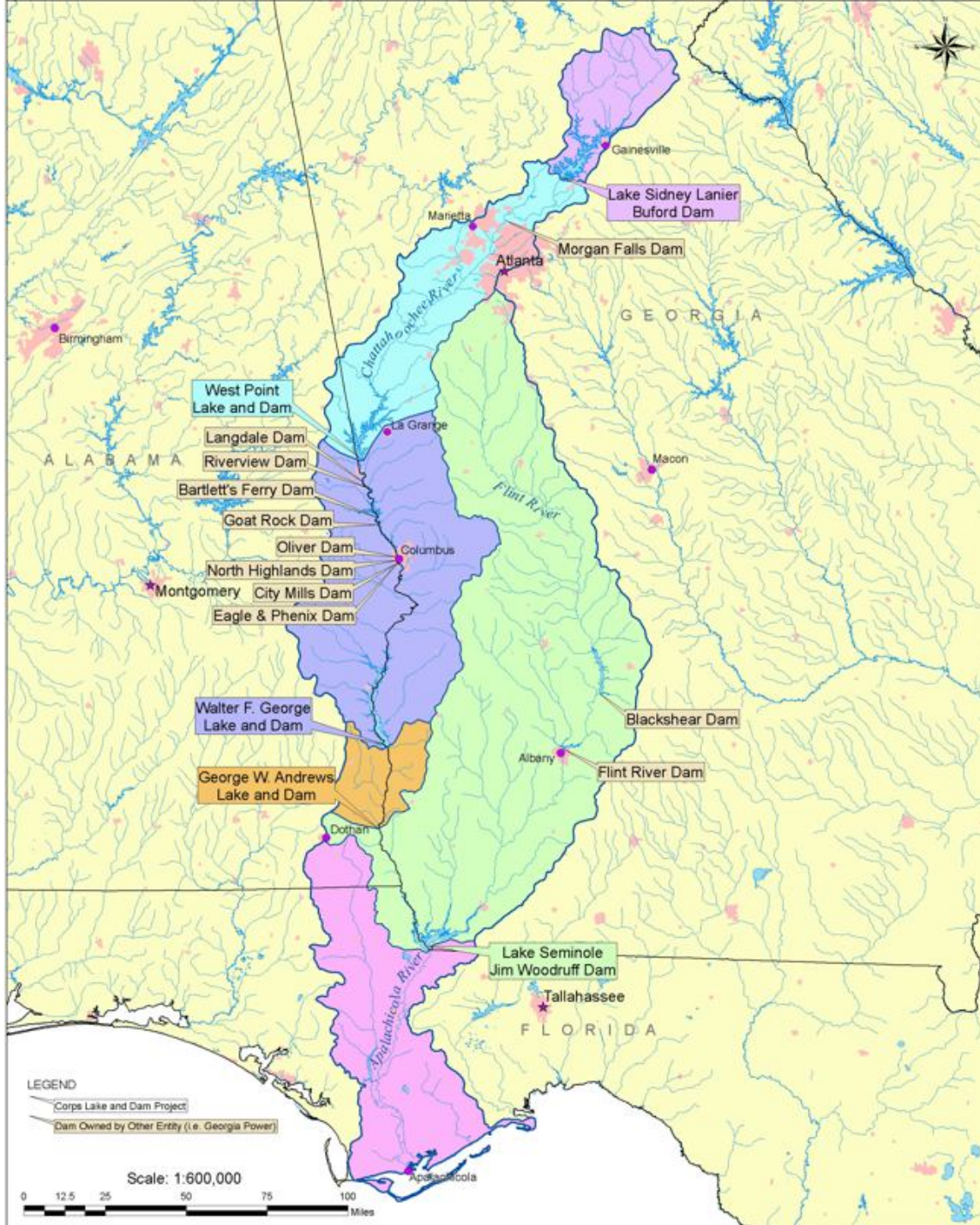


## The ACF River Basin

### **General**

The Apalachicola-Chattahoochee-Flint (ACF) Rivers basin originates in north east Georgia, crosses the Georgia-Alabama border into central Alabama, and follows the state-line south until it terminates in Apalachicola Bay, Florida. The basin covers 50 counties in Georgia, 10 counties in Alabama, and 8 counties in Florida. Extending a distance of approximately 385 miles, the basin drains 19,600 square miles.

## ACF Corps Dam Watersheds



The Mobile District operates five Federal reservoir projects: Buford Dam (Lake Lanier), West Point Dam, Walter F. George Lock and Dam, George W. Andrews Lock and Dam, and Jim Woodruff Lock and Dam (Lake Seminole) as components of the ACF system.

These are multi-purpose projects for which operations have been congressionally authorized either through the original project authorizations, or by subsequent Congressional authorizations

that apply generally to all Corps of Engineers reservoir projects.

The Buford and West Point Dams support fish and wildlife conservation, flood control, hydroelectric power generation, navigation, water supply, water quality and recreation.

Walter F. George Lock and Dam, George W. Andrews Lock and Dam, and Jim Woodruff Lock and Dam (Lake Seminole) operate for support of fish and wildlife conservation, hydroelectric power generation, navigation, water quality, water supply, and recreation.

The reservoir projects are operated in a balanced manner within the system to support all authorized project purposes within the ACF system to the extent practicable.

The Corps of Engineers does not prioritize the project purposes but does utilize action zones that have been defined for each of the major storage projects on the ACF Buford, West Point and Walter F. George. These actions zones which are outlined in the 1989 Draft Master Water Control Manual are used to determine minimum hydropower generation, water supply and water quality releases at each project as well as maximum navigation releases from conservation storage in the lakes while balancing the lake levels in a system-wide approach.

The guidelines in the Water Control Manual reduce the amount of water available for augmenting navigation flows and other project purposes as drought conditions intensify in the basin. Ultimately, during times of drought, operations in support of navigation and hydropower may become very limited, recreation will be impacted, and water supply and water quality support is reduced to the minimum levels.

The strategy of operating the projects also calls for water to be taken first from storage in the lower lakes on the system and gradually pulling water from the upper lakes over time. Thus, Walter F. George, which contains most of the storage on the lower system because Lake Seminole does not have much storage, will be the first lake to be impacted by operations on the system during periods of low water. If conditions remain dry, water will also be pulled from West Point and eventually Lake Lanier. This is all done in accordance to the action zones and guidelines in the Water Control Manual, which attempts to equitably balance the lakes in the system. However, varying hydrologic conditions throughout the ACF basin may result in the lakes getting out of balance but eventually they will be brought back into balance according to the manual.

## Water Management for Federal Project Purposes

The Water Management Section makes daily decisions and coordinates regularly with representatives from the various areas for which the river systems are operated -- hydropower, recreation, navigation, environmental, public affairs and others areas, to exchange information concerning the operation of the river systems. Daily water management decisions are determined using the information obtained along with current project and basin data. A weekly [District River Report](#) is prepared that summarizes the conditions in each of the river basins. Operation of the lakes on the ACF system is also guided by use of [action zones](#). The action zones provide guidelines on meeting the project purposes for each lake. The multiple project purposes on the ACF system include:

The multiple project purposes on the ACF system include:

- Hydropower
- Navigation
- Water Supply
- Water Quality
- Flood Control

- Fish and Wildlife
- Recreation

## Action Zones

Action zones have been defined for each of the major storage projects on the ACF -- Buford, West Point and George. They are shown on the 5-week forecast charts that are found on the [ACF Basin Page](#) . These zones are used to manage the lakes at the highest level possible for recreation and other purposes that benefit from high lake levels. The actions zones also provide guidance on meeting minimum hydropower needs at each project as well as determine the amount of storage available for downstream purposes such as navigation, water supply, water quality. These zones were derived based on the past operation of the projects which considered time-of-year, historical pool level/release relationships, operational limits for conservation and recreational resource impact levels. The action zones are basic guidelines for operating the river system; however there may be other factors and activities that may cause the lakes to operate differently than the zones shown on the graphs. Some of these factors range from flood control actions, fish spawn operations, maintenance and repair of turbines, emergency situations such as drownings and chemical spills, drawdowns due to shoreline maintenance, releases made to free stuck barges, and other circumstances.

All three lakes are operated to maintain their lake level in the same zones concurrently. However, due to the hydrologic and physical characteristics of the river system and factors mentioned above, there may be brief periods when one lake is in a lower zone than the other. If this occurs, efforts are made to bring the lakes back in balance with each other as soon as conditions allow. By doing this, impacts to the river basin is shared equitably among the projects.

## Water Control Manual

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 congressional authorizations apply to all federal reservoir projects, including:

- Flood Control Act of 1944 (P.L. 78-534)
- Water Supply Act of 1958 (P.L. 85-500)
- Fish and Wildlife Coordination Act of 1958 (P.L. 85-624)
- Federal Water Pollution Control Act Amendments of 1972 (P.L. 92-500)
- Endangered Species Act of 1973 (P.L. 93-205)
- Water Resource Development Acts

Without a comprehensive updated Water Control Manual, the Corps runs the risk of, among other things: adversely affecting water quality downstream; not providing sufficient water where needed (when needed to meet the authorized project purposes and the needs of stakeholders, whether domestic, municipal or industrial); adversely affecting endangered species; and expending water resources too early, which reduces the ability to maintain the system to meet project purposes and the needs of stakeholders; and flooding people and facilities that are now within flood plains. This risk is due to changing conditions within the basin and at federal reservoirs which, if not accounted for, can affect water management decisions.

Hydrologists must consider and evaluate many factors to determine the appropriate management of water at each lake. In addition to the constraints of the authorized project purposes, they must also consider power contract commitments, hydrologic and climatologic factors, downstream lake

and basin wide conditions, potential threats of flood and drought, and lake levels.

The current Master Water Control Manual for the ACF Basin was completed in 1958 and does not include Water Control Manuals for the West Point, Walter F. George, or George W. Andrews projects. Manuals were developed for individual projects in the ACF basin as they came on line or as operations changed to accommodate changing conditions within the system. Environmental Impact Statements for the reservoir projects in the basin were prepared in the 1970s. The existing Water Control Manuals do not address water supply operations.

There was a need to develop an updated ACF Master Water Control Manual that incorporated the overall system management, and a draft was proposed in 1989 as part of the Lake Lanier post-authorization change report. This Master Manual described current system operations at that time, but was never finalized due to litigation filed by the State of Alabama objecting to current and proposed changes to operations in the basin. However, the Corps has been operating the ACF projects under the draft 1989 Master Water Control Manual on an interim basis pending update of the Master Manual and individual project Water Control Manuals. The Water Control Manuals specific to each Federal reservoir in the Basin are prepared as appendices to the Master Water Control Manual. The current project manuals are listed below.

- Appendix A - Jim Woodruff Reservoir
- Appendix B - Buford Dam
- Appendix C - Walter F. George Dam
- Appendix D - George W. Andrews Reservoir
- Appendix E - West Point Reservoir

These individual manuals typically outline the regulation schedules for each project, including operating criteria, guidelines and rule curves; and specifications for storage and releases from the reservoirs. The Water Control Manuals also outline the coordination protocol and data collection, management and dissemination associated with routine and specific water management activities (such as flood control operations or drought contingency operations). Updates or revisions to the Water Control Manuals are typically integrated with the National Environmental Policy Act (NEPA) public involvement and documentation process.

The operational flexibility and discretion written into the manuals is necessary to balance the water management needs for the numerous and often competing authorized project purposes at each individual project, plus the need to balance basin-wide water resource needs for areas throughout the ACF basin. Project operations must also be able to adapt to seasonal and inter-annual variations in flow and climatic conditions. Additional plans may also be developed for drought contingency operations or to respond to other emergency conditions.

## **National Environmental Policy Act (NEPA)**

The National Environmental Policy Act of 1969 (NEPA) requires all federal agencies to analyze the environmental effects associated with all major federal actions. NEPA assures that environmental factors are considered equally with the technical and engineering components of a decision. NEPA requires federal agencies to identify all potential environmental effects and any adverse effects that cannot be avoided and to evaluate alternatives to the proposed action.

NEPA is a "full disclosure" law with provisions for public access to and full participation in the federal decision-making process. The Act's intent is to protect, restore, or enhance the environment through well-informed federal decisions. There will be three major NEPA compliance documents associated with this action:

- A Draft Environmental Impact Statement (EIS) which will evaluate and analyze significant environmental and socioeconomic impacts of alternative actions, and will be distributed for public comment.
- A Final EIS which will address public comments on the Draft EIS and recommend mitigation actions for significant impacts.
- A Record of Decision (ROD) which documents the final decision on the proposed action and specifies the needed mitigation measures and monitoring programs based on the information presented in the EIS. The Council on Environmental Quality (CEQ) offers more information on NEPA including the following: The Statute A Citizen's Guide to the NEPA

The National Environmental Policy Act of 1969 Statute:  
<http://ceq.hss.doe.gov/nepa/regs/nepa/nepaeqia.htm>

A Citizen's Guide to the NEPA:  
[http://ceq.hss.doe.gov/nepa/Citizens\\_Guide\\_Dec07.pdf](http://ceq.hss.doe.gov/nepa/Citizens_Guide_Dec07.pdf)