

**APPENDIX H**

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**Public Scoping Meeting Factsheets**



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## Drainage Basin

# Alabama, Coosa, & Tallapoosa (ACT) River Basin Fact Sheet

## What is a “Basin”?

*Where ever you are right now and wherever your property is, you and your property are always in one!*

The term “basin” refers to a “drainage basin” or “watershed” and is the area of land that catches rain (and other precipitation) that eventually drains or seeps into a marsh, river, lake, or groundwater. What separates different drainage basins/ watersheds from each other are ridges of higher land.

Drainage basins come in all different shapes and sizes. Some are millions of square miles and some are just a few acres. But no matter what size they are, basins are nearly always part of a larger basin area. The 22,800 square mile ACT Basin includes everything that eventually flows into the ACT – from above Lake Allatoona to north of Mobile, Alabama. The drainage basins for Allatoona, Carters, R.F. Henry, Millers Ferry, and Claiborne vary in size as does the scenery and topography.

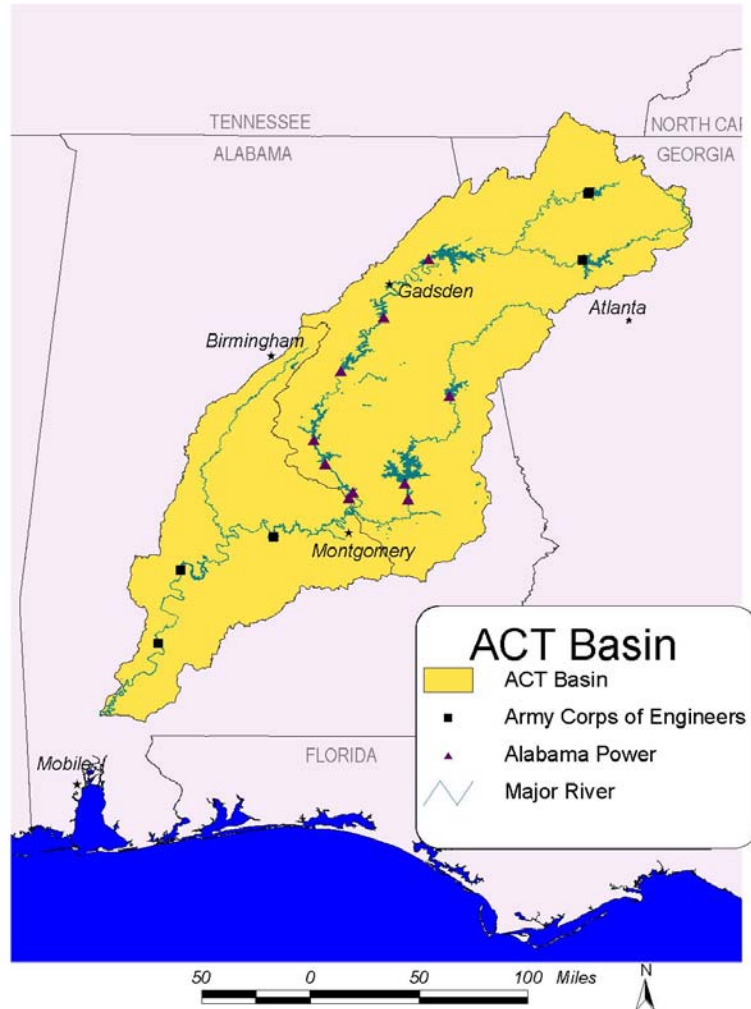
### Cumulative Watershed/Basin Size:

Allatoona = 1,110 square miles  
Carters = 376 square miles  
R.F. Henry= 16,300 square miles  
Millers Ferry= 20,700 square miles  
Claiborne= 21,473 square miles  
Total= 22,800 square miles

### ACT Basin Size by State:

23% in Georgia  
77% in Alabama

To keep you informed, the Corps has developed a “Drought Information” website at <http://www.sam.usace.army.mil> Check it out for the latest lake level, projections, boat ramp closures, news releases, and more!





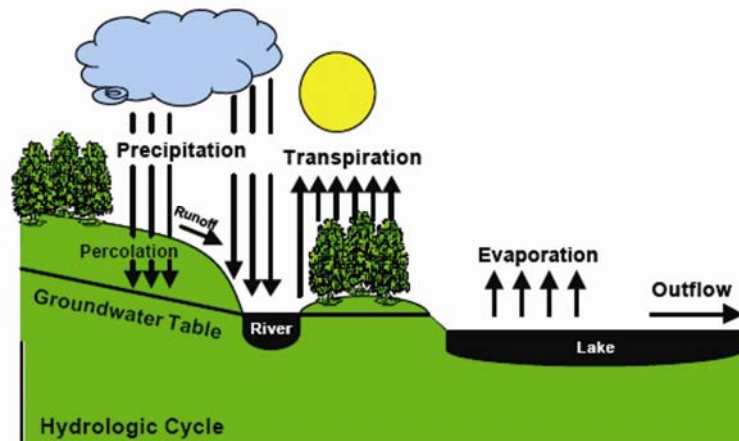
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## **Inflows and Outflows**

### **Alabama, Coosa & Tallapoosa (ACT) River Basin Fact Sheet**

How does water get into our lakes? Water, a renewable resource, is continually recycled and returned to the eco-system through the hydrologic cycle (see diagram). As weather systems move through, precipitation (typically rain in our area) is deposited. Rainfall is a major source of inflow into our lakes. However, rain does not need to fall directly over the lakes to increase lake levels. Actually, much of the inflow into our lakes originates as runoff—rainwater that falls outside of the actual lake (but within the basin/watershed).



Runoff follows the laws of gravity— it may run down slopes directly into a lake, or it may arrive indirectly such as by reaching a small stream or river that flows into a lake, or it may reach the lake under the surface because it soaked into the ground through percolation and became groundwater.

In addition to rainfall, runoff, and groundwater, another very important source of inflow into our lakes is through upstream water releases. These controlled releases at the dams can have a direct affect on the river and lake level below the dam. These releases are very important as they provide power during peak demand periods as well as maintain water supply and water quality needs of the Alabama, Coosa and Tallapoosa River Basin from Carters Lake and Lake Allatoona to the Gulf of Mexico.

At the same time water is coming into a lake, some of it is leaving— we call this outflow. Downstream water releases from hydropower generation are the most well known source of outflows. However, evaporation from the lake surface is a major means by which water leaves a lake. Water also leaves a lake system by groundwater outflow as well as through consumptive uses such as water supply for municipalities and industries.

The difference between the amount of water coming into a lake (inflow) and the amount of water going out (outflow) is the determining factor in whether the water level will rise, fall, or remain stable. When several months of above-average precipitation occur with cooler, cloudy conditions that cause less evaporation the levels tend to rise. Likewise, hot, sunny, windy weather and prolonged drought conditions result in lower water levels due to increases in evaporation and the decrease in inflows.

Why are inflows significantly decreased during drought? Because the ground is so dry that it acts like a sponge and absorbs rainfall before it can become runoff— which means less water reaching the lakes. In addition, the groundwater is typically reduced during a drought and it is not until the ground becomes resaturated that the runoff will significantly increase. This is why lake levels are not affected as much by rain during a drought as compared to under normal weather conditions; it can take many months of “normal” rainfall to build the inflows back up to their normal level.



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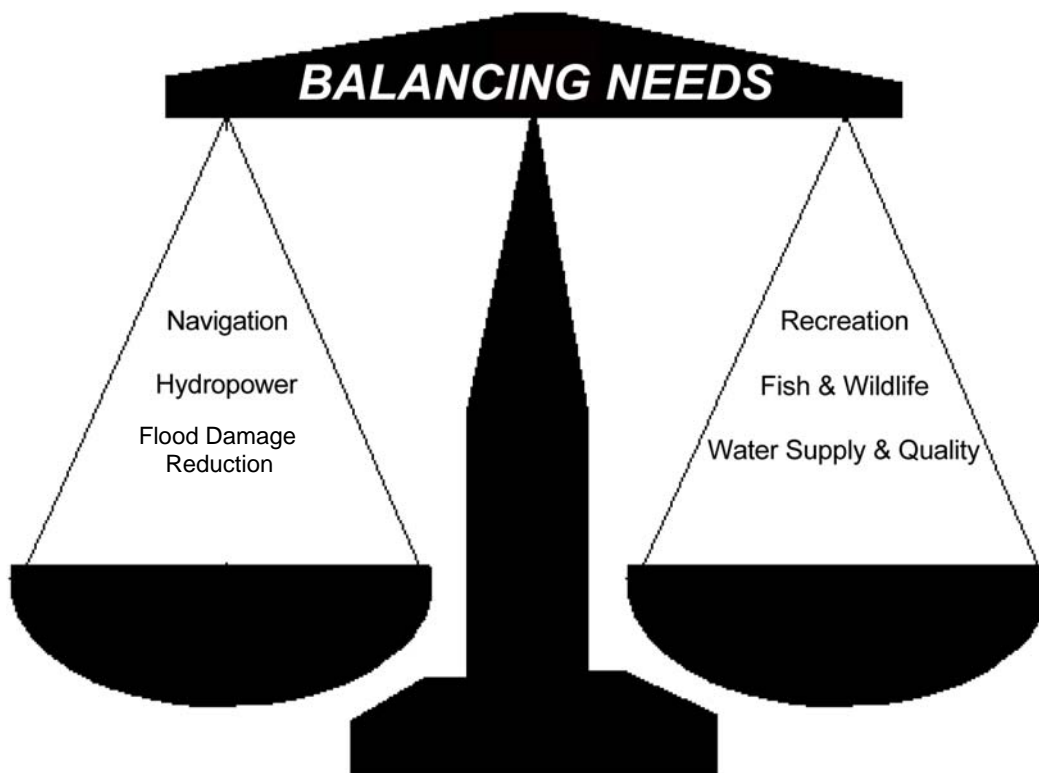
## **Authorized Purposes**

### **Alabama, Coosa, & Tallapoosa (ACT) River Basin Fact Sheet**

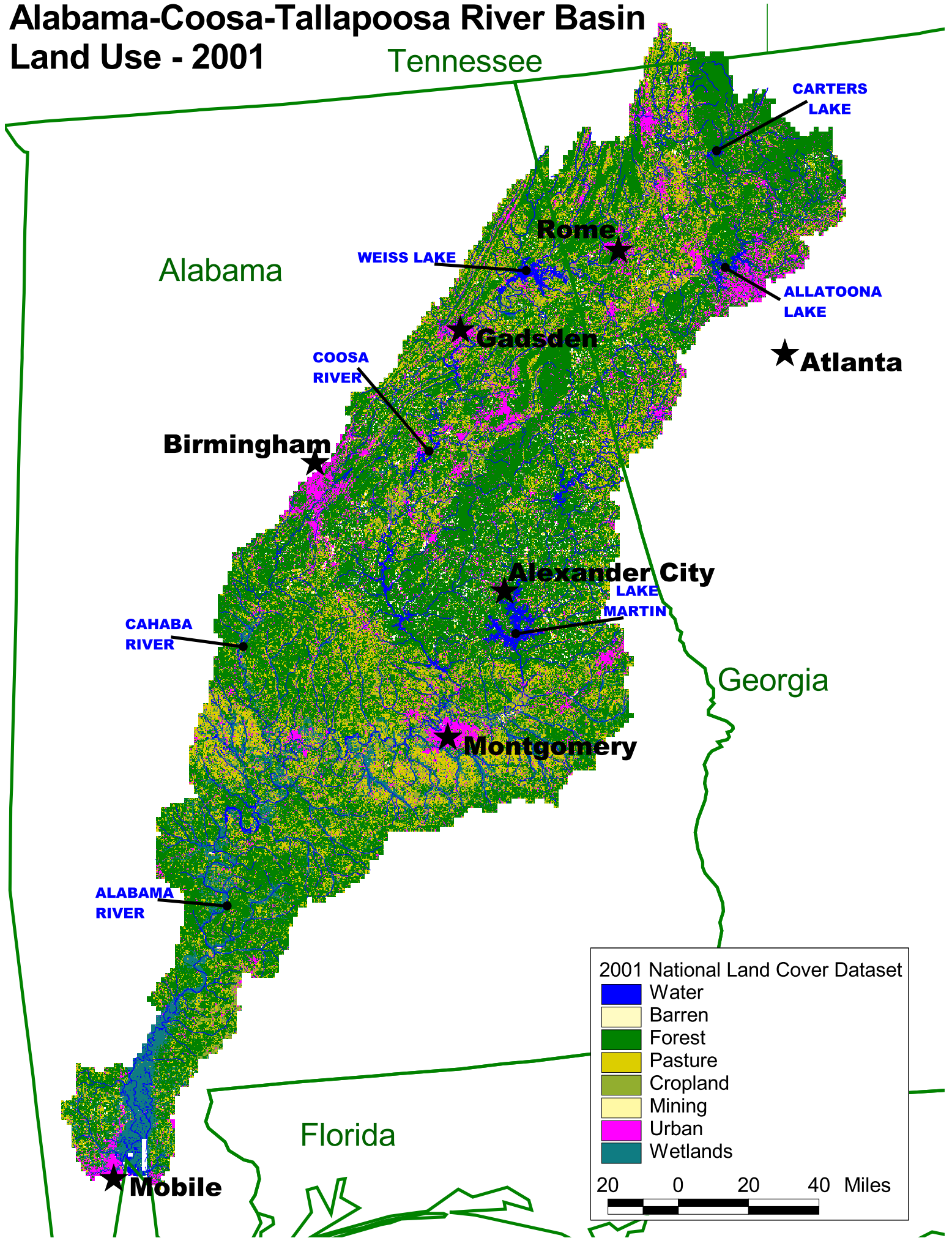
The Alabama, Coosa, & Tallapoosa (ACT) River Basin lakes—Lake Allatoona, Carters, R.F. Henry, Millers Ferry, and Claiborne, are operated as multipurpose reservoirs, with consideration given to all authorized purposes. Corps hydrologist (our water managers) must balance these competing needs. There is potential for conflict between these purposes, especially during drought conditions.

Hydrologist must consider and evaluate many factors to determine the appropriate management of water at each lake. In addition, to the constraints of the authorized 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. When a drought occurs, inflows to the lakes are significantly reduced while the challenge to maintain lake levels is significantly increased. The authorized purposes for the lakes do not change during a drought; we still must manage for them all, however priority is given to water supply and water quality.

To keep you informed, the Corps has developed a “Drought Information” website at <http://www.sam.usace.army.mil> Check it out for latest lake level, projections, boat ramp closures, news releases, and more!



# Alabama-Coosa-Tallapoosa River Basin Land Use - 2001



2001 National Land Cover Dataset

- Water
- Barren
- Forest
- Pasture
- Cropland
- Mining
- Urban
- Wetlands

20 0 20 40 Miles



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**River Basin System**

**Alabama, Coosa & Tallapoosa (ACT) River Basin System Fact Sheet**



**Cumulative Watershed/Basin Size:**

- Allatoona = 1,110 square miles
- Carters= 376 square miles
- R.F. Henry= 16,300 square miles
- Millers Ferry= 20,700 square miles
- Claiborne= 21,473 square miles
- Total= 22,800 square miles

**ACT Basin Size by State:**

- 23% in Georgia
- 77% in Alabama



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# FACTSHEET

## Robert F. Henry Lock and Dam



### Location

Alabama River (AL)

### Authorized Purposes

- Waste Assimilation Needs
- Hydropower
- Navigation
- Fish & Wildlife Enhancement
- Recreation

### Operation

Woodruff Lake is 77 miles long and averages 1,300 feet wide. It has a surface area of 12,500 acres. There is a 9-foot-deep by 200-foot-wide navigation channel over the entire length of the lake. The facility has a generation capacity of 82 megawatts (MW). The R.F. Henry Dam is operated in tandem with the downstream Millers Ferry Dam to provide an average daily outflow of 6,600 cubic foot per second (cfs) from the Millers Ferry Dam for navigation and waste assimilation needs on the Alabama River.

### Highlights

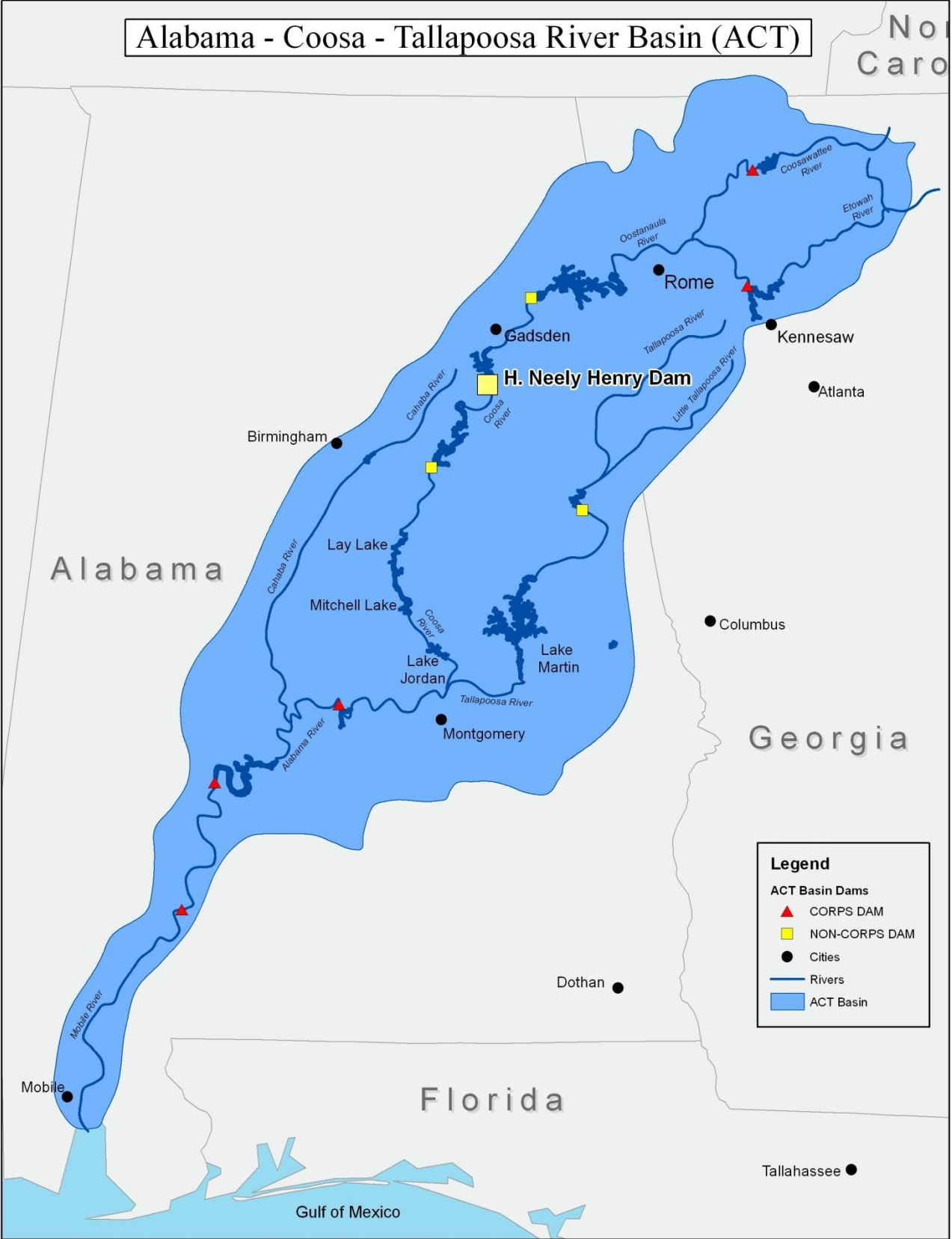
The R.E. “Bob” Woodruff Lake is created by the Robert F. Henry Lock and Dam, located 281 miles upstream of Mobile Bay. This is the first of three Corps projects on the Alabama River, also known as the Alabama River Lakes. Woodruff Lake extends from the Robert F. Henry Lock and Dam upstream to the Walter Bouldin Dam. The City of Montgomery, Alabama, is located on the lake. Lake levels are typically fairly stable with minimal fluctuation.

### Uses

Total Capacity	234,200 acre-feet
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acre-feet=one acre surface area to a depth of one foot  
approximately 325,851.4 gallons

# Alabama - Coosa - Tallapoosa River Basin (ACT)



**Legend**

**ACT Basin Dams**

- ▲ CORPS DAM
- NON-CORPS DAM

● Cities

— Rivers

■ ACT Basin





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# FACTSHEET

## R. L. Harris Dam

### Highlights

The R. L. Harris Dam is located on the Tallapoosa River at river mile 139.1 in Randolph County, Alabama. The 24 mile long reservoir extends up both the Tallapoosa and Little Tallapoosa Rivers and is contained within Randolph and Clay Counties. Crooked Creek is located just below the dam. The location of the dam is about midway between Montgomery, Alabama and Atlanta, Georgia. Operated and owned by Alabama Power Company.

### Location

Tallapoosa River (AL)

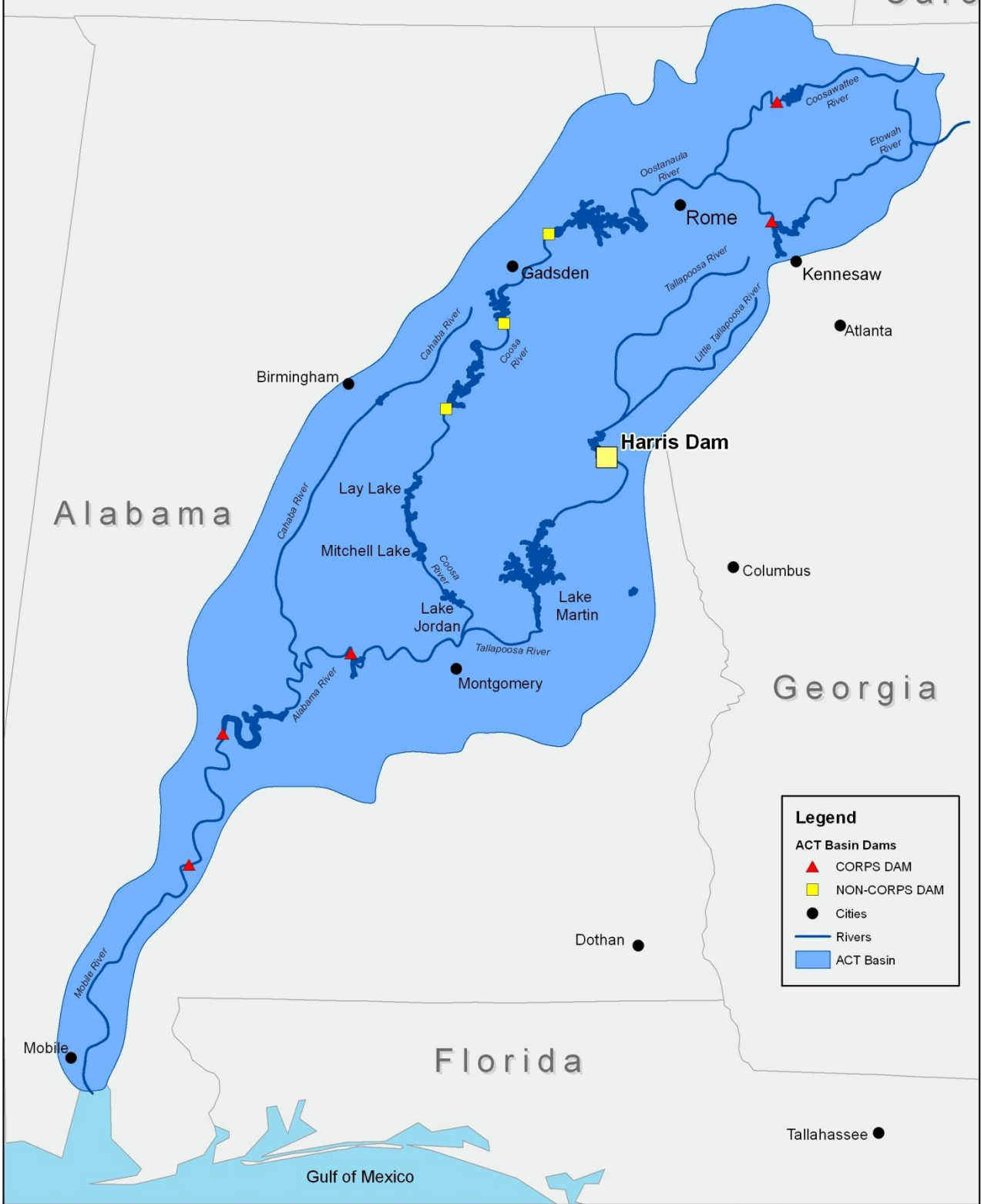
### Authorized Purposes

- Flood Damage Reduction
  - Hydropower
  - Water Quality
- Fish & Wildlife Enhancement
  - Recreation

### Operation

The R. L. Harris Dam consists of a concrete gravity dam about 150 feet high and 1,142 feet long including a 310 foot long spillway and a non-overflow section; a reservoir with full summer level power pool at elevation 793 feet mean sea level (msl), having a surface area of approximately 10,661 acres; a powerhouse containing two generating units, each rated at 67,500 kilowatts; various abutment dikes and saddle dikes.

# Alabama - Coosa - Tallapoosa River Basin (ACT)



**Legend**

- ACT Basin Dams
  - CORPS DAM (Red Triangle)
  - NON-CORPS DAM (Yellow Square)
- Cities (Black Dot)
- Rivers (Blue Line)
- ACT Basin (Light Blue Area)



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# FACTSHEET

## Millers Ferry Lock and Dam

### Highlights

The William “Bill” Dannelly Lake is created by the Millers Ferry Lock and Dam on the Alabama River, 178 miles upstream of Mobile Bay. Dannelly Lake is 103 miles long and averages almost 1,400 feet wide. The reservoir partially inundates several tributary streams. The Cahaba River flows into the upper reaches of Dannelly Lake.

Lake levels remain fairly stable on a day-to-day basis, but rise slightly, up to 0.5 feet, in wet weather. The reservoir provides ample recreation opportunities. Recreation visitors number three million annually.

### Location

Alabama River (AL)  
178 miles upstream of Mobile Bay

### Authorized Purposes

- Hydropower
- Navigation
- Fish & Wildlife Enhancement
- Recreation

### Operation

Dannelly Lake has a normal pool elevation of 80 feet. It has a surface area of 18,500 acres. There is a 9-foot-deep by 200-foot-wide navigation channel extending the entire length of the reservoir. The facility is a multi-purpose reservoir constructed by the Corps for both navigation and hydro-power. The hydropower generating capacity of the project is 90 megawatts (MW). An average daily outflow of 6,600 cubic foot per second (cfs) is provided from the Millers Ferry Dam for navigation and assimilative flow needs on the Alabama River. The reservoir also provides recreational benefits and has lands managed for wildlife mitigation.

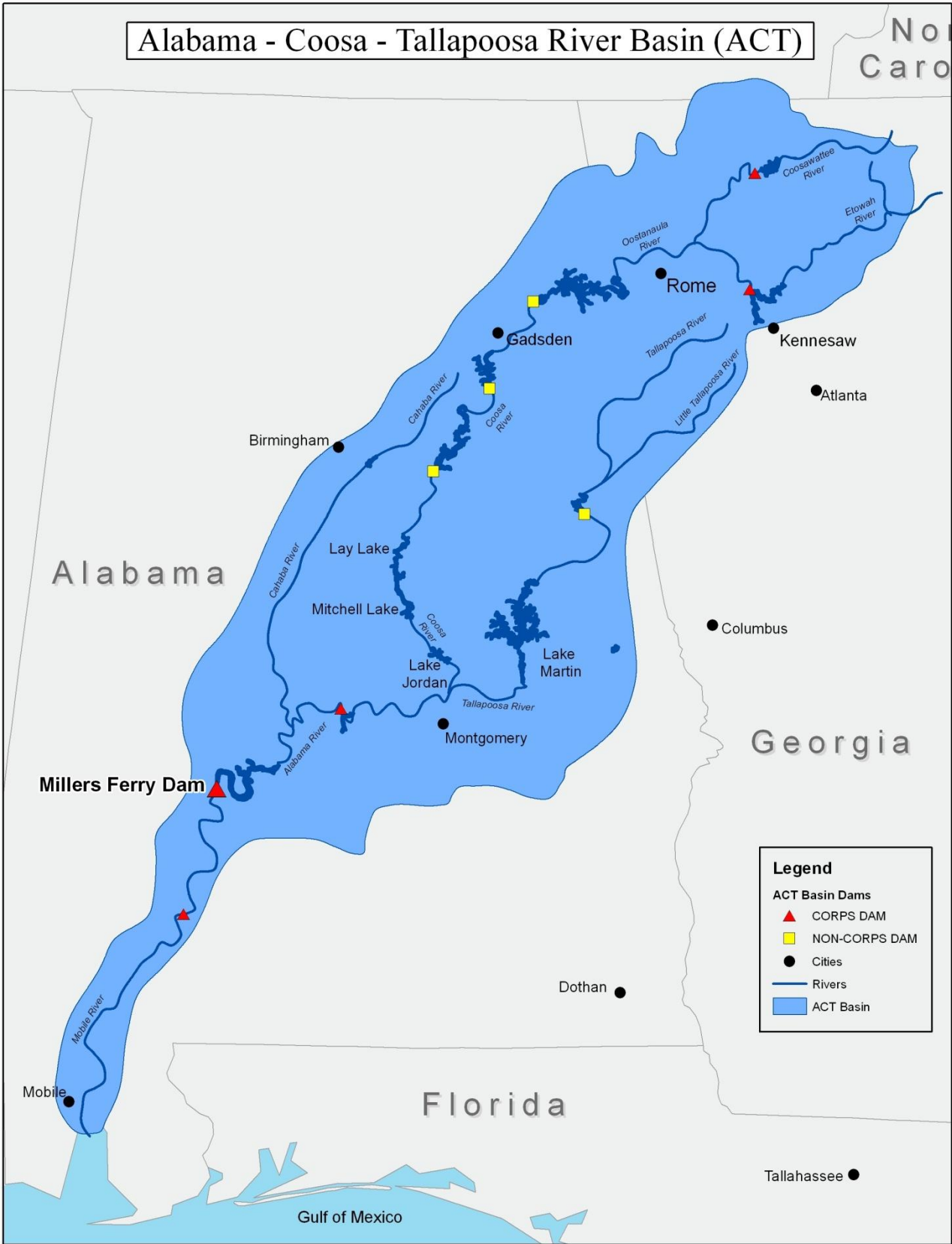
### Uses

Total Capacity	331,800 acre-feet
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acre-feet=one acre surface area to a depth of one foot  
approximately 325,851.4 gallons



# Alabama - Coosa - Tallapoosa River Basin (ACT)





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# FACTSHEET

## Logan Martin Dam

### Highlights

The Logan Martin Dam is located on the Coosa River at mile 99.5 and has a reservoir, extending upstream 48.5 miles to the H. Neely Henry Dam, located in Talladega, St. Clair, and Calhoun Counties. Operated and owned by Alabama Power Company.

### Location

Coosa River (AL)  
13 miles downstream from  
Childersburg

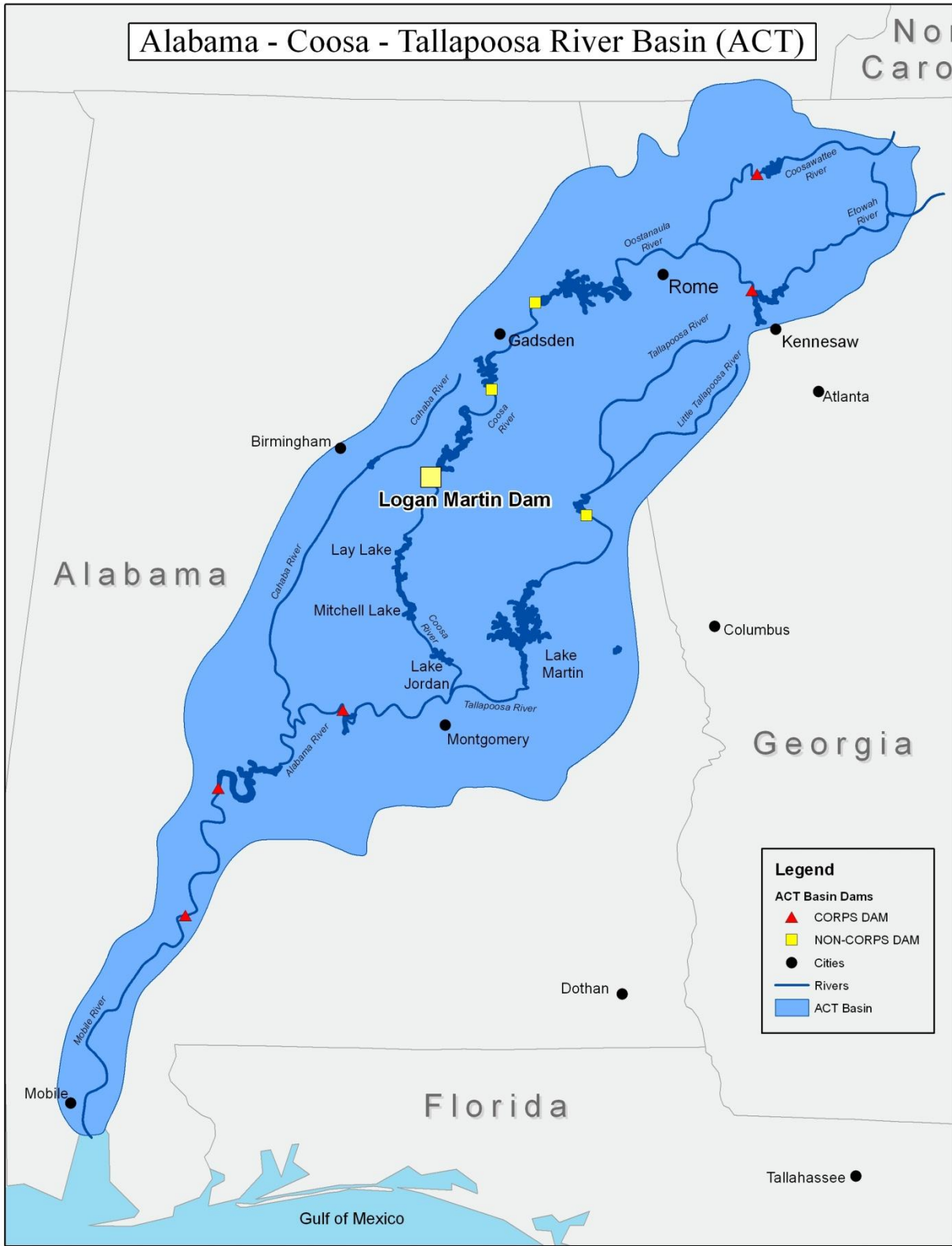
### Authorized Purposes

- Flood Damage Reduction
  - Hydropower
  - Water Quality
- Fish & Wildlife Enhancement
  - Recreation

### Operation

The Logan Martin Dam has a concrete gated spillway section with compacted earth abutment dikes; a reservoir with full summer level power pool at elevation 465 feet msl, having a surface area of approximately 15,300 acres; a 135 MW power plant which is part of the main dam, located on the west side of the river between the spillway and the right-bank earth abutment; a substation; and appurtenant electrical and mechanical facilities. It was designed and constructed with a provision for the future installation of locks and appurtenances to facilitate development of the river for navigation when such development becomes economically feasible.

# Alabama - Coosa - Tallapoosa River Basin (ACT)



**Legend**

- ACT Basin Dams
- ▲ CORPS DAM
- NON-CORPS DAM
- Cities
- Rivers
- ACT Basin



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# FACTSHEET

## H. Neely Henry Dam

### Highlights

The H. Neely Henry Dam is located on the Coosa River at mile 148.0 and has a reservoir extending upstream 77.70 miles to the Weiss Dam, located in St. Clair, Calhoun, Etowah and Cherokee Counties. Operated and owned by Alabama Power Company.

### Location

Coosa River (AL)  
27 miles downstream from Gadsden

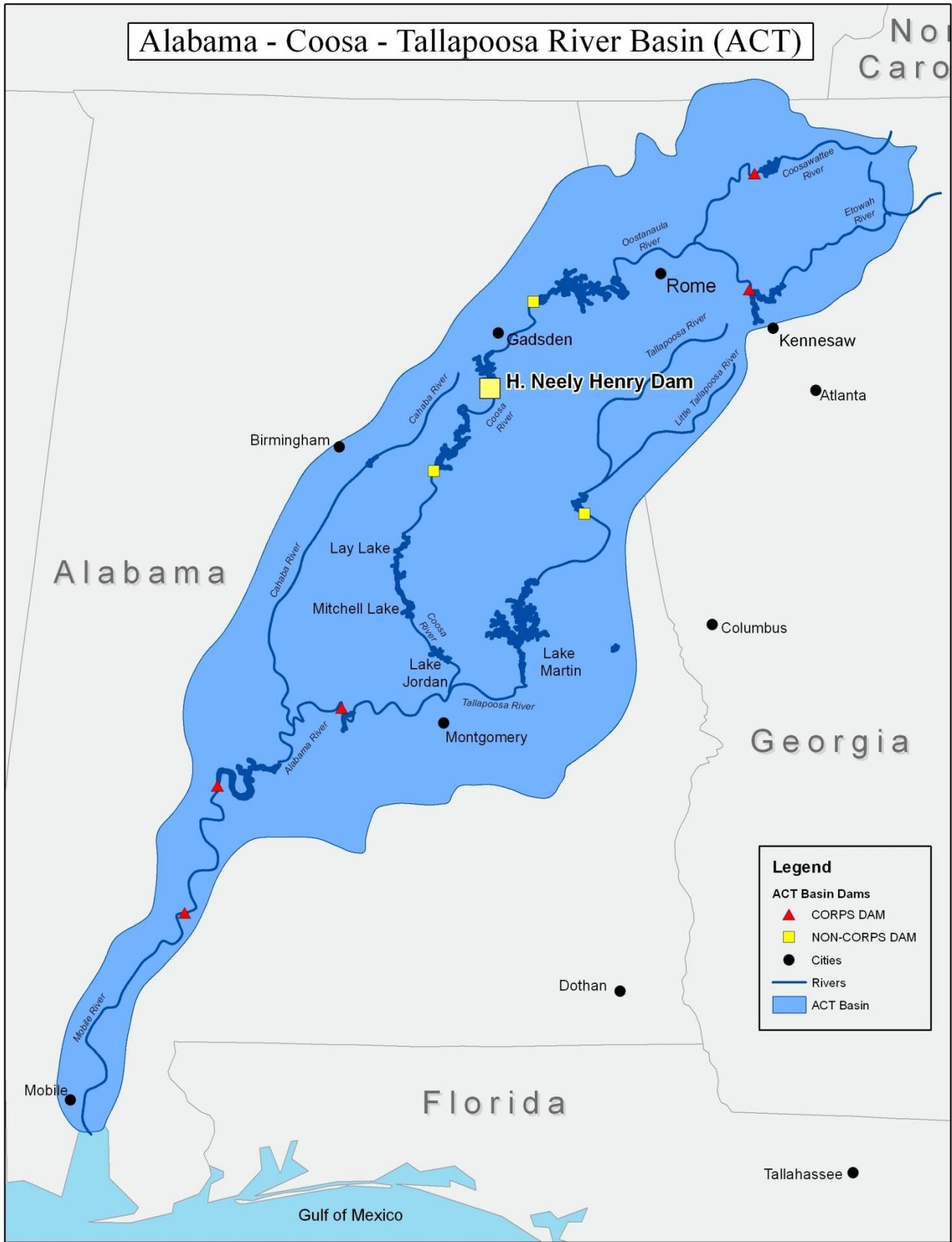
### Authorized Purposes

- Flood Damage Reduction
  - Hydropower
  - Water Quality
- Fish & Wildlife Enhancement
  - Recreation

### Operation

The H. Neely Henry Dam has a concrete gated spillway section with compacted earth abutment dikes; a reservoir with full summer level power pool at elevation 508 feet msl and a surface area of approximately 11,235 acres; a 70 megawatt (MW) power plant, which is part of the main dam, located on the east side of the river between the spillway and the left bank earth abutment; a substation; and, appurtenant electrical and mechanical facilities. The dam was built principally for the production of hydroelectric power but was designed and constructed with a provision for the future installation of locks and appurtenances to facilitate development of the river for navigation when such development becomes economically feasible.

# Alabama - Coosa - Tallapoosa River Basin (ACT)



**Legend**

**ACT Basin Dams**

- CORPS DAM (Red Triangle)
- NON-CORPS DAM (Yellow Square)

**Other Symbols:**

- Cities (Black Dot)
- Rivers (Blue Line)
- ACT Basin (Light Blue Area)





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# FACTSHEET

## Claiborne Lock and Dam

### Highlights

Claiborne Lake is the most primitive of the three Alabama River Lakes. The lake remains mostly within its original river banks and is surrounded by a rustic atmosphere. The Corps is allowing the shoreline to revert to its natural state, providing important wildlife habitat. Recreation visitors number over one million annually.



### Location

Alabama River (AL)  
118 miles upstream of Mobile Bay

### Authorized Purposes

- Flood Damage Reduction
- Navigation
- Fish & Wildlife Enhancement
- Recreation

### Operation

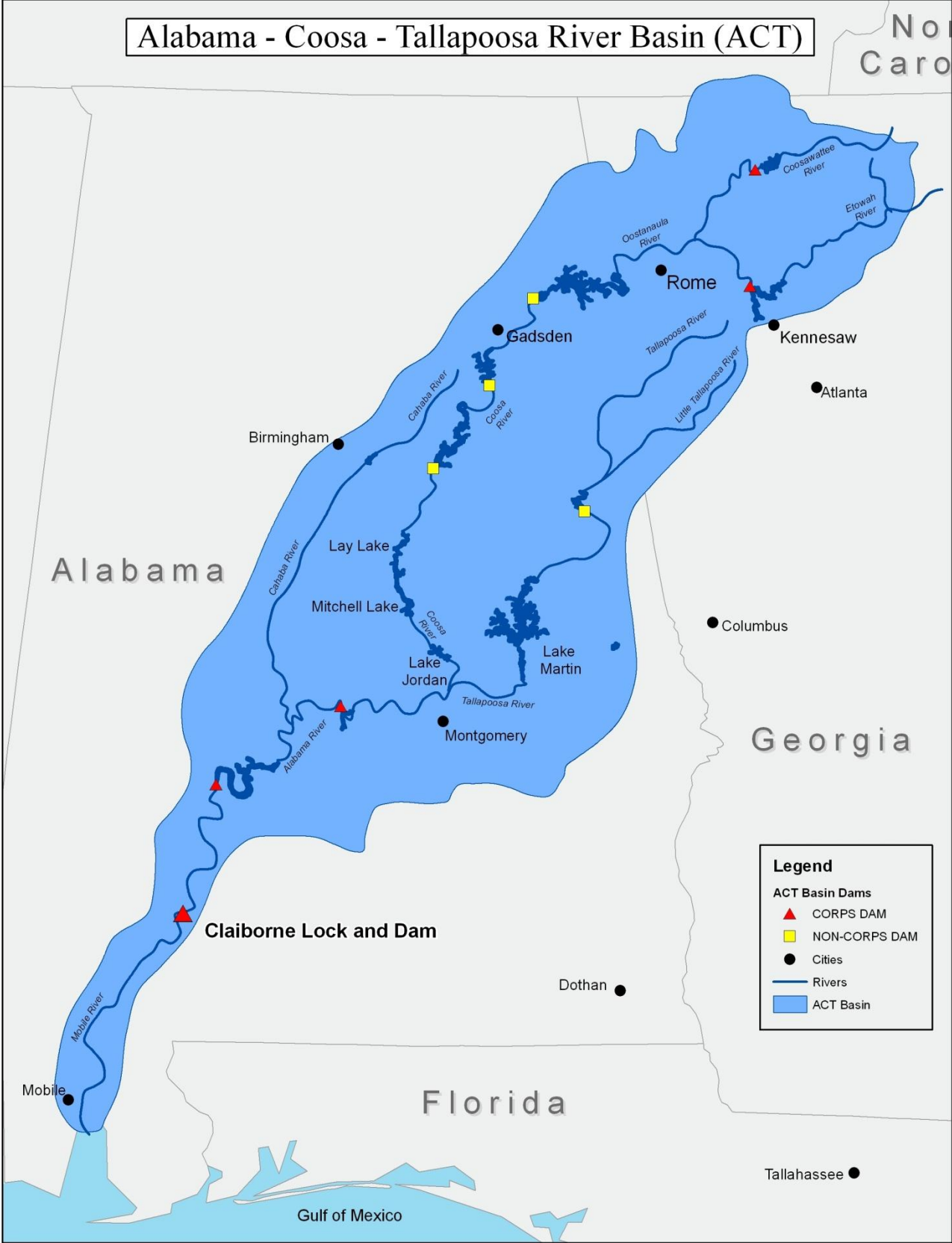
Claiborne Lake is created by the Claiborne Lock and Dam. The lake is similar to a wide river, averaging about 800 feet wide, with a surface area of 5,850 acres. Claiborne Lake extends 60 miles upstream to the Millers Ferry Lock and Dam. The lake has a 9-foot-deep, 200-foot-wide navigation channel extending its entire length. There is no hydropower generating capability at the project. The lake also provides recreation benefits and has lands managed for wildlife mitigation.

### Uses

Total Capacity	96,360 acre-feet
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acre-feet=one acre surface area to a depth of one foot  
approximately 325,851.4 gallons

# Alabama - Coosa - Tallapoosa River Basin (ACT)



**Legend**

- ▲ CORPS DAM
- NON-CORPS DAM
- Cities
- Rivers
- ACT Basin



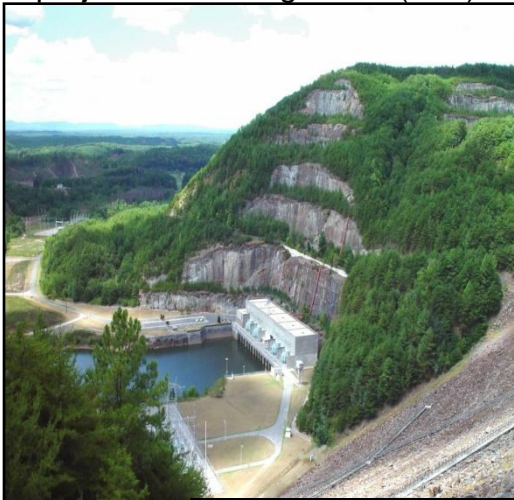
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# FACTSHEET

## Carters Dam & Carters Reregulation Dam

### Highlights

Carters Lake has a minimum power pool elevation of 1,022 feet and a maximum power pool (maximum conservation pool) elevation of 1,074 feet in the summer and 1,072 feet in the winter. Carters Lake has a surface area of 3,220 acres at elevation 1,072 feet. The normal year-round operating range for the reregulation dam is 677 to 696 feet. Carters Reregulation Dam provides a minimum continuous flow of 240 cubic foot per second (cfs) to the Coosa River. The total generating capacity of the project is 575 megawatts (MW).



### Location

Coosawattee River (GA)

### Authorized Purposes

- Flood Damage Reduction
- Hydropower
- Navigation
- Water Quality
- Fish & Wildlife Enhancement
- Recreation

### Operation

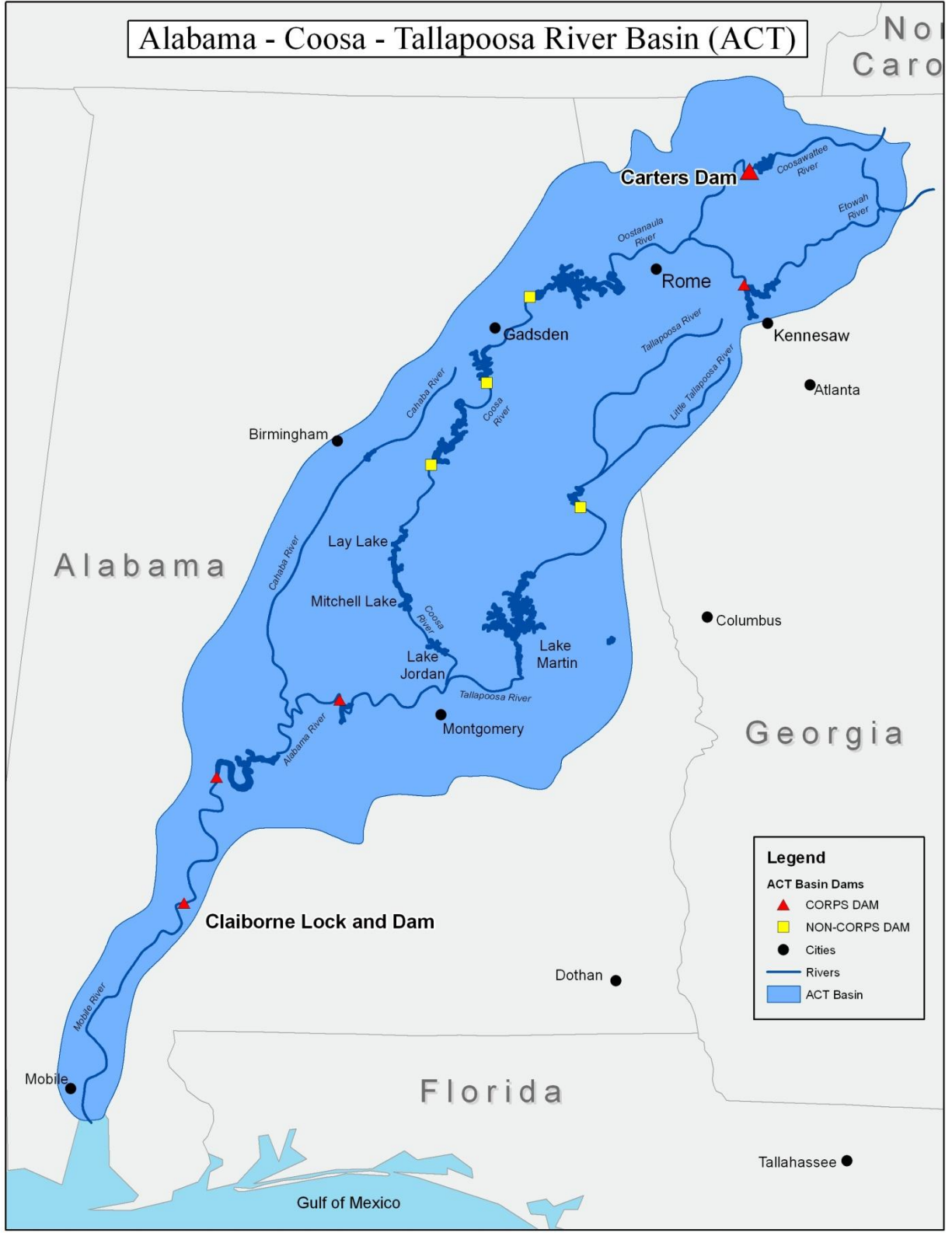
Water is released from Carters Dam, flows through the penstock, and generates power as it is discharged to the reregulation dam pool. The Corps generates power at Carters Dam only a few hours each weekday, when demand for electricity is greatest. When demand for electricity is low, usually during the night or on weekends, the turbines reverse and pump water back up from the reregulation pool to Carters Lake.

### Uses

Power Generation	134,900 acre-feet
Flood Control	95,700 acre-feet
Reserved Storage	242,200 acre-feet
<b>Total Capacity</b>	<b>472,800 acre-feet</b>

acre-feet=one acre surface area to a depth of one foot  
approximately 325,851.4 gallons

# Alabama - Coosa - Tallapoosa River Basin (ACT)



**Legend**

- ACT Basin Dams
  - ▲ CORPS DAM
  - NON-CORPS DAM
- Cities
- Rivers
- ACT Basin



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# FACTSHEET

## Allatoona Dam



### Highlights

Lake levels vary only several inches except during high inflows to the basin and during flood storage drawdown in the winter. Flood flows that are captured in the reservoir are generally released slowly over the subsequent weeks. Power releases during the low flow season augment flows at the Alabama Power Company's projects along the Coosa River. The releases also provide water for municipal and industrial needs in the Rome, Georgia, area and for navigation on the Alabama River below Montgomery during the dry season.

### Location

Etowah River (GA)

### Authorized Purposes

- Flood Damage Reduction
- Hydropower
- Navigation
- Water Quality
- Fish & Wildlife Enhancement
- Recreation
- Water Supply

### Operation

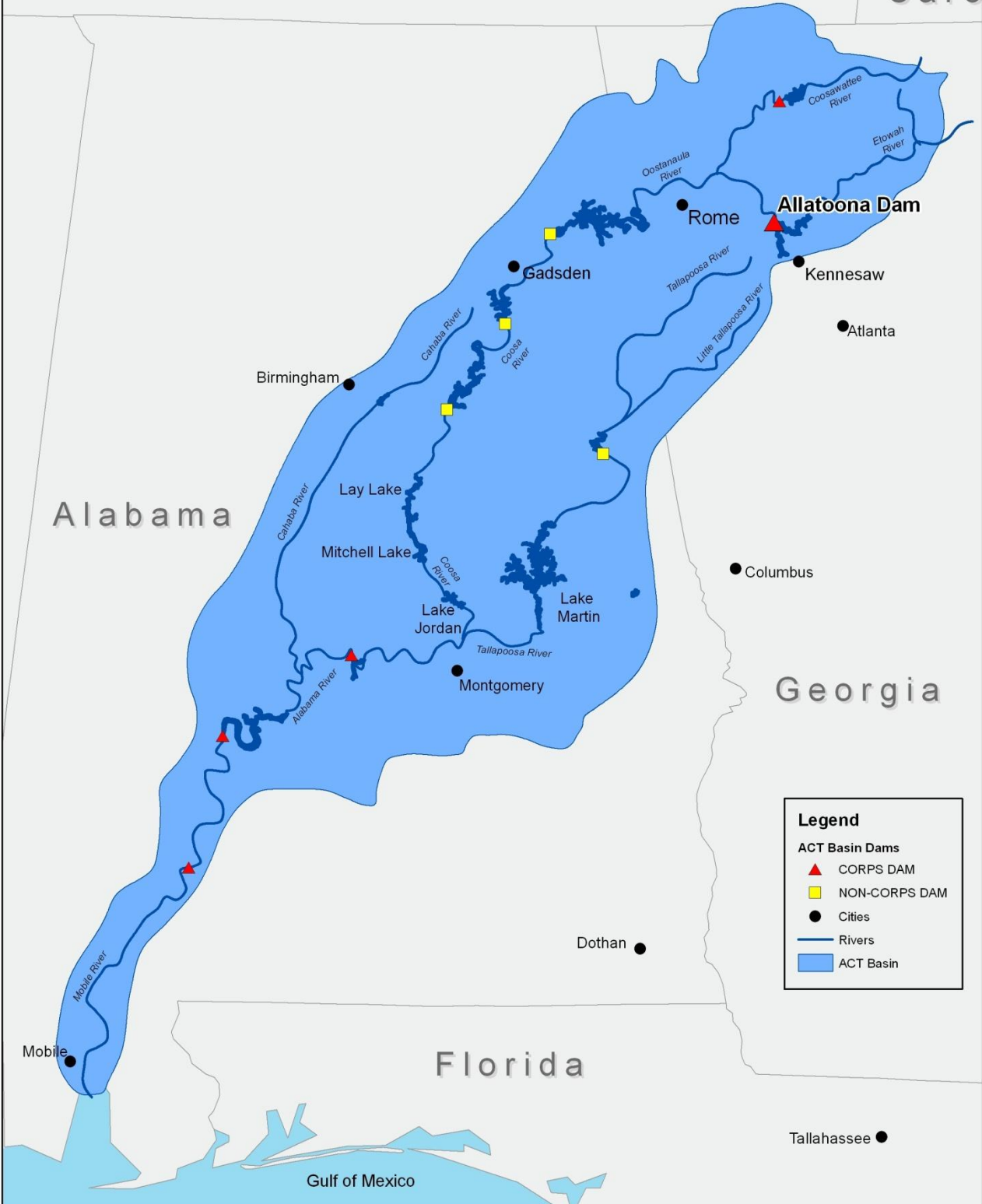
A minimum flow of about 250 cubic foot per second (cfs) is continuously released through a service unit, which generates power while providing a constant flow to the Etowah River downstream. Allatoona Dam operates in a peaking mode, generating power between 2 and 6 hours during normal operations each weekday. Weekend generation may occur if required to meet customer needs. The period of power generation is related to the stage of Conservation pool drawdown. The total generating capacity of the project is 72 megawatts (MW).

### Uses

Flood Control	265,300 acre-feet
Reserved Storage	284,580 acre-feet
<b>Total Capacity</b>	<b>549,880 acre-feet</b>

acre-feet=one acre surface area to a depth of one foot  
approximately 325,851.4 gallons

# Alabama - Coosa - Tallapoosa River Basin (ACT)



**Legend**

- ACT Basin Dams
  - CORPS DAM (Red Triangle)
  - NON-CORPS DAM (Yellow Square)
- Cities (Black Dot)
- Rivers (Blue Line)
- ACT Basin (Light Blue Area)



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# FACTSHEET

## Weiss Dam

### Highlights

The Weiss Dam reservoir, extending from the dam about 52 miles upstream to Mayo's Bar, Georgia, is located in Cherokee County, Alabama, and Floyd County, Georgia. The power plant, situated on the right bank of the river, is about 3 miles from the dam below a forebay lake and diversion canal constructed across a twenty-mile bend of the river. The reservoir is a source of water supply for domestic, agricultural, municipal and industrial uses. Operated and owned by Alabama Power Company.

### Location

Coosa River (AL)  
50 miles upstream from Gadsden

### Authorized Purposes

- Flood Damage Reduction
  - Hydropower
  - Water Quality
- Fish & Wildlife Enhancement
  - Recreation

### Operation

The Weiss Dam has a concrete gated spillway section with compacted earth abutment dikes; a reservoir including forebay lake, with full summer level power pool at elevation 564 feet msl having a surface area of approximately 30,200 acres, extending about 52 miles upstream to Mayo's Bar Lock and Dam; a diversion canal from the reservoir to a forebay created by dikes; an 81 MW power plant located at the lower end of the forebay; a substation; and appurtenant electrical and mechanical facilities. It was built by the Alabama Power Company and designed and constructed for the future installation of locks and appurtenances to facilitate development of the river for navigation when such development becomes economically feasible.

# Alabama - Coosa - Tallapoosa River Basin (ACT)

