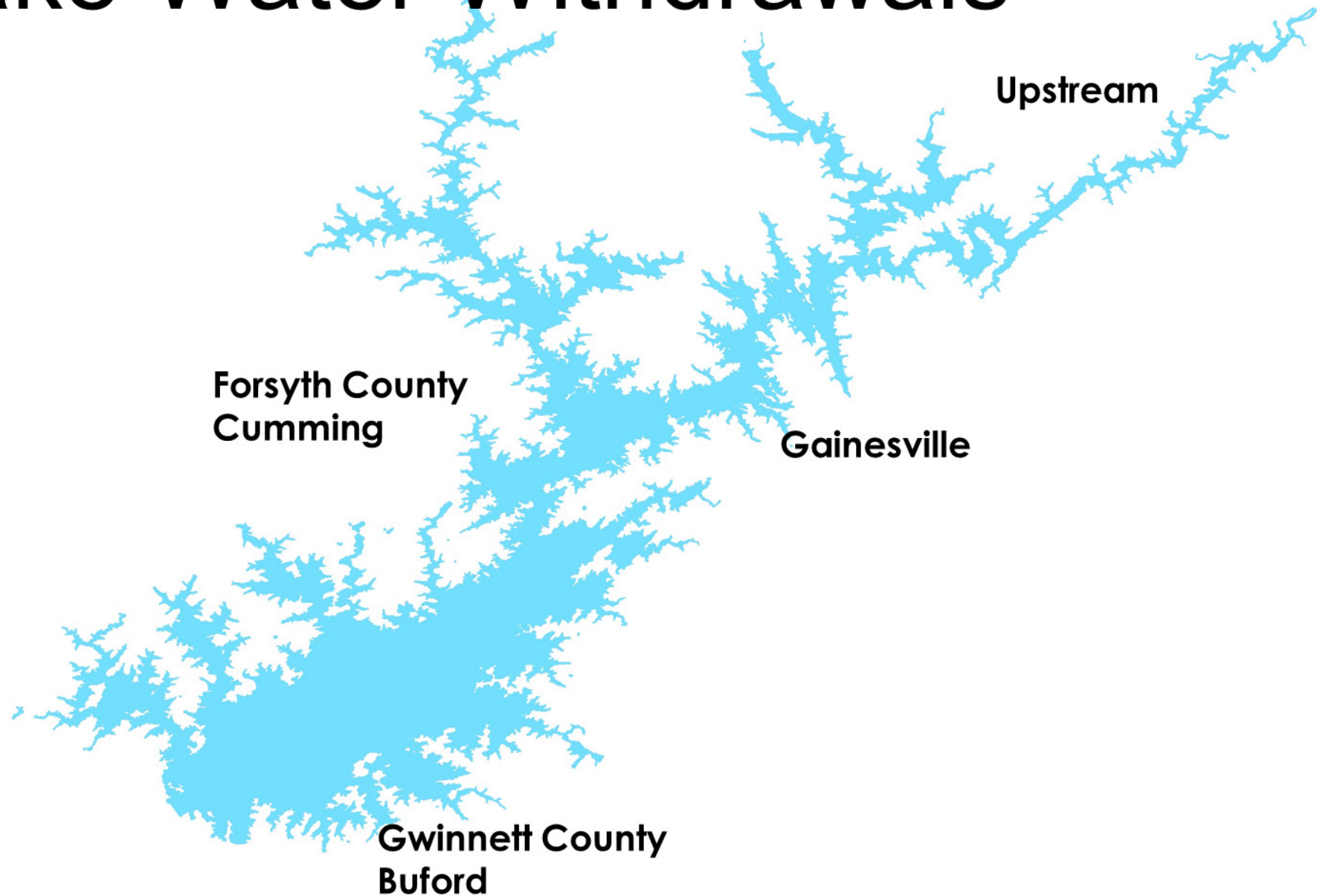
# Regulatory Aspects

- Withdrawal permit
- Public Water System Permit
- Water Control Manual Record of Decision in 2017
  - Granted 2050 water supply request
  - Authorized Storage Contract(s)



**ENVIRONMENTAL PROTECTION  
DIVISION**

# Lake Water Withdrawals



# Storage Contract Corps - Georgia

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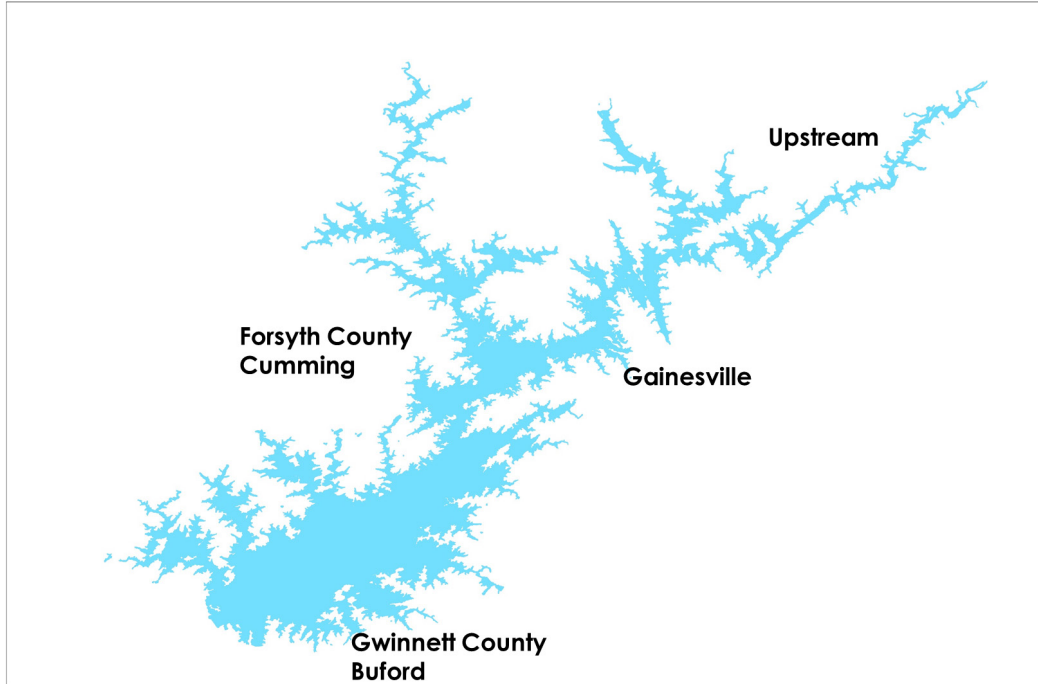
- Permanent rights
- Storage providing yield for the 2050 projected demand (242 mgd)
- Costs ~\$71M over 30 years
- Executed January 20, 2021

Water Supplier	Future (2050) MGD
Forsyth/Cumming	59
Gainesville	32
Gwinnett/Buford	143
Upstream	8
Total	242

# Subcontracts

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- 30 years with renewal conditions
- 80% of 2050 demand
- Annual payments
- Weekly reporting





# Challenges & Opportunities





THANK  
YOU!

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QUESTIONS? COMMENTS?