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Welcome

Displays are placed around the room. Each display focuses on federally authorized project purposes and particular issues related to the scope of the Apalachicola-Chattahoochee-Flint (ACF) River Basin Master Water Control Manual Update and Environmental Impact Statement (EIS).

STEP 1: Please sign-in at the information table.

STEP 2: Participate in a brief meeting orientation.

STEP 3: Visit the displays to obtain information about the ACF Master Water Control Manual Update and EIS in any order you choose.

STEP 4: Provide comments on updating water management operations and preparing an EIS.

(a) Submit comments at laptop computer station.

(b) Provide verbal comments at court reporter station.

(c) Visit our website at **www.acf-wcm.com** and fill out a comment form online.

All scoping comments must be received no later than November 21, 2008.

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Purpose and Need

Purpose: The purpose of the proposed action is to update the ACF Master Water Control Manual to include current project operations under the existing congressional authorizations taking into account changes in basin hydrology and consumptive demands due to years of growth and development; new/rehabilitated structural features; and environmental issues.

Need: An updated water control manual and basinwide drought contingency plan is required by regulation and needed to accomplish the specific congressionally authorized and general statutory project purposes in the basin.

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Water Control Manual

The operations at each federal reservoir managed by the U.S. Army Corps of Engineers are described in water control plans as documented in water control manuals. These manuals typically outline the regulation schedules for each project, including operating criteria, guidelines and rule curves for varying conditions; and specifications for storage and releases from the reservoirs.

The current (Draft) master manual is titled *Apalachicola-Chattahoochee-Flint Basin Water Control Plan, October 1989*. An individual manual for each project is prepared as an appendix to the master manual.

Contents of a WCM

I. Introduction
II. Description of Project
III. History of Project
IV. Watershed Characteristics
V. Data Collection and Communication Networks
VI. Hydrologic Forecasts
VII. Water Control Plan
VIII. Effect of Water Control Plan
IX. Water Control Management

Dates of Manuals

- Draft ACF Master Manual, 1989
- Jim Woodruff, 1985
- Buford, 1991
- Walter F. George, 1993
- George W. Andrews, 1978
- West Point, 1984

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Authorizations

- The authority for water control operations for Corps owned and operated reservoir projects is contained in legislative authorization acts and referenced project documents. These public laws and project documents contain provisions for the development of a Master Water Control Manual and specific project Water Control Manuals, and appropriate revisions and updates.
- A number of "blanket" congressional authorizations apply to all federal reservoir projects, including:
  - Fish and Wildlife Coordination Act of 1958 (P.L. 85-624)
  - Flood Control Act of 1944 (P.L. 78-534)
  - Water Supply Act of 1958 (P.L. 85-500)
  - Clean Water Act of 1977 (P.L. 95-217), as amended
  - Endangered Species Act of 1973 (P.L. 93-205)
  - Water Resource Development Acts provisions

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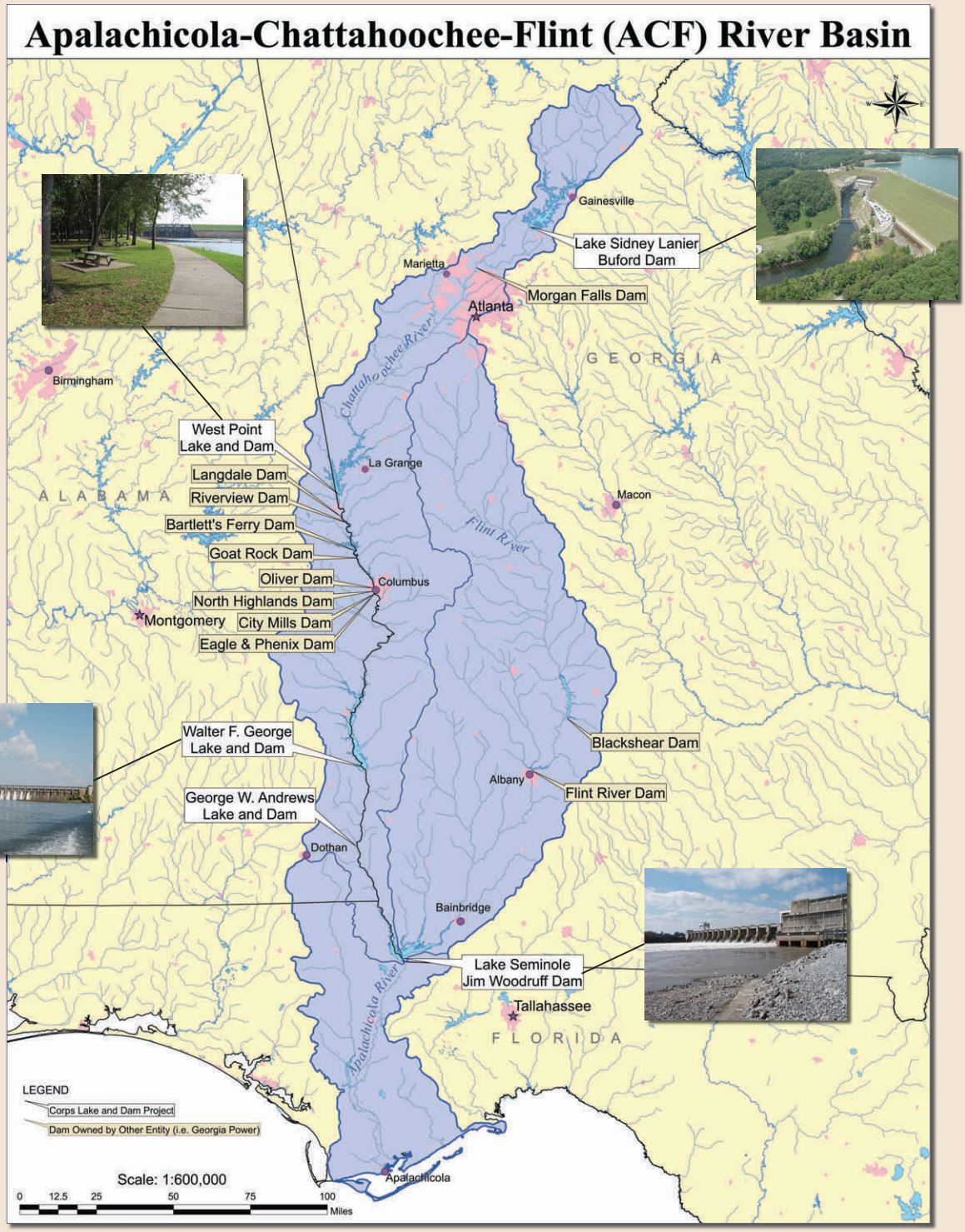
Basin Map



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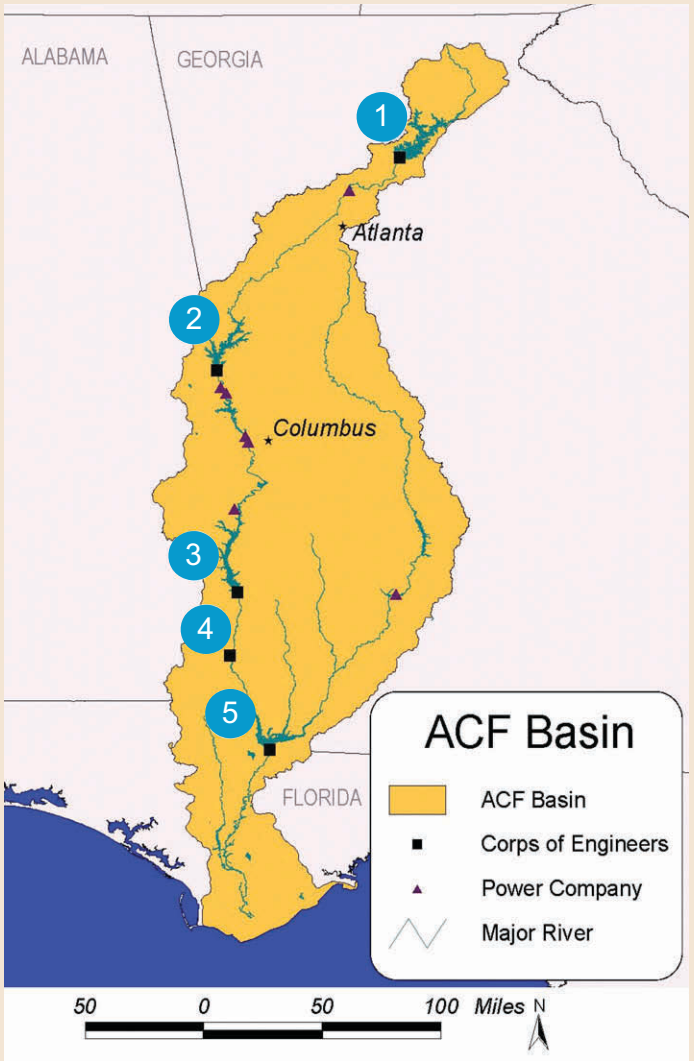
Water Management for Multiple Project Purposes



The Corps also uses action zones to guide its operation of the lakes on the ACF system. The action zones provide guidelines on meeting the project purposes for each lake.

1 **Lake Sidney Lanier**
Fish/Wildlife
Flood Control
Hydroelectric Power
Navigation
Recreation
Water Quality
Water Supply

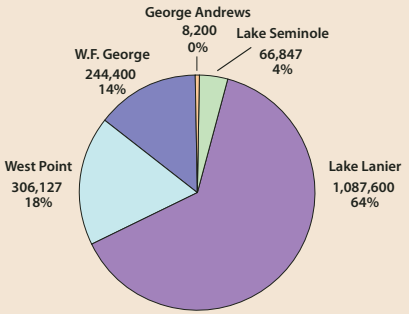
2 **West Point Lake**
Fish/Wildlife
Flood Control
Hydroelectric Power
Navigation
Recreation
Water Quality
Water Supply

3 **Walter F. George Lake**
Fish/Wildlife
Hydroelectric Power
Navigation
Recreation
Water Quality

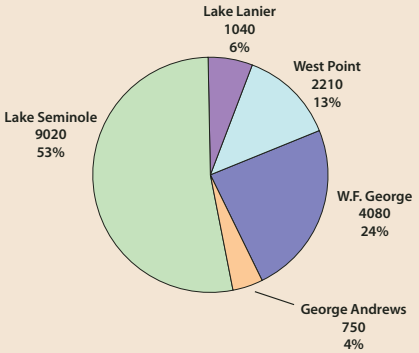
4 **George W. Andrews Lake**
Navigation
Recreation
Water Quality

5 **Lake Seminole**
Fish/Wildlife
Hydroelectric Power
Navigation
Recreation
Water Quality

ACF Conservation Storage by Project
(acre-feet)



ACF Drainage Basin Area by Project
(square miles)



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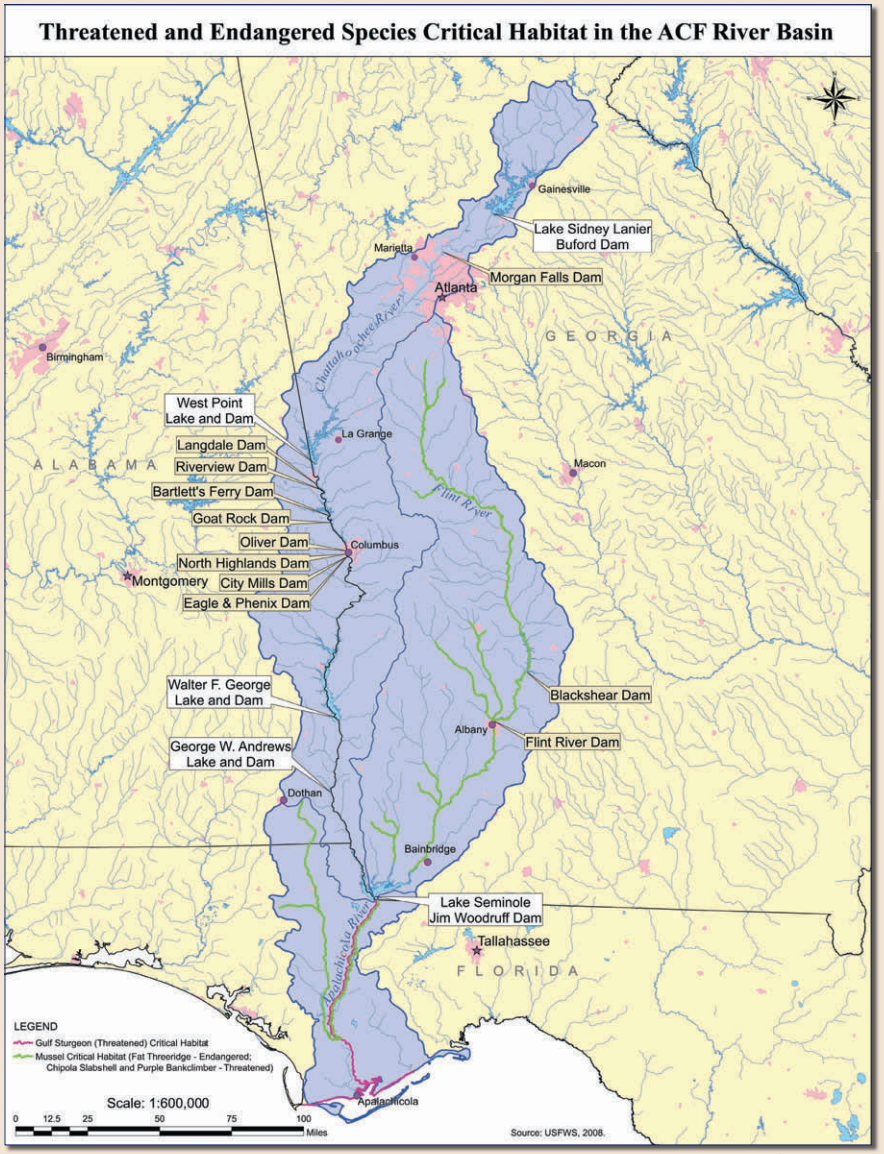
Fish and Wildlife

- The Corps operates the ACF system in accordance with the 1989 Draft Water Control Manual.
- Operations at Jim Woodruff Dam are conducted in accordance with the Revised Interim Operation Plan (RIOP).
- Each year in coordination with the USFWS and State fishery agencies, the Corps works to hold lake levels stable during the spring fish spawn period, and to also provide releases as necessary in support of fish spawn in downstream river reaches during designated periods.
- At other times of the year, the Corps manages releases and lake levels to enhance fisheries, both in reservoirs and in the downstream river reaches.



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Flood Damage Reduction and Drought Management

Flood Damage Reduction

- Winter drawdown of lakes to prepare for flood season.
- Store water in lake during flood event.
- Monitor downstream points for impacts of flooding.
- Evacuate water as quickly as practicable when downstream conditions allow to prepare for next event.

Drought Management

- Lake levels fall due to less water coming into projects.
- Discharges are reduced according to an individual project's Water Control Plan.
- Navigation reduced and curtailed as conditions worsen.
- Discharges specifically for hydropower are reduced.
- Flow is managed to meet minimum flow requirements.

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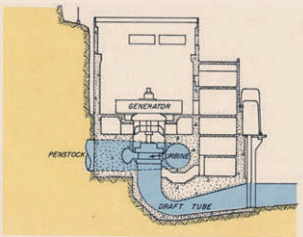
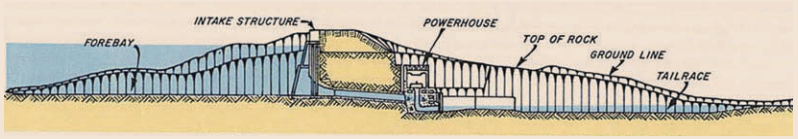
Hydropower

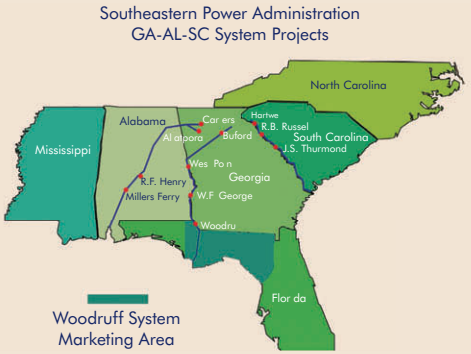
How Hydropower is Produced



To produce hydropower water is dammed so water levels can rise to create falling water. The force of falling water pushes against turbines causing them to spin. A generator is connected to the turbine, so when the turbine spins it causes the generator to spin. The energy from the turbines is converted during this process to electric energy. Transmission lines conduct electricity from the hydropower plant to homes and businesses. Hydropower generation is typically scheduled to meet daily peak demand and may also be generated in conjunction with releases made for other project purposes.



How Hydropower is Marketed



Southeastern Power Administration (SEPA) is responsible for marketing electric power and energy generated at reservoirs operated by the United States Army Corps of Engineers. Hydropower generated from powerplants at the ACF reservoir projects is marketed to preference customers (public suppliers of power and cooperatives) within the GA-AL-SC marketing area and within northwest Florida. The objectives of SEPA are to market electric power and energy generated by the Federal reservoir projects while encouraging widespread use of the power at the lowest possible cost to consumers. Revenue collected from the sale of this generation is used to repay the costs of the Federal investment which have been assigned to hydropower.

For more information visit www.sepa.doe.gov

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Navigation

- The Apalachicola River requires flow to assure adequate depths. A minimum flow is needed which will assure usable depths. In drier months, water may be taken from reservoirs to augment natural river flow. This can result in a decline in reservoir levels.
- Presently, due to a lack of water quality certification, navigation on the Apalachicola River occurs only during seasonal periods, in the winter and in early spring months, when there are adequate natural flows to support the required navigable depths. Other special shipments may occur on an emergency basis, but are scheduled and managed to minimize the impacts of fluctuating lake and river levels.

Water Supply Storage

- Much of the water supply in the southeast comes from streams, rivers, or lakes. Years ago there was sufficient flow in our streams and rivers, even in the worst droughts, to supply water to the public.
- Cities and Industries have grown and have become more dependent on the use of stored waters to assure a dependable water supply. Whether water is withdrawn from rivers below dams or withdrawn from lakes directly, today's uses depend on stored water that has been held back by dams when conditions are wetter.
- The use of Lake Lanier for water supply is a matter that is being litigated. For purposes of this update, withdrawals will be assumed to continue.

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Water Quality

- Many dams have obligations for minimum releases for environmental protection. These minimum flow releases from dams help to assure healthy aquatic life, even when treated or used waters are added at downstream points.
- The operation of the lake can influence water quality in the lake as it relates to nutrients and dissolved oxygen and can help benefit water quality purposes on the downstream lakes and rivers.

Recreation

- Recreation at Corps lakes has become a very important resource with a large economic impact based on local and interstate tourism. A wide variety of recreational opportunities are provided at these sites including boating, fishing, picnicking, camping, skiing, and sightseeing.

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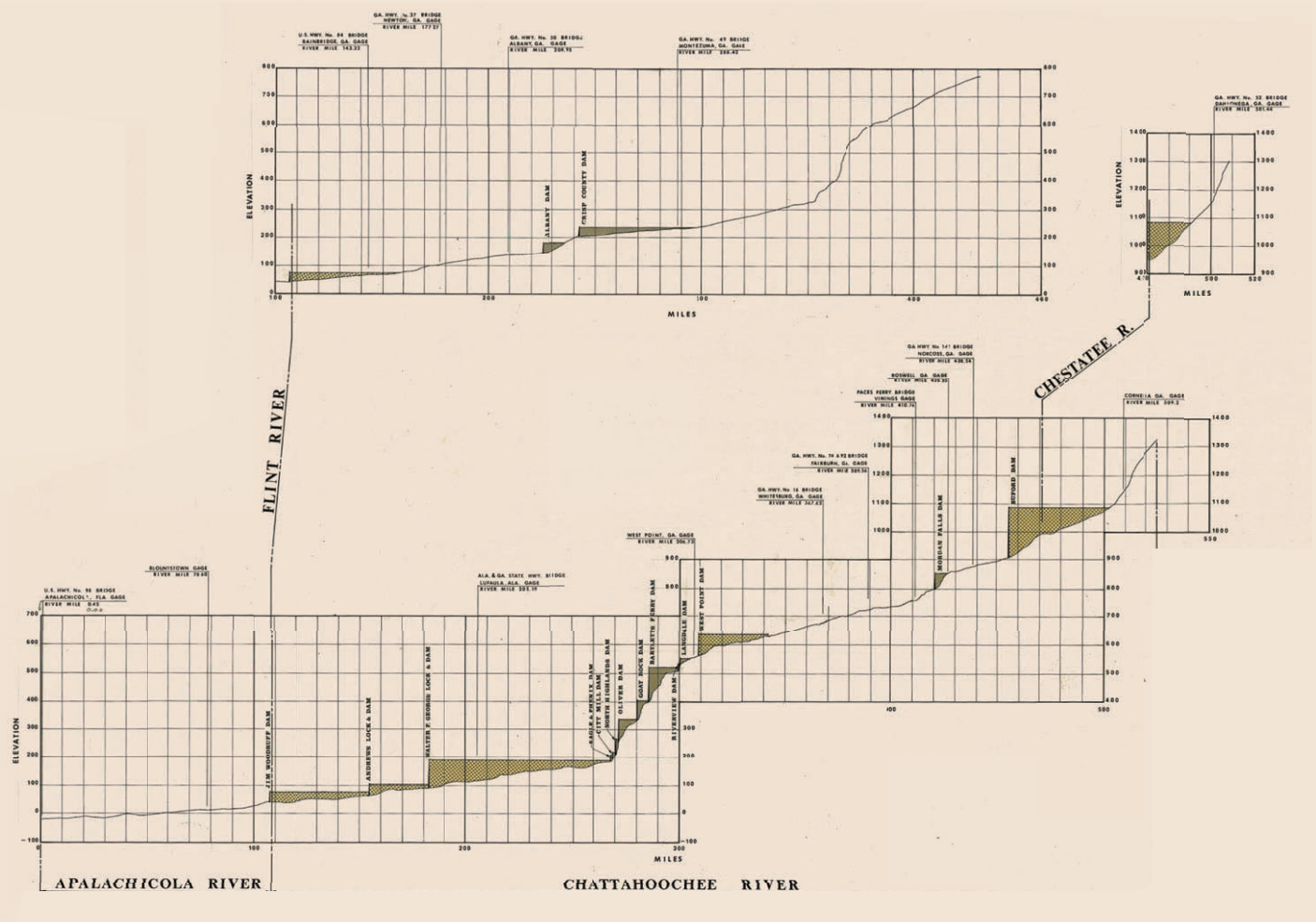
Profile of the Apalachicola-Chattahoochee-Flint River Basin



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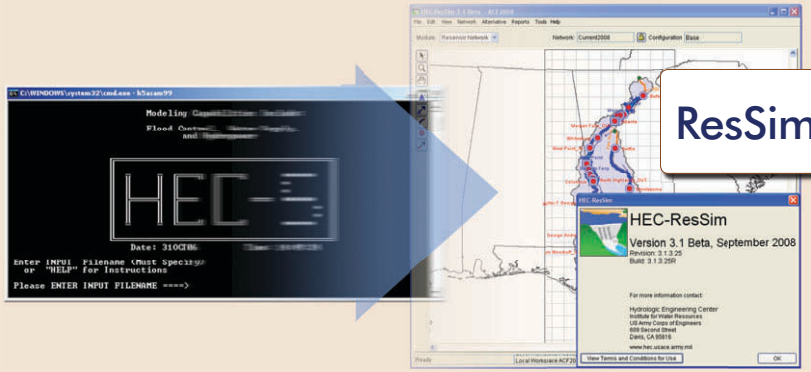
Modeling Tools

HEC-5 Models have been updated to HEC-ResSim. HEC-ResSim is the next generation in reservoir modeling.



ResSim Output

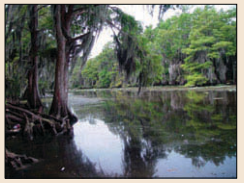
Protected Species Assessment

Economic Analyses

Riverine Aquatic Resources

Freshwater Inflows & Oysters in Apalachicola Bay

Riparian Wetland Assessment



Reservoir Fisheries Assessment

ResSim Links to Other Models, such as:

- HEC-5Q for Water Quality Impacts
- IHA for Environmental Impacts

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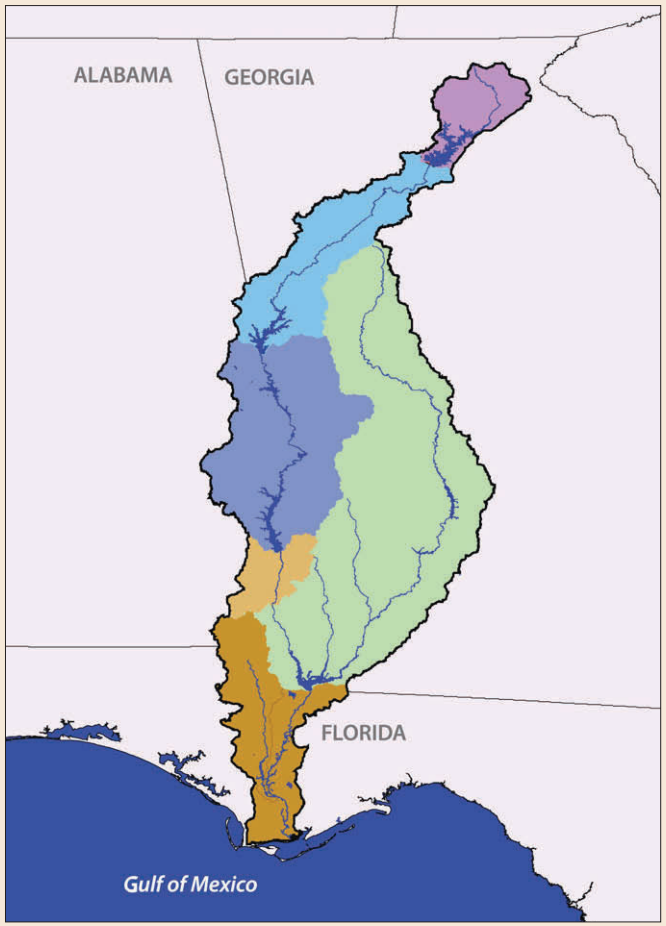
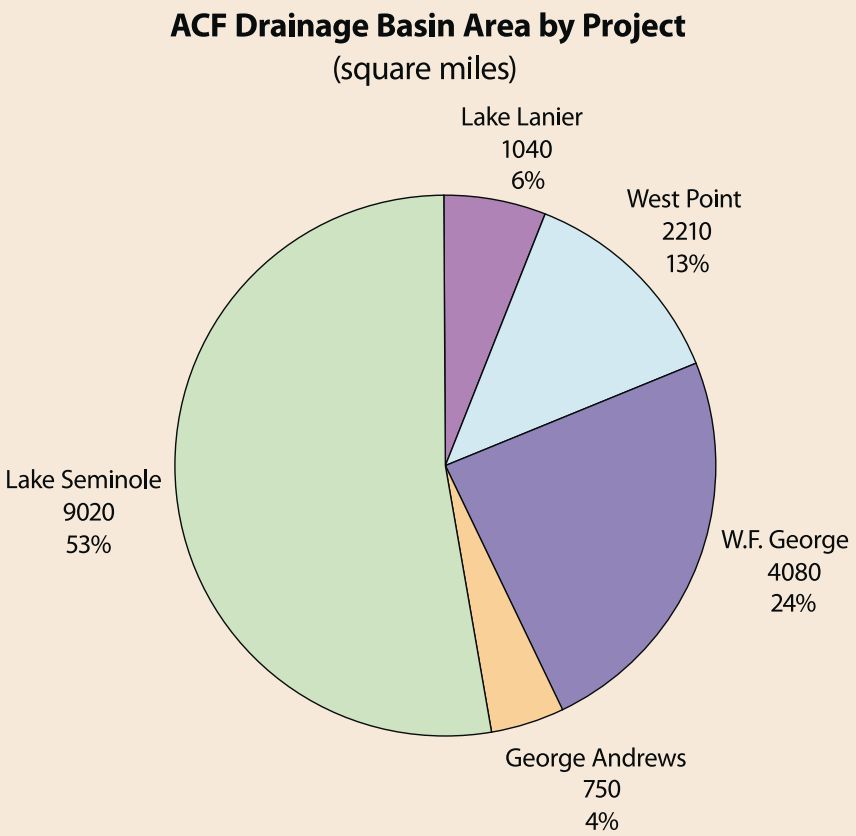
ACF Drainage Area





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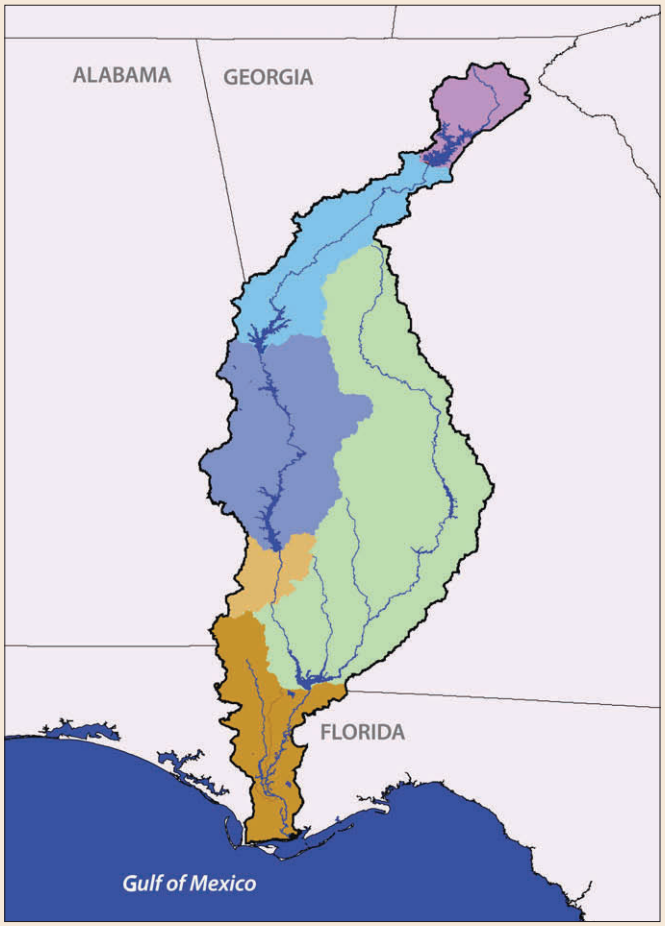
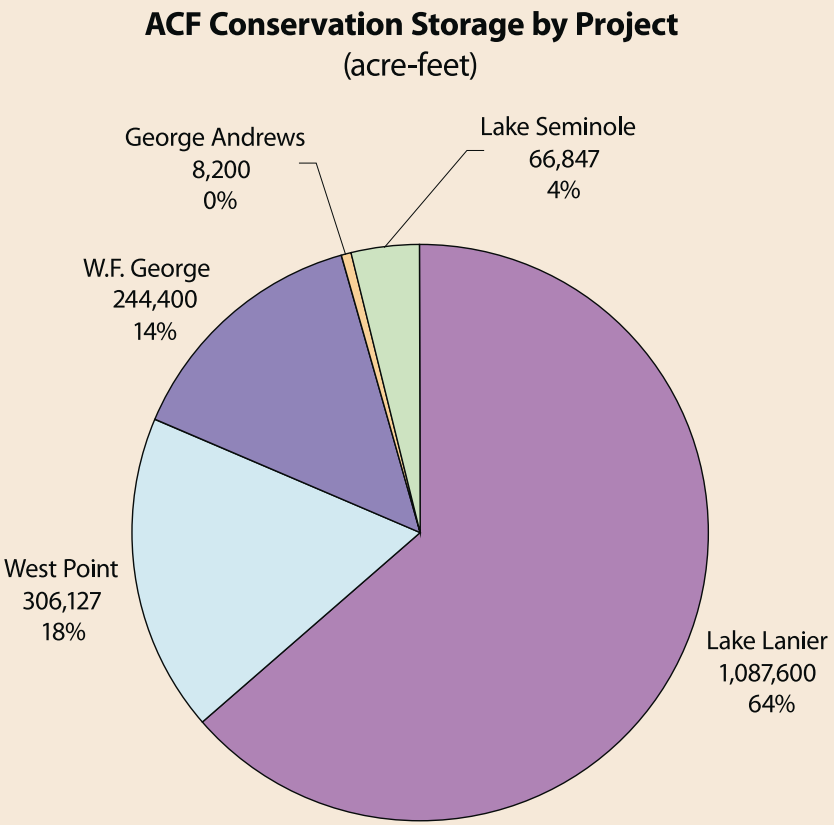
ACF Storage





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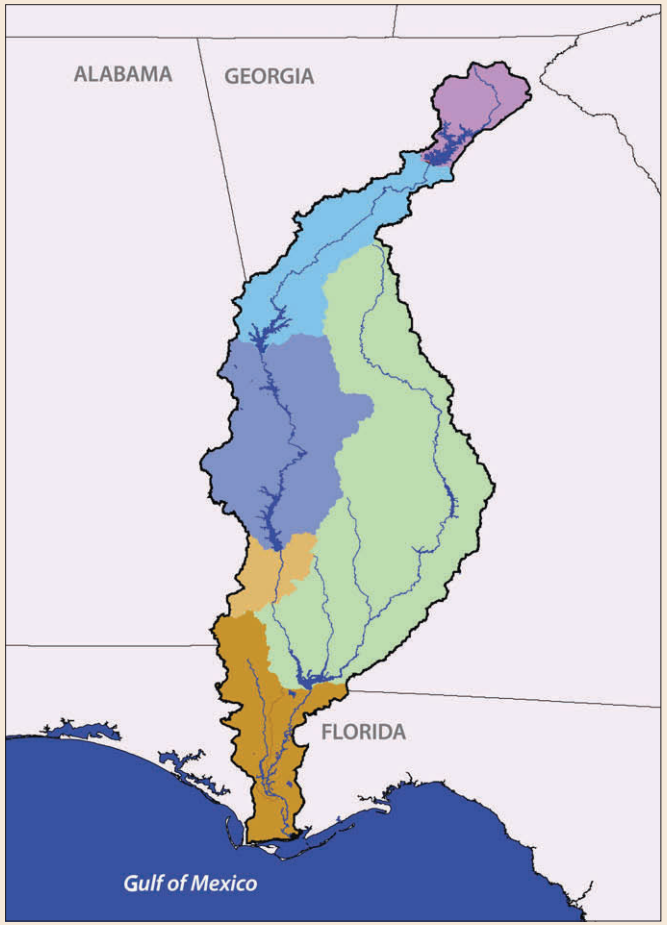
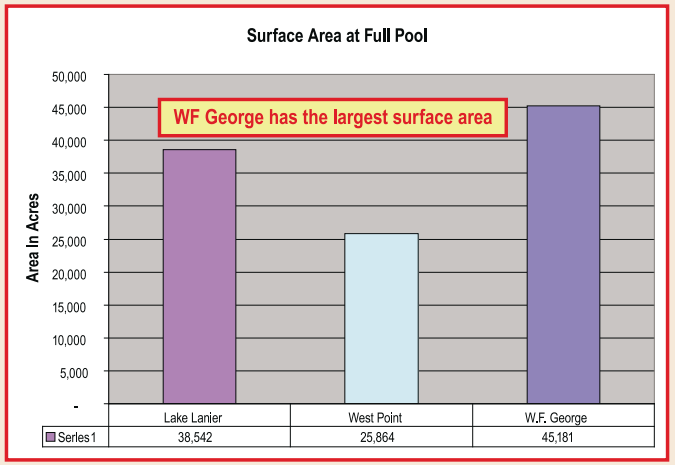
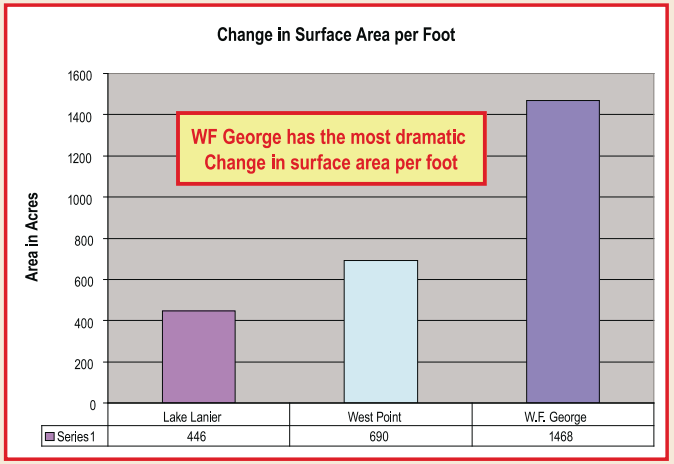
Lake Surface Area







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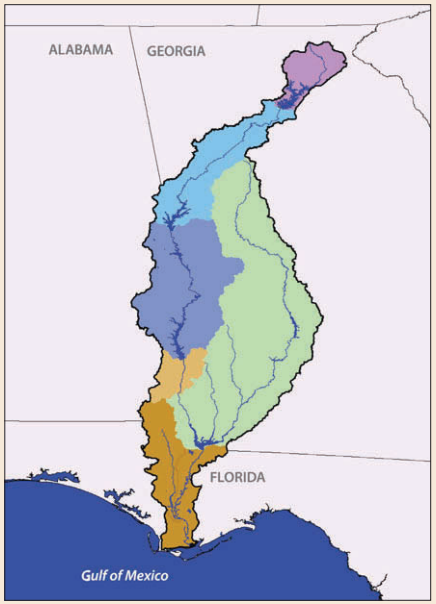
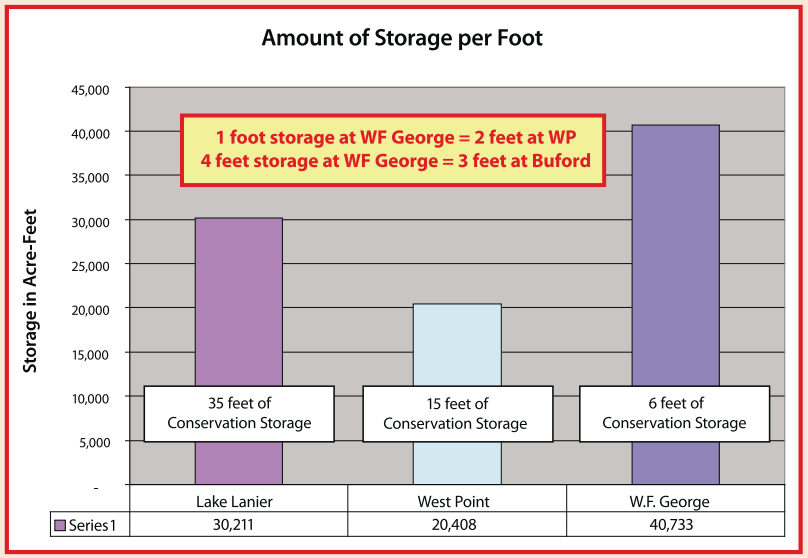
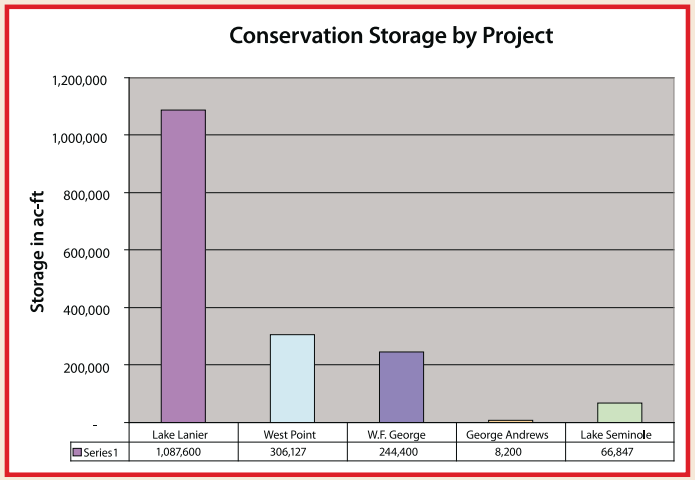
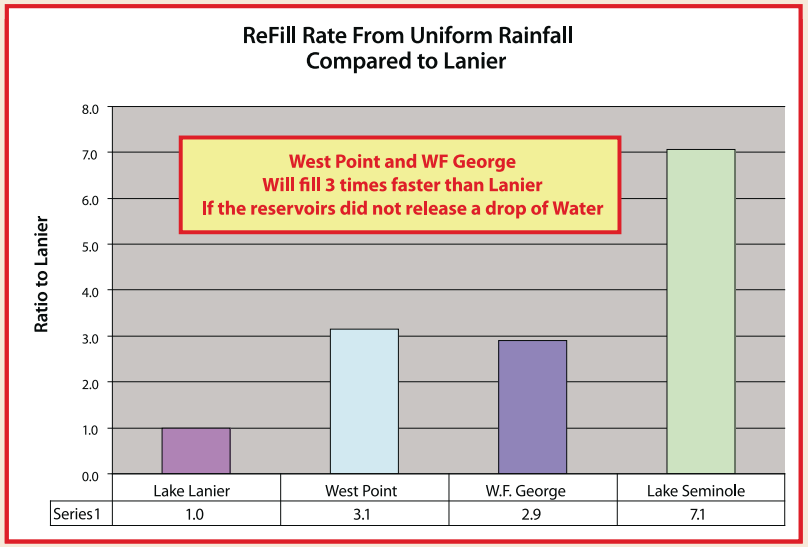
Storage Comparison









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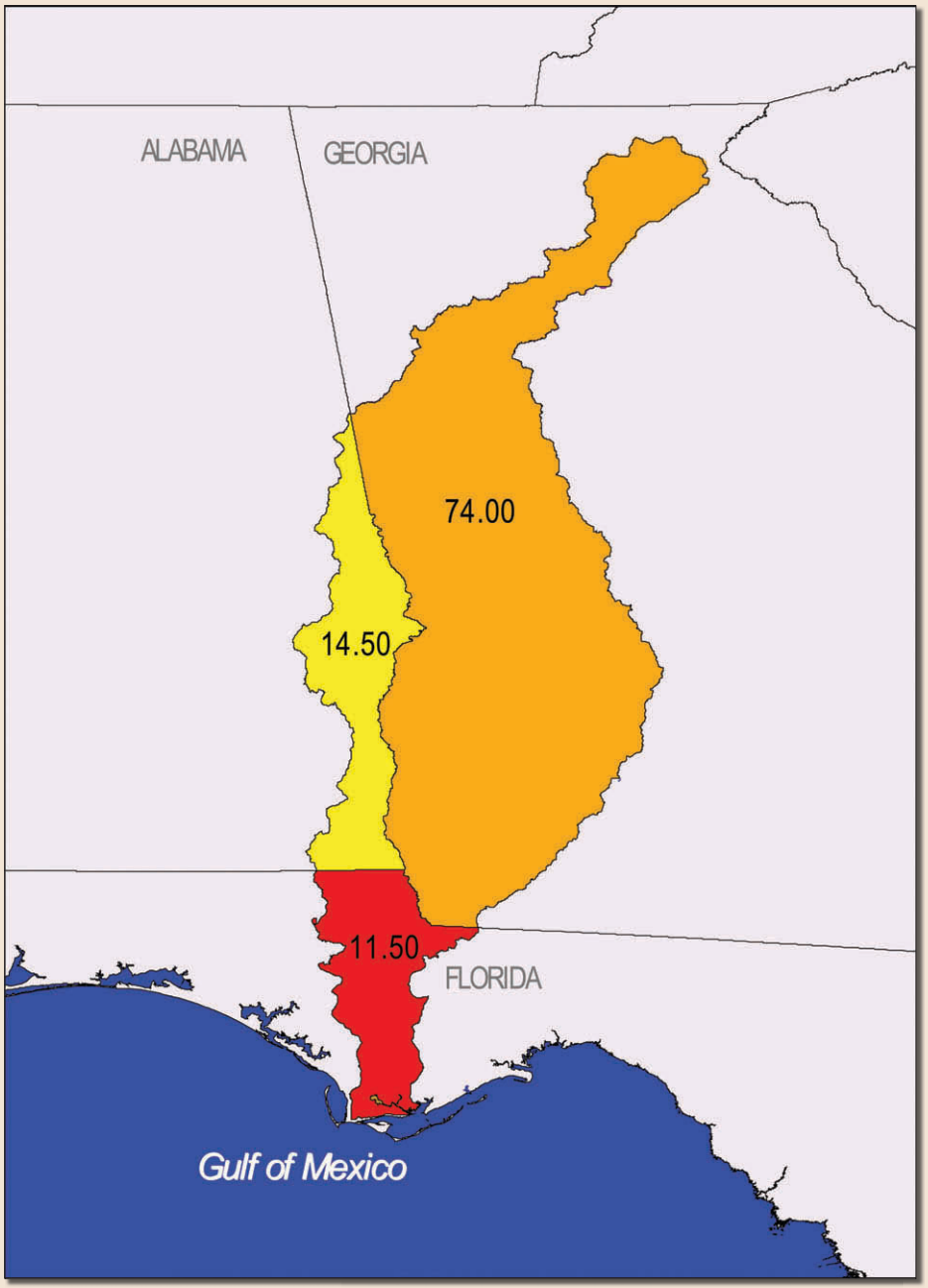
ACF Basin by State



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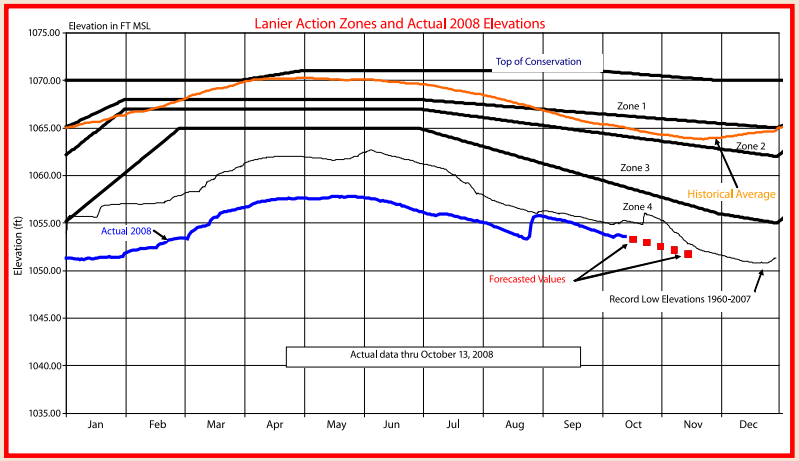
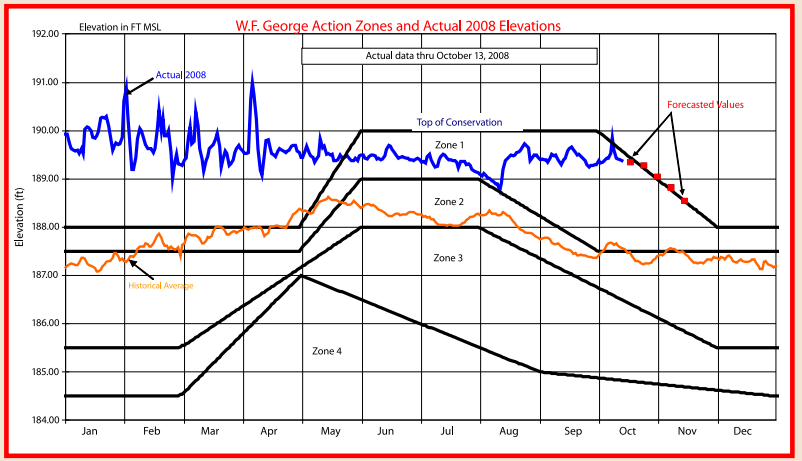
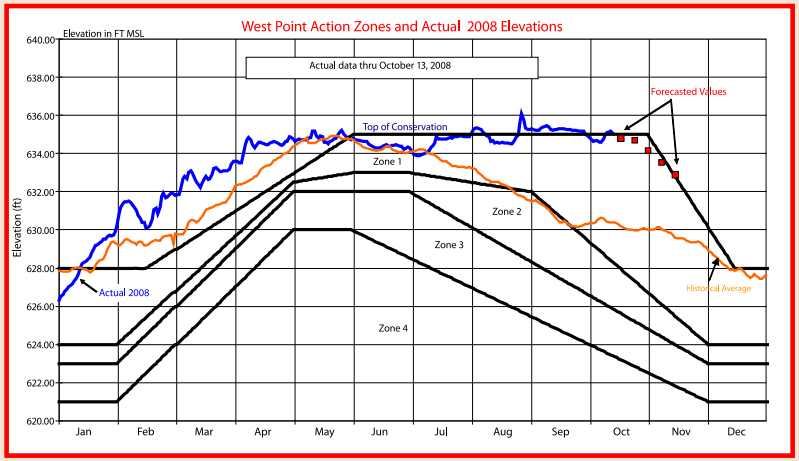
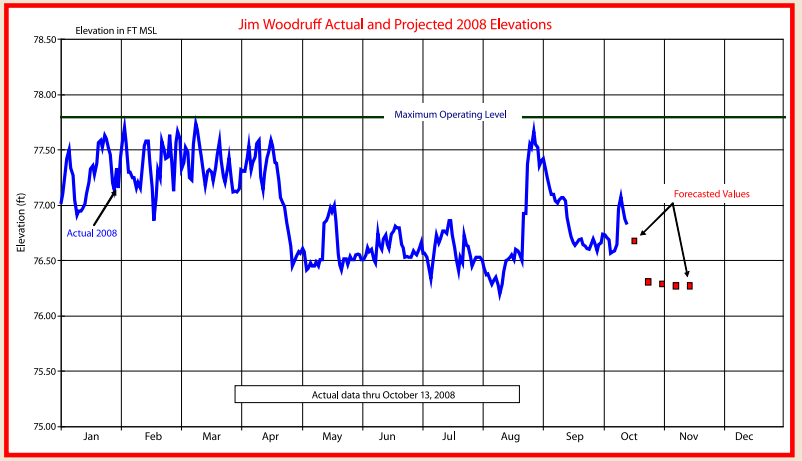
Reservoir Rule Curve









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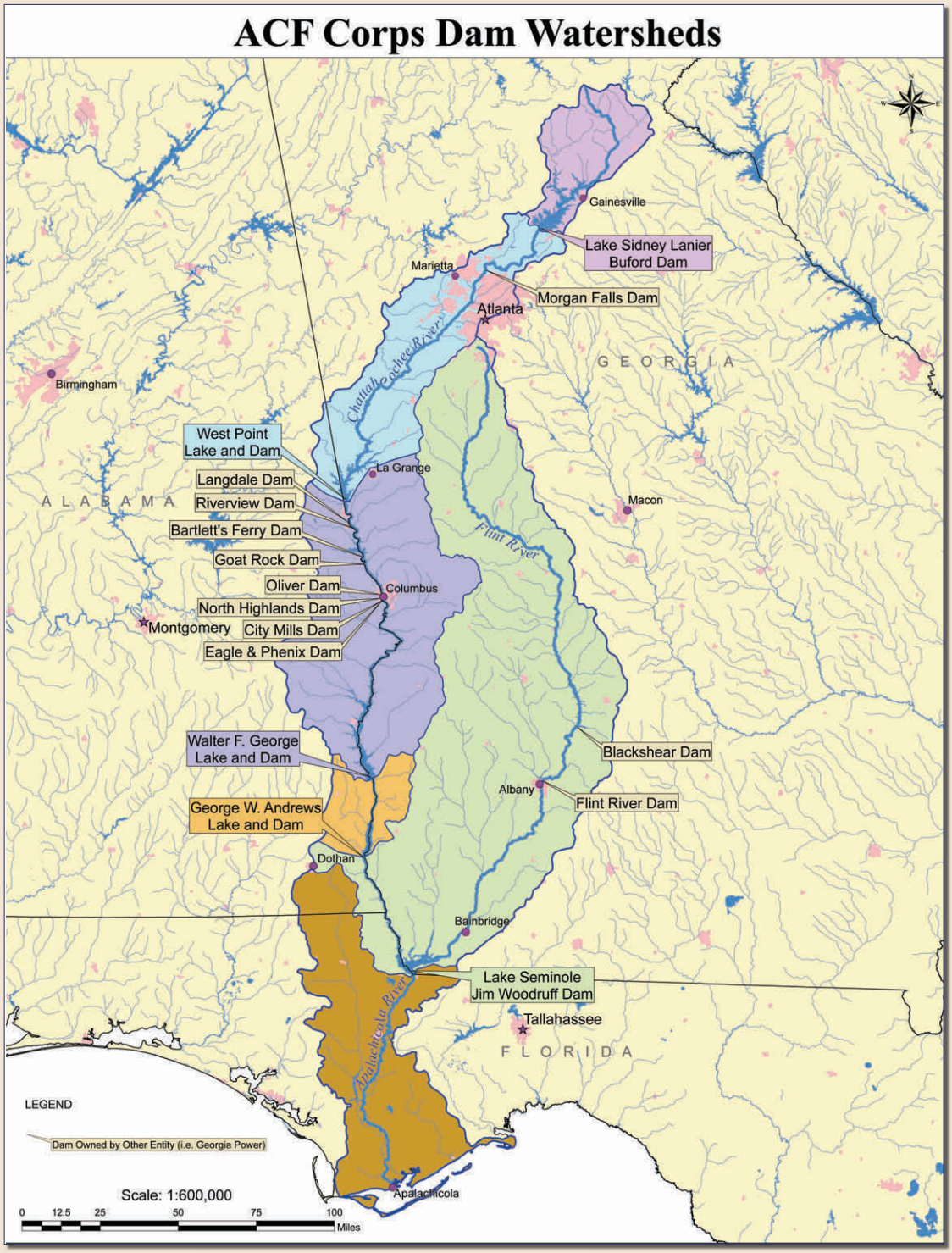
Basin Map



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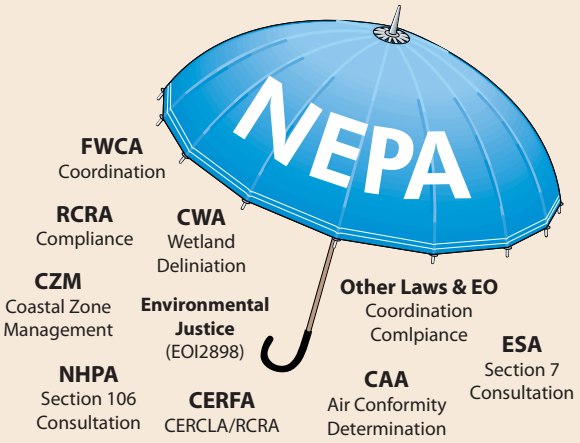
National Environmental Policy Act Overview

- A federal law that requires the identification and analysis of potential significant effects on the quality of the natural and human environment of certain proposed Federal actions and alternatives before those actions take place.
- A mechanism for:
  - Evaluation of potential environmental impacts.
  - Incorporating public involvement into the Federal decision-making process.



What is an Environmental Impact Statement (EIS)?

- An EIS is a document prepared in accordance with NEPA that presents the results of the analysis of the environmental effects of the proposed action and its alternatives.
- An EIS includes opportunities for public involvement in agency planning processes.
- An EIS includes a description of the baseline conditions of the affected environment against which effects of the proposed and alternative actions are evaluated.
- An EIS includes the analysis of effects of the proposed action and alternatives on natural resources (water, air, and wildlife), cultural resources, land use, recreation, aesthetics, and the socioeconomic environment.
- An EIS identifies potential consequences of the proposed action, cumulative impacts; and appropriate mitigation.

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Steps in Preparation of an Environmental Impact Statement

- Define proposed action and alternatives.
- Identify what needs to be analyzed (scoping); refine proposed action and alternative.
- Gather data, conduct analysis, and identify environmental effects of proposed action and alternative.
- Publish draft EIS for public and agency review.
- Conduct meetings on draft EIS to solicit public and agency comments.
- Address comments and publish final EIS.
- Issue Record of Decision (ROD).

Define a Proposed Action

Public Scoping

Refine the Proposed Action

Gather Data and Conduct Analysis

Publish Draft EIS

Public and Agency Review on Draft EIS

Public Meeting on Draft EIS

Publish Final EIS

Issue ROD

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Environmental Resources

Environmental Resources include water resources, biological resources, cultural resources, and air quality in the entire ACF River basin. The EIS will analyze the potential impacts to the environmental resources and develop a reasonable range of alternatives.

- Water Resources
  - Water Quantity
  - Water Quality
  - Floodplains
  - Groundwater
- Biological Resources
  - Vegetation
  - Wildlife
  - Fish and Aquatic Life
  - Threatened and Endangered Species
- Cultural Resources
  - Tribal Interests
  - Archaeological Sites
  - National and/or Historic Sites
- Air Quality

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Basin Map

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Socioeconomics

Purpose: The purpose of the proposed action is to update the ACF Water Control Manual to include current project operations under the existing congressional authorizations taking into account changes in basin hydrology and consumptive demands due to years of growth and development; new/rehabilitated structural features; and environmental issues.

The EIS will analyze existing data sources to determine the impacts of implementing the Water Control Manual on economic resources.

Resources and Areas of Potential Impact:

- Recreation
  - Visitor Days
- Hydropower
  - Megawatt Output
- Navigation
  - Availability of Channel Depth
- Flood Control
  - Flood Damages Prevented
  - Land Use Changes
- Municipal and Industrial Water Supply
  - Demand Millions Gallons Day
- Agricultural Water Supply
  - Demand Millions Gallons Day
- Social Effects
  - Population
  - Employment
  - Income
- Cumulative Effects

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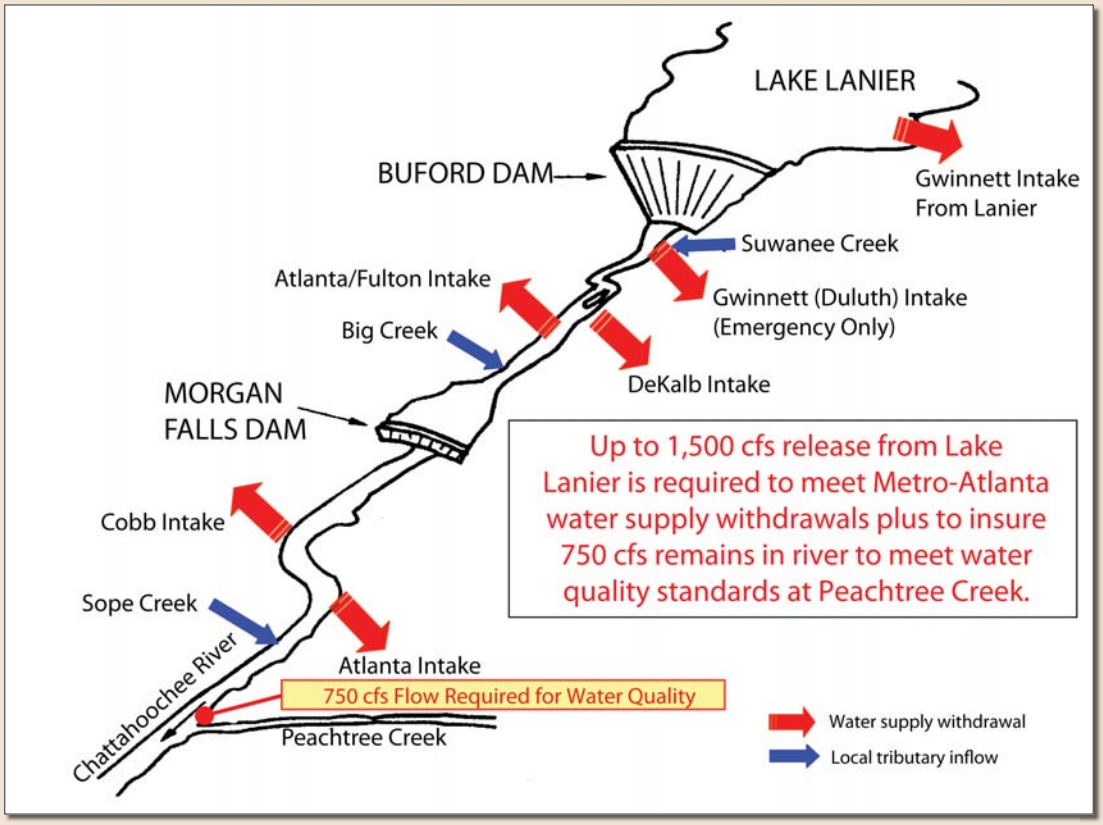
Buford Dam Minimum Flow Requirement Chattahoochee River at Peachtree Creek



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Court Reporter

If you would like your verbal comments about updating the ACF Water Control Manual and preparing an EIS to become part of the public record, please make your statement to the court reporter. If you have a prepared written statement, please leave it with the court reporter.

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Submit Comments

Comments on updating the ACF Water Control Manual and preparing an EIS should be submitted by November 21, 2008 to be included in the scoping report.

107 Saint Francis Street, Suite 1403
Mobile, Alabama 36602-9986
Web site: **www.acf-wcm.com**