



# WATER SUPPLY CHALLENGES: THE ACF CASE

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- The ACF Case: Why Does It Matter?
- The ACF River System
- The Water Supply Act
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# The ACF Case: Why Does It Matter?

# The ACF Case: Why Does It Matter?

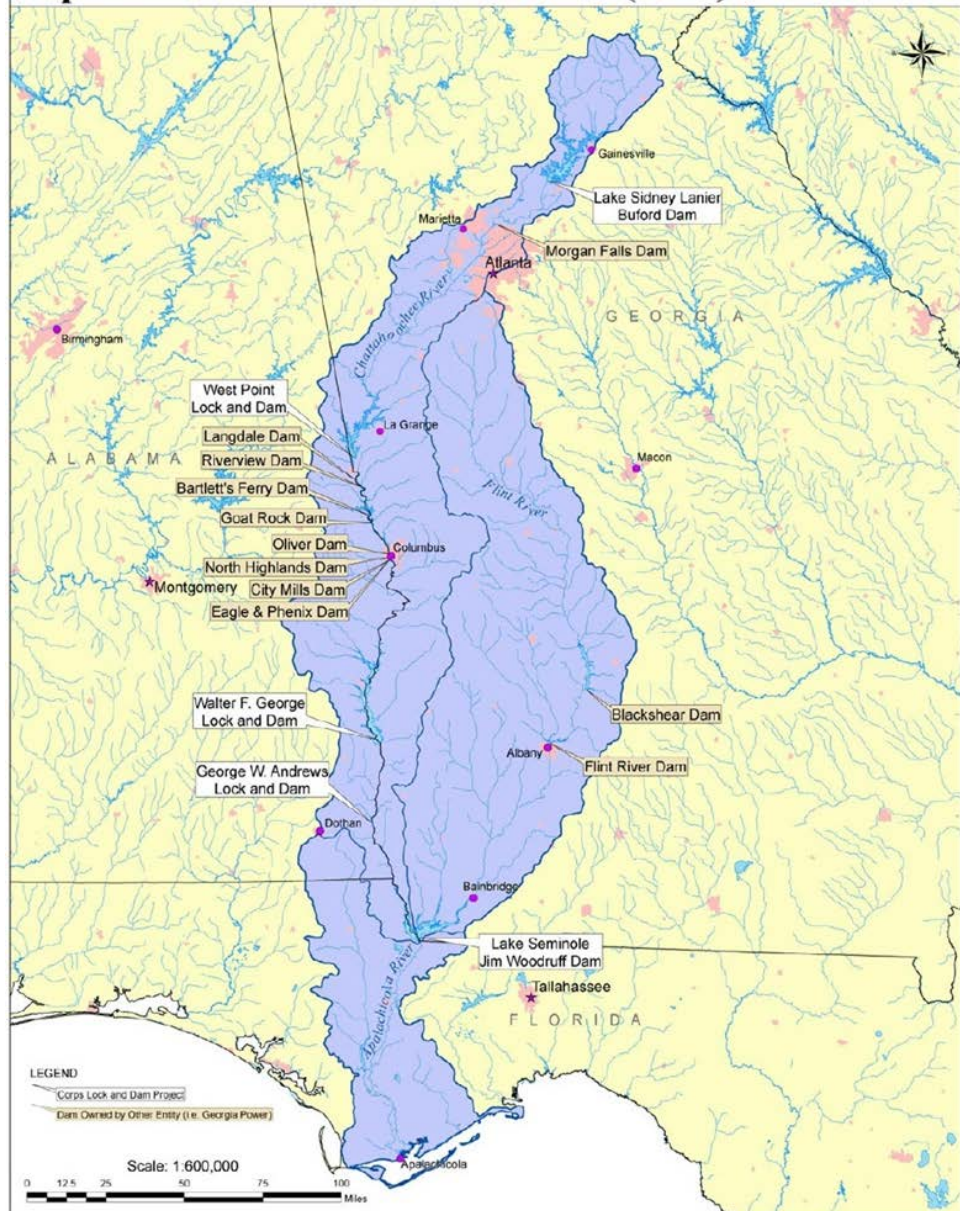


- Potential precedent for determining the Corps' authority to operate reservoirs for local municipal and industrial use (M&I) under:
  - Statutes authorizing reservoir construction and operation
    - Typically, Rivers & Harbors Act (RHA) or Water Resources Development Act (WRDA)
  - The Water Supply Act (WSA)



# The ACF River System

## Apalachicola-Chattahoochee-Flint (ACF) River Basin



## Five Corps Reservoirs

From north (upstream) to south:

- Buford Dam (Lake Lanier)
- West Point L&D
- Walter F. George L&D (Lake Eufaula)
- George W. Andrews L&D
- Jim Woodruff Dam (Lake Seminole)

# The ACF River System



- Initially authorized by the RHAs of 1945 and 1946
  - *“Be it enacted . . . That the following works of improvement of rivers, harbors, and other waterways are hereby adopted and authorized to be prosecuted . . . in accordance with the plans and subject to the conditions recommended by the Chief of Engineers in the respective reports hereinafter designated,”* etc.
    - With scores of Corps engineering reports listed
  - Each report describes a project:
    - Site, configuration, local demographics, costs, benefits, etc. etc. etc.



# The ACF River System

**Buford Dam / Lake Lanier**

North of Atlanta





# The ACF River System

## **West Point Dam**

Between Atlanta and Columbus



## The ACF River System

**Walter F. George Lock & Dam / Lake Eufaula**

Impounds the river up to Columbus



## The ACF River System

### **George W. Andrews Lock & Dam**

Between Eufaula and the Georgia-Florida line



## The ACF River System

### **Woodruff Lock & Dam / Lake Seminole**

Junction at the FL line; start of the Apalachicola



## Conservation storage of ACF reservoirs:

- Lanier (north of Atlanta):
  - 1,087,600 acre-feet (summer) (66%)
- West Point (north of Columbus):
  - 306,130 acre-feet (summer) (19%)
- Walter F. George / Eufaula:
  - 244,400 acre-feet (15%)
- George Andrews & Jim Woodruff:
  - Run of river



## ACF Navigation:

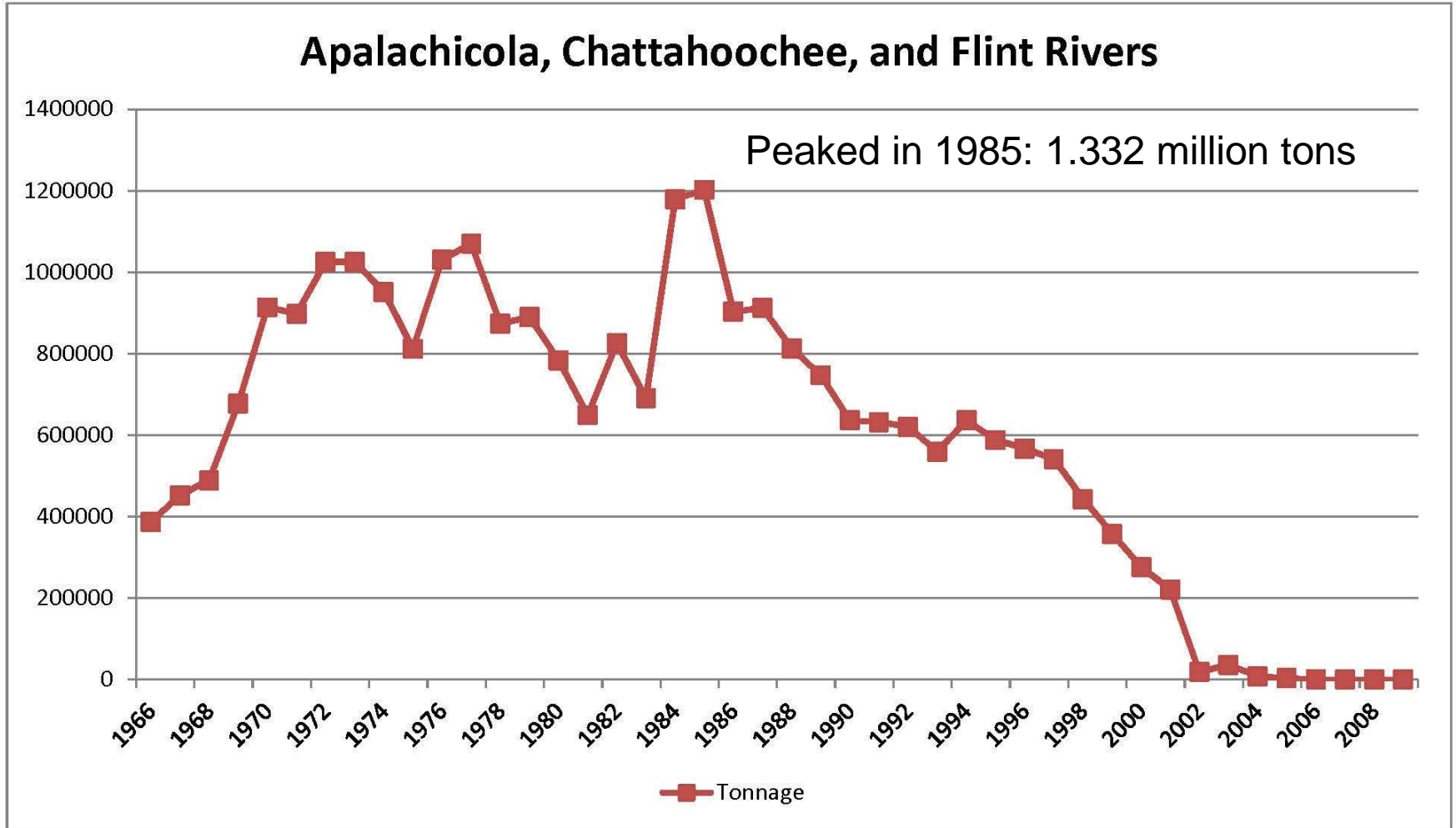
- From Gulf of Mexico to the fall line at Columbus, Georgia
  - “Fall line” is where Piedmont shifts to coastal plains
  - Few shipping destinations in Florida
- Two primary challenges:
  - Flow
  - Channel maintenance, especially on the Apalachicola
    - Approximately 13 of 109 river miles require active maintenance to maintain 9’ depth



## **Commodities historically shipped to & from the middle basin (Columbus, Eufaula, etc.) include...**

- Sand & gravel
- Grain
- Steel, ores, etc.
- Fuel & petroleum-based products
- Fertilizer & its components
- Bridge spans, lock gates, other metal fabrications
- Components for Plant Farley (nuclear power plant)

# The ACF River System







**Your view on flow depends a lot on your perspective.**



**Your view on flow depends a lot on your perspective.** (street art by Edgar Müller)

# The ACF River System



Different views in the ACF are a formula for conflict:

- MIDDLE basin: Supports & benefits from navigation
  - Flows for both transportation and as proxy for M&I needs
- UPPER basin: Powers the system's flows, but no capacity for navigation to Gulf
  - Large population with other needs, including *water supply*, shoreline & recreation uses, flood control, hydro
- LOWER basin: Little interest in navigation
  - Supports greater flows for environmental reasons, but with concerns about Apalachicola dredging



# The Water Supply Act

# The Water Supply Act



- Historically, water supply deemed to be a matter of state and local responsibility
- Prior law limited use of federal project water for municipal and industrial purposes to “surplus” water (FCA 1944)
- In 1958, via the Water Supply Act, Congress authorized the Corps (and the Bureau of Reclamation) to include water supply among the purposes of a reservoir

# The Water Supply Act



- For “future” (post-1958) projects:
  - Municipal and industrial supply may be included in a Corps reservoir project
    - For “present or anticipated future demand or need for municipal or industrial water”
  - State or local interests required to agree to ***pay associated costs***
    - “[O]n the bases that all authorized purposes served by the project shall share equitably in the benefits of multiple purpose construction as determined by” the Corps

# The Water Supply Act



- For then-existing projects (projects “heretofore authorized, surveyed, planned or constructed to include storage”)
  - Where a modification of the project or operations would
    - “seriously affect the purposes for which the project was authorized, surveyed, planned, or constructed” or
    - “involve major structural or operational changes”:
  - Such a change “shall be made only upon the approval of Congress as now provided by law”

# The Water Supply Act



- Questions under the Water Supply Act:
  - What constitutes a “major structural or operational change”?
  - How do you calculate storage and flow and measure changes in operations?





# The Court Case



## Background

- North Georgia parties did not cost-share on Lake Lanier
- For decades, the Corps said local M&I was not among the primary, Congressionally authorized purposes of Lake Lanier
  - Congress must approve reservation of storage for local supply beyond a certain level under the WSA
  - WSA threshold believed to be 15% or 50,000 acre-feet
  - Some room for technical argument as to what kind of operations would lead to changes of this magnitude



## Issue:

- Requests of North Georgia water authorities to withdraw water for local consumption
  - North Georgia parties:
    - Corps must grant requests
  - Alabama and Florida parties, and Columbus, GA:
    - Corps can't grant requests
  - Law: RHA 1945 / 1946 (authorizing Buford construction) and WSA
- Also: Threatened and endangered (T&E) species claims of Florida parties

# The Court Case



- District court (Judge Paul Magnuson of MN) ruled for downstream parties
- The Eleventh Circuit reversed and found that:
  - Water supply was among the Congressionally authorized, primary purposes of Lake Lanier under 1945 / 1946 RHAs
  - WSA and RHA are to be read together; WSA supplements authority provided under RHA
- Corps ordered to reconsider denial of North Georgia requests under both the RHA and WSA



# Legal Opinion of the Corps

# Legal Opinion of the Corps



- The Corps has issued a legal memorandum interpreting its authority under the ACF case
- The Corps concludes it has authority to grant all requested withdrawals
  - Assuming full use of conservation storage, located between 1070/1071' and 1035'
  - Withdrawals in 2030, based on Georgia's projections, during most severe drought would require drawdown to a level "lower than at any point since Buford Dam was completed in 1959," but still feasible and legal
    - Note: The lowest elevation during the 2007-2009 drought was 1051'



- Total requests of 705 million gallons per day (mgd):
  - Releases to allow downstream withdrawals of 408 mgd
    - Authority: 1945/1946 RHAs
  - Withdrawals from Lake Lanier of 20 mgd
    - Authority: A project-specific statute from 1956 and relocation agreements
  - Net withdrawals from Lake Lanier of 170 mgd
    - Gross withdrawals of 297 mgd, returns of 107 mgd
    - Authority: WSA



## Authorized project purposes:

- The 1945 /1946 RHAs adopted the Corps' reports
- Congress delegated substantial discretion to the Corps to balance various project purposes
- Modeling runs show releases for downstream\* withdrawals, even beyond requests, have minimal impact to other purposes and so are legal
  - \*Corps reports approved by 1945/1946 RHAs did not discuss withdrawals directly from the lake; therefore, the RHAs did not authorize direct withdrawals





## Application of WSA:

- Again: The WSA requires Congressional approval for a project “modification” that would:
  - “seriously affect” project purposes, or
  - “involve major structural or operational changes”



## Application of WSA:

- Process of consideration requires analysis of:
  - Technical feasibility
  - Corps' legal authority
- WSA does not “dictate” how to determine amount of storage required
- Critical yield analysis:
  - Can the Corps meet requests during the critical period, i.e., worst drought on record?



## Application of WSA:

- Return flow:
  - No “legal requirement or written Corps policy governing return flow”
  - “Corps’ general practice has been to recognize water supply providers’ return flows in the same manner as all inflows to the reservoir”
  - Other “possible” accounting methods:
    - “Direct crediting of return flows to the specific account” of the user who provides them
    - Account for return flows (withdrawals net inflows) when calculating contract quantities



## Application of WSA:

- “Amount or percentage of storage contracted for under the [WSA] is not determinative of whether a proposed action will result in major structural or operational change or seriously affect authorized purposes”
- Rather, “the actual, net removal of water from the Corps reservoir—any withdrawals, as well as any returns—that actually affects operations for other authorized purposes”



- Meanwhile, the Corps is updating the ACF master manual
  - And for the ACT (Alabama-Coosa-Tallapoosa), which has similar issues but does not involve Florida
  - Buford manual last updated in 1958
  - Draft “Post-Authorization Report” and draft manual issued in 1989, but not finalized
  - All parties will review to see projected operations for water supply, hydropower, navigation, T&E species, etc.



# Implications





- Where populations have grown up near a Corps reservoir, the Corps' authority to grant requests to facilitate withdrawals is subject to reexamination, based on:
  - Authorizing documents (Corps' original engineering reports, as approved by Congress)
  - WSA
- Whether a state or locality participated as a project sponsor is not determinative
  - Atlanta and North Georgia water users did not contribute to project cost



- Water supply can be an authorized purpose, as long as the authorizing documents do not completely avoid the subject
  - For example, with respect to Lanier:
    - The Corps reports approved by the 1945/1946 RHAs did not discuss direct withdrawals from the lake
      - Therefore, direct withdrawals are NOT AUTHORIZED
    - Those reports did discuss the fact that releases would result in available water downstream
      - Therefore, releases to serve downstream purposes are AUTHORIZED





- Under the WSA, the Corps has great discretion and latitude to determine how or whether a request impedes other project purposes
  - No particular percentage or amount is determinative
  - Relies on the Corps' own flow modeling
  - Return flows may be included in calculations
  - Calculations may assume availability of full extent of conservation storage to meet project purposes



**Thank you!**

***Questions?***

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